Effect of Occupational Safety, Health (K3) and Leadership Style on Employee Work Productivity Mediated by Discipline in Operations PTPN IV Balimbingan

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ABSTRACT

This study aims to determine the effect of occupational health safety (K3) and leadership style on employee work productivity mediated by employee discipline in the operational section of PTPN IV Balimbingan. The research method used is quantitative research, where the variables are measured using a Likert scale. The number of samples in this study was 39 employees of the operational section of PTPN IV Balimbingan. Data collection techniques used in this research are document studies and questionnaires. The data analysis technique used Structural Equation Modeling (SEM) using Smart-PLS. The results of the study indicate that (1) Safety and occupational health (K3) has a significant effect on the work productivity of employees at PTPN IV Balimbingan. (2) Directly safe, occupational health (K3) has a significant effect on employee discipline at PTPN IV Balimbingan. (3) Directly leadership style has a significant effect on employee work productivity at PTPN IV Balimbingan. (4) Directly leadership style has a significant effect on employee discipline at PTPN IV Balimbingan. (5) Directly discipline has a significant effect on work productivity at PT. Nusantara IV Balimbingan Plantation. (6) Indirectly, safety, and occupational health (K3) significantly influence work productivity through employee discipline at PTPN IV Balimbingan. In other words, discipline acts as a mediator between occupational safety and health (K3) on work productivity. (7) Indirectly, leadership style has a significant effect on work productivity through the discipline of PTPN IV Balimbingan employees. In other words, discipline acts as a mediator between leadership style and work productivity. This study was only limited by three factors, namely: occupational health safety (K3), leadership style, and discipline. Besides, this study also limits the discipline variable as a mediating variable. Further research can discuss other variables such as motivation, work environment, work ethic, skills, education, and so on. This research is limited only to employees of the operational division.

Keywords:
Occupational Safety, Health (K3), Leadership Style, Discipline, Work Productivity

1. Introduction

The ideals and hopes of every company are a success in achieving company goals, both small, medium, and large companies. Company leaders must understand and take into account the magnitude of the factors that affect the production process by paying attention to labor as an important factor in increasing productivity (Ballian, 2020). Work productivity is a result of work requirements that must be met by employees to obtain maximum results whereas, in practice, work productivity lies in the human factor as the executor of work activities (Prabawa, 2022). Work productivity can be interpreted as the ability to take advantage of the available facilities and infrastructure by producing optimal output, even if possible maximum (Rahmat, 2017). The capabilities referred to in this definition are not only related to facilities and infrastructure, but also relate to the use of time and human resources. Several factors affect employee work productivity, one of which is: program (K3), leadership style, and discipline.

A company is required to be able to increase the productivity of existing human resources (A. F. Nasib, 2020). The productivity of human resources is determined by the extent to which the existing system in the

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Employee Productivity Level of PT. Perkebunan Nusantara IV Balimbing Unit 2016 to 2020

<table>
<thead>
<tr>
<th>Year</th>
<th>Area (ha)</th>
<th>Production Target (Ton/ha)</th>
<th>Production Realization (Kg/ha)</th>
<th>Productivity Target (Ton/ha)</th>
<th>Productivity (Ton/ha)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>3.086</td>
<td>600.951</td>
<td>535.800</td>
<td>24.51</td>
<td>24.42</td>
</tr>
<tr>
<td>2017</td>
<td>3.086</td>
<td>679.781</td>
<td>614.630</td>
<td>23.81</td>
<td>24.19</td>
</tr>
<tr>
<td>2018</td>
<td>3.086</td>
<td>797.001</td>
<td>731.850</td>
<td>24.51</td>
<td>23.44</td>
</tr>
<tr>
<td>2019</td>
<td>2.933</td>
<td>762.091</td>
<td>696.940</td>
<td>24.50</td>
<td>19.88</td>
</tr>
<tr>
<td>2020</td>
<td>2.675</td>
<td>743.481</td>
<td>678.330</td>
<td>22.85</td>
<td>20.60</td>
</tr>
</tbody>
</table>

