DISCIPLINE AND WORK ENVIRONMENT AFFECT EMPLOYEE PRODUCTIVITY: EVIDENCE FROM INDONESIA

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ABSTRACT

**Objective:** This paper aims to test and evaluate the Effect of Discipline And Work Environment on Employee Productivity of state-owned public bodies.

**Design/methodology/approach:** This paper uses a quantitative approach using a survey approach. The survey is a study conducted on the employee population of state-owned public agency companies, samples taken from the employee population of state-owned public agency companies to find events related to discipline variables and work environments that can affect employee productivity variables, to analyze the influence between discipline variables and the work environment on employee productivity variables using a statistic regression approach. This method is used to explain the influence of discipline variables and work environment on employee productivity variables. This approach is simply to provide a description and test the influence between discipline variables and the work environment on employee productivity variables that can be known how much the influence of discipline variables and work environment on employee productivity variables.

**Findings:** The findings of this study explain that discipline has an influence on the productivity of employees of publicly owned companies, the work environment has an influence on the productivity of employees of publicly owned companies, while together discipline and work environment have an influence on the productivity of employees of publicly owned companies.

**Practical Implications:** The results of the study are recommended for employees to improve the effectiveness and efficiency of the performance of state-owned public bodies.

**Originality:** Previous research conducted to test the influence of discipline and work environment on the productivity of employees of manufacturing companies listed on the Indonesia Stock Exchange, the findings concluded that discipline and work environment have an influence on the work productivity of employees of manufacturing companies listed on the Indonesia Stock Exchange. This research object of research on publicly owned companies owned by the state.
INTRODUCTION

Human beings, as one of the production factors, provide resources that are very instrumental in achieving the company's goals. Efficient and effectiveness of a company is very dependent on the poor development of human resources in the company, because of the importance of human resources (Alsaghir et al., 2020; Baradaran & Hosseinion, 2020; Erna, 2020; Gadomska-Lila, 2020; Revillot-Narváez et al., 2020; Sato et al., 2020). The human resources must get attention to be utilized optimally (Bhatt & Bahuguna, 2019; Karimi & Taghaddos, 2020; Meng et al., 2019; No Title, n.d.; Syarifuddin & Damayanti, 2019; Zakariya et al., 2019; Zhang & Nesbit, 2018).

Productivity is the main demand for the company so that its survival or operation can be achieved (Cury & Saraiva, 2018; Dangelico, 2016; Nguyen et al., 2019; Oey et al., 2020; T. Singh & Malhotra, 2020; Stojanov & Ding, 2015). Many things can affect work productivity; therefore, companies must try to ensure that productivity factors can be met to the maximum. One of the factors that affect is discipline (Cruz et al., 2012; Dal et al., 2013; Lin et al., 2012; Malakauskaite & Navickas, 2010; Mamun et al., 2012; Mikalauskas et al., 2013).

The discipline of work is very important because, without the discipline of work, every job will not be completed properly (Abell & Sevian, 2020; DorDević, 2020; Lund et al., 2020; Mphatheni et al., 2020; Richter et al., 2020; Serebryakov, 2020). Thus it is undeniable that work discipline is the determining factor of success in a company; if the discipline of work is ignored will hinder and harm the company (Busta & Russo, 2020; Charity Hudley et al., 2020; Hu & Liu, 2020; Martino, 2020; Rodriguez et al., 2020; Wang et al., 2020). Because without discipline, it will decrease employee performance so that the company's target will not be achieved (Björkhagen Turesson, 2020; Farley-Ripple et al., 2020; Fitzgerald & Jiang, 2020; Martimianakis et al., 2020; Millstein et al., 2020; Rodríguez-Araya et al., 2020).

The work environment has an influence on the performance of the company's employees to complete the tasks charged to him that ultimately affect the work productivity of employees, a good environment will improve work, and vice versa if the work environment is less calm, will be able to increase the level of mistakes they make (Cassely et al., 2020; Husin & Kernain, 2020; Rameshwar et al., 2020; Rodrigo-Alarcón et al., 2020; Saleh et al., 2020; Szlang & Bruch, 2020).

To realize high work productivity, every employee and every work unit works as it should (Lorenzo, 2001). Thus, every employee must have a good work commitment and try to work effectively to realize the work directed at achieving the company's goals (Anguelov et al., 2020; Ingsih et al., 2017; Othman et al., 2019; Prasad & Sana, 2020; Purohit, 2018; Stombelli, 2020).

