

**THE EFFECT OF WORK MOTIVATION, WORK ENVIRONMENT,  
AND COMPETENCE ON EMPLOYEE PERFORMANCE  
(A STUDY AT FROZEN EDAMAME COMPANY)**

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Submitted 01 September 2020; Accepted 03 February 2021

**ABSTRAK**

PT. Mitratani Dua Tujuh dituntut untuk dapat selalu memenuhi kebutuhan pasar akan edamame beku dikarenakan semakin tingginya kebutuhan pasar akan *frozen edamame* itu sendiri. Karenanya, sumber daya manusia produktif sangat diperlukan yang mana hal ini dapat ditinjau melalui penilaian kinerja karyawan. Tujuan dilakukannya penelitian ini ialah untuk menganalisis faktor-faktor yang memengaruhi kinerja karyawan di PT. Mitratani Dua Tujuh melalui motivasi, lingkungan kerja dan kompetensi. Penelitian berlokasi di PT. Mitratani Dua Tujuh, Kabupaten Jember dan dilaksanakan pada Maret-April 2020. Jumlah sampel sebanyak 38 karyawan ditentukan dengan menggunakan teknik *purposive sampling*. Pengambilan data dengan cara penyebaran kuesioner dan kemudian data dianalisis menggunakan alat SEM-PLS *Analysis*. Pada penelitian ini, hasil yang diperoleh berupa ketiga variabel independen berpengaruh signifikan terhadap variabel kinerja karyawan. Variabel motivasi (X1) berpengaruh positif terhadap kinerja (Y) sebesar 0,43 dengan p-value sebesar <0.01. Berbeda dengan variabel lingkungan kerja (X2) yang berpengaruh negatif terhadap kinerja (Y) sebesar 0,26 dengan p-value sebesar 0,04. Variabel kompetensi (X3) memiliki pengaruh positif terhadap kinerja (Y) sebesar 0,39 dengan p-value sebesar <0.01. Nilai R-Squared menunjukkan angka 0,44 yang memiliki makna bahwa variabel motivasi, lingkungan kerja dan kompetensi secara simultan mempengaruhi kinerja karyawan sebesar 44%, dan sisanya dipengaruhi variabel lain diluar model.

**Kata kunci:** kinerja; kompetensi; lingkungan kerja, motivasi

**ABSTRACT**

*PT. Mitratani Dua Tujuh is required to be able to meet the market demand for frozen edamame due to its increasing demand. Therefore, productive human resources are needed, which can be seen through employee performance appraisals. This research aimed to analyze work motivation, work environment, and competence factors on the employee performance in frozen edamame company. The study was conducted at PT. Mitratani Dua Tujuh in Jember Regency from March-April 2020. The number of samples was 38 employees determined using a purposive sampling technique. The data were obtained by distributing questionnaires and analyzed using the partial least squares structural equation modeling (PLS-SEM) analysis. The results showed that work motivation (X1) had a positive effect on the employee performance variable (Y) of 0.43, with a P-value of < 0.01. In contrast, the work environment variable (X2) had a negative effect on performance (Y) of 0.26, with a P-value of 0.04. Furthermore, competence (X3) had a positive effect on performance (Y) of 0.39, with a P-value of < 0.01. The R-Squared value was 0.44. In conclusion, work motivation, work environment, and competence simultaneously affect employee performance by 44%, and the rest are affected by other variables outside the research model.*

**Keyword:** competence; performance; work environment, work motivation

## INTRODUCTION

The progress of a company cannot be separated from the company's resources. Human resources are one of the elements of production that play a crucial role. This is because human resources are the driving force of other resources within an organization or company (Rivai & Sagala, 2009). Good workforce management can be seen from the balance between the needs of the workforce and the demands of the company's progress. A company must be able to utilize the existing workforce in the company's environment appropriately in order to create this balance. This is in line with the research of Ushie, Agba, Ogaboh, & Okorie (2015), who revealed that employees whose needs are met by the company would develop self-readiness in them to achieve company goals. Good human resource management is expected to trigger the workforce to work productively.

Employees with high performance can create efficiency, effectiveness and increase company productivity to achieve company goals. In line with the research of Rajaguguk (2016), which states that the high quality of employee performance with good work performance will lead the company to increase the rate of productivity and work quality. Hence, the company's targets can be achieved. This also happens the other way around. If the employee's performance is bad, it will harm the company. According to Kasmir (2016), an organization can assess employee performance through thirteen factors, including work motivation, work environment, and competence.

