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# The Role of Job Satisfaction on the Effect of Work Environment to the Performance of Manufacturing Company Employees

Peran Kepuasan Kerja Pada Pengaruh Lingkungan Kerja Terhadap Kinerja Karyawan Perusahaan Manufaktur

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**ABSTRACT**

The purpose of this study is to provide recommendations for companies to improve the performance of their employees by analyzing the relationship between the variables in this study, namely work environment and job satisfaction with performance. This research was conducted at PT. Faco Global Engineering is a steel fabrication company that will continue to support the needs of steel construction manufacturing and engineering services. This research is quantitative research with a survey approach. The number of samples used in the study was 81 people who were employees of PT Faco Global Engineering. The method for processing and analyzing data uses Partial Least Square (PLS) with SmartPLS software. The results of the study show that there is a positive and significant direct effect of the work environment on employee performance. There is a positive and significant direct effect of job satisfaction on employee performance. There is a positive and significant direct effect of the work environment on job satisfaction. There is a positive and significant indirect effect of the work environment on employee performance, through job satisfaction. This study shows the effective role of the intervening variable, namely job satisfaction.

**Keywords:** work environment, job satisfaction, employee performance, organizational goal.

**ABSTRAK**

Tujuan dari penelitian ini adalah untuk memberikan rekomendasi bagi perusahaan untuk meningkatkan kinerja karyawannya dengan menganalisis hubungan variabel dalam penelitian ini yaitu lingkungan kerja dan kepuasan kerja terhadap kinerja. Penelitian ini dilakukan di PT. Faco Global Engineering merupakan perusahaan fabrikasi baja yang akan terus mendukung kebutuhan manufaktur konstruksi baja dan jasa engineering. Penelitian ini merupakan penelitian kuantitatif dengan pendekatan survei. Jumlah sampel yang digunakan dalam penelitian adalah 81 orang yang merupakan karyawan PT Faco Global Engineering. Metode pengolahan dan analisis data menggunakan Partial Least Square (PLS) dengan software SmartPLS. Hasil penelitian menunjukkan terdapat pengaruh langsung yang positif dan signifikan lingkungan kerja terhadap kinerja karyawan. Terdapat pengaruh langsung positif dan signifikan kepuasan kerja terhadap kinerja karyawan. Terdapat pengaruh langsung yang positif dan signifikan lingkungan kerja terhadap kepuasan kerja. Terdapat pengaruh tidak langsung yang positif dan signifikan lingkungan kerja terhadap kinerja karyawan, melalui kepuasan kerja. Penelitian ini menunjukkan peran efektif dari variabel intervening yaitu kepuasan kerja.

**Kata Kunci:** lingkungan kerja, kepuasan kerja, kinerja karyawan, tujuan organisasi.

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## INTRODUCTION

PT. Faco Global Engineering is a steel fabrication and engineering company committed to becoming a global company in 2020 by continuously prioritizing safety, producing high-quality products, and developing human resources by complying with customer requirements, environmental quality management, and regulations. Faco offers several steel fabrication and manufacturing services to ensure optimal performance. PT Faco Global Engineering has been operating and standing strong since 2004 until now, located at. Bogor Residence, West Java, Indonesia. As a steel construction services manufacturing company in Bogor, PT Faco Global Engineering will continue to support the needs in the steel construction manufacturing and engineering services sector, especially to supply the needs in the oil and gas, electrical energy, chemical, and manufacturing industries.

PT. Faco Global Engineering is an experienced corporate body working on national projects. PT. Faco Global Engineering is currently qualified. PT. Faco Global Engineering can work on projects with sub-classification, EL003 Implementing Services for Installing New and Renewable Energy Power Plants, EL006 Implementing Services for Construction of Medium Voltage Power Distribution Networks, MK008 Implementing Services for installing transport and lifting equipment, MK010 Implementing Services for installing facilities production, storage of oil and gas (engineering works).

Based on the results of the author's observations, the work environment at PT. Faco Global Engineering still looks less conducive seen from the layout on the work table, which is not neatly arranged, and the computer is dusty, so it is not comfortable to look at; there is a stuffy room that causes an odour, namely in the meeting room, the workspace is close to engine noise and sound vehicles from outside because the location of the company is close to the main road so it often disturbs the concentration of employees' work, and the absence of CCTV in each room can cause worry for employees. This condition is considered an inhibiting factor and results in employees not being optimal at work because the work environment has an important role in achieving performance.

A safe and comfortable work environment will enable employees to work comfortably and diligently to achieve maximum performance. On the other hand, the dissatisfaction of these employees creates unwanted things and can be detrimental to the company concerned. According to Rodrigo, et al (2022) which states that job satisfaction is a pleasant emotional state for employees looking at their work. If employees feel happy with their duties and work, employees will be enthusiastic and have a pleasant feeling in completing their work. Job satisfaction is a driver of employee and organizational results because job satisfaction is the result of employee perceptions of how well their work provides things that are considered important. Likewise with job satisfaction felt by employees at PT Faco Global Engineering, based on the results of initial observations of HRD research at PT Faco Global Engineering said that there were still some employees who felt they had not fully felt satisfaction at work, for example, they were still dissatisfied because they had not been able to master the job, causing employees to feel pressured by the work itself and communication with fellow employees that did not go smoothly. This condition also causes employees to be less than optimal at work so that the resulting performance is still lacking.