This study identified problems relevant to this study, among others: There are still employees who are late for work after lunch hours, less supportive work environment, for example, lack of lighting in the workspace, noisy workplace atmosphere, as well as facilities and infrastructure that are not by the number of employees, employees are less in getting training so that their productivity tends to decrease and impact on the lack of services provided to employees. Decreased employee work productivity is caused by a lot of employees who work casually and lack discipline in the absence of supervision from the leadership, still, low employee workability caused by the lack of training provided by the company to employees.
LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Human Resource Management

Human Resource Management is a human labour problem that is organized according to the order of its functions, to be effective and efficient in realizing the objectives of the office, employees and society (Ahn & Huang, 2020; Bianchi et al., 2020; Gulzar et al., 2020; Halliru et al., 2020; Wolff et al., 2020; Xu et al., 2020). Employees are planners and actors who always play an active role in every company’s activity (Ahmad & Chowdhury, 2020; Choudhury et al., 2020; Condé & Martens, 2020; Cooke et al., 2020; Oluwatayo & Adetoro, 2020; Xiao et al., 2020). Stated personnel management is a science to carry out, among others: Planning, Organizing and Controlling so that the effectiveness and function of personnel can be improved as much as possible in achieving goals (Ahmad & Chowdhury, 2020; Choudhury et al., 2020; Condé & Martens, 2020; Cooke et al., 2020; Oluwatayo & Adetoro, 2020; Xiao et al., 2020).

To achieve the goals that have been set it is necessary to know the four objectives of human resource management (Ellison, 2013; Narayana Swamy & Nagaraju, 2016) namely: a) Personal goals of company members, b) Objectives of society as a whole, c) The purpose of the company in the sense of the objectives of human resource management and d) Functional objectives.

Internal factors of human resource management planning Development, Budget or Financing, Agency Design, Expansion of Institution Activities, etc. External Factors include Economic, Socio-Political and Cultural, Law and Regulation, Development of Science and Technology, and Competition Between Companies (Kanitvittaya et al., 2010; Longo, 2007; Mateescu et al., 2017).

In general, the understanding of human resources can be examined from a macro scale (Dartey-Baah et al., 2020; Jang et al., 2020; Kögel & Wolbring, 2020; Martdianty et al., 2020; Sangwan et al., 2020; A. Valenti & Horner, 2020), where human resources are defined as "The overall potential of labour contained in a country (Daanaa et al., 2020; Ou et al., 2018; Reiner et al., 2019; Subramanien & Joseph, 2019; M. Valenti et al., 2019; Volodko et al., 2020). While on a micro-scale is only interpreted "A group of people who meet the needs of their lives by working in corporate units both government and private (Abraham & Seyyed, 2012; Horvat, 2009; ISBARY, 1962; Manohar, 2013; Prashar, 2019).

Human resource management is planning, companies, directing and supervising the procurement, development, compensation, integration, maintenance and determination of working relationships to help to achieve the goals of the company, individuals and communities (Harris et al., 2011; Järvenpää, 2007) Human resource management is a science and art that regulates the relationships and roles of the workforce to be effective and efficient in helping the realization of the goals of the company, employees and society (S. R. Taylor & Weiss, 2009). Human resource management is the withdrawal, selection, development, maintenance, use of human resources to achieve both individual and corporate goals (Thakur, 1999).

In Indonesia, human resource management is very important (Harini et al., 2020; Martdianty et al., 2020; Prasetyo et al., 2020; Savitri et al., 2020; Wolor et al., 2020; Yusuf, 2020). However, our country is rich in natural resources and began to develop advanced technologies (Masik & Studzińska, 2018; Saldaña, 2006). All of them can not be utilized
effectively and efficiently if not supported by human resources with good quality ability in the right amount and time (Pérez et al., 2015; Stubbs, 2016).

**Discipline**

The sense of discipline in a narrow sense means punishing. This sense becomes common, so that it means negative (Kozorez et al., 2020; No Title, n.d.; Ouyang et al., 2020; Richter et al., 2020; Serebryakov, 2020; Sun et al., 2020). The word discipline comes from Latin; discipline means exercise or education (Wilson, 2010). From forming discipline derived from the verb discere, meaning teaching, then disciplinary means teaching, educating and expanding (Chen et al., 2020; Cubero et al., 2020; Deane, 2020; Guan et al., 2020; Hong & Basturkmen, 2020; Teasdale et al., 2020).

Discipline is obedience to institutions or companies and everything that becomes its provisions without using feelings (Dwiartama, 2018), based only on conversion and awareness that without such obedience everything that becomes the provisions or objectives of the company will not be achieved (Abdullah et al., 2018; da Costa et al., 2019; Mita et al., 2018; S. Singh et al., 2020; Suhud et al., 2019; Thamagasorn & Pharino, 2019).

Stated that what is meant by discipline is an effort made to create a state in an orderly (Alter et al., 2020; Haghani & Bliemer, 2020; Ji et al., 2020; Johnston, 2020; Martino, 2020; Sun et al., 2020), effective and successful work environment through an appropriate system (Engelbrecht, 2009; Guo, 2010; Jones et al., 2010; Klimoviene et al., 2016; Nikolou-Walker & Curley, 2012; Yaghoubi et al., 2018).