One of the agro-industry sectors that are currently in great demand is frozen food processing companies. This is due to a shift in food consumption patterns in modern society's lifestyle. This change can be in the form of differences in food supplies at the household level, which previously consumed fresh food, and now some have become frozen food products. According to Santoso, Mustaniroh, & Pranowo (2018), frozen food

products are processed frozen instant foods that are durable and easy to serve.

The frozen food trend in the community and the high demand for frozen food in consumer households spur food processing companies to produce many variations of processed frozen food. It's no exception for PT. Mitratani Dua Tujuh as a company that produces frozen edamame products, which is also an exporter of its products to foreign markets. The main consumer of PT. Mitratani Dua Tujuh, which is Japan also gets frozen edamame supplies from countries other than Indonesia. This makes PT. Mitratani Dua Tujuh to improve and maintain the quality of its products in order to compete in the global market. In this case, PT. Mitratani Dua Tujuh must be able to maintain work performance, and one of the ways is with good human resource management.

A similar study was conducted by Hasanah, Sumowo, & Santoso (2018) on the effect of the work environment (X1), individual characteristics (X2), and work discipline (X3) on employee performance (Y) in similar companies. The difference between the research of Hasanah et al. (2018) and the current research conducted by the researchers in this study are related to the work environment at PT. Mitratani Dua Tujuh. The research of Hasanah et al. (2018) focuses on indicators of the physical work environment, while the current research conducted by the researchers in this study discussed more broadly related to the non-physical work environment. This is also mentioned in the research suggestions of Hasanah et al. (2018), that further research is suggested to conduct in-depth research by adding research objects in the form of indicators in work environment variables in order to improve previous research. On the other hand, Hafifi, Qomariyah, dan Anwar (2018) suggested future researchers conduct a study on employee performance appraisal through several variables, including work environment variables, leadership styles, and job training for employees in the production division of PT. Mitratani Dua Tujuh. Further

research needs to examine other variables that may affect employee performance, for example, motivation and competence.

The objective of this study was to analyze the effect of work motivation, work environment, and competence on employee performance in frozen vegetable processing companies. Discussions on human resources always become interesting topics to study in relation to the various problems that often arise within employees (as a driver of other resources) so that more effort is needed in their management. Therefore, effective and efficient human resource management is necessary.

### RESEARCH METHODS

This research was conducted at PT. Mitratani Dua Tujuh, which is located at Jalan Brawijaya No. 83 Mangli Village, Kaliwates Subdistrict, Jember Regency, East Java from March-April 2020. PT. Mitratani Dua Tujuh was selected as the research site because according to Ministry of Industry of the

Republic of Indonesia (2020), the company is the only frozen edamame producer in Indonesia, so it requires great attention in terms of employee performance in order to meet market demands for frozen edamame itself. Determination of the sample in this study used non-probability sampling method with purposive sampling technique. Questionnaires were distributed to all employees at PT. Mitratani Dua Tujuh as the research sample. In this study, the number of arrows leading to the construct in the structural model is three.

When using a significance level of 5% and the expected minimum  $R^2$  is 0.50, the sample size required in this study is at least 38 samples. The sample in this study was permanent employees at PT. Mitratani Dua Tujuh, which spread over ten divisions. The data collection technique in this research used questionnaires and interviews. This study analyzed the data using the partial least squares structural equation modeling (PLS-SEM) analysis tool.

