

The Influence of Transformational Leadership, Work Involvement and *Self-Efficacy* on Job Satisfaction and Employee Performance at PT Trubaindo Coal Mining, West Kutai Regency

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Abstract: This study aims to analyze the influence of transformational leadership, work engagement, and self-efficacy on job satisfaction and employee performance at PT Trubaindo Coal Mining, West Kutai Regency, with job satisfaction as a mediating variable. This study uses a quantitative approach with an explanatory design. The population in this study were all 142 permanent employees, with a sample of 106 respondents obtained through a purposive sampling technique. Data collection was carried out through questionnaires, while data analysis used the Structural Equation Modeling Partial Least Squares (SEM-PLS) method. The results of the study indicate that transformational leadership, work engagement, and self-efficacy have a positive and significant effect on employee job satisfaction. Furthermore, these three variables also have a positive and significant effect on employee performance. Job satisfaction has been shown to have a positive and significant effect on employee performance and acts as a mediating variable, strengthening the influence of transformational leadership, work engagement, and self-efficacy on performance. These findings indicate that improving employee performance is influenced not only by leadership and work engagement, but also by employee self-confidence and psychological well-being, such as job satisfaction. The implications of this study suggest that companies need to strengthen transformational leadership practices, increase work engagement, and develop employee self-efficacy through training and organizational support. Furthermore, enhancing job satisfaction needs to be a key strategy in human resource management to encourage optimal and sustainable employee performance.

Keywords: Transformational Leadership, Work Engagement, Self-Efficacy, Job Satisfaction, Employee Performance

INTRODUCTION

Human resources are a crucial factor in maintaining the sustainability of an organization/company. To improve and develop an organization, it is necessary to improve and develop the quality of human resources, both individually and within work teams. Organizations must be able to manage human resources effectively to achieve their goals. Organizational performance depends on individual performance.

Employee skill development can be achieved in various ways to achieve organizational goals. Organizational efforts to develop employee skills are expected to improve employee performance, enabling the organization to achieve its stated goals.

PT Trubaindo Coal Mining has a corporate culture called Banpu Heart. Banpu Heart has three core values: passionate, innovative, and committed. Passionate has four elements: pursue for success, can do more, be agile and change, and express care and share. Innovative has three elements: transcend the trend, ideate and get real, and learn fast, do first. Committed has 3 elements, namely adhere to Integrity and Ethics, synergize and network and engage to sustainability development. Every year PT Trubaindo Coal Mining and all its sister companies that are members of PT Indo Tambangraya Megah conduct a company culture survey called the Banpu Heart Survey.

Based on the results of the Banpu Heart survey in 2021, 2022, and 2023, the employee survey scores of PT Trubaindo Coal Mining remained below the average score of the PT Indo Tambangraya Megah Group for the three years. Banpu Heart PT Trubaindo Coal Mining and PT Indo Tambangraya Megah.

Based on survey results from the last three years (2021, 2022, and 2023), PT Trubaindo Coal Mining's Banpu Heart score remains below the average for the Indo Tambangraya Megah group. This indicates that the three core values of the company's culture have not yet become the primary guidelines for working at PT Trubaindo Coal Mining.

Performance is a description of the level of achievement of an activity/program/policy in realizing the organization's goals, objectives, mission, and vision as outlined in an organization's strategic planning. Performance assessment is the activity of measuring the level of performance achievement, which begins with establishing individual and team/group performance indicators.

Factors influencing performance should be studied and carefully assessed. The dominant factors influencing performance are clarity of the company's vision and mission, organizational culture, self-efficacy, human resource training and development, work engagement, leadership, and employee compensation.

Job satisfaction is a factor that can influence employee performance. Companies must understand the factors that contribute to employee job satisfaction and systematically strive to address these factors to achieve improved performance.

Improving job satisfaction leads to improved employee performance. To improve employee job satisfaction, leaders are needed who can bridge the gap between finding job satisfaction and achieving company goals. Factors that can create employee satisfaction at work include leadership, work engagement, self-efficacy, organizational culture, personal development, facilities and infrastructure, the work environment, work systems, work motivation, and compensation.

To determine the focus of the research, interviews were conducted with employees from the management level, operational level and trade union representatives and 3 main factors were found that influence employee performance and job satisfaction, namely: Leadership, Work Involvement and Self-efficacy.

Transformational leadership is leaders who can motivate followers to perform work above expectations and go beyond self-interest for the benefit of the organization with individual friendliness, intellectual stimulation, inspirational motivation, and idealized influence.

Transformational leadership results in extra effort from workers, higher productivity, higher morale and satisfaction, higher organizational effectiveness, lower absenteeism, and greater organizational adaptability (Robbins and Judge, 2019:262) translated by Ratna Saraswati and Febriella Sirait.

Job engagement refers to the emotional and psychological connection employees have with their work, colleagues, and organization. It goes beyond mere job satisfaction and reflects the extent to which employees are invested in their roles, committed to organizational goals, and motivated to contribute their best efforts.

Engaged employees are typically enthusiastic about their work, demonstrate a strong sense of purpose, and actively seek ways to contribute to the company's success. They tend to go beyond their basic job responsibilities, demonstrate initiative, and remain committed to their tasks even in challenging situations.

In addition to transformational leadership and work engagement, self-efficacy is also essential for organizational sustainability. Self-efficacy is a person's belief or confidence in their ability to succeed in a given situation. Individuals with a strong sense of self-efficacy are more likely to challenge themselves to face difficult tasks and are intrinsically motivated to achieve success.