**Work Environment**

The work environment is an environment where employees do their daily work". A conducive work environment provides a sense of security and allows employees to be able to work optimally (Afanasyev et al., 2020; Idoko et al., 2020; Revin et al., 2020; Reyes Romero et al., 2020; Tryma et al., 2020; Turanina et al., 2020). The work environment can affect an employee's emotions. If the employee enjoys the work environment in which he/she works, the employee will feel at home in his/her workplace to do activities so that work time is used effectively and optimistic employees' work performance is also high (Alhamda et al., 2020; Alzamel et al., 2020; Chalikias et al., 2020; Gulzar et al., 2020; Liao et al., 2020; Riyadi et al., 2020). The work environment includes established working relationships between fellow employees and employment relationships between subordinates and superiors and the physical environment in which employees work (Achu Ayuk et al., 2020; Bove, 2020; Collier-Bordet et al., 2020; Rizova et al., 2020; Tsitsovits, 2020; Victoria & Ortigosa, 2020).

The work environment is everything around the workers that can influence him in carrying out the tasks carried out (Cooper et al., 2020; D'Intino et al., 2020; Mylona & Mihail, 2020; Sarro et al., 2020; Silva-Romo et al., 2020; Velicu & Barca, 2020). The work environment is: "Tools and materials faced, the surrounding environment in which a person works, his working methods, as well as working arrangements both as an individual and as a group" (Apaolaza et al., 2020; Busta & Russo, 2020; Mackert et al., 2020; Pogodziński et al., 2020; Sampson et al., 2020; Susanto, 2020).

Based on the description of the definitions above, it can be concluded that the work environment is an environment in which the employees work in both physical and non-physical
forms that can affect employees in carrying out their duties. Thus, the company must strive to create a new work environment to show their full potential, as workers and people.

**Work Productivity**

Productivity contains two meanings, namely philosophical understanding and technical understanding (Degtyarev et al., 2020; Gubarenko et al., 2020; Kulikova et al., 2020; Schnabel, 2020; Serebryakova et al., 2020; A. Taylor, 2020). Philosophically, the notion of productivity basically includes a mental attitude that has always believed that this life and way of working should be better than yesterday's life and way of working, and the results achieved tomorrow should be more or better than those obtained today. Thus, productivity contains a sense of relative improvement; this opinion was expressed by (Brombin et al., 2020; Lackie & Tomblin Murphy, 2020; Muazzam et al., 2020; Setiadi et al., 2020; Toscano & Zappalà, 2020; Yoshimoto et al., 2020)

Defines productivity as follows: "Productivity is the relationship between the quality produced and the amount of work done to achieve these results (Fischer et al., 2020; Gaillard et al., 2020; Gu et al., 2020; Peprah et al., 2020; Vaithyasubramanian et al., 2020; Vidaković et al., 2020). Provides a general sense of productivity is a universal concept aiming to provide more goods, services and people by using fewer rill sources. Productivity is an interdisciplinary approach to determining effective objectives, plan making, and production methods to use sources efficiently while maintaining high quality (Giacalone et al., 2020; Hill & Schmutz, 2020; Jilcha Sileyew, 2020; Nascimento & Lopes, 2020; Schneider, 2020; Vasiljeva et al., 2020).

Revealed that labour productivity is measured based on performance, commonly called work achievement, but this term is very misleading (Dawit et al., 2020; Ghosh & Seethamraju, 2020; Haynes et al., 2020; Muyombano & Espling, 2020; Tuor Sartore & Backes-Gellner, 2020; Wiedman, 2020). Performance is none other than the value of an employee's behaviour towards the role function, activities, and tasks demanded by the position's requirements (job requirements). These three components of work must be seen in terms of procedures and work companies (Alluhidan et al., 2020; Brown et al., 2020; Fanego, 2020; Liogier, 2020; Pamies-Bertrn & Yuan, 2020; Ribeiro et al., 2020). So performance is the resultant of the function of position requirements and procedures/company work. If the existing work requirements are completed with procedures and the Company's work is not steady, then the performance will be affected, and vice versa.

Based on the explanation above on work productivity, the author concluded that productivity is an effort to use and save costs or efficiency of using all resources needed to achieve certain results or objectives optimally.

**Research Framework**

Human beings have infinite needs, and we consciously or not will always meet those needs to achieve satisfaction. If a need is not met, it will cause tension, and this will cause unrest in the company. If these difficulties are not resolved quickly, it will result in a decrease in the level of employee productivity. The onset of tension is also caused by a feeling of a need that is getting a higher intensity level so that it turns into a desire. This desire is regarded as a specific way of being affected by the environment with which those needs will be met. One way to increase the employee's work productivity is with good discipline and provide a good working environment.
To provide thought flow in this research, try to explain the frame of thought of research. Where the purpose of the research to be achieved is to know the influence of discipline and work environment on employee productivity. The frame of thought can be seen in the following Figure 1.

