THE ROLE OF WORK ENVIRONMENT, WORK MOTIVATION, AND LEADERSHIP TO IMPROVE EMPLOYEE PERFORMANCE WITH JOB SATISFACTION AS AN INTERVENING VARIABLES

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ABSTRACT

This study aims to determine the effect of the work environment (WE), work motivation (WM), leadership (Ld) on employee performance (EP) and job satisfaction (JS) as an intervening variable. The population is all furniture factory workers in the city of Semarang, Indonesia and sampling using a proportionate stratified random sampling technique. A questionnaire was distributed to 148 respondents to collect the data, all of whom were furniture factory workers. Variables are measured based on respondents’ perceptions using a Likert scale. The analytical tool used is the Structural Equation Model (SEM) with the AMOS 22 application’s help. The results show that the WE, WM, and Ld style significantly affect EP. Besides, JS has been shown to mediate EP.

Keywords: Work Environment, Work Motivation, Leadership, Job Satisfaction, Employee Performance.

JEL Classification: J24, J28, J29

INTRODUCTION

The Covid-19 pandemic has not only affected the health sector, but almost all sectors have been affected by the Covid-19 pandemic, especially in the economic sector. If the company cannot survive in this condition, it will go bankrupt. Bankruptcy does not only affect the company itself but also affects employees if a layoff occurs. Human resources (HR) is one element or part of the largest investment of an organization. A Quality HR must have high competence and skills that can advance the company. Therefore, HR is required to think smartly, innovatively, and work with high enthusiasm in facing the times’ progress. After all, the company will not properly carry out its duties and objectives if it does not have competent HR. Therefore, the human factor becomes a significant role in every effort made by the company.

In this condition, every company is often faced with problems regarding the performance of its employees. Every leader in the company will always try to motivate so that every activity can achieve effective and efficient results under the company’s objectives. Therefore, to achieve the desired level of effectiveness and efficiency, the company must have a good work system or have good EP. Therefore, an organization’s success is very much dependent on the organization’s performance, where the organization’s performance depends on its employees’ performance, the motor for a company to keep running.
Performance is the result of a process; it refers to and is measured over a period based on the provisions or agreements that have been previously determined. An employee’s performance is measured by the quality and quantity achieved in carrying out the task following the given responsibility. The appraisal is one way to improve EP; performance appraisal will reveal how well a person has worked according to the goals they want to achieve. JS is a problem that is quite interesting and important because it has proven to be of great benefit to the interests of individuals, industry, and society. For individuals, research on the causes and sources of JS allows efforts to increase their happiness in life.

Meanwhile, for industry, research on JS is carried out to increase production and costs by improving employee attitudes and behaviour. Furthermore, society will undoubtedly enjoy the industry’s maximum capacity yield and the increase in human value in work. JS is related to a person’s feelings or attitudes about the job itself, salary, promotion or education opportunities, supervision, co-workers, workload, and others. He continued his statement that JS is related to one’s attitude about work, and several practical reasons make JS an essential concept for leaders.

Several factors affect EP in carrying out the overall tasks that becoming their responsibility, including; Ld, WM, and WE. On the other hand, the factors that significantly influence JS are factors related to work, working conditions, co-workers, supervision, promotion, and salary. JS issues will be solved and fulfilled if the variables that affect it are very supportive. That variables are Ld, WM, and WE.

Ld is the most crucial factor in an organization. As a management concept, it can be formulated in various definitions depending on the basic assumption. The next factor that affects EP is WM. Motivation is a condition that encourages or causes someone to do an action or activity, which is done consciously. According to Steers & Porter (1991), WM is an effort that can lead to behaviour, direct behaviour, and maintain the behaviour under the WE in the organization. WM is a basic human need and an incentive expected to meet the desired basic needs. Therefore, if the need exists, it will result in the success of an activity. Employees who have high WM will try to get their work done as well as possible.

Furthermore, the WE is everything around the employee. It can affect how employees carry out the duties assigned, for example, by the air conditioner (AC), adequate lighting, etc. The WE in a company is critical for management to be noticed. Even though the WE does not carry out the production process in a company, the WE directly influences the employees who carry out the production process. The WE is an atmosphere where employees carry out activities every day.

