

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring, Kiki Farida Ferine, Sri Rahayu

¹Master of Management Student, Universitas Pembangunan Panca Budi

²Master of Management, Universitas Pembangunan Panca Budi

Email : indra.bingir@pln.co.id

Correspondence author: kikifaridaferinesyarif@gmail.com

srirahayu@dosen.pancabudi.ac.id

Received : 25 July 2025

Revised : 01 August 2025

Accepted : 24 August 2025

Published : 27 August 2025

DOI : <https://doi.org/10.54443/ijebas.v5i4.3918>

Published links : <https://radjapublika.com/index.php/IJEBAAS>

Abstract

This study aims to determine the effect of training and teamwork on work performance with job satisfaction as a mediating variable on employees of PT. PLN (Persero) UP3 North Medan. The problem in this study is motivated by the importance of human resources with high work performance to support the achievement of organizational targets, but in practice there is still a mismatch between training and teamwork with the level of employee satisfaction and work performance. The population in this study were all employees of PT. PLN (Persero) UP3 North Medan, totaling 144 people. Because the population is less than 200, the sampling technique used is a saturated sampling technique, where the entire population is used as a sample. The data analysis method uses Structural Equation Modeling-Partial Least Square (SEM-PLS) with the help of SmartPLS software. The results of the study show that: (1) training has a positive and significant effect on work performance, but does not have a significant effect on job satisfaction; (2) teamwork has a positive and significant effect on job satisfaction and work performance; (3) job satisfaction has a positive and significant effect on work performance; (4) Job satisfaction significantly mediates the influence of teamwork on work performance, but does not significantly mediate the relationship between training and work performance. This study concludes that teamwork is an important factor in increasing job satisfaction and performance, while the effectiveness of training needs to be reviewed so that it can provide a more optimal impact on job satisfaction.

Keywords: *Training, Teamwork, Job Satisfaction, Job Performance.*

Background

In an increasingly competitive business environment, improving employee performance has become a key focus for companies to achieve organizational goals effectively and efficiently. One company facing challenges in improving employee performance is PT. PLN (Persero) UP3 Medan Utara. As a company engaged in the electricity sector, PLN UP3 Medan Utara is required to provide quality services and ensure optimal employee performance in the face of technological changes and increasing customer needs. Employee performance is a key factor in determining a company's success. According to Robbins and Judge (2019), work performance is the result of individual efforts in carrying out their duties in accordance with established standards by the organization. Improved employee performance can be achieved through various strategies, including effective training and teamwork. Training plays a crucial role in improving employee skills, knowledge, and attitudes in carrying out their duties. On the other hand, good teamwork will create a harmonious work environment and increase overall organizational productivity. According to Noe (2020), effective training can improve employee skills and competencies in carrying out their duties. In the electricity industry, PLN UP3 Medan Utara employees must always be updated with technological developments and applicable regulations, so training is a very important aspect to improve their performance. Besides training, teamwork is also a factor that influences work performance. Good teamwork can create a more positive work environment, improve operational efficiency, and encourage innovation in the workplace. Robbins and Judge (2019) state that strong teamwork can increase employee motivation and job satisfaction,

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring et al

ultimately leading to improved work performance. However, the relationship between training and teamwork and work performance is not always direct. Another factor that plays a role in this relationship is job satisfaction. Job satisfaction is a positive emotional state experienced by employees when they feel appreciated and compensated appropriately for their efforts (Meyer & Allen, 2020). Podsakoff et al. (2021) state that job satisfaction has a significant impact on employee productivity and loyalty to the company. Although various studies have discussed the influence of training and teamwork on work performance, there is still a research gap regarding how job satisfaction plays a role as an intervening variable in the relationship between training, teamwork, and work performance, especially in the electricity sector such as PLN UP3 North Medan. Therefore, this study aims to fill this gap by analyzing how job satisfaction can strengthen or weaken the relationship between training and teamwork on work performance.