![Research Framework Diagram](image)

**Figure 1**

**RESEARCH FRAMEWORK**

**Hypothesis**

Hypotheses mean statements. Thus hypotheses mean weak statements, so-called because they are still untested conjectures (Canel et al., 2017; Forte et al., 2017; Zhylenko et al., 2019). The research hypothesis is: "Research using quantitative approaches. In qualitative research, hypotheses are not formulated, but it is expected that hypotheses can be found. Furthermore, the hypothesis will be tested by researchers using quantitative approaches."

Based on the statement above, it can be concluded that the research hypothesis can be interpreted as a temporary answer to research problems, until proven through the collected data and must be tested empirically.

1. There is a disciplined influence on employee productivity in publicly owned companies.
2. There is an influence of the work environment on employee productivity in publicly owned companies.
3. There is an influence of discipline and work environment on employee productivity in publicly owned companies.

**RESEARCH METHODOLOGY**

**Research Design**

This research uses a survey approach. The survey is a study conducted on the employee population of state-owned public agency companies, samples taken from the employee population of state-owned public agency companies to find events related to discipline variables and work environments that can affect employee productivity variables, to analyse the influence between discipline variables and the work environment on employee productivity variables using a statistic regression approach (Juanamasta et al., 2019; Prabowo et al., 2020; Rusdiyanto, Agustia, et al., 2020; Rusdiyanto, Hidayat, et al., 2020; Syafii et al., 2020). This method is used
to explain the influence of discipline variables and work environment on employee productivity variables. This approach provides a description and tests the influence between discipline variables and the work environment on employee productivity variables that can be known how much influence discipline variables and work environment on employee productivity variables.

**Research Variables**

Discipline is an effort to create an orderly, effective and successful working environment through an appropriate system (Table 1).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimensions</th>
<th>Indicators</th>
<th>Item Quest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline (X1)</td>
<td>Mental attitude</td>
<td>Sincerity of heart</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work spirit</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Applicable terms</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Punitive sanction</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arrive on time</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To be an example</td>
<td>6</td>
</tr>
<tr>
<td>Good understanding</td>
<td>Full of dedication</td>
<td></td>
<td>7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Have a commitment</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Have responsibilities</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Got to be nice.</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Must behave according to the rules</td>
<td>11</td>
</tr>
<tr>
<td>Good attitude</td>
<td>Loyalty at work</td>
<td></td>
<td>12</td>
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<tr>
<td></td>
<td></td>
<td>Must be sensitive</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Gotta be fair</td>
<td>14</td>
</tr>
</tbody>
</table>

The work environment is a whole system of ideas, actions and workplace atmosphere that will impact the performance of personnel in an organization (Table 2).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Dimensions</th>
<th>Indicators</th>
<th>Item Quest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Environment (X2)</td>
<td>Work environment factors</td>
<td>The light</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Temperature</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Air circulation</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mechanical vibration</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ac usage</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Set the color</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Work environment</td>
<td>Decoration</td>
<td>7</td>
</tr>
</tbody>
</table>
Productivity is an interdisciplinary approach to determining effective objectives, plan making, and production methods to use sources efficiently while maintaining high quality (Table 3).

**Table 3**

<table>
<thead>
<tr>
<th>WORK PRODUCTIVITY RESEARCH VARIABLE QUESTIONNAIRE GRID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Productivity (Y)</td>
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<td></td>
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</tbody>
</table>

**Population and Sample**

The population is a generalization area consisting of objects or subjects with the quantity and characteristics that researchers apply to be studied and then drawn conclusions. The population and samples in this study are the objects/subjects studied. Still, they include all the characteristics/traits possessed by the subject or object where the population and sample of 280 people.
Data Collection Techniques

This study uses data obtained from organizations on the influence of discipline and work environment on the productivity of employees of state-owned public companies. This research technique is carried out by going directly to the field by using questionnaire data collection tools, namely data collection techniques by presenting questions in writing to respondents, questionnaires are cooperative, it is expected that cooperation in time allowance and answering questions in writing according to the instructions the author provides.