This study will identify and evaluate the variables that influence job satisfaction and employee performance at Trubaindo Coal Mining by raising the research title "The Influence of Transformational Leadership, Work Involvement and Self-Efficacy on Job Satisfaction and Employee Performance at PT Trubaindo Coal Mining".

METHOD

The population in this study comprised all **142** permanent employees of Trubaindo Coal Mining in West Kutai Regency. A population is the entirety of research subjects or objects with specific characteristics and serving as the data source for a study (Sugiyono, 2021). This study employed a nonprobability sampling technique, a sampling technique that does not provide equal opportunity for each member of the population to be selected as a sample (Sekaran & Bougie, 2016). The use of this technique was based on specific considerations: respondents were permanent employees with a minimum of two years of service, and were therefore expected to provide relevant and accurate information in accordance with the research objectives.

Data collection technique

The type of data in this study is perception, obtained from the results of distributing questionnaires via Google Sheets and then processed statistically. The data in this study is primary data. Primary data is data collected and processed by the researcher directly from respondents. In this study, the method of data collection is by distributing questionnaires in the form of a number of written statements or questions to employees as respondents, which can then be answered. Statements or questions can be given either directly or indirectly. The questionnaire used in this study is a closed questionnaire, namely a questionnaire with pre-defined answer options, so employees as respondents can choose and answer directly.

In this study, the research instrument used for data collection was a questionnaire. The scale model used was a Likert scale, with five options: a) Score 1 = Strongly disagree; b) Score 2 = Disagree; c) Score 3 = Neutral; d) Score 4 = Agree; e) Score 5 = Strongly agree. To ensure that the quality of the questionnaire data obtained is reliable, it is necessary to carry out data validity tests and reliability tests as follows: 1) Validity Test: Validity testing is conducted to determine the ability of an instrument or data collection tool to reveal the primary objective of the measurement. An instrument is considered valid if it is able to measure what it is supposed to measure and reveal what it is intended to reveal. The most commonly used method to measure the validity of a measuring instrument is to correlate the scores obtained on each item

(question) with the total score. The total score is the sum of the scores of all the questions on the questionnaire. If the scores of all the questions correlate positively with the total score, the measuring instrument can be said to be valid.

Validity testing is conducted to determine the accuracy of the questionnaire. Questionnaire reliability means that the questionnaire is able to measure what it is supposed to measure. The criterion used is if $r > 0.30$, then the research instrument is considered valid; 2) Reliability Test: Reliability testing is necessary to determine the level of consistency of the measuring instrument used. A measuring instrument can be said to be reliable if the measurement results remain the same or the values obtained are consistent, even when repeated measurements are carried out on the same subjects. Reliability testing of all items/questions used in this study will use the Cronbach Alpha formula (Cronbach's alpha coefficient), which is generally considered reliable if the Cronbach Alpha value is > 0.6 (Hair et al., 1995).

RESULTS AND DISCUSSION

Respondent Demographics

This study involved a population of 142 permanent employees of PT Trubaindo Coal Mining, West Kutai Regency, however, in the data collection process only 106 employees returned the research questionnaire . Thus, the response rate was 74.6% of the total population. The questionnaire return rate (response rate) is an important indicator in survey research because it is related to the quality and representativeness of the data obtained from respondents (Dillman et al., 2014). Not all members of the target population are willing or able to participate in completing the research instrument, so this condition is common in survey-based research.

This study involved 106 employees of PT Trubaindo Coal Mining in West Kutai Regency as respondents. Respondent characteristics data are presented to provide a general overview of the demographic background of the respondents involved in the study, including gender, age, field of work, length of service, and highest level of education. This information is crucial for understanding the profiles of the respondents who served as data sources in the study.

Overall, the characteristics of respondents in this study indicate that PT Trubaindo Coal Mining employees are predominantly male, of productive age, with considerable work experience, and relatively good educational attainment. This reflects the readiness of human resources to face the demands of work in the mining sector and provides a strong basis for assessing the influence of transformational leadership, work engagement, and self-efficacy on employee job satisfaction and performance.

PLS SEM Analysis

1. Evaluation of Measurement Model

a. Convergence Test

Table 1. Results of Convergent Validity Test

Indicator	Outer Loading Value	Average Variance Extracted (AVE)	Information
Transformational Leadership (X1)			
X1.1	0.889	0.808	Valid
X1.2	0.864		Valid
X1.3	0.909		Valid
X1.4	0.906		Valid
X1.5	0.926		Valid
Job Engagement (X2)			
X2.1	0.880	0.785	Valid
X2.2	0.899		Valid
X2.3	0.891		Valid
X2.4	0.867		Valid

X2.5	0.894		Valid
Self-Efficacy (X3)			
X3.1	0.882		Valid
X3.2	0.881		Valid
X3.3	0.897	0.776	Valid
X3.4	0.871		Valid
X3.5	0.874		Valid
Job Satisfaction (Y1)			
Y1.1	0.882		Valid
Y1.2	0.851		Valid
Y1.3	0.875	0.745	Valid
Y1.4	0.857		Valid
Y1.5	0.849		Valid
Employee Performance (Y2)			
Y2.1	0.885		Valid
Y2.2	0.906		Valid
Y2.3	0.901	0.793	Valid
Y2.4	0.886		Valid
Y2.5	0.875		Valid

Source: Processed data, 2026

1) Employee performance

The AVE value for the Employee Performance variable is 0.793, indicating that 79.3% of the indicator's variance can be explained by the latent construct of employee performance. This value meets and even exceeds the minimum criteria for convergent validity, thus concluding that the employee performance indicators have excellent consistency in measuring the same construct and are suitable for use in the analysis of inter-variable relationships in the next stage.