Based on preliminary observations made by researchers, the problems being faced by the company indicate the low Performance of PT Faco Global Engineering can be seen from the employee performance appraisal data from 2018-2020, which is presented in Table 1 below:

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Table 1. Employee Performance of PT. Faco Global Engineering

| Performance | Year 2018 | | Year 2019 | | Year 2020 | |
|---|---|---|---|---|---|---|
| | Employee | % | Employee | % | Employee | % |
| Very Good | 6 | 5,7 | 4 | 3,6 | 2 | 1,9 |
| Good | 65 | 61.9 | 58 | 51,8 | 69 | 68,3 |
| Fair | 11 | 10,5 | 16 | 14,3 | 15 | 14,9 |
| Poor | 22 | 21 | 33 | 29,5 | 12 | 11,9 |
| Very Poor | 1 | 0,9 | 1 | 0,8 | 3 | 3 |
| Total | 105 | 100 | 112 | 100 | 101 | 100 |

Source: HRD PT. Faco Global Engineering

Criteria

| | | | | | |
|---|---|---|---|---|---|
| Very good | : 85-100 | Fair | : 65-70 | Very Poor | : <50 |
| Good | : 70-85 | Poor | : 50-65 | | |

Table 1 above shows the employee's performance from 2018-2020 has decreased. In 2018-2020, the number of employees with very good performance decreased from 6 in 2018 to 2 employees in 2020, then the number of employees with moderate and poor performance has also decreased. Fair performance appraisal from 11 in 2018 increased to 16 in 2019 and decreased again to 15 in 2020. The number of employees who received poor performance appraisals decreased from 22 in 2018, 33 in 2019, and 12 in 2020. Meanwhile, the number of employees who received good and very poor performance ratings experienced an increase. In 2018, there were 65 employees who received good performance ratings, then in 2019 it decreased to 58 and increased again in 2020 to 69. Meanwhile, performance ratings were very lacking, increasing from 1 in 2018 to 3 in 2020. Targets set the company are all employees of PT Faco Global Engineering received an excellent performance rating. Because now the company needs employees with maximum performance in order to achieve company goals. The table above shows that there are problems with employee performance, which are the background for this research (research gap). This study aims to find efforts to improve employee performance by analyzing the relationship between variables, namely employee performance, job satisfaction, and work environment.

## LITERATURE REVIEW

### Employee performance

According to (Mangkunegara, 2017) suggests that performance is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. According to Luthans in Bintoro & Daryanto (2017), performance is the quantity or quality of something produced or services provided by someone who does the job. According to Afandi (2018) Performance is the result of work that can be achieved by a person or group of people in a company in accordance with their respective authorities and responsibilities in an effort to achieve company goals illegally, not violating the law and not contradicting morals and ethics. According to Hasibuan (2014), employee performance is a result of work achieved by a person in carrying out the tasks assigned to him, which are based on skills, experience, sincerity, and time.

### Work environment

Sedarmayanti (2017) states that the work environment is the whole of the tools and materials encountered, the surrounding environment where a person works, his work methods, and work arrangements both as individuals and as a group. Sunyoto (2016)

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argue that the work environment is an important factor and influences employees in doing their jobs.

Nitisemito (2015), the work environment is everything that is around employees, and this can have an impact on employees in carrying out every task that has been assigned to them. Meanwhile, Afandi (2018) stated that the work environment is everything that is around employees and can affect them in carrying out the tasks assigned to them.

**Job satisfaction**

Hasibuan (in Bintoro & Daryanto, 2017), job satisfaction is a pleasant emotional attitude, and he loves his job. Weihric, Koontz in Sinambela (2019), states that job satisfaction refers to the experience of pleasure or liking that is felt by a person when what he wants is achieved. Job satisfaction is a situational condition that is pleasant or unpleasant and affects how employees perceive their work. Employee job satisfaction reflects a person's attitude toward his work (Rosita & Yuniati, 2016).

Meanwhile, according to Hasibuan (2016), job satisfaction is a pleasant emotional attitude, and he enjoys his job. Mangkunegara (2017), performance is the result of work in quality and quantity achieved by an employee in carrying out his duties in accordance with the responsibilities given to him. Kasmir (2016), factors that affect employee performance include the work environment and job satisfaction. The work environment is the whole tools and materials encountered, the surrounding environment in which a person works, work methods, and work arrangements both as individuals and as a group. Nitisemito (2015) said that what is meant by the work environment is everything that is around the worker and that can affect him in carrying out the tasks assigned. For example, cleanliness, music and others. Because it can affect the work done, every company must make efforts in such a way as to have a positive influence on employees. If the work environment provided by the company includes a conducive work environment and meets the criteria as a good work environment, then this can affect the performance produced by employees towards the company.