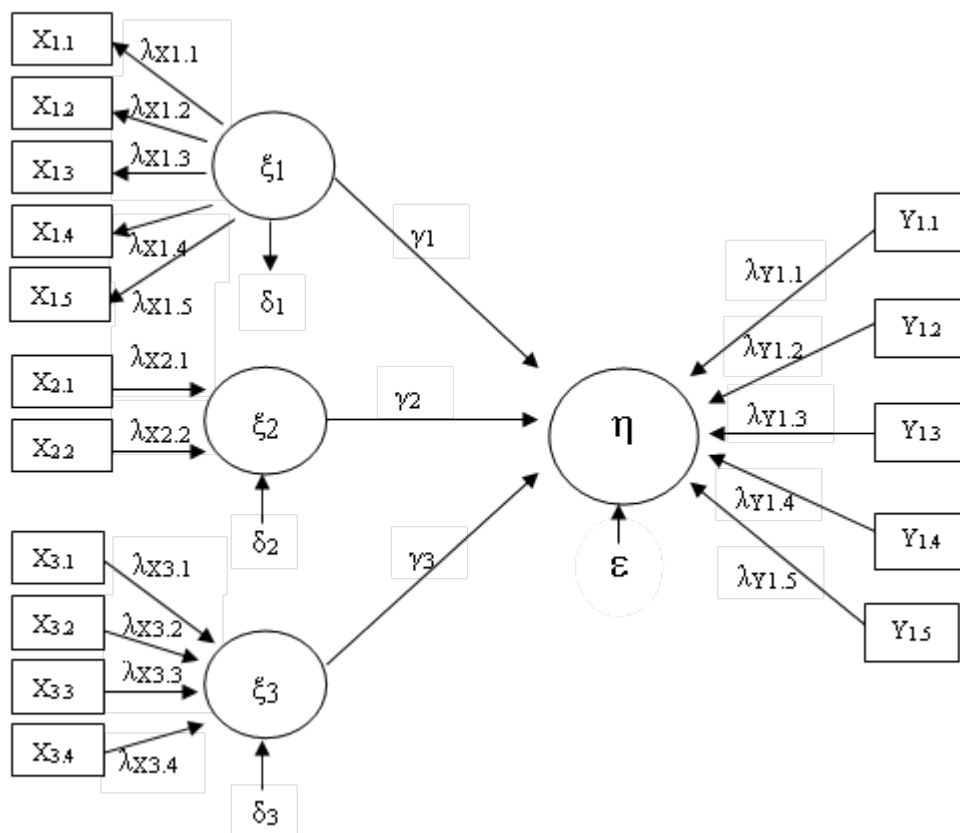


Figure 1. Research Path Diagram

The variables studied were work motivation, work environment, and competence that were tested on employee performance variables. The selection of these three variables is based on the theory of Kasmir (2016), which states that thirteen factors influence performance, and among them are work motivation, work environment, and competence.

Each variable is measured using several indicators. The variable of work motivation was measured using Maslow's hierarchy of needs theory proposed by Abraham Maslow, comprising a five-level model of human needs in Maslow's pyramid. The five levels are physiological needs, safety and security needs, affiliation or acceptance needs, esteem or status needs, and self-actualization needs.

The work environment variable is measured using the theory proposed by Sedarmayanti (2009), which states that there are two types of work environment, including the physical work environment and the non-physical work environment. Indicators in the physical work environment are workspace layout, light, temperature, humidity, and noise. The indicators in the non-physical work environment are the leader's attention and support, cooperation between co-workers, and smooth communication. The competence variable is measured using the theory of Palaniappan (2003), in which there are five indicators of self-competence. The five indicators are knowledge, skills, self-concept and values, and characteristics. Performance variables were measured formatively using indicators of quality, quantity, punctuality, attendance, and the ability to work together (Mathis & Jackson, 2006).

This study used structural equation modeling (SEM) analysis in answering the research objectives, namely the effect of work motivation, work environment, and competence on employee performance in frozen vegetable processing companies, especially PT. Mitratani Dua Tujuh in Jember Regency. According to Solimun, Fernandez, & Nurjannah (2017), there are six steps in the

SEM method, including designing the Inner Model, designing the Outer Model, constructing a path diagram, converting the path diagram into a system of equations, estimating parameters, and evaluating the model.

## RESULTS AND DISCUSSION

### Company Profile

This research was conducted at PT Mitratani Dua Tujuh. According to the official website of PT. Mitratani Dua Tujuh, this company is specialized in the frozen vegetable industry with edamame as the main product. PT. Mitratani Dua Tujuh currently has developed other products such as okra, beans, corn, and carrots.

PT. Mitratani Dua Tujuh, which has been known as Edamame and Okura exporting company, is currently focusing on increasing Edamame productivity due to the increasing number of global competitors supplying Edamame to the main market namely Japan. On the other hand, the decline in the value of the rupiah exchange rate makes the company get smaller revenue. For this reason, PT. Mitratani Dua Tujuh must be able to meet the demand of Edamame properly, so the company's profit can still be achieved. PT. Mitratani Dua Tujuh certainly requires a driver in the form of productive employees to achieve the company's goals optimally.

