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Analysis of Factors Affecting Employee Performance at PT Kurnia Agro Kemika Using the SMART PLS 3.0 Method

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Abstract: This study aims to analyze the influence of leadership on employee performance at PT. Kurnia Agro Kemika, both directly and through organizational culture. Specifically, this research examines (1) the effect of leadership on employee performance, (2) the effect of leadership on organizational culture, (3) the effect of organizational culture on employee performance, and (4) the role of organizational culture in mediating the relationship between leadership and employee performance. The method used in this study is Structural Equation Modeling (SEM) with a Partial Least Squares (PLS) approach, utilizing SmartPLS 3.0 software. The analysis results indicate that leadership has a significant influence on organizational culture, organizational culture significantly affects employee performance, and leadership significantly impacts employee performance through organizational culture as a mediating variable.

Keywords: Leadership, Organizational Culture, Employee Performance.

INTRODUCTION

The success of a job is highly determined by effective human resources, as they play a central role in the activities of an organization or workplace (Thania et al., 2024). The assessment of human resources can be observed through the work results they produce, which reflect their performance. Therefore, effective human resources lead to good performance. It is important to pay attention to employee performance, as it is one of the key factors in achieving the company's performance and overall business objectives (Rivai, 2020). The level of performance outcomes varies among employees. Within the scope of human resources, an employee's performance is essential for achieving the best results, benefiting both the employee and the company (Praditya, 2022).

PT. Kurnia Agro Kemika is a private company located at JL Wringin Anom, Km. 30.7, Krian, specializing in fertilizer production. The company operates under the motto of providing services beyond expectations. Employee performance is continuously improved in alignment with the company's quality service targets, known as the 5T principles: Right Person, Right Quantity, Right Time, Right Place, and Right Administration (Maulidiyah, 2020). To achieve these quality targets, the active role of employee performance is crucial across all company components. PT. Kurnia Agro Kemika faces several issues related to the work environment,

employee behavior, employee salaries, and working hours, which are perceived as inadequate. These challenges indicate that synchronization between employees and the company has not yet been fully optimized (Dewantoro, 2023).

One method that can be used to analyze the factors affecting employee performance is the SmartPLS 3.0 Method, which decomposes total data variance into components that measure various sources of variation (Sugiyono, 2010). This method is part of inferential statistics. In ANOVA testing, there are two types: one-way and two-way ANOVA. The one-way ANOVA aims to compare two or more means to assess generalization capability (Sholihin & Ratmono, 2021). If testing results show a significant difference between the samples, then the findings can be generalized.

The objective of this study is to analyze the factors influencing employee performance at PT Kurnia Agro Kemika. All employees were included as samples (census). The data analyzed was obtained through questionnaires distributed to the employees selected as samples in this research. The management of PT Kurnia Agro Kemika should implement policies to foster a harmonious relationship between leadership and employees, avoid conflicts, and create a conducive work environment. By doing so, it is expected that employee performance will be optimized in carrying out their assigned tasks.

METHOD

Data analysis involves breaking down the whole into smaller components to identify the dominant component, compare one component with another, and compare one or more components with the whole. Data analysis techniques are used to answer the research problem formulation or test the formulated hypothesis. Data processing in this study will utilize SmartPLS software (Ghozali, 2018). Partial Least Squares (PLS) uses the bootstrapping method, which involves random resampling, making normality assumptions irrelevant for PLS. Additionally, PLS does not require a minimum sample size, allowing studies with small samples to still apply this method. Partial Least Squares is classified as a non-parametric method, meaning that a normal data distribution is not required for PLS modeling (Sugiyono, 2021).