Related to those factors, previous research that has been conducted is Pawirosumarto et al. (2017) and Marshall et al. (2015), it was found in his research that the WE had a significant positive effect on employee JS. However Rafiq et al. (2012) and Tokuda et al. (2009) stated that the WE does negative affect JS. Subsequent research, Panagiotopoulos et al. (2018); Pranita (2018); Ogunnaike et al. (2014) found that the WM variable has a positive and significant effect on JS. However, Kian et al. (2014) found that WM does not affect employee JS. Pawirosumarto et al. (2017) and Voon et al. (2011) in his research found that Ld has a significant positive effect on JS, while Lok & Crawford (2004) proved that Ld negative affect JS in the company.

Research that has been done is Parashakti et al. (2020) and Nguyen et al. (2015) in his research, it found that the WE has a significant positive effect on EP. However Pawirosumarto et al. (2017) expressed the opinion that the WE does not affect EP. Subsequent research, namely Efendi et al. (2020); Pranita (2018); Robercu & Iancu (2016); Widodo (2014); Zameer et al. (2014) in his research, found that the WM variable has a significant positive effect on EP.
However, Shahzadi et al. (2014) found that WM does not affect EP. Fahmi & Sanika (2019); Pawirosumarto et al. (2017); Roeleejanto et al. (2015); Widodo (2014) in his research found that the Ld variable has a significant positive effect on EP, while Shahab & Nisa (2014) proved that Ld does not influence EP in the company. Also, research from Sudiardhita et al. (2018) and Shahab & Nisa (2014) proves that JS has a significant positive effect on EP. However, this is not the same as research from Pawirosumarto et al. (2017), which proves that JS does not affect EP.

Through the research gap that has been determined in previous research, it can be seen that there is a difference between each variable where there are variables with effective results, and the variables have no effect. Classic problems occur because employees feel bored at work, a less conducive WE, and other factors outside of that can also cause a lack of WM. Clearly, it affects EP with such working conditions where employees are less satisfied in carrying out their duties and jobs. So the research question is whether the WE, WM, and Ld influence the JS of factory workers? Do the WE, WM, and Ld affect the performance of factory workers?

LITERATURE REVIEW

Motivation Theory

In this study, motivation theory is used as a grand theory in the findings. Several motivation theorists, among others, Maslow’s (1943) hierarchy of needs theory, Mc’s achievement motivation theory McClelland & Mac Clelland (1961), Theory X and Y McGregor (1966), Herzberg’s (1959) Motivation Theory, and Alderfer’s (1969) ERG Theory. Maslow’s (1943) theory of motivation divides human needs into physiological needs, security needs, social needs, reward needs, and self-actualization needs. The theory of achievement motivation from McClelland & Mac Clelland (1961) based on the strength that exists in humans is achievement motivation. Furthermore, a person is considered to have the desire to perform better than others in many situations. McClelland & Mac Clelland (1961) emphasizes three needs: the need for achievement, the need for affiliation, and the need for power.

Theory X and Y McGregor (1966) is a theory that combines internal theory with external theory. He has formulated two fundamental differences regarding human behavior. Theory X is the average worker is lazy, does not like to work, and if possible, he will avoid it because basically, he does not like to work, he must be forced and controlled, treated with punishment, and directed to achieve organizational goals. Besides, the average worker prefers to be guided, tries to avoid responsibility, has little ambition, his ability is, above all else. Theory Y is the physical and mental effort by humans is the same as playing or resting. The average human being is willing to learn in decent conditions, not only accepting but looking for responsibility. There is extraordinary ingenuity, quality, and imagination to solve organizational problems widely spread to all employees. Control from outside punishment is not the only way to direct the achievement of organizational goals.