Therefore, all divisions within the organization need to cooperate to achieve the expected goals. According to the Mitratani27 webpage, PT. Mitratani Dua Tujuh increases the number of employee recruitments to meet market demand. Employee quality and quantity determine the resulting productivity considering that several things that can affect employee productivity at work are within the employees themselves—for example, self-motivation and competence (Abdullah, 2017).

### Characteristics of Respondents

The following is an explanation of the respondents in this study.

### 1. Age

The following table shows the age range of employees at PT. Mitratani Dua Tujuh as the research respondents.

**Table 1.** Percentage of Respondents by Age

| Age          | Total     | %(Total)   |
|--------------|-----------|------------|
| 20 – 40      | 10        | 26,32      |
| > 40         | 28        | 73,68      |
| <b>Total</b> | <b>38</b> | <b>100</b> |

*Source: Primary data processed, (2020)*

It can be seen that the majority of respondents in this study are employees aged above 40 years old, with a total percentage of 73.68%. According to the research of Aprilyanti (2017), productivity can be influenced by the quality of individual work in which there is an age factor that affects performance. Working age or productive age ranges from 20-40 years. Therefore, it can be said that 73.68% of employees at PT. Mitratani Dua Tujuh is in the category of old age groups. Hence, the productivity level is not maximal.

### 2. Gender and Age

The following table shows gender and age range of employees at PT. Mitratani Dua Tujuh as research respondents.

**Table 2.** Percentage of Respondents by Gender and Age

| Gender       | Age       |           | Total     | %(Total)   |
|--------------|-----------|-----------|-----------|------------|
|              | 20-40     | > 40      |           |            |
| Male         | 6         | 23        | 29        | 76,32      |
| Female       | 4         | 5         | 9         | 23,68      |
| <b>Total</b> | <b>10</b> | <b>28</b> | <b>38</b> | <b>100</b> |

*Source: Primary data processed, (2020)*

It can be seen that the majority of respondents in this study were male employees in the category of age range 40 years or older, with a total of 23 people. As it is known that this company cultivates their own products, and the leased land is scattered all over from the Jember Regency to Bondowoso Regency. Therefore, there are

more male employees than females due to the need for high physical jobs and work placements that are spread over several areas.

### 3. Education and Age

The education of employees is Junior High School (SMP), Senior High School/vocational high school (SMA/SMK), Diploma (D3), and Bachelor (S1). The following table shows the education and age of employees at PT. Mitratani Dua Tujuh.

**Table 3.** Percentage of Respondents by Education Level and Age.

| Education    | Age       |           | Total     | %(Total)   |
|--------------|-----------|-----------|-----------|------------|
|              | 20-40     | > 40      |           |            |
| SMP          | -         | 1         | 1         | 2,63       |
| SMA/SMK      | 6         | 17        | 23        | 60,53      |
| D3           | -         | 7         | 7         | 18,42      |
| S1           | 4         | 3         | 7         | 18,42      |
| <b>Total</b> | <b>10</b> | <b>28</b> | <b>38</b> | <b>100</b> |

*Source: Primary data processed, (2020)*

In table 3, it can be seen that the number of employees who graduated from Senior High School age 40 years or older are the largest, with 17 people. According to the spokesperson of the Human Resources Development Department at the company, this is because of PT. Mitratani Dua Tujuh in recent years has required its employees to have a minimum education equivalent to Senior High School.

### 4. Working Period and Age

The following table shows years of service and the age of employees at PT. Mitratani Dua Tujuh. In table 4, it can be seen that the number of employees with work experience of more than 10 years at PT. Mitratani Dua Tujuh has an age range of above 40 years old, with a total of 19 people.

PT. Mitratani Dua Tujuh keeps their old employees because they assumed that the longer the working period of an employee, the higher the knowledge and experience of one's work and productivity.

**Table 4.** Percentage of Respondents by Working Period and Age

| Working period | Age       |           | Total     | % (Total)  |
|----------------|-----------|-----------|-----------|------------|
|                | 20-40     | > 40      |           |            |
| < 1 year       | 2         | 0         | 2         | 5,26       |
| 1 – 5 years    | 1         | 1         | 2         | 5,26       |
| 6 – 10 years   | 4         | 8         | 12        | 31,58      |
| > 10 years     | 3         | 19        | 22        | 57,89      |
| <b>Total</b>   | <b>10</b> | <b>28</b> | <b>38</b> | <b>100</b> |

Source: Primary data processed, (2020)

### PLS-SEM Model Evaluation

The following table shows Reflective Model Loading and Cross Loading Indicators. In table 5, the loading factor value shows that each indicator has a value of more than 0.7. Each P-value on these indicators also shows a value of <0.001, so it can be said that all indicators have met the criteria of reliability indicator value.