RESULTS AND DISCUSSION

Data analysis

PLS Model

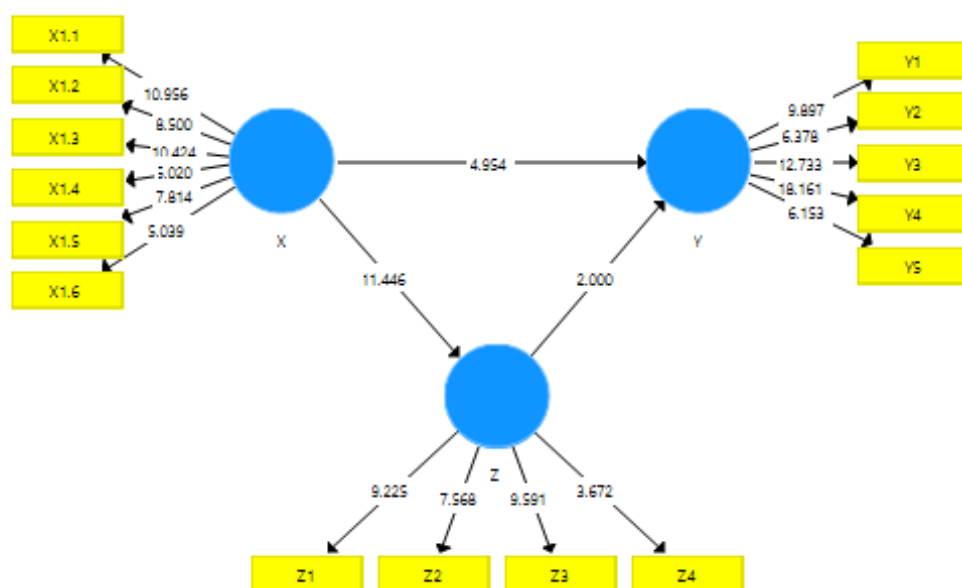


Figure 1. PLS Model

From the PLS output image above, we can see the magnitude of *the factor loading value* of each indicator which is located above the arrow between the variable and the indicator, we can also see the magnitude of the path coefficients *which* are above the arrow line between the exogenous variables , namely the Employee performance variable, while the mediating variables in this study are Organizational Culture and the endogenous variables , namely Leadership.

Validity Test (Outer Model)

Table 1 Factor Loading Values

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values |
|----------|---------------------------|-----------------------|----------------------------------|---------------------------|----------|
| X.1 <- X | 0.650 | 0.645 | 0.116 | 5,620 | 0,000 |
| X.2 <- X | 0.750 | 0.727 | 0.142 | 5,282 | 0,000 |
| X.3 <- X | 0.871 | 0.862 | 0.055 | 15,741 | 0,000 |
| X.4 <- X | 0.823 | 0.818 | 0.054 | 15,278 | 0,000 |
| X.5 <- X | 0.728 | 0.718 | 0.080 | 9,078 | 0,000 |
| Y.1 <- Y | 0.726 | 0.710 | 0.143 | 5,090 | 0,000 |
| Y.2 <- Y | 0.537 | 0.531 | 0.247 | 2,168 | 0.031 |
| Y.3 <- Y | 0.805 | 0.786 | 0.122 | 6,581 | 0,000 |
| Y.4 <- Y | 0.538 | 0.495 | 0.236 | 2,276 | 0.023 |
| Z.1 <- Z | 0.501 | 0.511 | 0.211 | 2,370 | 0.018 |
| Z.2 <- Z | 0.775 | 0.749 | 0.131 | 5,937 | 0,000 |
| Z.3 <- Z | 0.753 | 0.713 | 0.168 | 4,471 | 0,000 |
| Z.4 <- Z | 0.710 | 0.691 | 0.168 | 4,217 | 0,000 |

Source : Processed Data (2025)

The estimation results from the Outer Loading Table show that all indicators have met good validity because they have a loading factor of 0.45 and/or more than 0.45. Therefore, the validity test with outer loadings has been met, so the measurement model has the potential to be tested further.

The next Measurement Model is the Average Variance Extracted (AVE) value, which is a value that shows the magnitude of the indicator variance contained by its latent variables. Testing with the AVE value is more critical than *composite reliability* . The minimum recommended AVE value is 0.45.

Table 2 Average Variance Extracted (AVE)

| | Average Variance Extracted (AVE) |
|----------------------------|-------------------------------------|
| Leadership (X) | 0.744 |
| Employee Performance (Y) | 0.767 |
| Organizational culture (Z) | 0.887 |

Source : Processed Data (2025)

From table 2, the test results with AVE values show that all constructs have potential validity to be tested further. This is because the AVE value for all constructs is greater than 0.5

Reliability Test

Composite reliability is an index that shows the extent to which a measuring instrument can be trusted to be relied on. If a tool is used twice to measure the same symptoms and the

measurement results obtained are relatively consistent, then the tool is reliable. In other words, reliability shows the consistency of a measuring instrument in the same symptoms. The complete results can be seen in the following table.

Table 3 Data Reliability

| | Cronbach's Alpha | rho_A | Composite Reliability |
|----------------------------|------------------|-------|-----------------------|
| Leadership (X) | 0.788 | 0.799 | 0.848 |
| Employee Performance (Y) | 0.808 | 0.816 | 0.867 |
| Organizational culture (Z) | 0.771 | 0.794 | 0.827 |

Source: Processed Data, 2025

The reliability of the construct is measured by the composite reliability value, the construct is reliable if the composite reliability value is above 0.70 then the indicator is said to be consistent in measuring its latent variables. The test results show that the research constructs (variables) namely Leadership, Organizational Culture and Employee Performance have a composite reliability value greater than 0.7. So it is reliable.