Everyone who works expects to get satisfaction from his place of work. Afandi (2018), basically, job satisfaction is an individual thing because each individual will have a different level of satisfaction according to the values that apply to each individual. The more aspects of work that are in accordance with individual wishes, the higher the level of satisfaction felt. If employees feel happy with their duties and work, employees will be enthusiastic and give a pleasant feeling in completing their work.

By obtaining a good work environment and job satisfaction, employees will provide something more for the company and will try to improve their performance, which will then produce maximum work results so that the company will continue to progress and develop.

Based on the framework above, the authors formulate a research constellation as follows:

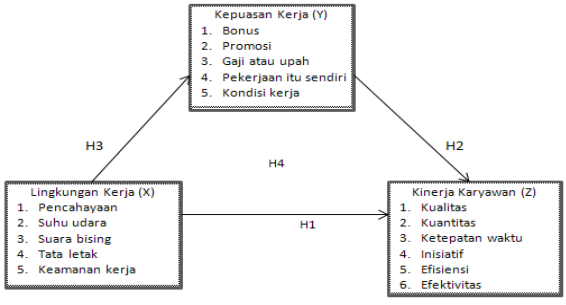


Figure 1. Research Model

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Research Hypothesis

H1: There is a direct influence of the Work Environment on Employee Performance at PT. Faco Global Engineering

H2: There is a direct effect of Job Satisfaction on Employee Performance at PT. Faco Global Engineering

H3: There is a direct influence of the Work Environment on Job Satisfaction at PT. Faco Global Engineering

H4: There is an indirect effect of the Work Environment on Employee Performance through Job Satisfaction at PT. Faco Global Engineering

## RESEARCH METHODS

The research used in this study is a type of quantitative research with a survey approach. Eighty-one production employees are involved in unit analysis. To determine the number of samples, the Slovin formula was used, which was taken from the population, Sugiyono (2018).

### Methods of Data Processing/Data Analysis

1. Structural Equation Modeling (SEM) Analysis

The data processing method in this study uses the Structural Equation Modeling (SEM) modeling equation. SEM modeling is a further development of Path Analysis, in the SEM method the causal relationship between exogenous variables and endogenous variables can be determined more fully, Abdullah (2015). By using SEM, not only can the causality relationship (direct and indirect) to the observed variables or constructs be detected, but also the components that contribute to the formation of the construction can be determined. Thus, the causal relationship between variables or constructs becomes more informative, complete, and accurate.

2. Partial Least Square (PLS)

This study uses a quantitative analysis approach that adopts Partial Least Square (PLS). PLS is a powerful analytical method because it is not based on many assumptions (Abdullah, 2015).

### Measurement Model (Outer Model)

Outer model testing is used to validate the research model built. The two main parameters built are construct validity testing (convergent and discriminant validity) and construct internal consistency (reliability) testing, (Abdillah & Jogiyanto, 2015).

Validity test

In general, the construct validity test can be measured by the loading score parameter in the research model (Rule of Thumbs > 0.7). If the loading score is < 0.5 - 0.7, the researcher should not remove the indicator that has the loading score as long as the AVE score is > 0.5 (Abdillah & Jogiyanto, 2015).

Convergent validity test

The convergent validity test is assessed based on the loading factor (correlation between item scores/component scores with construct scores) indicators that measure the

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construct. The rule of thumb used for convergent validity is outer loading > 0.7 and AVE > 0.5 (Abdillah & Jogiyanto, 2015). Meanwhile, according to (Abdullah, 2015) the convergent validity of the measurement model can be seen from the correlation between the indicator scores and the variable scores. An indicator is considered valid if it has an AVE value above 0.5 or shows all outer loading variable dimensions having a loading value > 0.5. The AVE formula (average variance extracted) can be formulated as follows:

$$\text{AVE} = \frac{\sum_{i=1}^{n} \lambda i}{n}$$

Information:
AVE is the average percentage of the variance score extracted from a set of latent variables estimated through standardized loading of indicators in the algorithm iteration process in PLS.

**Discriminant Validity Test**
The discriminant validity test is assessed based on the cross-loading of measurements with the construct or comparing the AVE roots for each construct with the correlation between the construct and the other constructs in the model. The model has sufficient discriminant validity if the AVE root for each construct is greater than the correlation between the construct and the other constructs in the model (Abdillah & Jogiyanto, 2015).

**Path Coefficient**
Measurement of the path coefficient between constructs was carried out to see the significance and strength of the relationship and also to test the hypothesis. Path coefficient values range from -1 to +1. The closer to the +1 value, the stronger the relationship between the two constructs. A relationship that is closer to -1 indicates that the relationship is negative (Sarstedt et al., 2017).

