

# Evaluation of the Influence of Transformational Leadership, Human Relations, and Work Ethic on ASN Performance in the Class I Railway Engineering Center

Putra Ramadhansyah, M. Chaerul Rizky

## Abstract

This study aims to evaluate the influence of Transformational Leadership, Human Relation, and Work Ethic on the Performance of ASN in the Class I Railway Engineering Center. The population in this study amounted to 140 ASN, and by using the Slovin formula at an error rate of 10%, a sample of 58 respondents was obtained which was selected through simple random sampling techniques. Data collection was carried out using a questionnaire with a Likert scale that has been tested for validity and reliability. The data analysis techniques used include descriptive statistical analysis, classical assumption tests (normality, multicollinearity, and heteroscedasticity tests), multiple linear regression analysis, t-tests (partial), F tests (simultaneous), and determination coefficient ( $R^2$ ) tests. The results of the study show that partially, Transformational Leadership, Human Relation, and Work Ethic have a positive and significant effect on ASN Performance. Simultaneously, the three independent variables also have a significant effect on ASN performance. The Adjusted R Square value of 0.666 shows that 66.6% of the variation in ASN Performance can be explained by these three variables, while the rest is influenced by other factors outside the research model. Work Ethic makes the greatest contribution in improving performance, followed by Human Relations and Transformational Leadership.

**Keywords:** Transformational Leadership, Human Relation, Work Ethic, ASN Performance.

Putra Ramadhansyah<sup>1</sup>

<sup>1</sup>Master of Management, Universitas Pembangunan Panca Budi, Indonesia

e-mail: [putrartup@gmail.com](mailto:putrartup@gmail.com)<sup>1</sup>

M. Chaerul Rizky<sup>2</sup>

<sup>2</sup>Master of Management, Universitas Pembangunan Panca Budi, Indonesia

e-mail: [mchaerulrizky@dosen.pancabudi.ac.id](mailto:mchaerulrizky@dosen.pancabudi.ac.id)<sup>2</sup>

2nd International Conference on Islamic Community Studies (ICICS)

Theme: History of Malay Civilisation and Islamic Human Capacity and Halal Hub in the Globalization Era

<https://proceeding.pancabudi.ac.id/index.php/ICIE/index>

## Introduction

The Medan Class I Railway Engineering Center as a Technical Implementation Unit under the Directorate General of Railways of the Ministry of Transportation has a vital responsibility in the supervision and technical guidance of railway safety in the Northern Sumatra region. The complexity of the tasks carried out, ranging from technical inspections of railway facilities and infrastructure, feasibility certification, to railway accident investigations, demands high and professional performance of civil servants. This is in line with Law Number 5 of 2014 concerning the State Civil Apparatus which mandates the need to improve the professionalism, integrity, and performance of civil servants in carrying out their duties and functions. According to (Mangkunegara, 2017), performance is the result of work achieved by employees based on set work standards, including aspects of quality, quantity, punctuality, and responsibility. Performance is the result of the actions or behaviors of employees that have an impact on their contribution to the organization, including in terms of the quality of services provided. Improving performance is the company's effort to encourage employee productivity to achieve the company's goals (Salsabilla et al., 2025). The achievement of optimal performance is inseparable from various factors that affect it, both from the aspects of leadership, interpersonal relationships, and the work attitude of the employees themselves.

Leadership style plays a vital role in creating a conducive work environment. Leadership style is a way of a certain ability pattern used by a leader in behaving, communicating, and interacting to influence, direct, encourage and control others or subordinates in order to do a job so as to achieve a goal (Gunawan & Rizky, 2024; Sembiring & Sitanggang, 2022). Leadership style is closely related to behavioral norms in a person when influencing the behavior of others (Lestari, 2024). Transformational leadership style is a style that leaders in companies use to influence employees so that work ethic increases (Marlina & Andri, 2023). According to (Robbins & Judge, 2017) transformational leadership is leaders who can motivate followers to execute and manage their own interests for the benefit of the organization with individualized friendliness, intellectual stimulation, and ideal influence will all result in extra effort from workers for better organizational effectiveness. Transformational leadership is a leadership style that not only emphasizes instruction, but also inspires, motivates, and exerts positive influence through clear vision, individualized attention, and intellectual stimulation. Leaders who are able to apply a leadership style that suits the company's situation and conditions can motivate employees to work better and achieve company goals (Pratiwi & Rizky, 2024).