This research is important because it can provide in-depth insights for the management of PLN UP3 North Medan in developing strategies to improve employee performance through more effective training and enhanced teamwork. Furthermore, this research also contributes to the development of theory in the field of human resource management, particularly regarding the relationship between training, teamwork, job satisfaction, and job performance. By understanding the factors that influence job performance, companies can design more effective policies to improve employee productivity and well-being. In the context of PLN UP3 North Medan, training and teamwork must be optimally designed to positively impact work performance. By considering job satisfaction as an intervening variable, the company can evaluate more effective policies to increase employee engagement and create a better work environment. Therefore, the results of this study are expected to provide recommendations for PLN UP3 North Medan in improving employee performance through human resource development strategies based on training, teamwork, and job satisfaction.

Formulation of the problem

Based on the background of writing the journal above, the problem formulation in this research is:

1. Does training have a positive and significant effect on work performance at PLN UP3 North Medan?
2. Does Teamwork have a positive and significant impact on Work Performance at PLN UP3 North Medan?
3. Does training have a positive and significant effect on job satisfaction at PLN UP3 North Medan?
4. Does Teamwork have a positive and significant effect on Job Satisfaction at PLN UP3 North Medan?
5. Does Job Satisfaction have a positive and significant effect on Job Performance at PLN UP3 North Medan?
6. Does Training have a positive and significant effect on Job Performance through Job Satisfaction at PLN UP3 North Medan?
7. Does Teamwork have a positive and significant effect on Work Performance through Job Satisfaction at PLN UP3 North Medan?

Research purposes

The objectives of this research are:

1. To test and analyze the influence of training on work performance at PLN UP3 North Medan
2. To test and analyze the influence of Teamwork on Work Performance at PLN UP3 North Medan
3. To test and analyze the influence of training on job satisfaction at PLN UP3 North Medan
4. To test and analyze the influence of Teamwork on Job Satisfaction at PLN UP3 North Medan
5. To test and analyze the influence of Job Satisfaction on Work Performance at PLN UP3 North Medan
6. To test and analyze the influence of training on job performance through job satisfaction at PLN UP3 North Medan
7. To test and analyze the influence of Teamwork on Work Performance through Job Satisfaction at PLN UP3 North Medan

Benefits of research

1. Theoretical Benefits

1. This research contributes to the development of knowledge in the field of human resource management, particularly in relation to improving employee performance through strengthening training programs and improving teamwork.
2. The results of this study can be a reference for other researchers who wish to study similar topics in the future.

2. Practical Benefits

1. Practically, the results of this study are expected to provide input and recommendations for the management of the PT. PLN UP3 Medan Utara Office in improving employee performance.
2. This research can be a basis for designing more effective and sustainable human resource development strategies.

LITERATURE REVIEW

Training

According to Dessler (2021), training is the process of improving employee skills and knowledge through training programs that can encourage job satisfaction.

Training Indicators

According to Dessler (2021) there are 5 training indicators, namely:

1. Knowledge Enhancement
2. Skill Enhancement
3. Behavior Change
4. Increased Productivity
5. Participant satisfaction

Teamwork

According to Podsakoff et al. (2021), teamwork is collaboration between employees in carrying out tasks to achieve company goals.

Teamwork Indicators

According to Podsakoff et al. (2021), there are 5 indicators of teamwork, namely:

1. Effective Communication
2. Cooperation
3. Involvement and Participation
4. Joint Decision Making
5. Conflict Resolution Skills

Job satisfaction

According to Meyer & Allen (2020), job satisfaction is an important factor in increasing organizational commitment.

Indicator Job satisfaction

According to Meyer & Allen (2020) indicators of job satisfaction are:

1. Satisfaction with Salary and Benefits
2. Satisfaction with Work Environment
3. Satisfaction with the Job Itself
4. Relationships with Coworkers
5. Satisfaction with Awards and Recognition

Work performance

According to Hughes et al. (2022), employee involvement in effective teamwork can improve well-being and productivity.