In the questionnaire that will be distributed to the respondent, contains several answers to existing questions. The answer is divided into 5 (five) categories, namely:

\[
\begin{align*}
SS &= \text{Strongly Agree} \\
S &= \text{Agree} \\
KS &= \text{Disagree} \\
TS &= \text{Disagree} \\
STS &= \text{Strongly Disagree}
\end{align*}
\]

RESEARCH AND DISCUSSION RESULTS

Research Results

Discipline Variables have 3 dimensions, 15 indicators, 15 statements (questionnaires) with ordinal scale measured with answers 5=Strongly Agree, 4=Agree, 3=Disagree, 2=Disagree, 1=Strongly Disagree. The following is the distribution of questionnaire answer results for discipline variables:

<table>
<thead>
<tr>
<th>Respondents</th>
<th>score</th>
</tr>
</thead>
<tbody>
<tr>
<td>strongly agree</td>
<td>275</td>
</tr>
<tr>
<td>Agree</td>
<td>457</td>
</tr>
<tr>
<td>Disagreeing</td>
<td>309</td>
</tr>
<tr>
<td>Disagree</td>
<td>62</td>
</tr>
</tbody>
</table>
Table 4  
**FREQUENCY OF ASSESSMENT SCORE AND % OF RESPONDENTS' STATEMENTS AGAINST DISCIPLINE VARIABLES (X1)**  

<table>
<thead>
<tr>
<th>Statement</th>
<th>RATING SCORE AND % STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STS</td>
</tr>
<tr>
<td>Discipline 1</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 2</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 3</td>
<td>3</td>
</tr>
<tr>
<td>Discipline 4</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 5</td>
<td>7</td>
</tr>
<tr>
<td>Discipline 6</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 7</td>
<td>6</td>
</tr>
<tr>
<td>Discipline 8</td>
<td>5</td>
</tr>
<tr>
<td>Discipline 9</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 10</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 11</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 12</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 13</td>
<td>3</td>
</tr>
<tr>
<td>Discipline 14</td>
<td>1</td>
</tr>
<tr>
<td>Discipline 15</td>
<td>1</td>
</tr>
<tr>
<td>Discipline</td>
<td>7</td>
</tr>
<tr>
<td>%</td>
<td>0.63</td>
</tr>
</tbody>
</table>

In the Table 4 above can be concluded from 74 samples studied, for disciplinary variables from 15 statements presented respondents' answers that often appear is the answer "agree" is as much as 457 times or 41.17%. Respondents' answers can also be presented in the form of histograms or bar charts as below Figure 2.

**FIGURE 2**  
% FREQUENCY OF RESPONDENTS TO DISCIPLINARY VARIABLE STATEMENTS

From the diagram above, it can be found that as many as 41.17% of respondents said they agree with discipline on employee productivity. The spread of questionnaires for discipline variable data showed that the lowest score was 30, and the highest score was 70. Thus, obtaining the lowest and highest score, the range is 40 (70 - 30). The figures after being analyzed resulted in:
Mean: 57.5811
Standar Deviasi: 7.90354
Range: 40
Minimum: 30
Maksimum: 70

To describe the frequency of data is presented in the form of frequency distribution as follows:

![Histogram Graph]

**Figure 3**
**DISCIPLINE VARIABLE HISTOGRAM GRAPH (X1)**

Work environment variables have 2 dimensions, 15 indicators, 15 statements (questionnaires) (Figure 3) with ordinal scale measured with answers 5=Strongly Agree, 4=Agree, 3=Disagree, 2=Disagree, 1=Strongly Disagree. The following is the distribution of questionnaire answer results for work environment variables:

- (27,66) Respondents strongly agree score 307
- (36,76) Respondents Agree score 408
- (26,66) Respondents Disagree score 296
- (7,39) Respondents Disagree score 87
- (1,53) Respondents Strongly Disagree score 17
### Table 5

**FREQUENCY OF ASSESSMENT SCORE AND % OF RESPONDENTS' STATEMENTS ON WORK ENVIRONMENT VARIABLES (X2)**

<table>
<thead>
<tr>
<th>Statement</th>
<th>RATING SCORE AND % STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>STS</td>
</tr>
<tr>
<td>LK 1</td>
<td>1</td>
</tr>
<tr>
<td>LK 2</td>
<td>3</td>
</tr>
<tr>
<td>LK 3</td>
<td>1</td>
</tr>
<tr>
<td>LK 4</td>
<td>1</td>
</tr>
<tr>
<td>LK 5</td>
<td>2</td>
</tr>
<tr>
<td>LK 6</td>
<td>5</td>
</tr>
<tr>
<td>LK 7</td>
<td>1</td>
</tr>
<tr>
<td>LK 8</td>
<td>6</td>
</tr>
<tr>
<td>LK 9</td>
<td>2</td>
</tr>
<tr>
<td>LK 10</td>
<td>2</td>
</tr>
<tr>
<td>LK 11</td>
<td>5</td>
</tr>
<tr>
<td>LK 12</td>
<td>1</td>
</tr>
<tr>
<td>LK 13</td>
<td>1</td>
</tr>
<tr>
<td>LK 14</td>
<td>1</td>
</tr>
<tr>
<td>LK 15</td>
<td>1</td>
</tr>
<tr>
<td>Work environment</td>
<td>17</td>
</tr>
<tr>
<td>%</td>
<td>1.53</td>
</tr>
</tbody>
</table>

In the Table 5 above can be concluded from 74 samples studied, for work environment variables from 15 statements presented respondents' answers that often appear is the answer "agree" is as much as 408 times or 36.76%. Respondents' answers can also be presented in the form of histograms or bar charts such as below (Figure 4):

![Figure 4](image-url)

**Figure 4

% FREQUENCY OF RESPONDENTS TO WORK ENVIRONMENT VARIABLE STATEMENTS**
From the diagram above, it can be found that as many as 36.76% of respondents said they agree with the work environment on employee productivity.