In addition to leadership, the quality of human relations also plays a key role in creating a harmonious and productive work environment. Good human relations are characterized by effective communication, cooperation between colleagues, and mutual trust in carrying out tasks. Healthy relationships create a comfortable working atmosphere and support psychological well-being (Salsabilla et al., 2025). The theory of human relations developed by (Mayo, 1945) asserts that work productivity is determined not only by technical and material factors, but also by the quality of social and psychological relationships in the workplace. Effective communication, solid teamwork, and harmonious interpersonal relationships between superiors and fellow colleagues can create a positive work environment and support improved performance.

An internal factor that is no less important is the work ethic of employees. According to (Priansa, 2018) work ethic is a work ethic possessed by employees to be able to work better to obtain added value in a job. Work ethic reflects a person's attitude, views, and habits towards work which is manifested in the form of dedication, discipline, responsibility, and enthusiasm in carrying out duties. A strong work ethic helps the individual or employee to apply his or her values in his or her job duties. If values such as honesty, trust, skills, and loyalty are understood and implemented well in the work environment, this will help improve employee performance

in carrying out their duties (Lestari, 2024). Civil servants with a high work ethic tend to show initiative, productivity, and better work quality. Given the tasks directly related to mass transportation safety, a high work ethic is an absolute prerequisite for every employee.

Several previous studies have examined the influence of transformational leadership, human relations, and work ethic on employee performance partially or simultaneously. Transformational leadership style has been proven to have a positive effect on employee performance, the results of this study are in accordance with the opinion of (Irawati et al., 2023) (Salsabilla et al., 2025). However, research (Hasana & Helmi, 2023) states that transformational leadership has a negative effect on performance, as well as research (Oktaviana et al., 2023) with the results of research that human relations do not affect employee performance. The inconsistency of the findings of previous research shows that there is a research gap that needs to be studied. These differences in results indicate that the influence of transformational leadership, human relations, and work ethic on employee performance still does not provide uniform conclusions. Therefore, this research is important and feasible to provide the latest empirical evidence, enrich previous literature, and answer the inconsistencies of previous research results with different organizational contexts.

### **Literature Review Transformational Leadership**

According to Yukl, effective leadership is not only about providing direction, but also creating a positive work climate, empowering the community, and facilitating the development of individual and group potential (Sitanggang et al., 2025). Transformational leadership is a leadership style that is able to inspire, motivate, and drive positive change in an organization through strong vision, individualized attention, intellectual stimulation, and ideal influence. According to (Bass & Avolio, 2019) transformational leaders generate subordinate commitment and performance through the ability to set an example, build trust, and motivate employees to work beyond personal interests for organizational goals.

According to (Chang et al., 2017) transformational leadership is the most superior and influential leadership style because transformational leadership uses logical, active, and effective reasoning, is results-oriented and directs employees in good values and behaviors within the company. Transformational leadership is the process of influencing, giving new ideas, and setting an example to employees, so that they can achieve company goals and benefit the well-being of the company and employees (Purnomo & Nugroho, 2023).

### **Human Relation**

Human relations are relationships between individuals in an organization that reflect the quality of interaction, communication, cooperation, and harmony in the work environment. The theory of human relations pioneered by Elton Mayo emphasized that productivity is not only influenced by technical factors, but also by social and emotional factors formed through positive interactions in work groups (Mayo, 1945).

Good human relations are able to create work comfort, reduce conflicts, increase effective communication, and strengthen social support among employees. Hasibuan (2013) in (Marlina & Andri, 2023) states that human relations are harmonious relationships, created from awareness and willingness to combine individual desires for the sake of common interests, the goal is to produce strong enough integration, encourage productive and creative cooperation to achieve common goals.

### **Work Ethic**

Every company that wants to move forward will involve its members to improve the quality of its performance so that it can improve the quality of the company, thus every company must have a high work ethic principle. Ethos comes from the Greek language, which means attitude,

personality, disposition, character, and belief in something (Purnomo & Nugroho, 2023). Work ethic is a person's mental attitude, belief, and enthusiasm in carrying out their duties in a disciplined, responsible, and results-oriented manner. A high work ethic is characterized by diligence, discipline, integrity, and having the drive to provide the best results.

Work Ethic is a work ethic that is a characteristic of the belief and ability of a village apparatus to be willing to carry out their duties and activities with high enthusiasm to achieve organizational goals (Irawati et al., 2023). Ethos is also a component of fundamental judgment as an attitude towards oneself that is reflected in one's life. Work ethic has a strong relationship with a person's personality, actions, and character. so that what affects it is not far from a person's daily life and the surrounding environment (Lestari, 2024).