Work Performance Indicators

According to Hughes et al. (2022) work performance indicators are:

1. Quality of Work Results
2. Productivity
3. Time Efficiency
4. Compliance with Standards
5. Innovation and Creativity

Factors that influence work performance

According to Handoko (2019), the factors that influence work performance are:

1. Motivation
2. Job Satisfaction
3. Stress Level
4. Physical conditions of work
5. Compensation System
6. Economic Aspects
7. Technical Aspects
8. Employee Behaviors

Conceptual Framework

The following is the conceptual framework of this research:

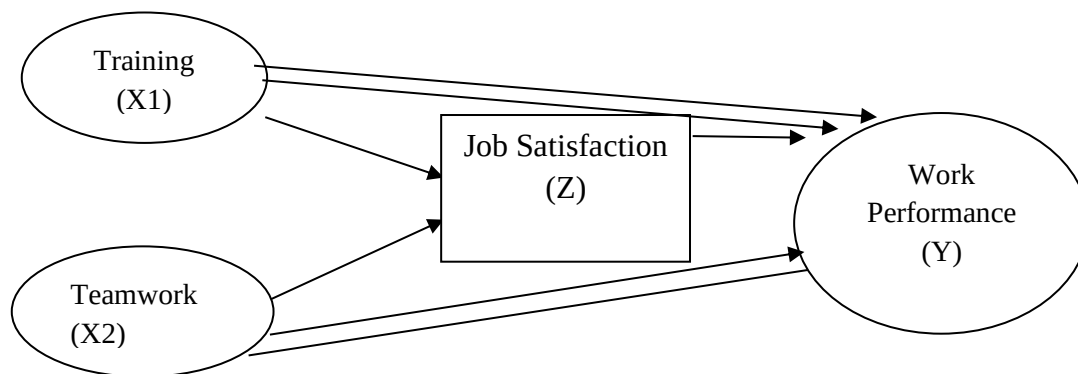


Figure 1: Conceptual Framework

Research Hypothesis

1. Training has a positive and significant influence on Work Performance at PLN UP3 North Medan
2. Teamwork has a positive and significant effect on Work Performance at PLN UP3 North Medan
3. Training has a positive and significant effect on Job Satisfaction at PLN UP3 North Medan
4. Teamwork has a positive and significant effect on Work Performance at PLN UP3 North Medan
5. Job satisfaction has a positive and significant effect on Work Performance at PLN UP3 North Medan
6. Training has a positive and significant effect on Job Performance through Job Satisfaction at PLN UP3 North Medan
7. Teamwork has a positive and significant effect on Job Performance through Job Satisfaction at PLN UP3 North Medan

RESEARCH METHODS

Types of research

The research approach used in this study is a quantitative approach with a survey method. Quantitative research is used to test the causal relationship between the independent variables (training and teamwork), the intervening variable (job satisfaction), and the dependent variable (job performance). This type of research is explanatory research, which aims to explain the causal relationship between the variables studied according to Sugiyono (2018).

Time and Location of Research

This research was conducted in July 2025 at PT. PLN (Persero) UP3 North Medan Jl. Kol. Yos Sudarso No. 118 Medan.

Data source

The research data source used by the researcher is a primary data source, the primary data source is the researcher obtained data directly from respondents who work at PT. PLN (Persero) UP3 North Medan.

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring **et al**

1. Primary Data: Collected through a questionnaire distributed to employees of PT PLN (Persero) UP3 Medan Utara
2. Secondary Data: Derived from company reports, academic literature, and previous research.

Research Population and Sample Population

A population is a generalization area consisting of objects/subjects that have certain qualities and characteristics that are applied by researchers to be studied and conclusions drawn (Sugiyono, 2018). The population used in this study amounted to 144 Technical Service Officers in all PLN North Medan service units.

Sample

According to Sugiyono (2018), the research sample is a portion of the number and characteristics of the population. The sample in this study was 144 Technical Service Officers in all PLN North Medan service units (Saturated Sample).

Data collection technique

The data collection technique used is a questionnaire, the researcher will distribute the questionnaire to the respondents who are the sample. According to Sugiyono (2018), a questionnaire is a data collection technique carried out by giving a set of written questions or statements to respondents to answer.