Based on the table above, it can be seen that the realization of production fluctuated from 2016 to 2020 at PT. Perkebunan Nusantara IV Balimbing Unit. This happens because the product obtained is not by the production targets set by the company so the productivity obtained by employees also fluctuates because the products that should be achieved are not by the productivity target. Work safety indicates conditions that are safe or safe from suffering, damage, or loss in the workplace (Supriyastiningsih, 2019). While occupational health refers to conditions that are free from physical, mental, emotional, or pain disorders caused by the work environment (Sukwika, 2021). It can be seen the measures of work productivity for the company on several items, one of which is about employee safety and health (K3), or how many accidents are committed by employees (Abidin, 2022). Furthermore, the provision of a safe, secure, and healthy workplace, is
achieved by operational leaders and members of the human resources staff who work together. It can be seen in the employee attendance list data obtained from the company as follows:

Based on the table above, it can be seen that the percentage of absent employees at PT. Perkebunan Nusantara IV Balimbingan Unit experienced a decline. One of the contributing factors is an accident at work. It can be seen in the work accident data obtained from the company as follows.

Based on the table above, it can be seen that the source of the causes of accidents is negligence at work and carelessness at work. The main responsibilities of the K3 program in the organization are supervisors and leaders. A human resource leader should conduct a field evaluation, investigate accidents, whether the coordination of the health and safety (K3) program is under the results of the OSH program training that has been held so far.

2. Research Methods

This type of research is survey research because it takes a sample from one population. This study uses an explanatory research approach, which aims to explain the causal relationship between research variables and testing hypotheses. This research is included in the category of causal research using a quantitative approach. The population in this study were all office employees of PT. Perkebunan Nusantara IV Balimbingan for operations or HR, totaling 39 people. Because the research population is less than 100 people, the sampling technique used in the census method, where the entire population of 39 people will be used as research samples. Data collection techniques using a questionnaire then the data will be analyzed with a quantitative approach using statistical analysis namely the Partial Least Square - Structural Equation Model (PLS-SEM) which aims to perform path analysis (Path) with latent variables.

3. Result and Discussion

3.1 Direct Effect Test Result

The following are the results of testing the direct influence hypothesis which can be seen in the table as follows.

<table>
<thead>
<tr>
<th>Direct Influence Test Results</th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Error (STERR)</th>
<th>t Statistic</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 → Y</td>
<td>-0.005</td>
<td>-0.009</td>
<td>0.082</td>
<td>0.067</td>
<td>0.947</td>
</tr>
<tr>
<td>X1 → Z</td>
<td>0.600</td>
<td>0.593</td>
<td>0.120</td>
<td>4.990</td>
<td>0.000</td>
</tr>
<tr>
<td>X2 → Y</td>
<td>0.469</td>
<td>0.469</td>
<td>0.116</td>
<td>4.055</td>
<td>0.000</td>
</tr>
<tr>
<td>X2 → Z</td>
<td>0.255</td>
<td>0.255</td>
<td>0.109</td>
<td>2.336</td>
<td>0.020</td>
</tr>
<tr>
<td>Z → Y</td>
<td>0.607</td>
<td>0.607</td>
<td>0.114</td>
<td>5.329</td>
<td>0.000</td>
</tr>
</tbody>
</table>

3.2 Indirect Influence Test Results

The indirect effect between exogenous and endogenous variables in early research is presented in the mediation test table as follows:

<table>
<thead>
<tr>
<th>Indirect Influence Test Results</th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>t Statistic</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 → Z → Y</td>
<td>0.364</td>
<td>0.360</td>
<td>0.102</td>
<td>3.584</td>
<td>0.000</td>
</tr>
<tr>
<td>X2 → Z → Y</td>
<td>0.155</td>
<td>0.156</td>
<td>0.077</td>
<td>2.113</td>
<td>0.045</td>
</tr>
</tbody>
</table>