Herzberg’s (1959) theory of motivation is often called the M-H or two-factor theory. This theory describes how managers can control the factors that can result in JS or job dissatisfaction. Alderfer’s (1969) ERG theory is a motivation theory that says that individuals have three hierarchical needs, namely: extension (E), relatedness (R), and growth (G).
Hypotheses Development

The relationship between the WE and JS

Fundamentally, the WE is an environment where workers feel comfortable carrying out their work activities to create the right WE. The WE is everything around the worker that can affect employees’ work, including regulation, lighting, controlling noise, setting, cleanliness, and security. Based on previous research conducted by Widodo (2014), the results show that the WE influences JS. Furthermore, according to the research results Kurniawaty et al. (2019), the WE has a significant positive affects JS. The statement in line with the research conducted by Pawirosumarto et al. (2017) and Marshall et al. (2015) that the WE partially has a significant positive effect on JS. This result shows that a comfortable WE encourages employees to feel satisfied with the work done. Based on the description above, the following hypothesis can be made:

\[ H_1 \quad \text{The WE has a positive effect on JS} \]

The relationship between WM and JS

WM is essential for the sustainability of a company; it is a reason that encourages employees to work in a company. Pamela (2015) motivation is the key to a successful organization to maintain its work continuity in a helpful and robust way to survive. Research conducted by Panagiotopoulos et al. (2018); Pranita (2018); Ogunnaike et al. (2014) states that motivation has a positive and significant effect on JS. This result shows that the proper motivation provided by the company will encourage employees to feel satisfaction in their work. Based on the description above, the following hypothesis can be made:

\[ H_2 \quad \text{The WM has a positive effect on JS.} \]

The relationship between Ld and JS

Ld is an ability or strength to influence others in terms of work and goals to achieve the predetermined target. Ld is influencing or giving an example to its followers through the communication process to achieve organizational goals. Based on previous research conducted by Pawirosumarto et al. (2017) and Voon et al. (2011), it is suggested that Ld has a positive and significant effect on JS. This result shows that good Ld from the company will encourage employees to do work satisfactorily. Based on the description above, the following hypothesis can be made:

\[ H_3 \quad \text{The Ld has a positive effect on JS.} \]

The relationship between the WE and EP

Fundamentally, the WE is an environment where workers feel comfortable carrying out their work activities to create the right WE. The WE is everything around the worker that can affect employees’ work, including regulation, lighting, controlling noise, setting, cleanliness, and security. Based on previous research conducted by Parashakti et al. (2020) and Nguyen et al. (2015), the WE is a factor that has a more significant influence on EP. In line with that, Fahreza
(2018) suggests that the WE, both partially and simultaneously, has a significant and positive effect on EP. Based on the description above, the following hypothesis can be made:

\[ H_4 \quad \text{The WE has a positive effect on EP.} \]

**The relationship between WM and EP**

WM is essential for the sustainability of a company; it is a reason that encourages employees to work in a company. Pamela (2015) motivation is the key to a successful organization to maintain its work continuity in a helpful and robust way to survive. Motivation is to provide appropriate guidance or direction, resources, and rewards to inspire and be interested in working in the desired way. Efendi et al. (2020) suggests that WM is a factor that has a significant positive effect on EP. Furthermore Pranita (2018) also argues that WM has a positive and significant effect on EP. In line with that Robercu & Iancu (2016); Widodo (2014); Zameer et al. (2014) states that the most significant positive influence on EP is the motivation variable, where good motivation from employees will encourage EP to be more optimal. Based on the description above, the following hypothesis can be made:

\[ H_5 \quad \text{WM has a positive effect on EP.} \]

**The relationship between Ld and EP**

Ld is an ability or strength to influence others in terms of work and goals to achieve the predetermined target. Ld is influencing or giving an example to its followers through the communication process to achieve organizational goals. Previous research conducted by Fahmi & Sanika (2019) suggests that Ld has a significant effect simultaneously and partially on EP. Furthermore Pawirosumarto et al. (2017); Roeleejanto et al. (2015); Widodo (2014) argues that Ld has a positive and significant effect on EP. In line with that, Dunggio & Rachman (2017) also argues that Ld positively affects EP. Based on the description above, the following hypothesis can be made:

\[ H_6 \quad \text{Ld has a positive effect on EP.} \]