Table 1: Operational Definitions of Variables

Variables	Definition	Indicator
Training (X1)	According to Dessler (2021), training is the process of improving employee skills and knowledge through training programs which can encourage job satisfaction.	According to Dessler (2021) training indicators are: 1. Knowledge Improvement 2. Skill Improvement 3. Behavior Change 4. Productivity Improvement 5. Participant Satisfaction
Teamwork (X2)	According to Podsakoff (2021), teamwork is collaboration between employees in carrying out tasks to achieve company goals.	According to Podsakoff (2021), indicators of teamwork are: 1. Effective Communication 2. Cooperation 3. Involvement and Participation 4. Joint Decision Making 5. Ability to Resolve Conflict
Job satisfaction (Z)	According to Meyer & Allen (2020), job satisfaction is an important factor in increasing organizational commitment.	According to Meyer & Allen (2020) indicators of job satisfaction are: 1. Satisfaction with Salary and Benefits 2. Satisfaction with Work Environment 3. Satisfaction with the Job Itself 4. Relationships with Coworkers 5. Satisfaction with Awards and Recognition
Work performance (Y)	According to Hughes et al. (2022), work performance identifies that employee involvement in effective teamwork can improve well-being and productivity.	According to Hughes et al. (2022) work performance indicators are: 1. Quality of Work Results 2. Productivity 3. Time Efficiency 4. Compliance with Standards 5. Innovation and Creativity

Data Analysis Model

The analytical model used in this study is path analysis, a statistical technique used to examine direct and indirect relationships between variables. In this study, path analysis was used to analyze the relationship between job stress, competence, employee performance, and work motivation. The model used in this study can be described as follows:

Path Analysis Model

1. Direct Effect

A direct effect is an effect that occurs directly from one variable to another without going through other variables. It shows the direct effect of work stress (X1) on employee performance (Y), or the direct effect of competence (X2) on employee performance (Y).

2. Indirect Effect:

Indirect influence is an influence that occurs through the moderating variable. It shows the indirect influence of work stress (X1) on employee performance (Y) through work motivation (Z).

3. Total Effect:

The total effect is the sum of the direct and indirect effects between two variables. It shows the total effect of work stress (X1) on employee performance (Y), which is calculated from the direct effect and the indirect effect involving work motivation (Z).

RESULTS AND DISCUSSION

Outer Model Analysis

Outer model analysis in quantitative research based on Partial Least Squares Structural Equation Modeling (PLS-SEM) is used to test the validity and reliability of constructs or indicators in a measurement model. The outer model explains the relationship between latent constructs and their indicators.

Convergent Validity

Convergent Validity or convergent validity is part of the outer model analysis in the PLS-SEM approach, which is used to test the extent to which the indicators in a construct truly reflect the construct. Loading between 0.50–0.70 can still be maintained if AVE and CR still meet the requirements. Indicators with loadings <0.50 should be removed as they are invalid. The results are as follows:

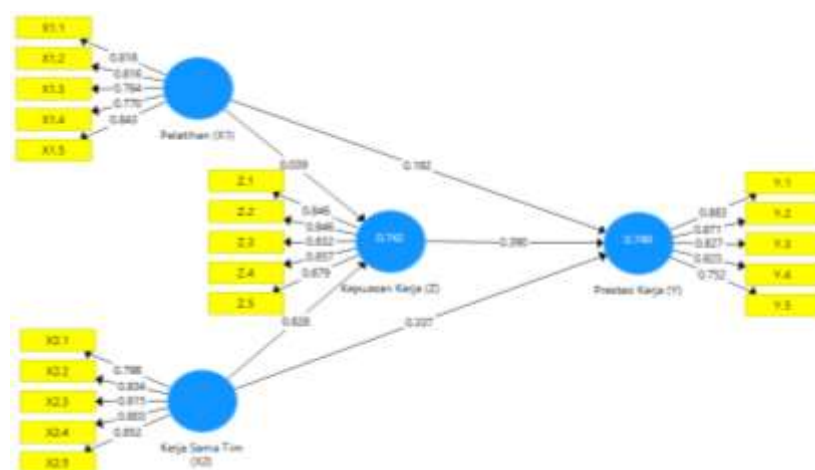


Figure 2. Outer Model

Smart PLS output for loading factor gives the results in the following table: Outer Loadings In this study there is an equation and the equation consists of two substructures for substructure 1