**Table 5.** Indicator Loading and Cross Loading Reflective Model

|                  | (X1)           | (X2)   | (X3)   | (Y)    | P-value |
|------------------|----------------|--------|--------|--------|---------|
| X <sub>1.1</sub> | <b>(0.805)</b> | -0.399 | -0.190 | 0.129  | <0.001  |
| X <sub>1.2</sub> | <b>(0.829)</b> | -0.091 | 0.087  | -0.166 | <0.001  |
| X <sub>1.3</sub> | <b>(0.745)</b> | 0.128  | -0.020 | 0.081  | <0.001  |
| X <sub>1.4</sub> | <b>(0.789)</b> | 0.295  | 0.163  | -0.044 | <0.001  |
| X <sub>1.5</sub> | <b>(0.763)</b> | 0.090  | -0.043 | 0.011  | <0.001  |

\* data results meet the loading factor criteria

Source: Primary data processed, (2020)

**Table 6.** Composite Reliability and AVE values

|   | (X1)  | (X2)  | (X3)  | (Y)   |
|---|-------|-------|-------|-------|
| <b>Composite reliability</b>            | 0.890 | 0.755 | 0.753 | 0,765 |
| <b>Average variance extracted (AVE)</b> | 0.619 | 0.516 | 0.587 | 0,609 |

Source: Primary data processed, (2020)

In table 6, the Composite Reliability shows that the reflective construct of each variable has a value above 0.7. This means

that the use of indicators or measurement models on each variable is reliable.

It is different from the AVE value, which has a value provision of > 0.5 in order to show good convergent validity results.

**Table 7.** Correlation values among latent variables with square roots of AVEs

|           | (X1)    | (X2)    | (X3)    | (Y)     |
|-----------|---------|---------|---------|---------|
| <b>X1</b> | (0.787) | 0.190   | 0.059   | 0.464   |
| <b>X2</b> | 0.190   | (0.562) | -0.243  | -0.045  |
| <b>X3</b> | 0.059   | -0.243  | (0.622) | 0.381   |
| <b>Y</b>  | 0.464   | -0.045  | 0.381   | (0.639) |

Source: Primary data processed, (2020)

Table 7 shows that the cross-loading value does not exceed the loading indicator value. In this case, it can be said that the indicator is valid. Second, the evaluation of discriminatory validity is to look at the roots of AVE. Based on the results, it can be seen in the table that the correlation between constructs has a smaller value than the square root value of AVE in each construct. Therefore, the discriminant validity is categorized as good.

According to Hair et al. (2011), formative models can be evaluated by looking at the results of indicator weights by evaluating two criteria: indicator reliability and collinearity. Indicator reliability can be seen through significant weights and collinearity through the variance inflation factor (VIF) value. The results show that all indicators on each variable X2, X3, and Y meet the criteria for indicator reliability. Meanwhile, the VIF value of all indicators is less than 3.3, which means that the collinearity criteria are met. This means that each indicator does not have a collinearity problem.

The next stage is the evaluation of the structural model (inner model), which aims to see the relationship between the variables contained in the model. Table 8 shows the R-Squared value on the employee performance variable (Y) of 0.44, which means that the contribution of the variables (X1), (X2), and (X3) to employee performance is 44%, and

variables outside the research model influence the remaining 56%.

**Table 8.** *R-Squared (R<sup>2</sup>), Full Collinearity VIF, Q-squared (Q<sup>2</sup>), and Effect Size (f<sup>2</sup>) values*

|  | (X1)  | (X2)  | (X3)  | (Y)   |
|--|-------|-------|-------|-------|
| <i>R-Squared Full Collinearity VIF</i>       |       |       |       | 0.440 |
| <i>Q-squared Effect Size (f<sup>2</sup>)</i> | 1.363 | 1.116 | 1.255 | 1.523 |
|  | 0.199 | 0.073 | 0.168 | 0.462 |

*Source: Primary data processed, (2020)*

In this study, the R-Squared value was 0.44, so it was included in the moderate category. Full Collinearity VIF shows a value of less than 3.3 on the four variables. Thus, the model in this study is free from collinearity problems. The Q-squared value of the employee performance variable (Y) is 0.462, which means the research model has a strong predictive relevance. In table 8 shows that work motivation (X1), work environment (X2), and competence (X3) have an Effect Size value of 0.168 on employee performance. Therefore, it shows that the three variables have a fairly significant role in terms of increasing employee performance variables at PT. Mitratani Dua.