### Employee Performance

Performance is the result of work in terms of quality and quantity achieved by the apparatus in carrying out the duties according to the responsibilities given. According to (Mangkunegara, 2017), performance is the result of work achieved by employees based on set work standards, including aspects of quality, quantity, punctuality, and responsibility. (Afandi, 2018) states that performance is a result of work achieved by a person in a company in accordance with the authority and responsibility in achieving the company, does not violate the law and does not contradict morals and ethics. Employee performance is the result of individual work in an organization. On the other hand, organizational performance refers to the overall end result of work achieved by each organization (Lestari, 2024). Performance is a function of motivation and the ability to complete a task or work that a person should have a certain degree of willingness and ability level (Rizky, 2018).

### Research Methodology

This study uses a quantitative approach with the type of explanatory research, because it aims to explain the causal relationship between transformational leadership variables, human relations, and work ethic on the performance of ASN of the Medan Class I Railway Engineering Center. The quantitative approach was chosen because it is able to measure social phenomena objectively through statistical analysis (Sugiyono, 2019). The research population is all ASN of the Medan Class I Railway Engineering Center which totals 140 people. The determination of the number of samples was carried out using the Slovin formula with an error rate of 10%, so that a sample of 59 respondents was obtained, as recommended in sampling when the population is relatively small (Sevilla et al., 2007). The type of data used consists of primary data obtained through the dissemination of Likert scale questionnaires as well as secondary data in the form of agency documents and scientific literature. Data collection techniques were carried out through closed questionnaires, documentation, and literature studies to strengthen the theoretical validity of the research.

The data analysis technique used multiple linear regression with the help of SPSS software, to see how much influence independent variables have on dependent variables as suggested by (Ghozali, 2018). The analysis was carried out through validity, reliability, classical assumptions (normality, multicollinearity, heteroscedasticity), t-test, F-test, and determination coefficient. The multiple linear regression model used in this study is formulated as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Description:

- Y = Employee Performance
- X<sub>1</sub> = Transformational Leadership
- X<sub>2</sub> = Human Relation

|                             |                          |
|-----------------------------|--------------------------|
| $X_3$                       | = Work Ethic             |
| $\alpha$                    | = Constant               |
| $\beta_1, \beta_2, \beta_3$ | = Regression coefficient |
| $\varepsilon$               | = Error term             |

### Results Description of Research Object

The Class I Railway Engineering Center is a Technical Implementation Unit (UPT) under the Directorate General of Railways of the Ministry of Transportation which is the object of this research, with the main function of carrying out supervision, inspection, testing, and certification of railway facilities and infrastructure to ensure the safety of railway operations. As a class I hall, this agency has a wide coverage of the work area and a high volume of technical testing activities, involving civil servants with specific competencies in the field of railway engineering such as facilities inspectors, infrastructure examiners, and engineering experts. The center handles periodic inspections of locomotives, passenger trains, freight cars, rail lines, railway bridges, signaling systems, and station infrastructure in its operational areas, thus demanding high performance standards of civil servants given their critical role in maintaining the safety of millions of rail transportation users and supporting the smooth operation of the national rail-based logistics system.

### Validity Test

The validity test is used to ensure that each question item in the instrument is able to measure the variables that should be measured, by looking at the correlation between the item score and the total score (Sugiyono, 2019). An item is declared valid if the calculated  $r$  value is greater than the  $r$  of the table.

**Table 1.** Validity Test

| Variables                        | Indicators | r-hitung | r-tabel | Desc. |
|----------------------------------|------------|----------|---------|-------|
| Transformational Leadership (X1) | X1.1       | .609**   | .258    | Valid |
|                                  | X1.2       | .818**   | .258    | Valid |
|                                  | X1.3       | .648**   | .258    | Valid |
|                                  | X1.4       | .757**   | .258    | Valid |
|                                  | X1.5       | .639**   | .258    | Valid |
|                                  | X1.6       | .630**   | .258    | Valid |
|                                  | X1.7       | .573**   | .258    | Valid |
|                                  | X1.8       | .747**   | .258    | Valid |
| Human Relation (X2)              | X2.1       | .601**   | .258    | Valid |
|                                  | X2.2       | .664**   | .258    | Valid |
|                                  | X2.3       | .657**   | .258    | Valid |
|                                  | X2.4       | .720**   | .258    | Valid |
|                                  | X2.5       | .733**   | .258    | Valid |
|                                  | X2.6       | .563**   | .258    | Valid |
|                                  | X2.7       | .630**   | .258    | Valid |
|                                  | X2.8       | .572**   | .258    | Valid |
| Work Ethic (X3)                  | X3.1       | .627**   | .258    | Valid |

|                             |      |        |      |       |
|-----------------------------|------|--------|------|-------|
|                             | X3.2 | .565** | .258 | Valid |
|                             | X3.3 | .582** | .258 | Valid |
|                             | X3.4 | .703** | .258 | Valid |
|                             | X3.5 | .653** | .258 | Valid |
|                             | X3.6 | .390** | .258 | Valid |
| Employee<br>Performance (Y) | Y.1  | .711** | .258 | Valid |
|                             | Y.2  | .682** | .258 | Valid |
|                             | Y.3  | .631** | .258 | Valid |
|                             | Y.4  | .870** | .258 | Valid |
|                             | Y.5  | .884** | .258 | Valid |
|                             | Y.6  | .911** | .258 | Valid |
|                             | Y.7  | .869** | .258 | Valid |
|                             | Y.8  | .735** | .258 | Valid |