2) Job satisfaction

The AVE value for the Job Satisfaction variable is 0.745, meaning 74.5% of the indicator variance can be explained by the Job Satisfaction construct. This value meets the minimum criteria for convergent validity, thus concluding that the Job Satisfaction construct has a good ability to explain its constituent indicators and is suitable for use in testing the structural model.

3) Transformational Leadership

Based on the table, all indicators in the Transformational Leadership variable (X1) have an outer loading value above 0.70, which ranges from 0.864 to 0.926, so that all indicators are declared valid in measuring the transformational leadership construct. The highest outer loading value is found in indicator X1.5 (0.926) which indicates that this indicator has the strongest contribution in representing the transformational leadership variable.

Furthermore, the Average Variance Extracted (AVE) value for the Transformational Leadership variable is 0.808, meaning that more than 80% of the indicator's variance can be explained by the latent construct. This AVE value meets the minimum criteria of >0.50, thus concluding that the Transformational Leadership variable has an excellent level of convergent validity and is suitable for use in structural model testing.

4) Job Engagement

The AVE value for the Job Engagement variable is 0.785, meaning that 78.5% of the indicator's variance can be explained by the latent construct of job engagement. This value exceeds the minimum required threshold, thus concluding that the Job Engagement variable

meets the convergent validity criteria and its indicators are suitable for further analysis of the structural model.

5) Self-Efficacy

The AVE value for the Self-Efficacy variable is 0.776, indicating that 77.6% of the indicator variance can be explained by the latent construct. This value meets the requirements for convergent validity (>0.50), thus it can be concluded that the indicators in the Self-Efficacy variable have good consistency in measuring the same construct and are suitable for use in testing the relationship between variables.

b. Fornell Larcker Criterion

Table 2. Fornell Larcker Criterion Test

Variables	X1. Transformation Leadership	X2. Work Engagement	X3. Self-Efficacy	Y1. Job Satisfaction	Y2. Employee Performance
X1. Transformational Leadership	0.899				
X2. Work Engagement	0.563	0.886			
X3. Self-Efficacy	0.531	0.583	0.881		
Y1. Job Satisfaction	0.624	0.628	0.636	0.863	
Y2. Employee Performance	0.617	0.650	0.652	0.668	0.890

Source: Processed data, 2026

In the Transformational Leadership variable (X1), the diagonal value of 0.899 is higher than its correlation with Work Engagement (0.563), Self-Efficacy (0.531), Job Satisfaction (0.624), and Employee Performance (0.617). These results indicate that the indicators in the Transformational Leadership construct better represent their own variables compared to other constructs, thus meeting the criteria for strong discriminant validity.

Furthermore, in the Work Engagement variable (X2), the diagonal value of 0.886 is higher than its correlation with Transformational Leadership (0.563), Self-Efficacy (0.583), Job Satisfaction (0.628), and Employee Performance (0.650). This indicates that the Work Engagement construct has a clear conceptual difference from other variables, and is able to explain its indicators more dominantly than other constructs in the model.

For the Self-Efficacy variable (X3), the diagonal value of 0.881 is also higher than its correlation with Transformational Leadership (0.531), Work Engagement (0.583), Job Satisfaction (0.636), and Employee Performance (0.652). This finding confirms that the self-efficacy indicator consistently and specifically measures employee self-confidence and does not overlap excessively with other psychological constructs in the model.

The dependent variables, Job Satisfaction (Y1) and Employee Performance (Y2), each have diagonal values of 0.863 and 0.890, both of which are higher than the correlations with other variables. Job Satisfaction shows the highest correlation with Employee Performance (0.668), but is still lower than its diagonal value, thus still meeting the criteria for discriminant validity.

Similarly, Employee Performance has the highest correlation with Job Satisfaction (0.668), but it is still smaller than its own diagonal value, which confirms that the two constructs are interrelated but remain conceptually distinct. Overall, the results of the Fornell–Larcker test prove that all constructs in the research model have met the criteria for discriminant validity and are suitable for use in testing structural relationships in the next stage of analysis.

c. Reliability Test

Table 3. Cronbach's Alpha, Composite Reliability, AVE

Variables	Cronbach's Alpha	Composite Reliability (Rho_A)	Composite Reliability (Rho_C)	Average Variance Extracted (AVE)
X1. Transformational Leadership	0.941	0.941	0.955	0.808
X2. Work Engagement	0.932	0.932	0.948	0.785
X3. Self-Efficacy	0.928	0.930	0.946	0.776
Y1. Job Satisfaction	0.914	0.915	0.936	0.745
Y2. Employee Performance	0.935	0.936	0.950	0.793

Source: Processed data, 2026

Based on the table, the reliability test results indicate that all constructs in this study have Cronbach's Alpha values above 0.70, with some even exceeding 0.90, indicating a very high level of internal consistency in the instrument. This indicates that the indicators in each variable are able to measure the same construct consistently and stably, thus the research instrument can be declared reliable for use in hypothesis testing.

In addition, the Composite Reliability values for both rho_a and rho_c for all variables were also above the minimum required limit of 0.70, with a value range between 0.930 and 0.955. This value indicates that the construct reliability is in the very good category, and shows that each construct has a strong ability to explain its constituent indicators. High Composite Reliability also confirms that the measurement model has good stability in estimating the relationship between latent variables.