**Reliability Test**
A reliability test is used to measure the internal consistency of measuring instruments. Reliability test in PLS can use two methods, namely Cronbach's alpha and Composite Reliability. Cronbach's alpha measures the lower limit of the reliability value of a construct, while composite reliability measures the actual value of the reliability of a construct. However, composite reliability is considered better in estimating the internal consistency of a construct. The rule of thumb for alpha or composite reliability must be greater than 0.7, although a value of 0.6 is still acceptable. But actually, the internal consistency test is not absolutely necessary if construct validity has been met because a valid construct is a reliable construct, otherwise, a reliable construct is not necessarily valid (Abdillah & Jogiyanto, 2015).

Table 2. Composite Reliability Test

| Variable | *Composite Reliability* | Conclusion |
|---|---|---|
| Work Environment (X) | 0,971 | Reliable |
| Job Satisfaction (Y) | 0,974 | Reliable |
| Performance (Z) | 0,973 | Reliable |

Sources: Output Smartpls, 2022

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## RESEARCH RESULTS AND DISCUSSION

### Data Instrument Test

The instrument test used in this study is the validity and reliability test distributed to 81 employees at PT. Faco Global Engineering, to analyze its validity and reliability and the results of this analysis are used as a reference load in obtaining data for further analysis. Evaluation of Measurement Model (Outer Model).

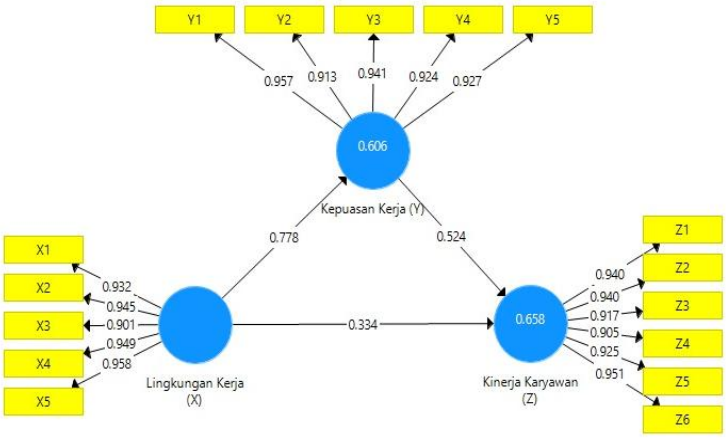


Figure 2 *Outer Model*

From the picture above, it can be seen that all indicators of all variables have an outer loading value greater than 0.7. It is show that the outer loading value has a high level of validity, so it meets convergent validity.

### Validity Test and Reliability Test

#### 1. Validity Test

The following is the result of processing the validity and reliability tests on the variables X (Work Environment), Y (Job Satisfaction), and Z (Employee Performance). Data processing in this study used the help of SmartPLS 3, the results of data processing are presented in the table below.

a. Convergent Validity

The convergent validity test is assessed based on the loading factor (correlation between item scores/component scores with construct scores) indicators that measure the construct. The rule of thumb used for convergent validity is outer loading > 0.7 and AVE > 0.5 (Abdillah & Jogiyanto, 2015). In the early stages of research on the development of a measurement scale, a loading factor value of 0.5-0.6 is still considered sufficient.

Table 3. Convergent Validity Test

| Variable | Indicator | Kode | Loading Factor (LF) | Conclusion |
|---|---|---|---|---|
| Work Environment | Lighting | X1 | 0,932 | Valid |
| | Temperature | X2 | 0,945 | Valid |
| | Noise | X3 | 0,901 | Valid |
| | Layout | X4 | 0,949 | Valid |
| | Facility Safety | X5 | 0,958 | Valid |
| Job Satisfaction | Bonus | Y1 | 0,957 | Valid |
| | Promotion | Y2 | 0,913 | Valid |
| | Salary | Y3 | 0,941 | Valid |
| | Job it-self | Y4 | 0,924 | Valid |
| | Work Condition | Y5 | 0,927 | Valid |

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| | | | | |
|---|---|---|---|---|
| Performance | Quality | Z1 | 0,940 | Valid |
| | Quantity | Z2 | 0,940 | Valid |
| | Timely | Z3 | 0,917 | Valid |
| | Initiative | Z4 | 0,905 | Valid |
| | Efficiency | Z5 | 0,925 | Valid |
| | Effectiveness | Z6 | 0,951 | Valid |

Source: Processed Data, 2022

Based on the test results in table 5 above, it shows that the 3 variables used in this study such as work environment, job satisfaction, employee performance in each question representing each variable have a loading factor value of > 0.6, so it can be stated that the question represents each variable meets the requirements for research.

a. Discriminant Validity

Discriminant validity measurement using cross loading value and average variance extracted (AVE) value. In this section, the results of the discriminant validity test will be described. The discriminant validity test uses the cross-loading value. An indicator is declared to meet discriminant validity if the indicator's cross loading value on the variable is the largest compared to other variables. The following is the cross-loading value for each indicator:

Tabel 4. Cross Loading Analisys

| | Job Satisfaction (Y) | Performance (Z) | Work Environment (X) |
|---|---|---|---|
| X1 | 0,716 | 0,606 | 0,932 |
| X2 | 0,738 | 0,693 | 0,945 |
| X3 | 0,736 | 0,741 | 0,901 |
| X4 | 0,738 | 0,677 | 0,949 |
| X5 | 0,717 | 0,749 | 0,958 |
| Y1 | 0,957 | 0,810 | 0,721 |
| Y2 | 0,913 | 0,691 | 0,719 |
| Y3 | 0,941 | 0,653 | 0,720 |
| Y4 | 0,924 | 0,608 | 0,730 |
| Y5 | 0,927 | 0,861 | 0,738 |
| Z1 | 0,747 | 0,940 | 0,735 |
| Z2 | 0,714 | 0,940 | 0,678 |
| Z3 | 0,726 | 0,917 | 0,725 |
| Z4 | 0,648 | 0,905 | 0,601 |
| Z5 | 0,794 | 0,925 | 0,696 |
| Z6 | 0,729 | 0,951 | 0,690 |

Source: Processed Data, 2022

Based on the data presented in table 6 above, it can be seen that each indicator on the research variable has the largest cross loading value on the variable it forms compared to the cross-loading value on other variables. Based on the results obtained, it can be stated that the indicators used in this study have good discriminant validity in compiling their respective variables.

In addition to observing the cross-loading value, discriminant validity can also be determined through other methods, namely by looking at the average variant extracted (AVE) value for each indicator, it is required that the value must be > 0.5 for a good model. The findings in this test with average variance extracted (AVE) show that the AVE value generated for each variable used is greater than 0.5, so it can be said that it meets the requirements presented in table 4.3 and is also strengthened in the form of figure 3 which shows the graph is green and exceeds the limit of 0.5 conditions.

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Table 5. Average Variance Extracted (AVE) Analysis

| Variable | Average Variance Extracted (AVE) |
|---|---|
| Job Satisfaction (Y) | 0,870 |
| Performance (Z) | 0,864 |
| Work Environment (X) | 0,878 |

Source: Processed Data, 2022

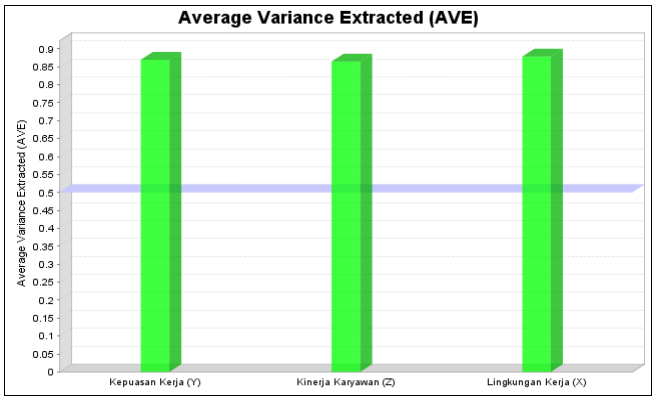


Figure 3. Average Variance Extracted (AVE)

Based on the table above, it can be seen that the AVE value of the job satisfaction variable is > 0.5 or 0.870, for employee performance variables > 0.5 or 0.864, and for work environment variables > 0.5 or 0.878. This shows that each variable has good discriminant validity.

## 2. Reliability Test

Reliability measurement will show how accurate the consistency of respondents' answers is in the variables used to determine whether respondents are consistent in answering the questions studied. In this measurement there are two ways used in this study are:

a. Composite Reliability

Composite reliability is the part that is used to test the value of the reliability of indicators on a variable. A construct is said to be reliable if the composite reliability value must be greater than 0.7 even though a value of 0.6 is still acceptable. The following is the composite reliability value of each variable used in this study:

Table 6
Composite Reliability Analisys

| Variable | Composite Reliability |
|---|---|
| Job Satisfaction (Y) | 0,971 |
| Performance (Z) | 0,974 |
| Work Environment (X) | 0,973 |

Source: Processed Data, 2022

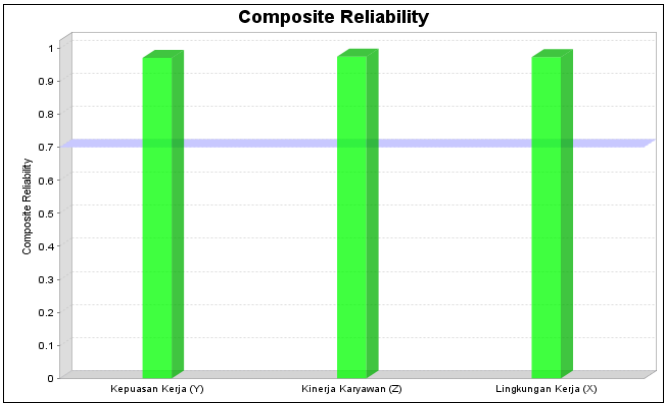


Figure 4 *Composite Reliability*

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The composite reliability value generated for each variable of job satisfaction, employee performance, and work environment is > 0.7 where the Composite Reliability value of the job satisfaction variable is > 0.7, which is 0.971, employee performance is > 0.7, which is 0.974, and work environment > 0.7 which is equal to 0.973. Judging from the Composite Reliability value for each variable which is > 0.7, it indicates that the three variables are reliable.