The results of the validity test showed that all indicators in the variables of Transformational Leadership (X1), Human Relations (X2), Work Ethic (X3), and ASN Performance (Y) had an r-calculation value greater than the r-table of 0.258, so that all items were declared valid. The r-table value was obtained from Pearson's Product Moment distribution table with degrees of freedom (df) =  $n - 2 = 58 - 2 = 56$  at a significance level of 5%, so that all instrument items were proven to have an adequate correlation with the total score of variables and were suitable for use in the study.

### Reliability Test

The reliability test aims to assess the consistency of research instruments through Cronbach's Alpha value which must be above 0.70 (Ghozali, 2018). Reliable instruments show that measurements are stable even if they are repeated times.

**Table 2.** Reliability Test

| Variables                        | Cronbach's Alpha | N of Items | Ket.     |
|----------------------------------|------------------|------------|----------|
| Transformational Leadership (X1) | .830             | 8          | Reliabel |
| Human Relation (X2)              | .784             | 8          | Reliabel |
| Work Ethic (X3)                  | .716             | 6          | Reliabel |
| Employee Performance (Y)         | .912             | 8          | Reliabel |

Based on the results of the reliability test, all research variables showed that Cronbach's Alpha value was above the minimum limit of 0.70, so that the instrument was declared reliable. The variables Transformational Leadership (0.830), Human Relations (0.784), Work Ethic (0.716), and ASN Performance (0.912) have a strong level of internal consistency, which means

that each item in the variable is able to produce stable and reliable measurements when used repeatedly.

### Descriptive Statistical Analysis

Descriptive Statistical Analysis is an analysis technique used to describe or describe the characteristics of research data through mean values, standard deviation, minimums, maximums, and frequency distributions (Sugiyono, 2019).

**Table 3.** Descriptive Statistical Analysis Descriptive

| Statistics                  | N  | Minimum | Maximum | Mean  | Std. Deviation |
|-----------------------------|----|---------|---------|-------|----------------|
| Transformational Leadership | 58 | 18      | 40      | 30.50 | 5.605          |
| Human Relation              | 58 | 18      | 40      | 32.98 | 4.286          |
| Work Ethic                  | 58 | 16      | 29      | 23.86 | 2.929          |
| Employee Performance        | 58 | 11      | 40      | 31.47 | 6.503          |
| Valid N (listwise)          | 58 |         |         |       |                |

Based on the results of descriptive statistical analysis in Table 3, it can be seen that all research variables consisting of Transformational Leadership, Human Relations, Work Ethic, and ASN Performance (Employee Performance) have the same number of respondents, namely 58 ASN in the Class I Railway Engineering Center. followed by Employee Performance (Mean = 31.47) and Transformational Leadership (Mean = 30.50), while Work Ethic had the lowest average of 23.86. The highest variation in data was found in Employee Performance (Std. Dev = 6,503), which indicated a heterogeneity of performance perception among respondents, while the lowest variation was found in Work Ethic (Std. Dev = 2,929) which showed a relatively uniform consistency in the perception of work ethic. The minimum and maximum value ranges show that respondents' perceptions of each variable vary, but remain in the category of reasonable assessment according to the scale of the research used (Sugiyono, 2019).

### Classic Assumption Test

The classical assumption test is used to ensure that the regression model meets the statistical requirements so that the results of the analysis are not biased (Ghozali, 2018).

#### Normality Test

The normality test aims to assess whether residual data is normally distributed, generally using the Kolmogorov–Smirnov test or the P-P Plot graph. The data is declared normal when the significance value > 0.05.

**Table 4.** Kolmogorov–Smirnov

#### One-Sample Kolmogorov-Smirnov Test

|   | Unstandardized Residual |
|---|-------------------------|
| N | 58                      |

|                                               |                |            |
|-----------------------------------------------|----------------|------------|
| Normal Parameters <sup>a,b</sup>              | Mean           | .0000000   |
|                                               | Std. Deviation | 3.65751961 |
| Most Extreme Differences                      | Absolute       | .104       |
|                                               | Positive       | .104       |
|                                               | Negative       | -.096      |
| Test Statistic                                |                | .104       |
| Asymp. Sig. (2-tailed) <sup>c</sup>           |                | .190       |
| Monte Carlo Sig. (2-tailed) <sup>d</sup> Sig. |                | .118       |
| 99% Confidence Interval                       | Lower Bound    | .109       |
|                                               | Upper Bound    | .126       |

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

d. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 2000000.