The last stage of the inner model evaluates the Goodness of fit (GoF) value of the model. GoF evaluation is used to measure the quality of the model. Based on the GoF calculation, the P-value of the APC, ARS, and AARS calculations shows a value ( $p < 0.05$ ), and therefore it is significant and meets the model fit. Meanwhile, the value of VIF and AFVIF has a value of less than 3.3 and meets the model fit requirement. In addition, the Tenenhaus GoF value  $GoF \geq 0.36$  indicates that the predictive power of this research model is strong, so the model fit can be accepted. The index values of SPR, RSCR, SSR, and NLBCDR have met the model fit, thus indicating that there is no causality problem in this research mode.

## Hypothesis Testing

Based on research that has been conducted, it is found that there is an effect caused by the variables of work motivation, work environment, and competence on the employee performance at PT. Mitratani Dua Tujuh. Based on table 9, it can be seen that all path coefficients in the construct have significant results.

**Table 9.** *Research Hypothesis*

|                                    | Hypothesis   | Path Coefficient | P-value  |
|------------------------------------|--|------------------|----------|
| H <sub>1</sub> : $\gamma_1 \neq 0$ | Motivation has a positive effect on employee performance       | 0,43             | P < 0,01 |
| H <sub>1</sub> : $\gamma_2 \neq 0$ | Work environment has a negative effect on employee performance | -0,26            | P = 0,04 |
| H <sub>1</sub> : $\gamma_3 \neq 0$ | Competence has a positive effect on employee performance       | 0,39             | P < 0,01 |

\*all hypotheses are accepted

*Source: Primary data processed, (2020)*

Not all of the path coefficients have positive results. This can be seen by the magnitude of the effect of the exogenous variables X1, X2, and X3 on Y, and the significance value can be seen from the stated p-value.

## The Effect of Work Motivation on Employee Performance at PT. Mitratani Dua Tujuh

The motivation variable has the highest effect among other variables on employee performance at PT. Mitratani Dua Tujuh. According to the previous research conducted by Amalia & Marpaung (2019), motivation positively and significantly affects employee performance. According to Gautam (2014), motivation is an important issue in any organization because it is directly involved in encouraging or initiating human behavior, directing and channeling behavior, and maintaining it. The trend from the respondents' answers shows that employees

have their own motivations at work. The results analysis using Abraham Maslow's Hierarchy theory on employee motivation at PT. Mitratani Dua Tujuh shows the distribution in each level of fulfillment of their needs. The indicator on the motivation variable that gets the highest score is esteem or status needs, then affiliation needs and security and safety needs.

This means that the highest motivation that drives the employees at PT. Mitratani Dua Tujuh is the need to be appreciated by others and in achieving a certain status. Through various efforts, employees want themselves to be seen as important. For example, in the cultivation division, at the end of each planting season, the company will announce the ranking of the area manager in terms of achieving the target harvest of the edamame and okura. The rank position motivates area managers and other employees to compete for the highest rankings, thereby making area managers and their employees improve their performance. PT. Mitratani Dua Tujuh will reward the top rankers who can achieve their target in the form of incentives.

Another driving motivator for employees at PT. Mitratani Dua Tujuh is the need for affiliation or socializing. According to (Fahmi 2016), at this point, it shows that someone needs recognition from others. 'Humans are social beings,' and therefore, humans will instinctively live in relationships and be a part of society. Employees can feel motivated to affiliate in order to get friends, but it can also confirm that they can blend in and get along with others in the company environment. For example, the existence of informal groups within the company.