3.3 Effect of Occupational Safety, Health (K3) on Work Productivity

From the results of the analysis of hypothesis testing, it is known that Occupational Safety and Health (K3) has no significant effect on work productivity which is assessed by a path coefficient of -0.005. The probability value obtained is 0.947 > 0.05, with tcount value of 0.067 and ttable 2.022, thus tcount is smaller than ttable (0.067 < 2.022). This means that occupational safety and health (K3) does not significantly affect the work productivity of employees at PT. Nusantara IV Balimbingan Plantation. The results of this study are
Leadership style plays a very important role in determining work productivity, the study also explains that occupational safety and health (K3) related to technical and environmental aspects, where technical factors and an unsupportive work environment can affect the work safety of company employees. In addition to human factors, technical and environmental factors are very influential in the possibility of accidents. Such as unsafe conditions, slippery, well-maintained machinery and equipment, and environmental factors. That is, the background of the problem does not match the results of the study, this indicates that the research is still preliminary. It can be concluded that occupational safety and health (K3) has no significant effect on employee work productivity. This means that the lower the occupational safety and health (K3) provided by the company to employees of PT. Perkebunan Nusantara IV Balimbingan, work productivity will decrease, where employees will experience obstacles in working so that work productivity will decrease. When viewed from the results of the study there is no effect of safety or occupational health on work productivity. According to the author, this is contrary to the state of the company, where in this condition the company has provided the equipment needed. It is possible that the company did not carry out supervision, and did not notice that these tools were available. So that employees do not know the availability of these tools, or employees who do not want to apply the rules properly. Therefore, companies must consider more wisely, where supervision of the company's occupational safety and health programs still needs to be evaluated and improved.

3.4 Effect of Occupational Safety, Health (K3) on Discipline

From the results of the analysis of hypothesis testing, it is known that occupational safety and health (K3) has a significant effect on discipline which is assessed with a path coefficient of 0.600. The probability value obtained is 0.000 < 0.05, with tcount value of 4.990 and table 2.022, thus tcount is greater than table (4.990 > 2.022) so that H0 is rejected (Ha is accepted). This means that occupational safety and health (K3) has a significant effect on employee discipline at PT. Nusantara IV Balimbingan Plantation. The results of this study are in line with the results of previous research conducted by (Daryanto, 2021)(Kurniawan, 2022)(Sonya, 2020) which concludes that safety and occupational health (K3) and discipline affect work productivity.

Occupational safety and health (K3) play a very important role in determining employee discipline, in the study, it is also explained that occupational safety and health (K3) is related to discipline and human resources, which have a sense of responsibility in terms of implementing the regulations given by the company to run smoothly. Both the occupational health safety system (K3), as well as the human factor in work accidents involving workloads that are not by the type of work/work hours, unskilled in operating equipment and working poor and under pressure. That is, the background of the problem is under the results of the study. It can be concluded that occupational safety and health (K3) has a significant effect on discipline. This means that with the better safety and occupational health (K3) provided by the company to employees of PT. Perkebunan Nusantara IV Balimbingan, the discipline of employees will be better, where employees who are given a guarantee of safety, and occupational health (K3) as needed, the employee will be more active in doing their job so that employee discipline will be better.

3.5 The Influence of Leadership Style on Work Productivity

From the results of the analysis of hypothesis testing, it is known that leadership style has a significant effect on work productivity which is assessed by a path coefficient of 0.469. The probability value obtained is 0.000 < 0.05, with tcount value of 4.055 and table 2.022, thus tcount is greater than table (4.055 > 2.022) so that H0 is rejected (Ha is accepted). This means that the leadership style has a significant effect on the work productivity of employees at PT. Nusantara IV Balimbingan Plantation. The results of this study are in line with the results of previous research conducted by (Hadiati, 2020)(Agustin, 2019)(and Prasetyo, 2021) who concluded that leadership style affected work productivity.