The results of the Kolmogorov–Smirnov normality test showed a significance value of 0.190 which was greater than 0.05, so that the residual data was declared to be normally distributed. Thus, the regression model meets the assumption of normality.

### Heteroscedasticity Test

The heteroscedasticity test checks whether there is an unevenness of residual variance between observations, which is usually tested by the Glejser or Scatterplot method. The model is said to be heteroscedasticity-free when the significance value > 0.05.

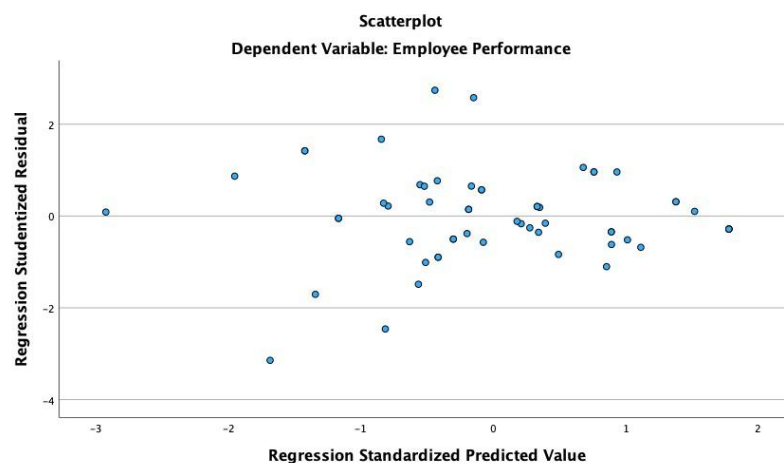


**Figure 1.** Scatterplot

Based on Figure 2 of the Scatterplot, it can be seen that the residual dots are randomly spread above and below the zero line without forming a specific pattern. This random distribution pattern shows that the regression model does not experience heteroscedasticity, so the residual variance can be said to be homogeneous and meets classical assumptions.

### Multicollinearity Test

The multicollinearity test was used to determine whether there was a high correlation between free variables, with an indicator of VIF values of  $< 10$  and Tolerance  $> 0.10$  (Ghozali, 2018). If it meets these criteria, the model is declared free of multicollinearity.

**Table 3.** Multicollinearity Test

**Coefficients<sup>a</sup>**

| Model |                             | Collinearity Statistics |       |
|-------|-----------------------------|-------------------------|-------|
|       |                             | Tolerance               | VIF   |
| 1     | Transformational Leadership | .413                    | 2.424 |
|       | Human Relation              | .394                    | 2.539 |
|       | Work Ethic                  | .524                    | 1.910 |

a. Dependent Variable: Employee Performance

The results of the multicollinearity test showed that all independent variables had a Tolerance value above 0.10 and a VIF value below 10, namely Transformational Leadership (VIF 2.424), Human Relations (VIF 2.539), and Work Ethic (VIF 1.910). Thus, it can be concluded that there is no multicollinearity between independent variables, so the regression model is feasible to use.

### Multiple Linear Regression Analysis

Multiple linear regression is used to test the influence of several independent variables on dependent variables simultaneously with regression equations as a reference (Sugiyono, 2019). This analysis produces a coefficient that describes the direction and magnitude of the influence of each variable.

**Table 4.** Multiple Linear Regression Analysis Coefficients<sup>a</sup>

| Model                       | Unstandardized Coefficients |            | Standardized Coefficients | t      | Sig. |
|-----------------------------|-----------------------------|------------|---------------------------|--------|------|
|                             | B                           | Std. Error | Beta                      |        |      |
| 1 (Constant)                | -12.433                     | 4.450      |                           | -2.794 | .007 |
| Transformational Leadership | .291                        | .138       | .251                      | 2.105  | .040 |
| Human Relation              | .558                        | .185       | .368                      | 3.018  | .004 |
| Work Ethic                  | .696                        | .235       | .313                      | 2.963  | .005 |

a. Dependent Variable: Employee Performance

Based on the table of multiple linear regression analysis results, the regression equation is obtained as follows:

$$Y = -12.433 + 0.291X_1 + 0.558X_2 + 0.696X_3$$

The constant value (-12.433) indicates that if the variables of Transformational Leadership ( $X_1$ ), Human Relations ( $X_2$ ), and Work Ethic ( $X_3$ ) are considered constant or unchanged, then the basic value of ASN Performance ( $Y$ ) is at -12.433. This negative constant value indicates

that the three independent variables have an important role in improving the performance of ASN at the Class I Railway Engineering Center.