Structural Model Testing (*Inner Model*)

Inner model or structural model testing is done to see the relationship between variables, significance values and R-square of the research model. After knowing the significant relationship between variables. thus, it can be concluded the hypothesis for customer satisfaction problems. Hypothesis testing is done by bootstrap resampling method . The test statistic used is the t-test statistic test . (Ghozali, 2008). Testing of the structural model is done by looking at the R-Square value which is the goodness-fit model test . Inner model testing can be seen from the R-square value in the equation between latent variables. As follows:

Table 4. R-Square

| | R Square |
|----------------------------|----------|
| Employee Performance (Y) | 0.819 |
| Organizational culture (Z) | 0.666 |

Source: Processed Data, 2025

R^2 value = 0.819 This can be interpreted that the model is able to explain the phenomenon/problem of Employee Performance by 81.9 %. While the rest (18.1 %) is explained by other variables (other than Leadership and Organizational Culture) that have not been included in the model and *error* . This means that Employee Performance is influenced by Leadership and Organizational Culture by 81.9 % while 18.1 % is influenced by variables other than Leadership and Organizational Culture

R^2 value = 0.666 This can be interpreted that the model is able to explain the phenomenon/problem of Organizational Culture by 66.6 %. While the rest (33.4 %) is explained by other variables (besides Leadership) that have not been included in the model and *error* . This means that Organizational Culture is influenced by Leadership, by 66.6 % while 33.4 % is influenced by variables other than Leadership.

Results from *Inner Weights*

1. Direct Effects

Table 5. Inner Weight

| | | | T Statistics (O/STDEV) | P Values |
|------------------------|--------------------|-------------------------------|---------------------------|----------|
| Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | | |

| | | | | | |
|--------|-------|-------|-------|-------|-------|
| X -> Y | 0.371 | 0.396 | 0.180 | 2,055 | 0.040 |
| X -> Z | 0.583 | 0.621 | 0.103 | 5,690 | 0,000 |
| Z -> Y | 0.381 | 0.371 | 0.193 | 1,975 | 0.049 |

Source: Processed Data, 202 4

From table above can conclusion obtained that hypothesis :

1. Leadership has a significant positive influence on employee performance with a T Statistics value of 2,055 where the p-value = 0.040 is smaller than the α value = 0.05 (5%)
2. Leadership has a significant positive influence on organizational culture with a T statistics value of 5,690 where the p-value = 0.000 is smaller than the α value = 0.05 (5%)
3. Organizational culture has a significant positive influence on employee performance with a T statistics value of 1.975 where the p-value = 0.049 is smaller than the α value = 0.05 (5%)

2. Indirect Effects

Apart from the direct effect *as* in hypothesis testing above, from this modeling we can find out *the total effect* or *indirect effect* or indirect influence. directly (through the *mediating variable*), as shown in the following *total effect table* with for hypothesis testing with mediating variables as following:

Table 6. Total Effects (Mean, STDEV, T-Values)

| | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P Values |
|-------------|---------------------------|-----------------------|----------------------------------|---------------------------|----------|
| X -> Z -> Y | 0.209 | 0.204 | 0.108 | 2,933 | 0.004 |

Source : Processed Data, 202 4

From table total effect on can taken conclusion that hypothesis :

Leadership has a significant influence on employee performance through organizational culture with a T statistics value of 2,933 where the p-value = 0.004 is smaller than the α value = 0.05 (5%)

Discussion

The Influence of Leadership on Employee Performance

The results of the study showed that leadership has a positive and significant effect on employee performance with a p-value of 0.040 ($\alpha = 0.05$). The highest indicator is "My leader conveys information clearly and easily understood" with a t-statistic of 15,741, and the indicator "My leader is responsible for the decisions that have been made" with the highest mean of 4.49.

Effective communication from a leader ensures that employees understand their tasks, avoid mistakes, and work more efficiently. In addition, leaders who are responsible for their decisions increase employee trust and loyalty, creating a conducive and productive work environment. And a leader who is responsible for the decisions taken will foster a sense of trust and loyalty among employees. Employees will feel safer and more comfortable working under leadership that not only provides direction, but is also willing to be accountable for every decision and consequence that arises (Fauzan et al., 2023). This will increase a sense of belonging to the organization, where employees will be more motivated to work hard and give their best contribution to achieve common goals. The combination of good communication and high responsibility in leadership increases employee motivation, efficiency, and job satisfaction. This is in line with (Nugroho et al., 2024), which emphasizes that leadership plays a role in influencing, motivating, and coordinating employees to achieve organizational goals.

