# Determinan on the Quality of Human Resources

**Anton Sobiri, Kholilul Kholik , Sri Rahayu**

**Abstract**

This study aims to determine and analyze the influence of Transformational Leadership and Work Motivation on the Quality of Human Resources (HR) among employees of PKS Timur PTPN IV Regional II, both partially and simultaneously. The research method used is a quantitative associative approach with multiple linear regression analysis. The population of this study consisted of all 71 employees of PKS Timur PTPN IV Regional II, using a saturated sampling (census) technique, so that the entire population was used as the research sample. Data were collected through questionnaires using a 1-5 Likert scale and analyzed using validity tests, reliability tests, classical assumption tests, and hypothesis testing (t-test and F-test) with the aid of statistical software. The results show that all instrument items were valid and reliable (Cronbach's Alpha X1 = 0.874; X2 = 0.852; Y = 0.856). The regression analysis produced the equation Y = -0.541 + 0.269X1 + 0.505X2. The t-test results indicate that Transformational Leadership has a positive and significant effect on HR Quality (t count 5.142 > t table 1.995; sig. 0.000 < 0.05), and Work Motivation has a positive and significant effect on HR Quality (t count 8.823 > t table 1.995; sig. 0.000 < 0.05). The F-test results show that Transformational Leadership and Work Motivation simultaneously have a significant effect on HR Quality (F count 247.0 > F table 3.132; sig. 0.000 < 0.05), with a coefficient of determination ($R^2$) of 0.879, meaning 87.9% of the variation in HR Quality can be explained by both independent variables, while the remaining 12.1% is explained by other variables outside the model. Work Motivation contributes a greater effective contribution (56.72%) compared to Transformational Leadership (31.18%). This study implies that jointly improving transformational leadership quality and work motivation is an important strategy for enhancing human resource quality within plantation companies.

**Keywords:** Transformational Leadership, Work Motivation, Human Resource Quality, Multiple Linear Regression

Anton Sobirin[1]
[1]Master of Management Student, Universitas Pembangunan Pancabudi,Indonesia
e-mail: sobirinanton@gmail.com

Kholilul Kholik [2], Sri Rahayu[3]
[2,3]Universitas Pembangunan Panca Budi Indonesia
e-mail: kholilulkholik@dosen.pancabudi.ac.id, srirahayu@dosen.pancabudi.ac.id
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## Introduction

Human resources (HR) are the most strategic asset for any organization, including plantation companies such as PT Perkebunan Nusantara IV (PTPN IV) Regional II. The company's success in achieving production targets, operational efficiency, and competitiveness in the palm oil industry depends heavily on the quality of its human resources. Good HR quality is characterized by competence, skills, work attitude, and employees' ability to adapt to increasingly complex job demands, particularly within a Palm Oil Mill (PKS) environment that requires precision, discipline, and a high level of technical mastery.

PKS Timur PTPN IV Regional II, as one of the palm oil processing business units, faces the challenge of continuously improving the quality of its human resources in order to support the productivity and quality of the Crude Palm Oil (CPO) produced. However, improvements in HR quality do not occur on their own; rather, they are influenced by various factors, including the leadership style applied by superiors and the level of work motivation possessed by employees themselves.

Transformational leadership is regarded as one of the most effective leadership styles for driving positive change in employees. Through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration, a transformational leader is able to raise morale, build self-confidence, and encourage employees to continuously develop their competencies and quality of work. On the other hand, work motivation also plays an important role because it drives employees to work optimally, take responsibility, and maintain a strong desire to keep learning and developing, which ultimately impacts the overall improvement of human resource quality.

Based on preliminary field observations, there are indications that some employees of PKS Timur PTPN IV Regional II still show variation in work initiative, discipline, and the ability to complete tasks according to established quality standards. This condition is presumed to be related to how the leadership style is applied by direct supervisors and how much work motivation employees feel in carrying out their daily duties.

Based on the above description, the researcher is interested in conducting a study entitled "The Influence of Transformational Leadership and Work Motivation on the Quality of Human Resources (A Study on Employees of PKS Timur PTPN IV Regional II)" in order to empirically determine and analyze the extent to which these two variables affect the quality of human resources within the company.

## Literature Review

### 2.1 Transformational Leadership

Transformational leadership is a leadership style that is able to inspire and motivate subordinates to achieve performance beyond expectations by transforming their values, beliefs, and needs toward better outcomes. Bass and Avolio developed this concept through four key dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Transformational leaders are seen as capable of building trust, respect, and loyalty among subordinates, thereby encouraging subordinates to work beyond their personal interests for the sake of organizational goals.

In the context of this study, the indicators of Transformational Leadership used include:

1. the leader's ability to act as a role model,
2. the ability to provide inspiration and motivation to subordinates,
3. the ability to encourage creativity and innovation among subordinates in solving problems, and
4. the leader's attention to the individual development needs of employees.