In the Transformational Leadership variable (X1), the Cronbach's Alpha value of 0.941, composite reliability (rho_c) of 0.955, and AVE of 0.808 indicate that the indicators in this construct have very high internal consistency and are able to explain more than 80% of the indicator variance. This indicates that the transformational leadership construct is very well measured and its indicators strongly represent the concept of transformational leadership.

For the variables of Work Engagement (X2) and Self-Efficacy (X3), each has a Cronbach's Alpha value of 0.932 and 0.928, composite reliability (rho_c) of 0.948 and 0.946, and AVE of 0.785 and 0.776. These values indicate that these two constructs have excellent levels of reliability and convergent validity. This means that the indicators of work engagement and self-efficacy consistently and accurately measure the psychological constructs that are the focus of this study.

Furthermore, the variables Job Satisfaction (Y1) and Employee Performance (Y2) also showed excellent results, with Cronbach's Alpha values of 0.914 and 0.935, respectively, composite reliability (rho_c) of 0.936 and 0.950, and AVE of 0.745 and 0.793. An AVE value exceeding 0.50 indicates that most of the indicator variance can be explained by the latent construct, so it can be concluded that all variables in this study have met the criteria for reliability and construct validity. Thus, the measurement model is declared feasible and can be continued to the structural model evaluation stage (inner model) for testing the research hypothesis.

2. Structural Model Evaluation

a. R Square Test

Table 4. R Square Test

Variables	R-Square
Y1. Job Satisfaction	0.561

Y2.Employee Performance	0.602
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Source: Processed data, 2026

Based on the Table, the R-square (R^2) value for the Job Satisfaction variable (Y1) is 0.561, which means that 56.1% of the variation in employee Job Satisfaction can be explained by the independent variables in the model, namely Transformational Leadership, Job Involvement, and Self-Efficacy . Meanwhile, the remaining 43.9% is explained by other factors outside the research model, such as compensation, physical work environment conditions, organizational culture, or other personal factors not examined in this study. The R^2 value of 0.561 indicates that the model's predictive ability towards Job Satisfaction is in the moderate to strong category.

Furthermore, the R-square (R^2) value for the Employee Performance variable (Y2) is 0.602, which means that 60.2% of the variation in Employee Performance can be explained by the variables Transformational Leadership, Work Engagement, Self-Efficacy and Job Satisfaction as mediating variables. The remaining 39.8% is influenced by other variables outside the model, such as the performance appraisal system, workload, work safety factors, or broader organizational conditions. The R^2 value of 0.602 indicates that the model has strong explanatory power in explaining the factors that influence employee performance.

Overall, the R^2 values for both endogenous variables indicate that the structural model developed in this study has good explanatory power and is empirically relevant. This indicates that the combination of transformational leadership, work engagement, and self-efficacy is an important determinant in shaping job satisfaction, which in turn impacts employee performance at PT Trubaindo Coal Mining, West Kutai Regency. Therefore, the research model is considered suitable for use in hypothesis testing and drawing conclusions regarding causal relationships between variables.

b. F Square Test

Table 5. F Square Test

Variables	F-Square
X1.Transformational_Leadership -> Y1.Job Satisfaction	0.128
X1.Transformational_Leadership -> Y2.Employee Performance	0.057
X2.Job Involvement -> Y1.Job Satisfaction	0.098
X2.Work Engagement -> Y2.Employee Performance	0.078
X3.Self Efficacy -> Y1.Job Satisfaction	0.136
X3.Self Efficacy -> Y2.Employee Performance	0.090
Y1.Job Satisfaction -> Y2.Employee Performance	0.054

Source: Processed data, 2026

Based on the table, the f-square (f^2) test is used to determine the contribution of each exogenous variable to the endogenous variable in the structural model. The interpretation criteria for effect size according to Hair et al. are 0.02 = small, 0.15 = medium, and 0.35 = large. The f^2 value indicates how much the R^2 value changes if an independent variable is removed from the model, so the greater the f^2 value, the more important the variable's role in explaining the dependent variable.

The effect of transformational leadership (X1) on job satisfaction (Y1) has an f^2 value of 0.128, which is in the small to medium effect category. This indicates that transformational leadership makes a significant contribution to increasing job satisfaction, although it is not the most dominant factor. This means that an inspirational and supportive leadership style can increase job satisfaction, but its influence still needs to be combined with other factors such as work engagement and self-efficacy.

Meanwhile, the effect of Transformational Leadership (X1) on Employee Performance (Y2) shows an f^2 value of 0.057, which is included in the small effect category. This indicates that transformational leadership does not have a strong direct influence on employee performance, but rather its influence is most likely indirect through increased job satisfaction or work engagement. Thus, the role of leadership is more effective in influencing employee psychological aspects than direct performance outcomes.

For the Job Engagement (X2) variable, the f^2 value for Job Satisfaction (Y1) is 0.098, which is categorized as a small effect. This indicates that job engagement positively contributes to job satisfaction, where employees who are more emotionally and cognitively involved in their work tend to feel more satisfied. However, this contribution is still at a moderate level and is not the sole determinant of job satisfaction.

The effect of work engagement (X2) on employee performance (Y2) has an f^2 value of 0.078, which is also included in the small effect category. This finding indicates that although work engagement is important for encouraging employee enthusiasm and dedication, increasing work engagement alone is not sufficient to have a significant direct impact on performance. This indicates that employee performance is more influenced by a combination of other psychological and structural factors within the organization.