The regression coefficient of Transformational Leadership (X1) of 0.291 means that every 1 unit increase in the Transformational Leadership variable will increase the performance of ASN by 0.291, assuming the other variables are fixed.

The Human Relation regression coefficient (X2) of 0.558 shows that every 1 unit increase in the Human Relation variable will increase ASN Performance by 0.558, assuming the other variables are constant.

The Work Ethic regression coefficient (X3) of 0.696 indicates that if the Work Ethic variable increases by 1 unit, then the performance of ASN will also increase by 0.696, assuming that other independent variables do not change.

### T test (Partial)

The t-test is used to test the influence of each independent variable partially on the dependent variable. The variable is stated to have a significant effect if the value of t is calculated  $> t$  table or  $\text{sig} < 0.05$  (Ghozali, 2018).

**Table 5.** Partial Test (t)

**Coefficients<sup>a</sup>**

| Model                       | Unstandardized Coefficients |            | Standardized Coefficients |        | Sig. |
|-----------------------------|-----------------------------|------------|---------------------------|--------|------|
|                             | B                           | Std. Error | Beta                      | t      |      |
| 1 (Constant)                | -12.433                     | 4.450      |                           | -2.794 | .007 |
| Transformational Leadership | .291                        | .138       | .251                      | 2.105  | .040 |
| Human Relation              | .558                        | .185       | .368                      | 3.018  | .004 |
| Work Ethic                  | .696                        | .235       | .313                      | 2.963  | .005 |

a. Dependent Variable: Employee Performance

The t-test is used to test the influence of each independent variable partially on the dependent variable. The variable is declared to have a significant effect if the value of t is calculated  $> t$  of the table or the significance value  $< 0.05$  (Ghozali, 2018). With the number of samples ( $n$ ) = 58 and the significance level  $\alpha = 0.05$ , and the degree of freedom ( $df$ ) =  $n - k - 1 = 58 - 3 - 1 = 54$ , the table t value of 2.005 was obtained. Based on Table 5, the results of the partial t-test can be interpreted as follows:

The test results showed that the Transformational Leadership variable had a calculated t-value of  $2.105 > \text{table } 2.005$  with a significance value of  $0.040 < 0.05$ . This shows that Transformational Leadership has a positive and significant effect on the Performance of ASN

at the Class I Railway Engineering Center. These findings confirm that a leadership style that is able to inspire, motivate, and provide a clear vision to subordinates will encourage optimal employee performance improvement.

The test results showed that the Human Relations variable had a calculated t-value of  $3.018 > t_{table} 2.005$  with a significance value of  $0.004 < 0.05$ . This shows that Human Relations has a positive and significant effect on the Performance of ASN at the Class I Railway Engineering Center. These results prove that harmonious interpersonal relationships, effective communication, and good teamwork in the work environment are key factors in increasing the productivity and performance of ASN.

The test results showed that the Work Ethic variable had a calculated t-value of  $2.963 > t_{table} 2.005$  with a significance value of  $0.005 < 0.05$ . This shows that Work Ethic has a positive and significant effect on the Performance of ASN at the Class I Railway Engineering Center. The regression coefficient of 0.696 (the highest among the three variables) indicates that every increase in one unit of Work Ethic will increase the Performance of ASN by 0.696 units. These findings confirm that a professional attitude, dedication, commitment, and high responsibility for work are the strongest determinants in encouraging the achievement of better ASN performance.

### F Test (Simultaneous)

F tests the influence of all independent variables together on the dependent variables. The model is said to be significant if the value of F is calculated  $> F_{table}$  or  $sig < 0.05$  (Sugiyono, 2019).

**Table 6.** Simultaneous Test (F)

#### ANOVA<sup>a</sup>

| Model |            | Sum of Squares | df | Mean Square | F      | Sig.               |
|-------|------------|----------------|----|-------------|--------|--------------------|
| 1     | Regression | 1647.916       | 3  | 549.305     | 38.901 | <.001 <sup>b</sup> |
|       | Residual   | 762.515        | 54 | 14.121      |        |                    |
|       | Total      | 2410.431       | 57 |             |        |                    |

a. Dependent Variable: Employee Performance b. Predictors: (Constant), Work Ethic, Transformational Leadership, Human Relation

The F test is used to test the influence of all independent variables simultaneously (together) on the dependent variables. Independent variables are declared to have a significant effect simultaneously if the value of F is calculated  $> F_{table}$  or the significance value  $< 0.05$  (Ghozali, 2018). With the number of samples ( $n$ ) = 58, the number of independent variables ( $k$ ) = 3, and the significance level of  $\alpha = 0.05$ , as well as the degree of freedom of the numerator ( $df1$ ) =  $k = 3$  and the degree of freedom of the denominator ( $df2$ ) =  $n - k - 1 = 54$ , the value of F of the table was obtained of 2.78.