**The relationship between JS and EP**

JS is the level of pleasure that someone feels for their work, and they feel proud of their work. Simultaneously, EP results from employee work achieved by someone carrying out a task under the responsibility. EP is the result of employee work, namely a management process or an organization as a whole whose work results must be shown concrete and measurable evidence. Previous research conducted by Sudiardhita et al. (2018) stated that JS has a significant positive affects EP. In line with that Shahab & Nisa (2014) shows that JS has a significant effect on EP. This result shows that if employees are satisfied with the work done, their performance will be maximized. Based on the description above, the following hypothesis can be made:

\[ H_7 \quad \text{JS has a positive effect on EP.} \]

**METHODOLOGY**

In this study, the population is all furniture factory workers in the city of Semarang,
Indonesia. The sampling method used was the proportionate stratified random sampling technique, a sampling technique for populations with heterogeneous or varied characteristics. The data was obtained by distributing questionnaires to respondents. Meanwhile, methods and data analysis is using Structural Equation Modeling (SEM). WE variables, WM, and Ld as independent variables. JS as an intervening variable and EP as the dependent variable. WE, measured using indicators of cleanliness, air exchange, lighting, safety, noise. WM is measured by indicators of fair and decent wages, opportunities for advancement, recognition as individuals, job security, fair workplaces, acceptance by groups. Ld, measured by indicators of the ability to foster cooperation and good relations, practical abilities, participatory Ld, and authority delegation. EP is measured by job quality indicators, the quantity of work, responsibility, ability to work together, and initiative. JS, salary, the job itself, co-workers, superiors, promotions, WE.

**RESEARCH RESULTS AND DISCUSSION**

Based on gender, there are 57 male respondents, with a percentage of 38.5%; on the other hand, 91 female respondents dominate the respondents, with a percentage of 61.5%. From this percentage, it can be seen that the number of female employees who work as laborers is more dominant than male employees. Meanwhile, based on the age, there are 38 respondents aged from 19-25 years, with a percentage of 25.7%; there are 36 respondents aged from 40-46 years, with a percentage of 24.3%; there are 28 respondents aged from 33-39 years, with a percentage of 18.9%; there are 21 respondents aged from 26-32 years, with a percentage of 14.2%; there are 20 respondents aged from 47-53 years, with a percentage of 13.5%; and at last, there are five respondents, aged from 54-60 years, with the percentage of 3.4%. However, overall, employee age is productive age. Furthermore, based on education level, respondents’ last education in the high school category is dominant; there are 92 respondents with a percentage of 62.2%. Meanwhile, for the Junior High School category, there are 56 respondents with a percentage of 37.8%. Then, based on the working period, the two-year category respondents are dominant; there are 48 respondents with a percentage of 32.4%; there are 46 respondents with the four-years working period, with a percentage of 31.1%; there are 31 respondents with the three-years working period, with a percentage of 20.9%; and there are 23 respondents with five-years working period, with the percentage of 15.5%.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Standardized Regression Weights</th>
<th>P-value</th>
<th>Annotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE</td>
<td>1.000</td>
<td>0.001</td>
<td>Valid</td>
</tr>
<tr>
<td>WM</td>
<td>0.530</td>
<td>0.002</td>
<td>Valid</td>
</tr>
<tr>
<td>Ld</td>
<td>0.701</td>
<td>0.004</td>
<td>Valid</td>
</tr>
<tr>
<td>JS</td>
<td>0.465</td>
<td>0.003</td>
<td>Valid</td>
</tr>
<tr>
<td>EP</td>
<td>0.621</td>
<td>0.000</td>
<td>Valid</td>
</tr>
</tbody>
</table>


Based on the Table 1 above, all variables’ constructs have a significant regression weight with a value above 0.2 with a p-value less than 0.05. Therefore, it can be stated that all variables form a valid construct.
Based on the results obtained from testing the reliability of research instruments as in the table above, the coefficient of construct reliability is greater than 0.7; it can be concluded that all of these variables are reliable (Table 2). The confirmatory analysis is a process in research to test the unidimensionality of the dimensions that form latent variables or latent constructs. The dimensions used in a model need to be confirmed whether these dimensions can explain a construct that is an unobserved variable. Endogenous variables confirmatory analysis, namely WE, WM, Ld, JS, and EP. The results of the analysis can be seen in the following Figure 1:

**FIGURE 1**

**STRUCTURAL MODEL OF THE INFLUENCE OF WE, WM AND LD ON JS AND EP**

The Effect of WE on JS

The results of hypothesis testing using SEM empirically show that the WE positively affects JS. The WE is everything around the workers and affects them in carrying out the assigned tasks (Table 3). In this case, the WE influences employee JS in carrying out their work...
duties. If employees are satisfied with the existing WE’s conditions, it will encourage JS from these employees. Thus, companies must consider adequate working conditions for their employees. The better the WE, the more maximum employee JS. The results of this study are in line with research conducted by) Pawirosumarto et al. (2017) and Marshall et al. (2015) which states that the WE has a positive and significant effect on JS. To increase employee JS, the company has implemented programs to maximize the WE because it affects JS. The steps taken by the company to maximize the WE are by keeping the WE clean, maintaining good air circulation, providing workspace lighting, providing adequate security, and minimizing noise. However, the findings of this study are not in line with Rafiq et al. (2012) and Tokuda et al. (2009), which state that the WE negative affect JS.

### Table 3

<table>
<thead>
<tr>
<th>Path</th>
<th>Regression Coefficient</th>
<th>CR</th>
<th>P</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>WE → JS</td>
<td>0.072</td>
<td>2.725</td>
<td>0.002</td>
<td>accepted</td>
</tr>
<tr>
<td>WM → JS</td>
<td>0.074</td>
<td>2.741</td>
<td>0.000</td>
<td>accepted</td>
</tr>
<tr>
<td>Ld → JS</td>
<td>0.212</td>
<td>2.829</td>
<td>0.000</td>
<td>accepted</td>
</tr>
<tr>
<td>WE → EP</td>
<td>0.216</td>
<td>3.948</td>
<td>0.000</td>
<td>accepted</td>
</tr>
<tr>
<td>WM → EP</td>
<td>0.180</td>
<td>4.356</td>
<td>0.000</td>
<td>accepted</td>
</tr>
<tr>
<td>Ld → EP</td>
<td>0.304</td>
<td>3.468</td>
<td>0.014</td>
<td>accepted</td>
</tr>
<tr>
<td>JS → EP</td>
<td>0.274</td>
<td>4.373</td>
<td>0.018</td>
<td>accepted</td>
</tr>
</tbody>
</table>


The Effect of WM on JS

The results of hypothesis testing using SEM empirically show that WM positively affects Pamela (2015) states that motivation is the key to an organization to maintain work continuity. This statement means that if the company can motivate employees both in wages under the workload or career opportunities for employees, employees will be satisfied with their performance. So that motivation affects employee JS. This study’s results are in line with the research conducted by Panagiotopoulos et al. (2018), Pranita (2018), Ogunnaike et al. (2014), which states that WM has a positive and significant effect on JS. The company strives to provide WM to its employees to satisfy the company’s services. In this case, the company has made efforts to provide wages according to the workload, provide career opportunities, and provide adequate workplace workspace. With these efforts, the company can increase employee JS. However, the findings of this study are not in line with Kian et al. (2014), which states that WM does not affects JS.

The Effect of Ld on JS

The results of hypothesis testing using SEM empirically show that Ld has a positive effect on JS. Ld is the most critical factor in an organization, where Ld can influence group activities organized to achieve common goals. In this case, Ld is a process that regulates employee activities. If the company implements a good Ld system, this will affect employee satisfaction in doing their job. The results of this study are in line with research conducted by Pawirosumarto et al. (2017) and Voon et al. (2011), which states that Ld has a positive and significant effect on employee JS. Ld is an essential factor for companies, and companies strive to maintain their Ld’s stability. This action aims to keep employees working and increase employee JS. The steps taken by the company are recruiting leaders who can foster good
cooperation, complete tasks on time, make deliberative decisions and prioritize organizational interests compared to personal interests. However, the findings of this study are not in line with the research findings from Lok & Crawford (2004).