### 2.2 Work Motivation

Work motivation is a drive, whether originating from within an individual (intrinsic) or from outside (extrinsic), that moves an individual to work optimally in order to achieve certain

goals. Relevant motivation theories include Maslow's hierarchy of needs, Herzberg's two-factor theory (hygiene and motivator factors), and Vroom's expectancy theory, which emphasizes that motivation arises from a person's expectation regarding the outcome of their effort.

The indicators of Work Motivation used in this study include:

1. the need for recognition of work results,
2. the drive to achieve and develop oneself,
3. supportive working conditions, and
4. harmonious working relationships with colleagues and supervisors.

**2.3 Quality of Human Resources**

The quality of human resources refers to the level of ability, skill, attitude, and knowledge possessed by employees in carrying out their duties and responsibilities effectively and efficiently. High HR quality is reflected in work productivity, discipline, the ability to adapt to change, and commitment to achieving organizational goals. Improvements in HR quality can be achieved through education and training, work experience, and supporting factors such as effective leadership and high work motivation.

The indicators of HR Quality used in this study include:

1. competence and work skills,
2. attitude and work ethic, and
3. the ability to adapt and develop oneself according to job demands.

**2.4 Research Methodology**

This study uses a quantitative approach with a causal-associative research type, which aims to determine the influence between two or more independent variables and one dependent variable. This study aims to test the influence of Transformational Leadership (X1) and Work Motivation (X2) on the Quality of Human Resources (Y) among employees of PKS Timur PTPN IV Regional II.

**2.5 Population and Sample**

The population of this study consists of all employees of PKS Timur PTPN IV Regional II, totaling 71 people. The sampling technique used is saturated sampling (census), a sample determination technique in which the entire population is used as the sample. This technique was chosen because the population size is relatively small (fewer than 100 people), so all employees were used as respondents.

**2.6 Instrument Testing**

a. Validity Test: conducted by calculating the Pearson Product Moment correlation between each item's score and the total variable score. An item is declared valid if the calculated r value > the r table value at a 5% significance level.
b. Reliability Test: conducted by calculating the Cronbach's Alpha coefficient. An instrument is declared reliable if the Cronbach's Alpha value > 0.60.

**2.7 Hypothesis Testing**

a**.** t-Test (Partial): used to determine the individual influence of each independent variable on the dependent variable. H0 is rejected if the calculated t value > the t table value or the significance value < 0.05.
b. F-Test (Simultaneous): used to determine the joint influence of the independent variables on the dependent variable. H0 is rejected if the calculated F value > the F table value or the significance value < 0.05.
c. Coefficient of Determination ($R^2$): used to determine the extent to which the independent variables are able to explain the variation in the dependent variable.
d. Effective Contribution (EC) and Relative Contribution (RC): used to determine the effective and relative contribution of each independent variable to the total influence given.

**Results**

**3.1 Description of Research Variables**

The descriptive statistics of the total scores for each research variable, based on 71 respondents, are presented in the following table:

| Variable | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Transformational Leadership (X1) | 71 | 16.34 | 2.49 | 11 | 20 |
| Work Motivation (X2) | 71 | 16.45 | 2.28 | 11 | 20 |
| HR Quality (Y) | 71 | 12.15 | 1.85 | 9 | 15 |

Based on the table above, the average score for Work Motivation (16.45) is slightly higher than that of Transformational Leadership (16.34), while the HR Quality score ranges from 9 to 15 with an average of 12.15, indicating that respondents' perceptions generally fall in the fairly good to good category.

### 3.2 Instrument Test Results

#### Validity Test

The validity test was conducted by correlating each item's score with the total variable score (Pearson Product Moment), with an r table value at df = 69 and a 5% significance level of 0.2335.

**Table 1 : Validity Test**

| Variable | Item | r calculated | r table | Result |
|---|---|---|---|---|
| Transformational Leadership (X1) | X1.1 | 0.893 | 0.2335 | Valid |
| | X1.2 | 0.760 | 0.2335 | Valid |
| | X1.3 | 0.889 | 0.2335 | Valid |
| | X1.4 | 0.871 | 0.2335 | Valid |
| Work Motivation (X2) | X2.1 | 0.863 | 0.2335 | Valid |
| | X2.2 | 0.834 | 0.2335 | Valid |
| | X2.3 | 0.787 | 0.2335 | Valid |
| | X2.4 | 0.853 | 0.2335 | Valid |
| HR Quality (Y) | Y1 | 0.911 | 0.2335 | Valid |
| | Y2 | 0.913 | 0.2335 | Valid |
| | Y3 | 0.837 | 0.2335 | Valid |

All statement items across the three variables were declared valid because the calculated r value > the r table value (0.2335).