Leadership style plays a very important role in determining work productivity, the research also explains that leadership style is related to caring, where the main attitude of a leader is to inspire, believe and support every problem faced by members to achieve organizational or company goals and increase work productivity. That is, the background of the problem is by the results of the study. It can be concluded that leadership style has a significant effect on work productivity. That is, the better the leadership style for the employees of PT. Perkebunan Nusantara IV Balimbingan improves employee work productivity, where the leader gives morale, provides advice, motivates ability development, approaches work rules and
procedures, and gives warnings and praises to employees so that employees will be more active in doing their work and will always follow the rules which are in the office.

### 3.6 Influence of Leadership Style on Discipline

From the results of the analysis of hypothesis testing, it is known that leadership style has a significant effect on discipline which is assessed with a path coefficient of 0.255. The probability value obtained is 0.020 < 0.05, with a tcount of 2.336 and ttable of 2.022, thus tcount is greater than ttable (2.336 > 2.022) so H0 is rejected (Ha is accepted). This means that leadership style has a significant effect on employee discipline at PT. Nusantara IV Balimbingan Plantation. The results of this study are in line with the results of previous research conducted by (Sunreni, 2019)(Ichsan, 2021)(and Salim, 2021) who concluded that leadership style and discipline affect work productivity.

Leadership style plays a very important role in determining discipline, in the study, it was also explained that leadership style is related to inspiration, which communicates high expectations, uses symbols to focus efforts, expresses important goals in a simple way that can provide something good for employee discipline. That is, the background of the problem is by the results of the study. It can be concluded that leadership style has a significant effect on discipline. That is, the better the leadership style for the employees of PT. Perkebunan Nusantara IV Balimbingan results in better employee discipline, where the leader provides a vision and mission, creates a sense of pride, and gains respect and trust so that employees will be inspired and do their job better.

### 3.7 The Effect of Discipline on Work Productivity

From the results of the analysis of hypothesis testing, it is known that discipline has a significant effect on work productivity which is assessed by a path coefficient of 0.607. The probability value obtained is 0.000 < 0.05, with tcount value of 5.329 and ttable 2.022, thus tcount is greater than ttable (5.329 > 2.022) so that H0 is rejected (Ha is accepted). This means that discipline has a significant effect on work productivity at PT. Nusantara IV Balimbingan Plantation. The results of this study are in line with the results of previous research conducted by (S. C. S. A. Y. Nasib, 2019)(Tambunan, 2019)(Widodo, 2020) who concludes that discipline affects work productivity.

Discipline plays a very important role in determining work productivity, the research also explains that discipline is related to legal sanctions and firmness, where punishment plays an important role in maintaining employee discipline. With increasingly severe penalties, employees will be increasingly afraid of violating company regulations. Likewise, the firmness of the leadership in taking action will affect the discipline of the company's employees. Leaders must be brave and decisive to act to punish any disciplinary employee by the sanctions that have been set so that employee work productivity goes well. That is, the background of the problem is by the results of the study. It can be concluded that discipline has a significant effect on work productivity. That is, the better the discipline of the employees of PT. Perkebunan Nusantara IV Balimbingan will improve employee productivity, where employees who violate discipline must be immediately given sanctions by applicable organizational regulations. The goal is that the employee concerned understands the sanctions for violations that apply in the company. Negligence in imposing sanctions will weaken existing discipline, and provide opportunities for violators to ignore company discipline, so that employee productivity will continue to increase.

From the results of the analysis of hypothesis testing, it is known that Occupational Safety, Health (K3) has a significant effect on work productivity through a discipline that is assessed with a path coefficient of 0.364. The probability value obtained is 0.000 < 0.05, with tcount value of 3.584 and ttable 2.022, thus tcount is greater than ttable (3.584 > 2.022). This means that occupational safety and health (K3) has a significant effect on work productivity through employee discipline at PT. Nusantara IV Balimbingan Plantation. The results of this study are in line with the results of previous research conducted by (Sinuhaji 2019) concluding that occupational health safety (K3) affects work productivity through discipline.