### **The Effect of Work Environment on Employee Performance at PT. Mitratani Dua Tujuh**

The results of this study are different from previous studies where the work environment has a positive and significant effect on performance, for example, in the research conducted by Hasanah *et al.* (2018), which was also conducted at PT. Mitratani

Dua Tujuh stated that the work environment has a positive effect on company performance. This is because previous researchers used analysis in the form of multiple linear regression, while the researchers used the partial least squares structural equation modeling (PLS-SEM) analysis. Another thing that makes it different in the research results between these two studies is the indicators used by previous researchers are less than the indicators used by the researchers in this study. It is shown that the highest average value of the work environment indicators is found in indicators of workspace layout, lighting, temperature and humidity, noise, as well as the leaders' attention and support.

According to (Ismara, 2005), a workspace is a well-designed room for machines or work desks, supporting equipment, and operators, which are expected to support work productivity. One of the employees stated that at the beginning PT. Mitratani Dua Tujuh still operates using simple machines and devices, even data recording does not use a computer. In order to improve the quality and quantity of production, everyone involves in industries, including PT. Mitratani Dua Tujuh prompts to implement an Office Automation System. Office automation is defined as automatic equipment in the form of a multi-function manipulator that can be programmed to replace some human functions to perform tasks (Ismara, 2005). PT. Mitratani Dua Tujuh has implemented Office Automation System to use computers for each employee whose duties are directly related to company data and the use of machines in the processing division. This shows that PT. Mitratani Dua Tujuh has a spatial layout with good supporting equipment to increase productivity through work effectiveness and efficiency. However, in this study, it was found that the work environment had a negative effect on performance. As it is known that based on the characteristics of the respondents, 73.68% of the respondents in this study were aged 40 years or older and had worked for more than



ten years, which means that the majority of the employees went through the transition period. This can happen because employees who are used to manual machine operations feel that these automatic machines are complicated, vulnerable to damage, and many commands or buttons are not easy to understand or remember (Ismara, 2005). In addition, Ismara (2005) also mentions that the result of the gap that occurs is human-machine interaction is not in tune. The high level of cognitive and psychological demands on workers also make them easy to make mistakes, stress, and get bored. This can cause a decline in employee performance and the company's target of productivity cannot be achieved.

Lighting is one of the indicators that is an essential factor related to a good working environment. Whether or not an employee's work is efficient or not can be determined through appropriateness and carefulness at work (Putra & Madyono, 2017). Moreover, (Putra & Madyono, 2017) states that lighting greatly affects object vision, so that one of the factors to support good vision conditions is through optimum lighting levels. In this study, the results showed the respondents agreed that the lighting at PT. Mitratani Dua Tujuh is good. However, this study also showed that the environment had a negative effect on the employees' performance. Good lighting does not mean that the higher the lighting, the better the lighting. This is in line with the research of (Putra & Madyono, 2017) that light intensity analysis is needed to support workplace safety and comfort. Analysis of light intensity can be done by looking at the minimum required lighting level, coefficient of utilization or coefficient of use (CU), light-loss factor, and lighting intensity to determine the right lighting level. Excessive lighting can cause eye fatigue, which is one of the health problems for workers. According to Suma'mur (2009), the inaccuracy of contrast causes eye fatigue due to stress that arises when the accommodation muscles of the workers make careful observations. If employees experience eye fatigue, this can

affect their performance, proving that excessive lighting can cause a decline in employees' performance.

PT. Mitratani Dua Tujuh as a frozen vegetable producer, has several different workspaces according to their respective divisions. The workspace in the Internal Control Unit (SPI), General, HR, Marketing, Seeds, Cultivation, Engineering, Quality Assurance, and Finance divisions are different from the workspace in the Production division, which is a factory. This also affects the temperature and humidity of the room in the workspace. The room temperature in the division that works in the office shows 20-25°C, including normal conditions with the help of Air Conditioners in each room. This is according to the Decree of the Minister of Health of the Republic of Indonesia Number 1405/MENKES/SK/XI/2002, which states that in office and industrial environments, the temperature requirements are range from 18-28°C. However, it is different from the temperature in the processing factory, especially in the cold storage section, which shows the room temperature below -18°C.