Self efficacy (X3) variable, the influence on Job Satisfaction (Y1) has an f^2 value of 0.136, which is the highest value among all paths to Job Satisfaction and is in the small to medium effect category. This indicates that employee self-confidence in their abilities has a relatively strongest role in increasing job satisfaction compared to leadership and work engagement. Meanwhile, the influence of Self Efficacy (X3) on Employee Performance (Y2) has an f^2 value of 0.090 (small effect), and the influence of Job Satisfaction (Y1) on Employee Performance (Y2) is 0.054 (small effect), which indicates that employee performance is influenced by many factors simultaneously, not just by one dominant variable. Overall, the f^2 test results show that all variables in the model provide a significant contribution to the endogenous variables, but on a small to medium scale, so that the model is multifactorial and complementary in explaining employee performance.

c. Multicollinearity Test

Table 6. Multicollinearity Test

Variables	VIF
X1. Transformational Leadership -> Y1. Job Satisfaction	1,612
X1. Transformational Leadership -> Y2. Employee Performance	1,819
X2. Job Involvement -> Y1. Job Satisfaction	1,753
X2. Work Engagement -> Y2. Employee Performance	1,925
X3. Self Efficacy -> Y1. Job Satisfaction	1,668
X3. Self Efficacy -> Y2. Employee Performance	1,895
Y1. Job Satisfaction -> Y2. Employee Performance	2,279

Source: Processed data, 2026

Based on the table, the results of the multicollinearity test indicate that all Variance Inflation Factor (VIF) values for each relationship path between variables range from 1.612 to 2.279. This value is well below the recommended maximum limit, which is $VIF < 5$ (even < 3 for stricter criteria), so it can be concluded that there is no multicollinearity problem in the structural model used in this study. This means that the independent variables are not excessively correlated with each other in explaining the dependent variable.

In more detail, the path with the highest VIF value is the relationship between Job Satisfaction (Y1) and Employee Performance (Y2) at 2.279, which is still in the safe category. Meanwhile, other paths such as the influence of Transformational Leadership on Job Satisfaction (1.612), Job Involvement on Employee Performance (1.925), and Self-Efficacy on

Job Satisfaction (1.668) also show low and stable VIF values. This indicates that each variable makes a relatively independent contribution in explaining variation in the endogenous variable.

Thus, the results of this multicollinearity test confirm that the research model meets the multicollinearity-free assumption, allowing the path coefficient estimates in the SEM-PLS analysis to be reliably interpreted without any distortion due to high correlations between predictors. This condition strengthens the validity of the structural model and ensures that the hypothesis testing results obtained reflect the real and separate influence of each variable in influencing job satisfaction and employee performance.

d. FIT Model

Table 7. FIT Model Test

Information	Saturated Model	Estimated Model
SRMR	0.045	0.045
d_ ULS	0.658	0.658
d_ G	0.582	0.582
Chi-square	345,366	345,366
NFI	0.867	0.867

Source: Processed data, 2026

Based on the table, the results of the model feasibility test indicate that the Standardized Root Mean Square Residual (SRMR) value is 0.045 for both the saturated and estimated models. This value is below the recommended maximum limit of 0.08, thus concluding that the residual error rate between the observed and predicted correlation matrices is relatively low. Therefore, the constructed structural model is able to represent the empirical data well.

Furthermore, the d_ ULS value of 0.658 and d_ G of 0.582 indicate that the distance between the empirical covariance matrix and the matrix estimated by the model is still within acceptable limits. The relatively small d_ ULS and d_ G values indicate that the difference between the model and the actual data is not significant, so the structure of the relationship between variables in the model can be said to be in accordance with the data pattern obtained from respondents.

The Chi-square value of 345.366 indicates a certain level of difference between the theoretical model and the empirical data, but in the SEM-PLS approach, the Chi-square indicator is not the main criterion in assessing model feasibility because it is very sensitive to sample size. Therefore, the interpretation of model feasibility is more emphasized on residual-based indices such as SRMR and relative fit measures such as NFI, which are more relevant in the context of PLS-SEM.

The Normed Fit Index (NFI) for this model was 0.867, which is close to the ideal value of ≥ 0.90 . This value indicates that the model has a good level of fit in explaining the relationships between constructs compared to the null model. Although it has not yet reached the very good category, the NFI value still indicates that the constructed structural model is quite feasible and acceptable for use in hypothesis testing. Overall, the results of the model fit test confirm that the research model has met the feasibility criteria and can be used for analyzing causal relationships between variables in this study.

e. Structural Model Evaluation (Inner Model Analysis)