$$Z = b_1X_1 + b_2X_2 + e_1$$

$$Z = 0.039 + 0.828 + e_1$$

For substructure 2

$$Y = b_2X_1 + b_4X_2 + b_3Z + e_2$$

$$Y = 0.192 + 0.337 + 0.390 + e_2$$

Table 2. Outer Loadings

	Job Satisfaction (Z)	Teamwork (X2)	Training (X1)	Work Performance (Y)
X1.1			0.816	
X1.2			0.816	
X1.3			0.764	
X1.4			0.770	
X1.5			0.843	
X2.1		0.798		
X2.2		0.834		
X2.3		0.815		
X2.4		0.803		
X2.5		0.852		
Y.1				0.883
Y.2				0.871
Y.3				0.827
Y.4				0.823
Y.5				0.752
Z.1	0.846			
Z.2	0.846			
Z.3	0.832			
Z.4	0.857			
Z.5	0.879			

Source: Smart PLS3,3,3

Based on the results of the convergent validity test using outer loading values, all indicators of the four constructs (Training, Teamwork, Job Performance, and Job Satisfaction) had values > 0.70 , which means all indicators are valid and reflect the constructs being measured. Therefore, all constructs have met the requirements for convergent validity, and no indicators need to be eliminated.

Discriminant Validity

Discriminant validity is part of the outer model evaluation in PLS-SEM, used to test whether a construct is truly unique and distinct from other constructs. This is to ensure that indicators of one construct are not highly correlated with other constructs, meaning that each construct measures something different. As follows:

Table 3. Discriminant Validity

	Job Satisfaction (Z)	Teamwork (X2)	Training (X1)	Work Performance (Y)
X1.1	0.622	0.675	0.816	0.622
X1.2	0.616	0.690	0.816	0.650
X1.3	0.548	0.627	0.764	0.535
X1.4	0.577	0.671	0.770	0.585
X1.5	0.608	0.735	0.843	0.673
X2.1	0.688	0.798	0.699	0.647
X2.2	0.790	0.834	0.714	0.759
X2.3	0.685	0.815	0.656	0.653

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring et al

X2.4	0.670	0.803	0.675	0.607
X2.5	0.690	0.852	0.735	0.746
Y.1	0.743	0.711	0.667	0.883
Y.2	0.713	0.737	0.665	0.871
Y.3	0.690	0.729	0.633	0.827
Y.4	0.627	0.658	0.637	0.823
Y.5	0.643	0.636	0.586	0.752
Z.1	0.846	0.712	0.604	0.650
Z.2	0.846	0.717	0.555	0.662
Z.3	0.832	0.719	0.653	0.654
Z.4	0.857	0.731	0.697	0.737
Z.5	0.879	0.786	0.647	0.789

Source: Smart PLS3,3,3

Based on the cross-loading results, it can be concluded that all indicators have the highest loading on their respective constructs compared to the loadings on other constructs. Thus, discriminant validity for all constructs (Training, Teamwork, Job Satisfaction, and Job Performance) has been met.

Composite reliability

Construct reliability measures the extent to which indicators within a construct correlate with each other and are consistent in measuring the same concept. Reliability is assessed using three measures: Cronbach's Alpha Used to measure internal reliability. The minimum criterion is 0.70. The analysis results show that all constructs have Cronbach's Alpha > 0.70, which means good internal consistency. Composite Reliability (CR) CR provides a more accurate reliability estimate than Cronbach's Alpha. The CR value is also required > 0.70, and the results of the study show that all constructs have CR above that value, indicating high reliability. Average Variance Extracted (AVE) In addition to being a validity assessment, AVE also shows the extent to which the indicator explains the construct. An AVE value of more than 0.50 indicates that the indicator is able to explain the construct variance dominantly, which has been met in all variables.

Table 4. Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Job Satisfaction (Z)	0.906	0.930	0.727
Teamwork (X2)	0.879	0.912	0.673
Training (X1)	0.861	0.900	0.644
Work Performance (Y)	0.888	0.918	0.693

Source: Smart PLS3,3,3

Based on the test results of the indicators in each latent variable, it can be concluded that all constructs in this research model — namely Training (X1), Teamwork (X2), Job Satisfaction (Z), and Job Performance (Y) — have met the criteria for good validity and reliability. This is evidenced by the Cronbach's Alpha and Composite Reliability values, which are all above the minimum threshold of 0.70, indicating that each construct has high internal consistency. In addition, the Average Variance Extracted (AVE) value of the four constructs also exceeds the minimum value of 0.50, which means that each construct is able to explain more than 50% of the variance of its constituent indicators, thus fulfilling the requirements for convergent validity. By fulfilling these three evaluation indicators (Cronbach's Alpha, Composite Reliability, and AVE), it can be concluded that all constructs in the model are valid and reliable, and are suitable for use in further analysis at the inner model or structural model testing stage.