The results of the questionnaire spread for work environment variable data showed that the lowest score was 31, and the highest score was 75. Thus, obtaining the lowest and highest score, the range is 44 (71 - 31). The Figure 5 after being analyzed resulted in:

\[
\text{Mean} : 57.2432 \\
\text{Standar Deviasi} : 9.11992 \\
\text{Range} : 44 \\
\text{Minimum} : 31 \\
\text{Maksimum} : 75
\]

To describe the frequency of data is presented in the form of frequency distribution as follows:

![Histogram](image)

**FIGURE 5**
WORK ENVIRONMENT VARIABLE HISTOGRAM GRAPHIC (X2)

Employee productivity variables have 3 dimensions, 15 indicators, 15 statements (questionnaires) with ordinal scale measured by answers 5 = Strongly Agree, 4 = Agree, 3 = Disagree, 2 = Disagree, 1 = Strongly Disagree. The following is the distribution of questionnaire answer results for employee productivity variables:

| (26,85) Respondents strongly agree | score 298 |
| (36,85) Respondents Agree | score 409 |
In the Table 6 above can be concluded from 74 samples studied, for employee productivity variables from 15 statements presented respondents' answers that often appear is the answer "agree" that is as much as 409 times or 36.85%. Respondents' answers can also be presented in the form of histograms or bar charts as below (Figure 6):
From the diagram above, it can be found that as many as 36.85% of respondents said they agree with discipline and work environment towards employee productivity.

The results of the questionnaire spread for employee productivity variable data showed that the lowest score was 26, and the highest score was 74. Thus, obtaining the lowest and highest score, the range is 48 (74 - 26). The figures after being analyzed resulted in:

Mean : 56.2703
Standar Deviasi : 9.44820
Range : 48
Minimum : 26
Maksimum : 74

To describe the frequency of data is presented in the form of frequency distribution as follows (Figure 7):
First Hypothesis Test

There is a disciplined influence on employee productivity. For each of the first hypothesis tests described as follows :

Simple correlation coefficient:

The coefficient of discipline correlation (X1) and employee productivity (Y) is 0.790, meaning that the close relationship between discipline and employee productivity is 79%. This relationship is strong because it is between 0.600 – 0.799, which means that if discipline increases, employee productivity also increases or vice versa. While the coefficient of determination (r)² is calculated by using the following formula:

\[
\begin{align*}
K_d &= \frac{r^2 \times 100}{100} \\
&= (0.790)^2 \\
&= (0.790)^2 \times 100 \%
\end{align*}
\]

The result of calculation obtained the coefficient of determination (r)² is 0.624 which means employee productivity of 62.4% is determined by discipline and the rest is influenced by other factors of 37.6%.

Test Result t

From the results of data processing with spss program, obtained t value count as follows (Table 7):

<table>
<thead>
<tr>
<th>Equation</th>
<th>Value t_count</th>
<th>Value t_table</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline (X1) on Employee Productivity (Y)</td>
<td>10,940</td>
<td>2,000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on table above, the t value obtained by 10,940, while \( t_{table} \) in \( \alpha \) (0.05) of 2,000. Thus \( t_{count} > t_{table} \), so clearly Ho was rejected and Ha accepted. This indicates that discipline has a positive and significant effect on employee productivity.

Test Result F

From the results of computer processing based on SPSS calculation, obtained the value of \( F_{count} \) coefficient as follows Table 8:
Table 8
FIRST HYPOTHESIS VALUE $F_{count}$ AND $F_{table}$

<table>
<thead>
<tr>
<th>Equation</th>
<th>Value $F_{count}$</th>
<th>Value $F_{table}$</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline (X1) on Employee Productivity (Y)</td>
<td>119.676</td>
<td>3.98</td>
<td>0.000</td>
</tr>
</tbody>
</table>

From the table above it is known that the value of $F_{count}$ is 119.676. Simultaneously, the critical price of $F_{table}$ value with free degree numerator 1 and denominator 72 $\alpha$ (0.05) is 3.98. Thus $F_{count} > F_{table}$, so clearly Ho was rejected, and Ha accepted. This indicates that discipline has a positive and significant effect on employee productivity.