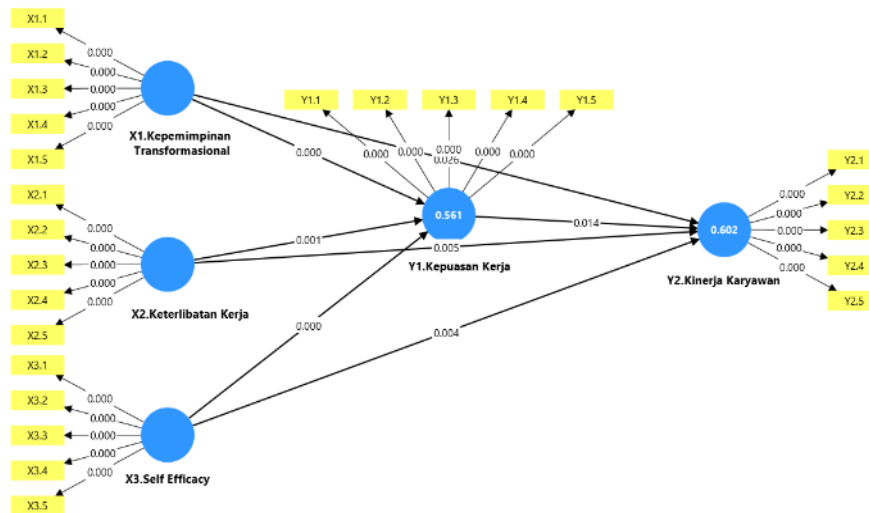


Figure 1. Smart PLS 4 Inner Model Output Results

1) Direct Effect

Table 8. Direct Effect

Variables	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
X1.Transformational Leadership -> Y1.Job Satisfaction	0.301	0.072	4,190	0.000
X1.Transformational Leadership -> Y2.Employee Performance	0.202	0.091	2,222	0.026
X2.Job Involvement -> Y1.Job Satisfaction	0.274	0.081	3,408	0.001
X2.Work Engagement -> Y2.Employee Performance	0.244	0.087	2,798	0.005
X3.Self Efficacy -> Y1.Job Satisfaction	0.316	0.072	4,378	0.000
X3.Self Efficacy -> Y2.Employee Performance	0.261	0.090	2,887	0.004
Y1.Job Satisfaction -> Y2.Employee Performance	0.222	0.091	2,447	0.014

Source: Processed data, 2026

Explanation of analysis results:

- The first hypothesis (**H1**) is **accepted**, namely that Transformational Leadership has a positive and significant influence. to Job satisfaction with path coefficient (0.301) and p-value (0.000 < 0.05). Every increase in Transformational Leadership will increase Job Satisfaction.
- The second hypothesis (**H2**) is **accepted**, namely that work involvement has a positive and significant effect. to Job satisfaction with path coefficient (0.274) and p-value (0.001 < 0.05). Every increase in Job Engagement will increase Job Satisfaction his.
- The third hypothesis (**H3**) is **accepted**, namely that Self Efficacy has a positive and significant influence. to Job satisfaction with path coefficient (0.316) and p-value (0.000 < 0.05). Every increase in Self Efficacy will increase Job Satisfaction his.
- The fourth hypothesis (**H4**) is **accepted**, namely that Transformational Leadership has a positive and significant influence. to Employee performance with a path coefficient of 0.202 and a p-value of 0.026 < 0.05. Each increase in Transformational Leadership will increase Employee Performance. his.
- The fifth hypothesis (**H5**) is **accepted**, namely that work involvement has a positive and significant effect. to Employee performance with a path coefficient of 0.244 and a p-value of 0.005 < 0.05. Every increase in work engagement will increase employee performance. his.

- f) The sixth hypothesis (**H6**) is **accepted**, namely that Self Efficacy has a positive and significant influence.to Employee performance with a path coefficient of 0.261 and a p-value of $0.004 < 0.05$. Every increase in self-efficacy will increase employee performance. his.
- g) The seventh hypothesis (**H7**) is **accepted**, namely Job Satisfaction has a positive and significant effect on employee performance with a path coefficient of 0.222 and a p-value of $0.014 < 0.05$. Each increase in Job Satisfaction then it will increase employee performance.

2) Indirect Effect

Table 9. Indirect Effect

Variables	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
X1.Transformational_Leadership -> Y1.Job Satisfaction -> Y2.Employee Performance	0.067	0.032	2,093	0.036
X2.Job Engagement -> Y1.Job Satisfaction -> Y2.Employee Performance	0.061	0.031	1,980	0.048
X3.Self Efficacy -> Y1.Job Satisfaction -> Y2.Employee Performance	0.070	0.036	1,975	0.048

Source: Processed data, 2026

Explanation of analysis results:

- a) **Eighth** hypothesis (H8) is accepted, namely that Job Satisfaction is able to mediate the influence of Transformational Leadership on Employee Performance with a path coefficient (0.067) and p-value ($0.036 < 0.05$).
- b) The ninth hypothesis (**H9**) is **accepted**, namely that Job Satisfaction is able to mediate the influence of Job Involvement on Employee Performance with a path coefficient (0.061) and p-value ($0.048 < 0.05$).
- c) The tenth hypothesis (**H10**) is **accepted**, namely that Job Satisfaction is able to mediate the influence of Self Efficacy on Employee Performance with a path coefficient (0.070) and p-value ($0.048 < 0.05$).

Discussion

Transformational Leadership on Job Satisfaction

The results of the analysis show that Transformational Leadership has a positive and significant influence. on Job Satisfaction of PT Trubaindo Coal Mining employees in West Kutai Regency . This is supported by the results of the structural model test which shows a positive coefficient direction and an R-square value of Job Satisfaction of 0.561, which means that more than half of the variation in job satisfaction can be explained by transformational leadership, work involvement, and self-efficacy . In addition, the effect size (f^2) value of 0.128 indicates that transformational leadership makes a real contribution even though it is in the small to medium category, so it still has an important role in shaping employee job satisfaction.

Conceptually, transformational leadership focuses on a leader's ability to provide inspiration, individual attention, and intellectual stimulation to subordinates. Leaders who are able to build supportive working relationships, instill trust, and engage employees in achieving the organization's vision will create a positive work experience. These conditions foster a sense of appreciation, emotional attachment, and satisfaction with work and the work environment. In the context of the high-pressure mining industry, an inspirational leadership style is a crucial factor in maintaining psychological balance and increasing employee job satisfaction.

Thus, it can be concluded that transformational leadership plays a crucial role in increasing employee job satisfaction. The better a superior implements a transformational leadership style, the higher the level of job satisfaction experienced by employees. Leaders who provide motivation, individual attention, and a clear work vision will foster feelings of appreciation, comfort, and meaning in their work, thus directly contributing to increased employee job satisfaction within the organization.