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring **et al**

This strengthens the belief that the instruments used in this study have been able to measure the intended constructs accurately and consistently.

Inner Model Analysis

The inner model, or structural model, is used to examine the relationships between latent variables identified in the research hypothesis. This analysis aims to determine the extent of influence of the independent variables on the dependent variable, both directly and indirectly. Assessment is performed by examining the path coefficient, T-statistic, and P-values for each relationship tested.

Coefficient of Determination (R²)

The coefficient of determination (R²) is used to measure how much the independent variable is able to explain the dependent variable in a structural model. The R² value ranges from 0 to 1. The closer to 1 → the higher the ability of the independent variable to explain the dependent variable. The closer to 0 → the lower the model's explanatory ability. Based on data processing that has been carried out using the SmartPLS 3.0 program, the R Square value is obtained as follows:

Table 5. R Square Results

	R Square	Adjusted R Square
Job Satisfaction (Z)	0.742	0.738
Work Performance (Y)	0.749	0.744

Source: Smart PLS3,3,3

The R Square value is 0.742 shows that 74.2% of the variation in Job Satisfaction can be explained by the independent variables in the model (namely Training (X1) and Teamwork (X2)). Meanwhile, the remaining 25.8% is explained by other factors outside the model. Because the value is close to 1 and more than 0.75, the explanatory power is included in the strong/substantial category. The R Square value of 0.749 shows that 74.9% of the variation in Work Performance can be explained by the variables Training (X1), Teamwork (X2), and Job Satisfaction (Z). The remaining 25.1% is influenced by other factors not included in this model. This value also falls into the strong/substantial category, which means that this model has a high level of clarity on Work Performance.

Hypothesis Testing

Based on the results of hypothesis testing using the bootstrapping method in SmartPLS, it was found that all relationships between variables have a value The T-statistic is greater than 1.96 and the P-value is less than 0.05. This indicates that all influences between variables in the model are statistically significant at the 5% significance level as follows:

Table 6. Path Coefficients (Direct Effect)

	Original Sample (O)	T Statistics (O/STDEV)	P Values	Results
Job Satisfaction (Z) -> Job Performance (Y)	0.390	4,828	0,000	Accepted
Teamwork (X2) -> Job Satisfaction (Z)	0.828	12,563	0,000	Accepted
Teamwork (X2) -> Work Performance (Y)	0.337	3,366	0,000	Accepted
Training (X1) -> Job Satisfaction (Z)	0.039	0.541	0.295	Rejected
Training (X1) -> Work Performance (Y)	0.192	2,487	0.007	Accepted

Source: Smart PLS3,3,3

In table 6 there are the results of the hypotheses in the research, so the explanation of this research is as follows:

1. Job Satisfaction (Z) has a positive and significant effect on Job Performance (Y). The coefficient obtained is 0.390, T Statistics 4.828, and P Value 0.000, which indicates that job satisfaction has a positive and significant effect on

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring **et al**

- job performance. The more satisfied an employee is with his/her job, the more likely he/she will show higher and quality performance.
- Teamwork (X2) has a positive and significant effect on Job Satisfaction (Z) The coefficient value is 0.828, T Statistics is 12.563, and P Value is 0.000 indicating that teamwork has a positive and significant effect on job satisfaction. This means that the higher the level of teamwork created in the organization, the higher the level of job satisfaction felt by employees.
 - Teamwork (X2) has a positive and significant effect on Work Performance (Y) With a coefficient of 0.337, T Statistics 3.366, and P Value 0.000, it can be concluded that teamwork also has a positive and significant effect on work performance. This indicates that synergy within a team can directly improve individual and group performance in achieving work targets.
 - Training (X1) does not have a significant effect on Job Satisfaction (Z) Although the coefficient value is 0.039, T Statistics 0.541, and P Value 0.295 indicates a positive direction, it is not statistically significant. This means that training has not been able to provide a real contribution to increasing job satisfaction in the context of this study.
 - Training (X1) has a positive and significant effect on Work Performance (Y) With a coefficient value of 0.192, T Statistics 2.487, and P Value 0.007, indicating that the training provided also has a positive and significant effect on employee work performance. Appropriate training can improve knowledge and skills which ultimately impacts on achieving better performance.