Based on Table 6, the results of the F test showed an F value of  $38.901 > F_{table} 2.78$  with a significance value of  $< 0.001$  ( $p < 0.05$ ). This shows that the variables of Transformational Leadership, Human Relation, and Work Ethic simultaneously have a positive and significant effect on the Performance of ASN at the Class I Railway Engineering Center. The Sum of Squares regression value of 1,647,916 shows the magnitude of the variation in ASN Performance that can be explained by the three independent variables, while the residual Sum of Squares of 762,515 shows a variation that cannot be explained by the model. The mean square regression of 549.305 which is much larger than the residual mean square of 14.121 indicates

that the regression model formed has a good fit in explaining the relationship between independent variables and dependent variables.

The results of this F test prove that the combination of the application of Transformational Leadership, harmonious Human Relations coaching, and strengthening a high work ethic together makes a significant contribution to improving ASN Performance, so that these three aspects need to be managed and developed to optimize organizational performance within the Class I Railway Engineering Center.

### Coefficient of Determination ( $R^2$ )

The coefficient of determination ( $R^2$ ) is used to measure the ability of independent variables to explain the variation of dependent variables. A value of  $R^2$  close to 1 indicates that the model has strong predictive capabilities (Ghozali, 2018).

**Table 7.** Coefficient of Determination ( $R^2$ )

#### Model Summary<sup>b</sup>

| Model | R                 | R Square | Adjusted Square | R | Std. Error of the Estimate |
|-------|-------------------|----------|-----------------|---|----------------------------|
| 1     | .827 <sup>a</sup> | .684     | .666            |   | 3.758                      |

a. Predictors: (Constant), Work Ethic, Transformational Leadership, Human Relation b. Dependent Variable: Employee Performance

Based on the results of the determination coefficient, the Adjusted R Square value of 0.666 shows that 66.6% of the variation in ASN Performance can be explained by the variables of Transformational Leadership, Human Relation, and Work Ethic. The remaining 33.4% was influenced by other factors outside the research model.

### Conclusion

This research reveals that Transformational Leadership, Human Relation, and Work Ethic have an important role in shaping and improving the performance of ASN within the Class I Railway Engineering Center. Harmonious human relations, effective communication, and solid teamwork create a conducive work climate that encourages productivity and better work quality. Meanwhile, a high work ethic reflected in a professional attitude, dedication, commitment, and responsibility for duties are the main foundations that drive ASN to make their best contribution to the organization.

The combination of these three factors provides a strong synergy in improving the performance of ASN, where transformational leaders create inspiration and direction, good human relationships build collaboration and social support, and a high work ethic ensures that the implementation of tasks is carried out with full integrity and responsibility. These findings confirm that improving the performance of civil servants cannot be achieved through just one aspect, but requires a holistic approach that integrates effective leadership, positive interpersonal relationships, and a strong professional attitude. Therefore, organizational management needs to develop a comprehensive strategy that strengthens all three dimensions simultaneously to achieve optimal and sustainable organizational performance.

### References

- [1] Afandi. (2018). *Manajemen Sumber Daya Manusia (Teori, Konsep dan Indikator)*. Nusa Media.