a. Cronbach's Alpha

The reliability test with composite reliability can be strengthened by using the Cronbach's alpha value, the criteria for evaluating variables, if the Cronbach's alpha value for each variable is > 0.7, it is said to be reliable. The following is the Cronbach's alpha value of each variable which is reinforced by Figure 5:

Table 7. Cronbach's Alpha

| Variable | Cronbach's Alpha |
|---|---|
| Job Satisfaction (Y) | 0,963 |
| Performance (Z) | 0,969 |
| Work Environment (X) | 0,965 |

Source: Processed Data, 2022

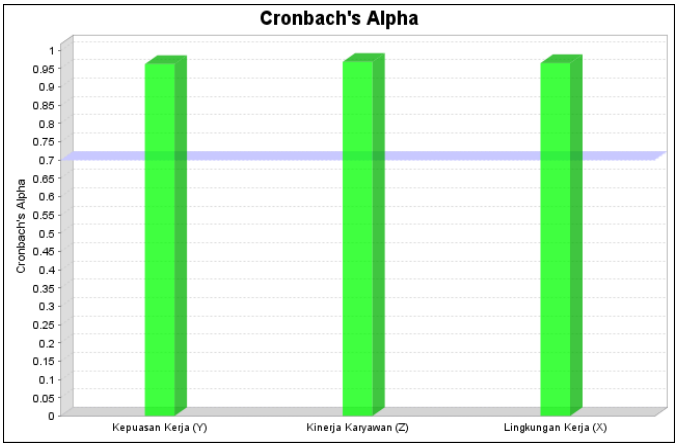


Figure 5. *Cronbach's Alpha*

Based on the table above, the results of Cronbach's Alpha variable job satisfaction > 0.7, which is 0.963, employee performance > 0.7, which is 0.969, and work environment > 0.7, which is 0.965. Thus, these results can indicate that each research variable has met the requirements for Cronbach's alpha value, so it can be concluded that all variables have a high level of reliability.

Multicollinearity Test

Table 8. *Colinearity Statistics* (VIF)

| Variable | Job Satisfaction (Y) | Performance (Z) | Work Environment (X) |
|---|---|---|---|
| Job Satisfaction (Y) | | 2,536 | |
| Performance (Z) | | | |
| Work Environment (X) | 1,000 | 2,536 | |

Source: Processed Data, 2022

Based on table 8 results from Collinearity Statistics (VIF), see the multicollinearity test with the results of the inner value of the variable job satisfaction on employee performance of 2.536. Then the value of the work environment variable on job satisfaction is 1,000 and the work environment on employee performance is 2,536. From

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each VIF variable < 5, it does not violate the multicollinearity assumption test (Sarstedt et al, 2017).

**Structural Model (*Inner Model*) Test**

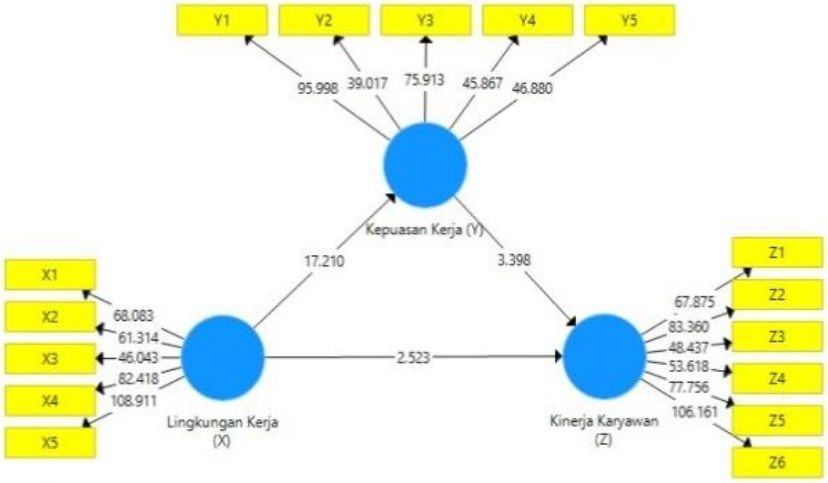


**Figure 6. *Inner Model***

This study will explain the results of the path coefficients test, the goodness of fit test and the hypothesis test.

Goodness of Fit Analysis

Table 9. R-Square Test

| Model | R Square | R Square Adjusted |
|---|---|---|
| Job Satisfaction (Y) | 0,606 | 0,601 |
| Performance (Z) | 0,658 | 0,650 |

Source: Processed Data, 2022

Based on the table 9 above, it is known that the R-Square value for the job satisfaction variable is 0.606. The acquisition of this value explains that the percentage of job satisfaction can be explained by the work environment of 60.6%. Then for the R-Square value obtained by the employee performance variable of 0.658. This value explains that employee performance can be explained by the work environment and job satisfaction of 65.8% (Sarstedt et al, 2017).