The Influence of Leadership on Organizational Culture

The results of the study showed that leadership has a positive and significant effect on organizational culture with a p-value of 0.000 ($\alpha = 0.05$). The highest indicator is "My leader conveys information clearly and easily understood" with a t-statistic of 15.741, while the indicator "My leader is responsible for the decisions that have been made" has the highest mean of 4.49. These results indicate that the leader's communication skills in conveying clear and easily understood information have a major influence on organizational culture. Good communication skills from leaders not only clarify the direction and goals of the organization, but also create a more open, transparent, and organized work climate. With clear communication, team members can more easily understand the organization's vision and mission, as well as how they can contribute optimally. This also increases the sense of trust and involvement of team members, which in turn strengthens a more inclusive and collaborative organizational culture. The leader's ability to convey information effectively also accelerates the decision-making process based on clear data and facts

The leader's communication skills in conveying clear information play a major role in clarifying the direction of the organization, creating a transparent work climate, and increasing team engagement. This supports a more inclusive and collaborative organizational culture. However, the indicator "My leader involves team members in the decision-making process" has the lowest t-statistic value (5,620), indicating that team engagement is still limited. As a suggestion, leaders need to be more open in empowering team members so that the organizational culture is stronger. This finding is in line with (Risianto et al., 2018), which states that leadership that supports openness and transparency can form a healthy organizational culture that is adaptive to change.

The Influence of Organizational Culture on Employee Performance

The results of the study indicate that organizational culture has a positive and significant effect on employee performance with a p-value of 0.049. The highest indicators are "Management strives to achieve targets with aggressive strategies" (mean 4.46) and "The organization emphasizes the importance of accuracy in every task" (T-Statistics 5.937). This shows that a culture that emphasizes accuracy plays an important role in improving employee accuracy, efficiency, and work quality. Employee performance is more influenced by a culture that prioritizes accuracy than a culture that encourages risk-taking for innovation. This indicates that compliance with procedures is prioritized in certain organizations. However, a balance between accuracy and innovation is still needed for employees to develop.

Implementing a culture of appreciation by giving awards to teams that demonstrate good coordination is also important to encourage a spirit of collaboration. With these steps, organizations can build a culture that is not only innovative, but also structured in terms of communication, so that employee performance can increase optimally. The indicator with the lowest T-Statistics value is "Employees are encouraged to take risks in finding innovative solutions" (2.370), indicating a lack of support for innovation. Organizations need to encourage the courage to innovate by providing training, resources, and awards for employees who try new approaches.

This finding is in line with the research of Mastura et al., (2023), which shows that organizational culture has a direct effect on individual behavior and employee performance. The better the culture implemented, the higher the level of employee productivity and performance in the organization .

The Influence of Leadership on Performance Through Organizational Culture

The results of the study showed that leadership influences employee performance through organizational culture with a p-value of 0.004. The highest indicators are "I always finish work according to deadlines" (T-Statistics 6.581) and "Cooperation between employees goes well"

(mean 4.47). This shows that punctuality is a dominant factor in employee performance, which is supported by an organizational culture that emphasizes accuracy, communication, and effective leadership. Communicative leadership forms a strong organizational culture, especially in terms of accuracy and team coordination. This culture increases work effectiveness and timely target achievement. However, low employee participation in decision-making can hinder innovation, so that work quality standards are less of a priority than punctuality. Therefore, visionary and communicative leadership is very important in creating a work culture that encourages team effectiveness and optimal performance. The indicator with the lowest T-Statistics is "I ensure work results are in accordance with company standards" (2.168), which shows that work quality standards have not been fully internalized. Organizations need to strengthen communication, provide training, and regular feedback to improve employee understanding of quality standards.

This study is in line with the theory that leadership plays a central role in building a strong organizational culture . (Setyowati & Miftah, 2022), and (Aprilia, 2019) shows that organizational culture formed by leaders increases employee engagement, loyalty, and work motivation. With a strong organizational culture, employees have a better understanding of work expectations and standards, so they work more effectively and efficiently..

CONCLUSION

Based on the PLS analysis results, the following conclusions can be drawn regarding the factors influencing employee performance at PT. Kurnia Agro Kemika:

- a. Leadership influences organizational culture, meaning that effective leadership shapes the organization's core values, creating conducive culture.
- b. Leadership impacts employee performance, as a good leadership style provides support that encourages improved employee performance.
- c. Organizational culture affects employee performance, where a positive culture fosters a conducive work environment that motivates employees to enhance their performance.
- d. Leadership influences employee performance through organizational culture, meaning that effective leadership builds a strong organizational culture, leading to improved employee performance.

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