- [2] Bass, B. M., & Avolio, B. J. (2019). (2019). *Transformational Leadership Development: Manual for the Multifactor Leadership Questionnaire*. Consulting Psychologists Press.
- [3] Chang, J.-C., Lee, C.-Y., Wei, P.-Y., & Huang, W.-C. (2017). How Do Employees Inspire Innovative Work Behavior? Transformational Leadership And Work Motivation Perspectives. *2017 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, 1797–1801.  
<https://doi.org/10.1109/IEEM.2017.8290201>
- [4] Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25*. Badan Penerbit Universitas Diponegoro.
- [5] Gunawan, H., & Rizky, M. C. (2024). Pengaruh Gaya Kepemimpinan, Pelatihan Dan Pengembangan Karir Terhadap Retensi Karyawan Dengan Kepuasan Kerja Sebagai Variabel Intervening Pada PT Nusantara Power Engineering Medan. *Jurnal GICI : Jurnal Keuangan Dan Bisnis*, 16(2).
- [6] Hasana, N., & Helmi, S. (2023). Pengaruh Gaya Kepemimpinan Transformasional, Motivasi Kerja dan Disiplin Kerja terhadap Kinerja Karyawan PT Kereta Api Indonesia (Persero) Divisi Regional III Palembang. *SEIKO : Journal of Management & Business*, 6(3), 329–343.
- [7] Irawati, Badaruddin, & Daud, A. (2023). Pengaruh Kepemimpinan Transformasional, Etos Kerja Dan Efektivitas Komunikasi Terhadap Kinerja Perangkat Desa Di Kecamatan Gantarangkeke Kabupaten Bantaeng. *Jurnal Magister Manajemen Nobel Indonesia*, 4(3), 526–540.
- [8] Lestari, Y. (2024). *Pengaruh Gaya Kepemimpinan dan Etos Kerja Terhadap Kinerja Pegawai Di Kantor Dinas Kependudukan dan Pencatatan Sipil Kabupaten Kuantan Singingi*. Universitas Islam Negeri Sultan Syarif Kasim Riau.
- [9] Mangkunegara, A. P. (2017). *Manajemen Sumber Daya Manusia Perusahaan*. Remaja Rosdakarya.
- [10] Marlina, N., & Andri, S. (2023). Pengaruh Human Relation Dan Gaya Kepemimpinan Transformasional Terhadap Etos Kerja Karyawan Pada PT. Nusa Guna Prima Jaya Kecamatan Ungar Kabupaten Karimun. *Journal on Education*, 5(4), 15380–15388.
- [11] Mayo, E. (1945). *The Social Problems of an Industrial Civilization*. Harvard University Press.
- [12] Oktaviana, N. N., Sutrisno, & Utami, R. H. U. (2023). Pengaruh Human Relation, Disiplin Kerja Dan Kepuasan Kerja Terhadap Kinerja Karyawan Pada PT Nasmoco Karangjati Semarang. *Equivalent : Journal of Economic, Accounting and Management*, 1(2), 93–102. <https://doi.org/https://doi.org/10.61994/equivalent.v1i2.48>
- [13] Pratiwi, A., & Rizky, M. . C. (2024). Analisis Gaya Kepemimpinan, Employee Engagement dan Kepuasan Kerja Terhadap Kinerja Karyawan pada PT Sarana Baja Perkasa Medan. *MANEGGIO: Jurnal Ilmiah Magister Manajemen*, 7(2), 161–171.
- [14] Priansa, D. (2018). *Perencanaan & Pengembangan SDM*. Alfabeta.
- [15] Purnomo, G. E. A. P., & Nugroho, N. E. (2023). Pengaruh Kepemimpinan Transformasional, Etos Kerja, Dan Disiplin Kerja Terhadap Kinerja Karyawan Pada PT Sarana Surya Sakti. *Jurnal Ilmu Dan Riset Manajemen*, 12(8).
- [16] Rizky, M. . C. (2018). Pengaruh Loyalitas Pegawai, Motivasi Intrinsik Dan Kepribadian Ekstrovet Terhadap Kinerja (Studi Pada Pegawai Tetap Universitas Pembangunan Panca Budi Medan). *Jurnal Manajemen Tools*, 9(1), 53–66.
- [17] Robbins, P. S., & Judge, T. A. (2017). *Organizational Behaviour, Edisi 13, Jilid 1*. Salemba Empat.
- [18] Salsabilla, J. B., Sumartik, S., & Firdaus, V. (2025). Pengaruh Kepemimpinan Tranformasional, Human Relation dan Etos Kerja Terhadap Kinerja Karyawan melalui

- Kepuasan Kerja. *Permana : Jurnal Perpajakan, Manajemen, Dan Akuntansi*, 17(3), 725–744.
- [19] Sembiring, F., & Sitanggang, D. (2022). Pengaruh Gaya Kepemimpinan, Pengembangan Karir dan Kepuasan Kerja terhadap Kinerja Karyawan pada PT Perkasa Internusa Mandiri Medan. *Jurnal Manajemen Dan Bisnis*, 52–68. <https://doi.org/10.54367/jmb.v22i1.1729>
- [20] Sevilla, C. G., Ochave, J. A., Punsalan, T. G., Regala, B. P., & Uriarte, G. G. (2007). *Research Methods*. Rex Book Store.
- [21] Sitanggang, D. I., Rizky, M. C., Gulo, T. N., Simanjuntak, Y., & Zendrato, A. (2025). Participatory Leadership and Motivation Boost Rural Community Productivity. *Indonesian Journal of Innovation Studies*, 26(3). <https://doi.org/https://doi.org/10.21070/ijins.v26i3.1428>
- [22] Sugiyono. (2019). *Metode Penelitian Dan Pengembangan Research Dan Development*. Alfabeta.