The goodness of fit assessment is known from the Q-Square value. The Q-Square value has the same meaning as the determination coefficients (R-Square) in the regression analysis, where the higher the Q-Square, the better or more fit the model can be with the data. The results of calculating the Q-Square value are as follows:

Q-Square $= 1 – [(1 - R^2 1) \times (1 – R^2 2)]$

$= 1 – [(1 – 0,606) \times (1 – 0,658)]$

$= 1 – (0,394 \times 0,342)$

$= 1 – 0,134$

$= 0,866$

Based on the calculation results above, a Q-Square value of 0.866 is obtained. This shows the magnitude of the diversity of the research data that can be explained by the research model is 86.6%. While the remaining 13.4% is still influenced by other factors. Thus, from these results, this research model can be stated to have good goodness of fit (Ghozali and Latan, 2015).

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2. Effect Size (F-Square)

Effect Size f is used to determine the goodness of the independent and dependent variable models. The f value of 0.02 is categorized as small, 0.15 is categorized as medium and 0.35 is categorized as large. Values in this study can be seen in the following table:

Table 10. F-Square Test

| Variable | Job Satisfaction (Y) | Performance (Z) | Work Environment (X) |
|---|---|---|---|
| Job Satisfaction (Y) | | 0,317 | |
| Performance (Z) | | | |
| Work Environment (X) | 1,536 | 0,129 | |

Source: Processed Data, 2022

Based on the table 10 above, it shows that the variable of job satisfaction on employee performance has a value of F-Square 0.317 so it is concluded that it has a medium goodness-of-fit effect because its value is greater than 0.15. The work environment variable on job satisfaction has an F-Square value of 1.536 so it is concluded that it has a great effect on goodness because it has a value greater than 0.35. And the work environment variable on employee performance has an F-Square value of 0.129 so it can be concluded that it has a small kindness effect because it has a value greater than 0.02 (Chin, 1998 in Ghozali and Latan, 2015).

The relatively small value of the work environment variable indicates that the variable is less significant to the employee's performance variable. While the value of the work environment variable which is classified as large indicates that this variable has a large influence on job satisfaction variables. And the value of the variable job satisfaction is classified as medium, indicating that this variable has a normal effect on employee performance variables.

Table 11. NFI Analysis

| | Saturated Model | Estimated Model |
|---|---|---|
| SRMR | 0,059 | 0,059 |
| dull | 0,473 | 0,473 |
| d_G | 0,555 | 0,555 |
| Chi-Square | 240,526 | 240,526 |
| NFI | 0,877 | 0,877 |

Source: Processed Data, 2022

Based on the results of the analysis above(table 11), the model fit indicators show that the NFI value is > 0.1 or higher, so the model can be said to be much better.

**Hypothesis Testing**

Based on the data analyzed, the results can be used to answer the research hypothesis. To see the results of the hypothesis testing in this study, you can look at the results of the t statistics and P values. This hypothesis can be said to be accepted if the P Values <0.05. This study also has a direct and indirect influence on each variable because it includes independent variables, dependent variables, and intervening variables. The results of processing the direct influence hypothesis can be seen in the path coefficient table which is in the SmartPLS bootstrapping. The test results can be seen through the bootstrapping test table as follows:

**1. Direct Effect Testing**

In this path coefficient test it will show how strong the influence of the independent variable is on the dependent variable. Based on the inner model schema that has been

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shown in the figure, and also in the path coefficient table it can explain the biggest to the smallest influence.

Table 12. Direct Effect (*Path Coefficient*)

| Model | Original Sample (O) | T Statistics (\|O/STDEV\|) | P Values |
|---|---|---|---|
| Job Satisfaction (Y) -> Performance (Z) | 0,524 | 3,398 | 0,001 |
| Work Environment (X) -> Job Satisfaction (Y) | 0,778 | 17,210 | 0,000 |
| Work Environment (X) -> Performance (Z) | 0,334 | 2,523 | 0,012 |

Source: Processed Data, 2022

It can be explained that the greatest influence as shown in table 12 above that the influence of work environment variables on job satisfaction with the path coefficient is 0.778. Then the second biggest influence is the influence of job satisfaction variables on employee performance with the path coefficient is 0.524. The third biggest influence is the effect of work environment variables on employee performance with the path coefficient is 0.334. Based on the results of the description it can be concluded that the overall model in this variable has a positive path coefficient value. It can be seen because the greater the value of the path coefficient, the stronger the influence of the independent variables and the dependent variable.