Table 7. Path Coefficients (Indirect Effect)

	Original Sample (O)	T Statistics (O/STDEV)	P Values	Results
Teamwork (X2) -> Job Satisfaction (Z) -> Job Performance (Y)	0.323	4,297	0,000	Accepted
Training (X1) -> Job Satisfaction (Z) -> Job Performance (Y)	0.015	0.553	0.290	Rejected

Source: Smart PLS3,3,3

- Teamwork has a positive and significant effect on work performance through job satisfaction as a mediating variable. This is indicated by a coefficient value of 0.323, with a T-statistic of 4.297 and a P-value of 0.000. A T-statistic value greater than 1.96 and a P-value smaller than 0.05 indicate that the mediation effect is statistically significant. This finding indicates that better teamwork built in the work environment will increase employee job satisfaction, which ultimately has an impact on increased work performance. In other words, job satisfaction is proven to be able to significantly mediate the relationship between teamwork and work performance.
- Training does not have a significant indirect effect on job performance through job satisfaction. This can be seen from the coefficient value of 0.015, with a T-statistic of 0.553 and a P-value of 0.290. Since the T-statistic is less than 1.96 and the P-value is more than 0.05, it can be concluded that the effect of training on job performance is not significantly mediated by job satisfaction. This indicates that even if training is provided, if it is not supported by other factors that increase job satisfaction, then the training does not directly have a significant impact on achieving job performance through employee satisfaction.

Conclusion

The conclusions of this study are as follows:

- Job satisfaction has a positive and significant effect on work performance. These results indicate that employees who are satisfied with their jobs will tend to show high work performance. The coefficient value of 0.390, T-Statistic 4.828, and P-Value 0.000 indicate that this hypothesis is accepted.
- Teamwork has a positive and significant effect on job satisfaction. This indicates that the better the teamwork, the higher the employee job satisfaction. The coefficient value of 0.828, T-Statistic 12.563, and P-Value 0.000 prove that this hypothesis is accepted.
- Teamwork has a positive and significant impact on work performance. This means that effective teamwork can improve employee performance. This is supported by a coefficient of 0.337, a T-Statistic of 3.366, and a P-Value of 0.000.
- Training had no significant effect on job satisfaction. These results indicate that the training provided was insufficient to improve employee job satisfaction. With a coefficient of 0.039, a t-statistic of 0.541, and a p-value of 0.295 (above 0.05), the hypothesis was rejected.

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring et al

5. Training has a positive and significant effect on job performance. This means that the better the training provided, the higher the employee's job performance. This is evidenced by a coefficient value of 0.192, a t-statistic of 2.487, and a p-value of 0.007 (below 0.05), thus accepting the hypothesis.
6. Teamwork has a positive and significant effect on work performance through job satisfaction. This means that job satisfaction significantly mediates the relationship between teamwork and work performance. This is evidenced by a coefficient of 0.323, a t-statistic of 4.297, and a p-value of 0.000.
7. Training does not significantly influence job performance through job satisfaction. These results indicate that job satisfaction does not significantly mediate the relationship between training and job performance. This is indicated by a coefficient value of 0.015, a T-Statistic of 0.553, and a P-Value of 0.290 (above 0.05).

Suggestion

After drawing conclusions from this research, the research suggestions are as follows:

Theoretical Suggestion:

1. **Strengthening the Role of Job Satisfaction as a Mediating Variable** This study shows that job satisfaction significantly mediates the effect of teamwork on job performance, but not training. Therefore, future researchers are advised to delve deeper into other variables that may be more effective mediators between training and job performance, such as work motivation or the work environment.
2. **Conceptual Model Development** These findings can be used as a basis for developing a new conceptual model linking training, teamwork, job satisfaction, and job performance in the context of public service organizations. Researchers could also add moderating variables such as leadership or organizational culture.