In the food industry, especially at PT. Mitratani Dua Tujuh, they have cold storage, which is useful for storing raw materials or production results that can extend the product's life so that it does not go bad or rot quickly. The temperature and humidity in the cold storage environment can cause cold stress, which will affect the workers in that environment. Cold stress is a combination of temperature conditions (cold), wind speed, and humidity that can harm the body of the workers because it causes body or mental tension (Killham, 2007). Furthermore, (Killham, 2007) explains that the body's response to cold stress can be in the form of shivering, reduced sensitivity, and dexterity of the fingers. At lower temperatures, it can affect deeper muscles, reduce muscle and joint strength, which can harm workers. The most concerning is that workers at PT. Mitratani Dua Tujuh is mostly in the category of old age. Thus, they are more susceptible to disease, which can lead to a decrease in work

productivity. According to Aprilyanti (2017), workers who have entered old age will have a lower level of productivity than workers in productive age. This is because the physical becomes weak and limited.

### **The Effect of Competence on Employee Performance at PT. Mitratani Dua Tujuh**

Based on the average value obtained, it is found that the indicator on the highest competency variable is knowledge. This means that employees at PT. Mitratani Dua Tujuh feels that their knowledge is suitable for their current position. Therefore, it can affect their performance. For example, employees in the cultivation division, especially the foreman who is directly responsible for crop production, some of whom are graduates from the faculty of agriculture at the University in Jember. Placements in the cultivation division with an educational background that focuses on agriculture are indeed compatible. The basics of cultivating edamame, okura, and other plants have been known beforehand when studying. Therefore, the practice in the field can be easily implemented. In addition to the foreman, there is also a clerk whose job is to handle regional administration. For example, employees with a high school education background or equivalent are responsible for recording the need for fertilizers, pesticides, and salary requests. This is because, in the administration division, the company does not require particular specifications from certain majors. However, they must be able to operate Microsoft Word and Microsoft Excel.

Another indicator that gets the highest score in the competence variable is skills. According to Callista (2016), skills refer to a person's ability to perform certain tasks. In addition, Callista (2016) also stated that maintaining or improving the competence of skills can be done by providing training. PT. Mitratani Dua Tujuh also provides training to their employees. According to the news page on the Mitratani27 website, this company increases the grade of auditors in accordance with the specified competencies. Auditors are

employees in the Internal Control Unit (SPI) division responsible for audits to ensure that employees and systems within the company are running well. The increase in grade for auditors is carried out by involving these auditors in the In-house Training of Internal Auditors. This shows that PT. Mitratani Dua Tujuh pays attention to employees' competence and plays an active role in efforts to improve the capabilities of its employees through existing training.

## **CONCLUSION AND SUGGESTION**

### **Conclusion**

Work motivation and competence have a positive and significant effect on employee performance at PT. Mitratani Dua Tujuh. The motivational variables that get the highest score are safety and security needs, physiological needs, and esteem or status needs. This means that the highest motivation that drives employees at PT. Mitratani Dua Tujuh is the need for security and safety, fulfilling physiological needs, and socializing. The highest competence variable indicators are knowledge and self-characteristics. The majority of the employees at PT. Mitratani Dua Tujuh feels that their knowledge is suitable for their current position. Therefore, it can affect their performance. In contrast, the work environment has a negative effect on employee performance. A better physical and non-physical work environment will decrease company performance from time to time. The work environment variables that have the highest values are lighting, attention and support from leaders, spatial layout, and noise.

### **Suggestion**

Researchers provide several suggestions for companies and academics after conducting research and understanding the actual field conditions. The suggestions are as follows:

1. In an effort to improve employee performance, the HR division needs to know the employees' level of motivation,

and therefore appropriate action can be taken. One of the ways is to evaluate employee performance, as was done in this study. The results obtained indicate that the highest indicators are the need for health and safety and physiological needs. The HR Division has provided health insurance in the form of BPJS health, and for physiological needs, it can be done by offering incentives to employees.

2. Based on the findings, which show that the work environment has a negative effect on employee performance, the researcher suggests that PT. Mitratani Dua Tujuh needs to provide training related to the use of machines or computers to employees so that their work results can be in accordance with company goals. Furthermore, the company can also recruit workers who have the skills to operate machines or computers. In addition, PT. Mitratani Dua Tujuh needs to educate its employees by giving information on standard operating procedures. Thus, the employees can understand that the existing work environment is the most suitable environment for the production process. Leaders are also advised to be more appreciative of employees' work and motivate the employees without putting pressure on them. This is intended to make the work environment healthier, and therefore it can improve employee performance.
3. This study shows results that the work environment has a negative effect on employee performance at PT. Mitratani Dua Tujuh. It is recommended for further research to examine each indicator on physical and non-physical environmental variables that may affect employee performance.

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