**The Effect of WE on EP**

The results of hypothesis testing using SEM empirically show that the WE positively affects EP. The WE’s influence on EP means that employees will feel comfortable with the existing WE conditions. If the WE conditions suit them and they do not feel insulted when they work, this comfort will encourage them to work. This condition causes much work to be done well so that their performance will be maximized. The results of this study are in line with research conducted by Parashakti et al. (2020) and Nguyen et al. (2015), which states that the WE affects EP. The company’s WE must meet the standards so that employees can work optimally without significant disturbances. The company provides good circulation in the WE, keeps the WE clean, provides security for employees, and provides lighting in the workspace. However, the findings of this study are different from research Pawirosumarto et al. (2017) which proves that the WE does not affect EP.

**The Effect of WM on EP**

The results of hypothesis testing using (SEM) empirically show that WM positively influences EP. Motivation is encouragement or enthusiasm for work. Companies need to motivate employees to give their best work contributions, such as arriving on time to finish their work immediately. This behavior can undoubtedly improve EP to a higher level because employees will behave according to the company’s vision and mission. The results of this study are in line with the research proposed by Efendi et al. (2020); Pranita (2018); Robercu & Iancu (2016); Widodo (2014); Zameer et al. (2014), which states that WM has a positive and significant effect on EP. The company motivates its employees by making efforts under the workload carried out by the employees. The company also provides career opportunities for employees, ensures employees’ safety, and provides an appreciation for EP. With these efforts, it is hoped that it can encourage EP to be more productive. However, the findings of this study are not the same as research by Shahzadi et al. (2014).

**The Effect of Ld on EP**

The results of hypothesis testing using (SEM) empirically show that Ld positively affects EP. Ld is an effort to influence many people through communication to achieve goals. An organization or company certainly has goals that must be achieved jointly between leaders and subordinates. Therefore, companies need to consider Ld factors to improve EP; the higher the Ld variable, the better the company’s performance. If the Ld is good, the performance will also be useful; this is influenced by the leader’s behavior. The results of this study are in line with the research proposed by Fahmi & Sanika (2019); Pawirosumarto et al. (2017); Roeleejanto et al. (2015); Widodo (2014) that Ld has a positive and significant effect on EP. From a Ld perspective, the company strives to maintain the stability of the company’s Ld. The steps taken by the company are recruiting leaders who can foster good cooperation, complete tasks on time, make deliberative decisions and prioritize organizational interests compared to personal interests. Thus, EP will be maximized because of the support from good company leaders. However, these
results are not in line with the research findings by Shahab & Nisa (2014).

**Effect of JS on EP**

The results of hypothesis testing using SEM empirically show that JS positively influences EP. Someone who experiences JS with the work being done will produce maximum performance. The more fulfilled aspects of JS, the higher the level of JS. JS can be formed from the provision of a salary under the workload. This behavior will encourage employees to strive to achieve predetermined performance. However, if the employee experiences dissatisfaction, it will affect the work done, affecting the resulting performance in completing work on time and meeting job demands in quantity and quality. The results of this study are in line with research conducted by Sudiardhita et al. (2018) and Shahab & Nisa (2014), which states that JS has a significant effect on EP. Employees have received various kinds of facilities provided by the company. In this case, the provision of these facilities is aimed at improving EP. Employees are satisfied with the facilities provided, one of which is an adequate WE, good WM from the company, and a leader who can work well together to improve their performance further. However, this is not the same as research from Pawirosumarto et al. (2017).

**CONCLUSION**

Based on the results of the research and discussion described, the conclusion is that the WE, WM, and Ld have a significant positive effect on JS. Besides, WE, WM, and Ld have a significant positive effect on EP. Moreover, JS affects EP. The suggestions for future researchers are to use different variables and use other models in order to obtain different findings to expand the study of human resource related sciences. This research implies that, especially during the Covid-19 pandemic, every company must pay attention to the WE, motivate employees, and lead employees well, which will achieve employee JS to impact EP.

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