Transformational Leadership on Employee Performance

The analysis results show that transformational leadership has a positive and significant effect on employee performance at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by the results of the structural model test with an R-square value of employee performance of 0.602, which indicates that more than 60% of employee performance variations can be explained by transformational leadership, work engagement, self-efficacy, and job satisfaction. However, the effect size value ($f^2 = 0.057$) is in the small category, indicating that the direct contribution of transformational leadership to performance is limited but still has a significant role in improving employee work performance.

Thus, it can be concluded that job engagement plays a significant role in increasing employee job satisfaction. The higher the level of job engagement, the greater the perceived job satisfaction. Employees who feel emotionally engaged, find their work meaningful, and are actively involved in work activities tend to be more satisfied with their jobs and work environment, thus contributing to the creation of positive and productive working conditions within the organization.

Job Involvement on Job Satisfaction

The analysis results show that job engagement has a positive and significant effect on employee job satisfaction at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by the results of the structural model test with an R-square value of 0.561 for job satisfaction, indicating that more than half of the variation in job satisfaction can be explained by transformational leadership, job engagement, and self-efficacy. Although the effect size value ($f^2 = 0.098$) is in the small category, this finding still confirms that job engagement makes a significant contribution in shaping employee perceptions of job satisfaction.

Thus, it can be concluded that self-efficacy plays a crucial role in increasing employee job satisfaction. The greater an employee's confidence in their ability to complete tasks and face work challenges, the higher their perceived job satisfaction. Employees with high self-confidence tend to be better able to manage work pressure, feel more competent, and have a positive assessment of their work, thus creating a more comfortable working environment and supporting sustainable job satisfaction.

Job Engagement on Employee Performance

The analysis results show that work engagement has a positive and significant effect on employee performance at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by the results of the structural model test with an R-square value of employee performance of 0.602, which indicates that more than 60% of employee performance variations can be explained by transformational leadership, work engagement, self-efficacy, and job satisfaction. Although the effect size value ($f^2 = 0.078$) is in the small category, this finding still shows that work engagement makes a positive contribution to improving performance, although it is not a direct dominant factor.

Thus, it can be concluded that work engagement has a positive and significant impact on employee performance. The higher the level of work engagement, the better the performance. Employees with high work ethic, dedication, and engagement tend to exhibit more productive,

responsible, and goal-oriented work behaviors, thereby sustainably improving employee performance within the organization.

Self-Efficacy on Job Satisfaction

The results of the analysis show that self-efficacy has a positive and significant effect on employee job satisfaction at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by the results of the structural model test with an R-square value of job satisfaction of 0.561, which indicates that more than half of the variation in job satisfaction can be explained by transformational leadership, work involvement, and self-efficacy. In addition, the effect size value ($f^2 = 0.136$) is the highest among other variables, which confirms that employee self-confidence is a relatively strong factor in shaping job satisfaction.

Thus, it can be concluded that self-efficacy has a positive and significant effect on employee job satisfaction. The higher an employee's confidence in their ability to complete a task, the higher their perceived job satisfaction. Employees with high self-efficacy tend to be more confident, able to manage work pressure, and have a positive assessment of their work, thus creating a more comfortable working environment and supporting sustainable job satisfaction.

Self-Efficacy on Employee Performance

The analysis results show that self-efficacy has a positive and significant effect on employee performance at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by the results of the structural model test with an R-square value of employee performance of 0.602, which indicates that more than 60% of employee performance variations can be explained by transformational leadership, work engagement, self-efficacy, and job satisfaction. However, the effect size value ($f^2 = 0.090$) is in the small category, which indicates that although self-efficacy has an effect, its contribution to performance is not directly dominant.

Thus, it can be concluded that self-efficacy has a positive and significant impact on employee performance. The higher an employee's confidence in their abilities, the better their performance. Employees with high self-efficacy tend to be more confident, persistent in facing challenges, and proactive in completing tasks, thus enabling them to consistently and sustainably improve their performance in the workplace.

Job Satisfaction towards Employee Performance

The analysis results show that job satisfaction has a positive and significant effect on employee performance at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by the results of the structural model test with an R-square value of employee performance of 0.602, which indicates that employee performance is influenced by transformational leadership, work engagement, self-efficacy, and job satisfaction. However, the effect size value ($f^2 = 0.054$) is in the small category, which indicates that job satisfaction has a positive contribution to performance, but is not a direct dominant factor.

Thus, it can be concluded that job satisfaction has a positive and significant impact on employee performance. The higher the level of job satisfaction experienced by employees, the better their performance. Employees who are satisfied with their jobs tend to have higher motivation, stronger loyalty, and a commitment to achieving organizational goals, thus driving sustainable performance improvement in the workplace.

Transformational Leadership on Employee Performance through Job Satisfaction

The results of the analysis show that transformational leadership has a positive and significant effect on employee performance through job satisfaction as a mediating variable at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by the results of the indirect

path test which is positive and the R-square value of employee performance is 0.602, which indicates that most of the variation in employee performance can be explained by transformational leadership, work engagement, self-efficacy, and job satisfaction. In addition, the effect size value of the direct effect of transformational leadership on performance ($f^2 = 0.057$) is smaller than its effect on job satisfaction ($f^2 = 0.128$), thus indicating that job satisfaction is an important mechanism in strengthening the influence of leadership on employee performance.