Occupational health safety plays a role in determining employee work productivity, in this case, occupational health safety is related to discipline, where the role of a leader is needed, such as planning, initiating, controlling, supporting, informing, and evaluating, so that employees can carry out their work by implementing occupational health safety with good. In this case, the company must pay attention to the safety and health of employees because HR is an asset that supports the smooth running of the company as well. When the company has provided facilities that can ensure the safety and health of employees, it is hoped that employees can carry out their work by implementing occupational health safety properly. That is, the background of the problem is by the results of the study. It can be concluded that occupational safety and
health (K3) has a significant effect on work productivity through discipline. This means that with the better safety and occupational health (K3) provided by the company to employees of PT. Perkebunan Nusantara IV Balimbingan, the productivity of employees is getting better with better employee discipline, where employees are given a guarantee of safety, occupational health (K3) by what is needed, the employee will be more active in doing his work so that employee discipline will be better as a mediating variable of work productivity.

3.8 The Influence of Leadership Style on Work Productivity Through Discipline

From the results of the analysis of hypothesis testing, it is known that leadership style has a significant effect on work productivity through a discipline which is assessed with a path coefficient of 0.155. The probability value obtained is 0.045 < 0.05, with tcount value of 2.113 and ttable 2.022, thus tcount is greater than ttable (2.113 > 2.022). This means that leadership style has a significant effect on work productivity through employee discipline at PT. Nusantara IV Balimbingan Plantation. The results of this study are in line with the results of previous research conducted by (I. L. Nasib, 2020)(Rivaldo, 2021)(Suardika, 2020) concluded that leadership style affects work productivity through discipline.

Leadership style plays a very important role in determining employee work productivity, the study also explained that transformational leadership style is related to work productivity, where a transformational leader has vision, rhetorical skills, and good impression management and uses it to develop strong emotional bonds with followers or employees, so that it has an impact on employee work productivity with work discipline as a rule made by the company or organization, which aims to encourage employees to behave carefully at work so that they can solve a problem. That is, the background of the problem is by the results of the study. It can be concluded that leadership style has a significant effect on work productivity through. That is, the better the leadership style for the employees of PT. Perkebunan Nusantara IV Balimbingan, the productivity of employees is getting better with employee discipline that will be better too, where the leader gives morale, gives advice, motivates ability development, approaches work rules and procedures and gives reprimands and praises to employees so that employees will be more active in carrying out their work and will always follow the regulations contained in the office, so that employee discipline will be better as a mediating variable for work productivity.

4. Conclusion

Based on the results of research and discussions that have been stated previously, conclusions can be drawn from research on the effect of occupational health safety (K3) and leadership style on employee work productivity in the era of the covid-19 pandemic mediated by employee discipline in the operational section of PT. The Nusantara IV Balimbingan Plantations are as follows: Directly safe, occupational health (K3) does not significantly affect the work productivity of employees at PT. Nusantara IV Balimbingan Plantation. Directly leadership style has a significant effect on employee discipline at PT. Nusantara IV Balimbingan Plantation. Directly leadership style has a significant effect on the work productivity of employees at PT. Nusantara IV Balimbingan Plantation. Directly leadership style has a significant effect on employee discipline at PT. Nusantara IV Balimbingan Plantation. Discipline directly has a significant effect on work productivity at PT. Nusantara IV Balimbingan Plantation. Indirectly safety, and occupational health (K3) has a significant effect on employee discipline at PT. Nusantara IV Balimbingan Plantation. In other words, discipline acts as a mediator between occupational safety and health (K3) on work productivity. Indirectly leadership style has a significant effect on work productivity through employee discipline at PT. Nusantara IV Balimbingan Plantation. In other words, discipline acts as a mediator between leadership style and work productivity.

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