**Simple Regression Equation**

From the spss calculation results, the following results are obtained:

\[
\hat{Y} = a + b_1 X_1 \\
\hat{Y} = 1.879 + 0.945X_1
\]

This equation means that every 1 discipline variable score ($X_1$), affects the employee productivity variable (Y) by 0.945, assuming another variable is constant in value.

**Second Hypothesis Test**

Second Hypothesis: "There is an influence of the work environment on employee productivity." For each second hypothesis test is described as follows:

**Simple Correlation Coefficient**

The coefficient value of the correlation of the work environment ($X_2$) with employee productivity (Y) is 0.776, meaning that the relationship between the work environment and employee productivity is 77.6%. This relationship is strong because it is between 0.600 – 0.799, which means that if the work environment improves then employee productivity also increases or vice versa.

While the coefficient of determination ($r^2$) is calculated by using the following formula:

\[
K_d = \frac{r^2 \times 100}{(0.776)^2} = \frac{x 100 \%}{0.602 \times 100 \%} = 60,2 \%
\]

From the calculation obtained the coefficient of determination ($r^2$) is 0.602, which means employee productivity of 60.2% is determined by the work environment and the rest is influenced by other factors of 39.8%.
**Test Result t**

From the results of data processing with spss program, obtained \( t \) value count as follows (Table 9):

<table>
<thead>
<tr>
<th>Equation</th>
<th>Value ( t_{\text{count}} )</th>
<th>Value ( T_{\text{table}} )</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline (X1) on Employee Productivity (Y)</td>
<td>10,434</td>
<td>2,000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on table above, \( t_{\text{count}} \) value obtained by 10,434, while \( T_{\text{table}} \) in \( \alpha \) (0.05) of 2,000. Thus \( t_{\text{count}} > T_{\text{table}} \), so clearly Ho was rejected and Ha accepted. This indicates that the work environment has a positive and significant effect on employee productivity.

**Test Result F**

From the results of computer processing based on SPSS calculation, obtained the value of \( F_{\text{count}} \) coefficient as follows (Table 10):

<table>
<thead>
<tr>
<th>Equation</th>
<th>Value ( F_{\text{count}} )</th>
<th>Value ( F_{\text{table}} )</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Environment (X2) on Employee Productivity (Y)</td>
<td>108,868</td>
<td>3.98</td>
<td>0.000</td>
</tr>
</tbody>
</table>

From the table above it is known that the value of \( F_{\text{count}} \) is 108,868. While the critical price of \( F_{\text{table}} \) value with free degree numerator 1 and denominator 72 \( \alpha \) (0.05) is 3.98. Thus \( F_{\text{count}} > F_{\text{table}} \), so clearly Ho was rejected and Ha accepted. This indicates that the work environment has a positive and significant effect on employee productivity.

**Simple Regression Equation**

From the calculation results, the following results are obtained:

\[
\hat{Y} = a + b_2X_2 \\
\hat{Y} = 10,260 + 0.804X_2
\]

This equation means that every 1 work environment variable score \( (X_2) \), affects the employee productivity variable \( (Y) \) by 0.804, assuming other variables have a constant value.

**Third Hypothesis Test**

Third Hypothesis: "There is an influence of discipline and work environment together on employee productivity on. For each of the first hypothesis tests described as follows:

**Multiple Correlation Coefficients**
The coefficient value of multiple correlation discipline (X1) and work environment (X2) with employee productivity (Y) is 0.804, which means the relationship of discipline variables (X1) and work environment (X2) with employee productivity bound variables (Y) indicates a very strong relationship. While the amount of coefficient of determination or R Square is 0.646 which is the squealing of the correlation coefficient. This showed 64.6% of employee productivity variables were determined by variable factors of discipline and work environment, while the remaining 35.4% determined other factors, which in this study could not be researched.

**Test Result t**

From the results of data processing with spss program, obtained t value count as follows (Table 11):

<table>
<thead>
<tr>
<th>Equation</th>
<th>Value</th>
<th>Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline (X1) on Employee Productivity (Y)</td>
<td>2.976</td>
<td>2.000</td>
<td>0.000</td>
</tr>
<tr>
<td>Work Environment (X2) on Employee Productivity (Y)</td>
<td>2.087</td>
<td>2.000</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Based on the Table 11 above obtained the value of discipline variable \( t_{count} \) of 2.976, while the \( t_{table} \) in \( \alpha \) (0.05) of 2.000. Thus \( t_{count} > t_{table} \), so clearly \( H_0 \) was rejected and \( H_a \) accepted. This indicates that discipline has a positive and significant effect on employee productivity. While the \( t_{count} \) value of the work environment variable is 2.087, while the \( \alpha \) (0.05) is 2.000. Thus \( t_{count} > t_{table} \), so clearly \( H_0 \) was rejected and \( H_a \) accepted. This indicates that the work environment has a positive and significant effect on employee productivity.