**Table 2 : Reliability Test**

| Variable | Cronbach's Alpha | Standard | Result |
|---|---|---|---|
| Transformational Leadership (X1) | 0.874 | 0.60 | Reliable (Very Good) |
| Work Motivation (X2) | 0.852 | 0.60 | Reliable (Very Good) |
| HR Quality (Y) | 0.856 | 0.60 | Reliable (Very Good) |

All variables have Cronbach's Alpha values above 0.60, so the research instrument is declared reliable and suitable for use as a measurement tool.

### 3.3 Heteroscedasticity Test

The test was conducted using the Glejser test, i.e., regressing the absolute residual values against the independent variables. The significance values obtained were 0.173 for X1 and 0.108 for X2, both greater than 0.05, so it can be concluded that the regression model is free from heteroscedasticity (the residual variance is homogeneous).

**Table 3 : Multiple Linear Regression Analysis Results**

| Model | Coefficient (B) | Std. Error | Standardized Beta | t value | Sig. |
|---|---|---|---|---|---|
| (Constant) | -0.541 | 0.577 | - | -0.937 | 0.352 |
| Transformational Leadership (X1) | 0.269 | 0.052 | 0.362 | 5.142 | 0.000 |
| Work Motivation (X2) | 0.505 | 0.057 | 0.622 | 8.823 | 0.000 |

Based on the table above, the following multiple linear regression equation was obtained:
$Y = -0.541 + 0.269\ X1 + 0.505\ X2$
Interpretation: (1) The constant value of -0.541 indicates that if Transformational Leadership and Work Motivation are 0, HR Quality would be at that value (although this is not statistically significant, sig. 0.352 > 0.05). (2) The regression coefficient of X1 (0.269) indicates that every one-unit increase in Transformational Leadership will increase HR Quality by 0.269 units, assuming other variables remain constant (ceteris paribus). (3) The regression coefficient of X2 (0.505) indicates that every one-unit increase in Work Motivation will increase HR Quality by 0.505 units, assuming other variables remain constant. The standardized beta coefficients show that Work Motivation (0.622) has a greater influence than Transformational Leadership (0.362) on HR Quality.

### 3.4 Hypothesis Testing Results

**t-Test (Partial Test)**

The t table value at df = 68 and a 5% significance level (two-tailed) is 1.995.

H1: Transformational Leadership (X1) obtained a calculated t value of 5.142 > t table 1.995 with a significance of 0.000 < 0.05, so H1 is accepted. This means Transformational Leadership has a positive and significant effect on HR Quality.

H2: Work Motivation (X2) obtained a calculated t value of 8.823 > t table 1.995 with a significance of 0.000 < 0.05, so H2 is accepted. This means Work Motivation has a positive and significant effect on HR Quality.

**Table 4 : F-Test (Simultaneous Test)**

| Model | F calculated | F table | Sig. |
|---|---|---|---|
| Regression | 247.0 | 3.132 | 0.000 |

H3: The calculated F value obtained is 247.0 > F table 3.132 with a significance of 0.000 < 0.05, so H3 is accepted. This means Transformational Leadership and Work Motivation simultaneously (jointly) have a positive and significant effect on HR Quality.

**Table 5 : Coefficient of Determination ($R^2$)**

| R | R Square | Adjusted R Square |
|---|---|---|
| 0.938 | 0.879 | 0.875 |

The R Square value of 0.879 indicates that 87.9% of the variation in HR Quality can be explained by the Transformational Leadership and Work Motivation variables together, while the remaining 12.1% is explained by other variables outside this research model, such as organizational culture, compensation, training, or the physical work environment.

**Table 6 : Effective and Relative Contribution**

| Variable | Effective Contribution (EC) | Relative Contribution (RC) |
|---|---|---|
| Transformational Leadership (X1) | 31.18% | 35.48% |
| Work Motivation (X2) | 56.72% | 64.52% |
| Total | 87.90% | 100% |

The table above shows that the Work Motivation variable provides the most dominant contribution to HR Quality (56.72%), greater than that of Transformational Leadership (31.18%). This indicates that in efforts to improve HR quality at PKS Timur PTPN IV Regional II, strengthening employee work motivation needs to be a top priority, without neglecting the importance of strengthening transformational leadership.

## Conclusion

1. Transformational Leadership has a positive and significant effect on the Quality of Human Resources among employees of PKS Timur PTPN IV Regional II (t count 5.142 > t table 1.995; sig. 0.000 < 0.05).
2. Work Motivation has a positive and significant effect on the Quality of Human Resources among employees of PKS Timur PTPN IV Regional II (t count 8.823 > t table 1.995; sig. 0.000 < 0.05), with a more dominant influence than Transformational Leadership.
3. Transformational Leadership and Work Motivation simultaneously have a positive and significant effect on the Quality of Human Resources (F count 247.0 > F table 3.132; sig. 0.000 < 0.05), with a contribution ($R^2$) of 87.9%, while the remaining 12.1% is influenced by other factors outside this research model.

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