Practical Advice:

1. **Improving the Effectiveness of Training Programs** Given that training has no significant impact on job satisfaction, company management needs to re-evaluate the quality and relevance of the training materials provided. Training should be tailored to job needs and employee expectations to positively impact employee satisfaction.
2. **Building Solid Teamwork** Since teamwork has been shown to significantly impact job satisfaction and performance, management should continue to develop a teamwork culture through activities such as team building, open communication, and appreciation for collaborative work.
3. **Increase Overall Job Satisfaction** Job satisfaction has been shown to significantly impact performance. Therefore, companies need to pay more attention to factors that influence job satisfaction, such as a comfortable work environment, clear job descriptions, reward systems, and work-life balance.
4. **Objective and Measurable Work Performance Evaluation** To ensure that work performance improves as expected, companies need to establish clear, measurable, and fair performance indicators and conduct regular evaluations. This will also impact employee motivation and satisfaction.

REFERENCES

- Arifin, A. (2020). The influence of leadership and teamwork on employee job satisfaction and performance. *Bisman-Jurnal Bisnis & Manajemen*, 3(01), 9-16.
- Bagis, F., Kusumo, UI, & Hidayah, A. (2021). Job Satisfaction as a Mediating Variable in the Relationship between Training and Employee Performance. *Journal of Management Science*, 9(2), 123-135.
- Bakri, S. (2021). The Effect of Empowerment, Teamwork, and Training on Employee Productivity at PT. Tanjung Sarana Lestari Pasangkayu. *Journal of Management and Business*, 10(1), 45-58.
- Ferine, KF, & Ermiati, C. (2020). The Influence of Motivation and Competence on the Performance of Employees of SMEs Assisted by Bank Sumut, Kampung Baru Branch, Medan. *Liabilities (Journal of Accounting Education)*, 3(2), 115–120. <https://doi.org/10.30596/liabilities.v3i2.5587>
- Mangkunegara, AAP (2017). *Corporate Human Resource Management*. Rosdakarya Youth.
- Robbins, S. P., & Judge, T. A. (2017). *Organizational Behavior*. Pearson Education.
- Salim, U., & Woodward, R. (2022). Analysis of Training and Compensation on Employee Performance through Job Satisfaction as an Intervening Variable at PT Anugrah Harapan Nusantara. *Journal of Management and Business*, 15(3), 210-225.

THE EFFECT OF TRAINING AND TEAMWORK ON JOB PERFORMANCE, WITH EMPLOYEE JOB SATISFACTION AS AN INTERVENING VARIABLE AT PLN UP3 NORTH MEDAN

Indra Sintanta Sembiring **et al**

- Siagian, SP (2020). The Influence of Teamwork on Employee Performance at the Cirebon Maritime Academy. *Journal of Administration and Educational Management*, 3(1), 15-22.
- Simamora, H. (2018). *Human Resource Management*. STIE YKPN.
- Sugiyono. (2018). *Quantitative, Qualitative, and R&D Research Methods*. Alfabeta.
- Suparman, A., & Yusman, Y. (2022). The Effect of Training on Employee Performance at PT. PLN (Persero) Tolitoli Branch. *Journal of Management and Business*, 1(1), 52–60.
- Supardi, YR, & Yusman. (2021). The Effect of Job Training, Promotion, Compensation, and Motivation on the Work Performance of Nurses at Batam Regional General Hospital. *As-Said Journal*, 1(2), 2774–4175.
- Tampubolon, M. (2020). The Effect of Training and Teamwork on Employee Job Satisfaction and Performance at PT. XYZ. *Journal of Management*, 12(1), 45-58.
- Wahyuningsih, S. (2019). The Effect of Training in Increasing Employee Work Productivity. *Journal of Economics and Business*, 8(2), 123-135.
- Wibowo. (2016). *Performance Management*. Rajawali Press.
- Zainal, VR (2019). The Effect of Teamwork and Training on Employee Job Satisfaction at PT. ABC. *Journal of Management Science*, 7(3), 813-817.