**Test Result F**

From the results of computer processing based on statistical calculations, obtained the value of the \( F_{count} \) coefficient as follows (Table 12):

<table>
<thead>
<tr>
<th>Equation</th>
<th>Value</th>
<th>Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discipline (X1) and Work Environment (X2) on Employee Productivity (Y)</td>
<td>64.805</td>
<td>3.13</td>
<td>0.000</td>
</tr>
</tbody>
</table>

From the table above it is known that the value of \( F_{count} \) is 64.805. While the critical price of \( F_{table} \) value with free degree numerator 2 and denominator 71 \( \alpha \) (0.05) of 3.13. Thus \( F_{count} > F_{table} \), so clearly \( H_0 \) was rejected and \( H_a \) accepted. This shows that discipline and work environment have a positive and significant effect on employee productivity.

**Multiple Regression Equations**

From the results of statistical calculations, the following results are obtained:
\[
\hat{Y} = a + b_1X_1 + b_2X_2
\]
\[
\hat{Y} = 2,800 + 0.579 X_1 + 0.352 X_2
\]

This equation means that:

1) Each discipline variable score ($X_1$) affects the employee productivity variable ($Y$) of 0.579, assuming the work environment variable ($X_2$) is of constant value.

2) Every work environment variable score ($X_2$) affects the employee productivity variable ($Y$) of 0.352, assuming the discipline variable ($X_1$) value is constant.

Based on the test results of the three hypotheses above, it turns out that all hypotheses are acceptable and significant.

**DISCUSSION**

**The Influence of Discipline on Employee Productivity**

The results of the correlation analysis showed that the relationship between discipline variables and employee productivity was 0.790. While the coefficient of determination is 0.624. This means that 62.4% of variations occurring in employee productivity variables ($Y$) can be predicted by discipline variables ($X_1$) or in other words discipline variables as predictable predicate variables to predict employee productivity variables in state-owned public agency companies by 62.4%.

From the calculation of statistical programs obtained a calculated $t$ value of 10,940, while it is known that the critical point of acceptance in table $t$ is 2,000. Thus the $t_{count} > t_{table}$, so clearly Ho was rejected, and Ha accepted. This indicates that discipline has a positive and significant effect on employee productivity in publicly owned companies.

**The Effect of the Work Environment on Employee Productivity**

The results of correlation analysis showed that the relationship between work environment variables and employee productivity was 0.776. While the coefficient of determination is 0.602. This means that 60.2% of variations occurring in employee productivity variables ($Y$) can be predicted by work environment variables ($X_2$) or work environment variables as predictable predicate variables to predict employee productivity variables in state-owned public agency companies by 60.2%.

From the calculation results with the statistics program obtained $t$-count value of 10,434, while it is known that the critical point of acceptance in table $t$ is 2,000. Thus the $t$-count is $> t$-table, so it is clear Ho was rejected, and Ha accepted. This indicates that the work environment has a positive and significant effect on employee productivity in publicly owned companies.

**The Influence of Discipline and Work Environment together on employee Productivity**

The result obtained the value of the coefficient of multiple correlations ($R$) of 0.804. The figure indicates that there is a relationship between the two free variables and bound variables. The coefficient of multiple determination ($R^2$) of discipline variables and work environment against employee productivity is 0.646. The value informs that 64.6% of variations occurring in employee productivity variables can be predicted by the two free variables together.
From the calculation results obtained \( F_{\text{count}} \) value of 64,805. While the critical price of \( F_{\text{table}} \) value at the level of \( (\alpha = 0.05) \) is 3.13. Thus \( F_{\text{count}} > F_{\text{table}} \), so clearly Ho was rejected, and H1 accepted. This shows that jointly discipline and work environment has a positive and significant effect on employee productivity in state-owned public bodies.

**CONCLUSION**

There is a positive influence between discipline and employee productivity. From the hypothetical test results obtained \( t_{\text{count}} \) value of 10,940, while obtained \( t_{\text{table}} \) of 2,000. Thus \( t_{\text{count}} > t_{\text{table}} \), then Ho was rejected and H1 accepted. This means that there is a positive and significant influence of discipline on employee productivity. There is a positive influence between the work environment and employee productivity. From the results of hypothesis testing obtained thitung value of 10,434, while obtained \( t_{\text{table}} \) of 2,000. Thus \( t_{\text{count}} > t_{\text{table}} \), then Ho was rejected, and H1 accepted. This means that there is a positive and significant impact of the work environment on employee productivity. From the Anova test, it was obtained that \( F_{\text{count}} \) (64,805) is greater than \( F_{\text{table}} \) (3.13), it can be said that discipline variables and work environment together can be used to stimulate employee productivity variables.

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