Thus, it can be concluded that transformational leadership has a positive and significant effect on employee performance through job satisfaction as a mediating variable. The better the implementation of transformational leadership, the higher employee job satisfaction, which ultimately leads to improved performance. Leaders who are able to provide motivation, individual attention, and build positive working relationships will create a supportive psychological environment, enabling optimal and sustainable employee performance improvement.

Job Engagement on Employee Performance through Job Satisfaction

The analysis results show that job engagement has a positive and significant effect on employee performance through job satisfaction as a mediating variable at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by a positive indirect effect and an R-square value of 0.602 for employee performance, indicating that variations in employee performance can be explained by job engagement along with other variables. Although the direct effect of job engagement on performance has a small effect size ($f^2 = 0.078$), the presence of job satisfaction as a mediator strengthens the relationship, so that job engagement still makes a significant contribution to improving employee performance.

Thus, it can be concluded that job engagement has a positive and significant effect on employee performance through job satisfaction as a mediating variable. The higher the level of employee engagement, the higher the perceived job satisfaction, which ultimately leads to improved performance. Employees who are emotionally and cognitively engaged in their work will be more motivated, have a sense of responsibility, and demonstrate a commitment to achieving targets, thus enabling optimal and sustainable performance improvement.

Self-Efficacy on Employee Performance through Job Satisfaction

The analysis shows that self-efficacy has a positive and significant effect on employee performance through job satisfaction as a mediating variable at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by a positive indirect effect and an R-square value of 0.602 on employee performance, indicating that the model is able to explain variations in employee performance strongly. Although the direct effect of self-efficacy on performance is in the small category ($f^2 = 0.090$), the effect of self-efficacy on job satisfaction is relatively larger ($f^2 = 0.136$), thus indicating that job satisfaction is an important pathway in strengthening the relationship between self-efficacy and employee performance.

The analysis shows that self-efficacy has a positive and significant effect on employee performance through job satisfaction as a mediating variable at PT Trubaindo Coal Mining, West Kutai Regency. This is supported by a positive indirect effect and an R-square value of 0.602 on employee performance, indicating that the model is able to explain variations in employee performance strongly. Although the direct effect of self-efficacy on performance is in the small category ($f^2 = 0.090$), the effect of self-efficacy on job satisfaction is relatively larger ($f^2 = 0.136$), thus indicating that job satisfaction is an important pathway in strengthening the relationship between self-efficacy and employee performance.

In the context of PT Trubaindo Coal Mining, which is characterized by high-risk work and significant operational pressure, self-efficacy is a crucial factor in maintaining employee confidence to work safely and effectively. However, self-confidence alone is not enough to

produce optimal performance if it is not accompanied by a sense of satisfaction with the job and work environment. Employees who are confident in their abilities but dissatisfied with working conditions can experience decreased motivation, resulting in performance that does not increase optimally. Therefore, job satisfaction plays a strategic role as a mediator that ensures that an individual's psychological potential can be actualized in the form of high performance.

The practical implications of these findings suggest that companies need to develop HR management strategies that focus not only on improving employee competence and confidence but also on creating working conditions that foster job satisfaction. Training programs coupled with reward systems, superior support, and a fair work climate will strengthen self-efficacy and increase job satisfaction. Thus, the influence of self-efficacy on employee performance can be optimized through an integrated approach that combines individual psychological strengthening with organizational improvements, thereby encouraging sustainable performance.

Thus, it can be concluded that self-efficacy has a positive and significant effect on employee performance through job satisfaction as a mediating variable. The higher an employee's confidence in their abilities, the higher their perceived job satisfaction, which ultimately leads to improved performance. Employees with high self-efficacy and supported by satisfactory working conditions tend to be more confident, motivated, and able to demonstrate optimal and sustainable performance within the organization.

CONCLUSION

Based on the results of data analysis and discussion regarding the influence of Transformational Leadership, Work Involvement, and Self-Efficacy on Job Satisfaction and Employee Performance at PT Trubaindo Coal Mining, West Kutai Regency, the following conclusions can be drawn:

Transformational leadership has a positive and significant impact on employee job satisfaction. The better a superior implements a transformational leadership style, the higher the employee's job satisfaction. Leaders who provide motivation, individual attention, and a clear work vision foster feelings of appreciation and well-being at work.

Job engagement has a positive and significant impact on employee job satisfaction. Employees with high levels of job engagement tend to feel more satisfied with their jobs because they have a stronger emotional bond and a stronger sense of meaning in their work related to the tasks and roles they perform within the organization.

Self-efficacy has a positive and significant impact on employee job satisfaction. Employees' confidence in their ability to complete tasks increases self-confidence, reduces work stress, and strengthens positive job evaluations, thus increasing job satisfaction.

Transformational leadership has a positive and significant impact on employee performance. An inspirational and supportive leadership style can motivate employees to perform optimally, although its direct impact on performance is not as significant as its impact on employee psychology.

Job Engagement has a positive and significant impact on employee performance. Employees who are actively and emotionally engaged in their work demonstrate greater enthusiasm, dedication, and consistency, positively impacting individual performance.

Self-efficacy has a positive and significant impact on employee performance. Employees with high self-confidence tend to be more persistent, independent, and able to overcome work challenges, ultimately supporting improved employee performance in demanding work environments like the mining industry.

Satisfaction Work has a positive and significant effect on employee performance and mediates the influence of independent variables on performance. Job satisfaction acts as an intervening variable that strengthens the influence of

transformational leadership, work engagement, and *self-efficacy* on employee performance, so that performance improvements are more effective through prior improvement in employee psychological conditions.

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