To determine the significance as shown in table 12, that p value as the analysis results obtained are: (t statistic value > 1.96 according to Abdillah and Jogiyanto, 2015), as follows:

1. Partially the resulting value on the variable job satisfaction on employee performance with a t statistic of 3.398, a p value of 0.001 can be explained by a statistical value of 3.398 > ttable 1.96 or a p value of 0.001 <0.05, then statistically Ho is rejected or Ha is accepted, meaning that the variable of job satisfaction significant effect on employee performance.
2. The resulting value of the work environment variable on job satisfaction with a t statistic is 17.210, a p value of 0.000 can be explained by a statistical value of 17.210 > ttable 1.96 or a p value of 0.000 <0.05, so statistically, Ho is rejected and Ha is accepted, meaning that the work environment variable has a significant effect on job satisfaction.
3. The resulting value of the work environment variable on employee performance with a t statistic of 2.523, a p value of 0.012 can be explained by a statistical value of 2.523 > ttable of 1.96 or a p value of 0.012 <0.05, then statistically Ho is rejected and Ha is accepted, meaning that the work environment variable has a significant effect on employee performance.

## 2. Indirect Effect Testing

This analysis is more to explain the results of significant influence indirectly or using mediation. The results of the analysis obtained are:

Table 13. *Specific Indirect Effect* Analysis

| Variable | Original Sample (O) | T Statistics (\|O/STDEV\|) | P Values |
|---|---|---|---|
| Work Environment (X) -> Job Satisfaction (Y) -> Performance (Z) | 0,408 | 3,435 | 0,001 |

Source: Processed Data, 2022

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Based on table 13 above, it shows that the statistical value is 3.435 > $t_{table}$ 1.96 or p value 0.001 <0.05 with the coefficient of 0.408 the effect of the work environment on employee performance through job satisfaction. This means that job satisfaction mediates the influence of the work environment on employee performance in a positive and significant way. It can be concluded that the hypothesis of job satisfaction variables mediating the work environment on employee performance can be said to be accepted.

## DISCUSSION

From the results of the hypothesis test, it can be seen that Work Environment has a significant effect on Performance through Job Satisfaction as assessed by the statistic 3.435 > $t_{table}$ 1.96 or p value 0.001 <0.05 and the coefficient shows a positive direction of 0.408 meaning that Job Satisfaction mediates positively and significantly between Work Environment on Performance at PT. Faco Global Engineering. At PT. Faco Global and also other manufacturing industries, a work environment that creates employee job satisfaction, especially on job it-self indicators, is very important to improve employee performance. A conducive work environment in the sense of being safe, both physically and psychologically comfortable, will make employees feel comfortable at work, this will make employees more focused at work and of course will improve their performance.

The results of this study are reinforced by previous research conducted by Junaidi (2022). The results of this study indicate that the research variables, namely Work Environment and Job Satisfaction, have a positive and significant effect on performance. Subsequent research was carried out by Badrianto & Ekhsan (2020) which the results of the research showed that there was an effect of Work Environment and Job Satisfaction on Performance.

## CONCLUSIONS AND RECOMMENDATION

### Conclusions

1. There is a positive and significant direct effect of the work environment on employee performance. This is evidenced by the statistical value of 2.523 > $t_{table}$ 1.96 or p value of 0.012 <0.05 with a coefficient of 0.334, then statistically Ho is rejected and Ha is accepted meaning that the work environment variable has a positive influence on employee performance at PT. Faco Global Engineering.
2. There is a positive and significant direct effect of job satisfaction on employee performance. This is evidenced by the statistical value of 3.398 > $t_{table}$ 1.96 or p value of 0.001 <0.05 with a coefficient of 0.524, then statistically Ho is rejected or Ha is accepted, meaning that the job satisfaction variable influences employee performance at PT. Faco Global Engineering.
3. There is a positive and significant direct effect of the work environment on job satisfaction. This is evidenced by the statistical value of 17.210 > $t_{table}$ of 1.96 or p value of 0.000 <0.05 with a coefficient of 0.778, then statistically Ho is rejected and Ha is accepted meaning that the work environment variable has an influence on job satisfaction at PT. Faco Global Engineering.
4. There is a positive and significant indirect effect of the work environment on employee performance through job satisfaction as assessed by the t statistic 3.435 > t table 1.96 or p value 0.001 <0.05 with a coefficient of 0.408 the effect of the work environment on employee performance through job satisfaction. This means that job satisfaction mediates the influence of the work environment on employee performance in a positive and significant way. It can be concluded that the hypothesis of job satisfaction variables mediates the work environment towards performance is accepted.

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## RECOMMENDATION

In the work environment variable that has a weakness in the noise indicator, the advice that can be given is that sound control in the work space should be given even better attention, such as installing soundproofing in the room so that employees feel comfortable and can concentrate on work. The variable of job satisfaction is expected to be further improved, especially in the promotion indicator, namely by providing opportunities for employees who have potential and achievements to gain career advancement or promotion so that employees are more enthusiastic at work so as to increase employee job satisfaction. Employee performance at PT. Faco Global Engineering is generally in the high category, so the company must always maintain and even improve employee performance. This can be done by means that the company must always remind employees of the importance of quantity in work, and always evaluate employee performance so that it can be used as evaluation material so that employee performance can improve even better. For future researchers to further develop research on the Work Environment and Job Satisfaction on Employee Performance in different units of analysis.

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