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THE INFLUENCE OF WORK DISCIPLINE ON WORK PRODUCTIVITY MODERATED BY THE WORK ENVIRONMENT AT PT HANJAYA MANDALA SAMPOERNA

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Abstract

This study aims to examine the effect of work discipline on work productivity and the moderating role of the work environment in the relationship between work discipline and work productivity at PT Hanjaya Mandala Sampoerna. The study involved 102 respondents, and the data were analyzed using Moderated Regression Analysis (MRA). The results indicate that work discipline has a positive and significant effect on work productivity. However, the work environment does not moderate the relationship between work discipline and work productivity at PT Hanjaya Mandala Sampoerna.

Keywords: Work Discipline, Work Productivity, Work Environment .

I. INTRODUCTION

Work productivity is a crucial aspect of human resource management because it relates to employees' ability to produce optimal work to achieve company goals. Work productivity can describe an employee's ability to produce output by utilizing available resources effectively and efficiently (Rivai, V., & Sagala 2019) **.** According to Khoeriyah, (Khoeriyah 2023) **,** productivity is the ratio between the results obtained and the level of workforce participation within a specific time period. Meanwhile, Sunaryo et al. (2023) explain that work productivity is related to a mental attitude that believes that the quality of life today must be better than yesterday and tomorrow must be better than today. Therefore, work productivity is one of the factors that companies need to consider to improve operational effectiveness, maintain the quality of work results, and achieve predetermined targets.

Work productivity is not only determined by an employee's ability to complete tasks but also by their discipline in carrying out their duties and responsibilities. Work discipline is a crucial element in human resource management because it reflects an employee's awareness and willingness to comply with company regulations and applicable norms. Hasibuan (2022) states that discipline is a person's awareness and willingness to comply with all company regulations and applicable social norms. Meanwhile, Mangkunegara (2020) explains that work discipline is a management implementation to strengthen organizational guidelines. Employees with good work discipline are expected to be able to carry out their work according to procedures, utilize their time effectively, and meet company-set targets. Thus, work discipline is one factor that can support increased employee productivity.

In addition to work discipline, the work environment is also an aspect that needs to be considered in human resource management. The work environment includes both physical and non-physical conditions around employees that can affect their comfort and work performance. A good work environment can provide a sense of security and comfort, and support positive relationships between employees and their colleagues and superiors. Sunaryo et al. (2024) explain that a conducive work environment plays a crucial role in increasing employee motivation and comfort while working, thereby supporting increased productivity. An adequate work environment is expected to help employees carry out their duties optimally. In relation to work discipline, the work environment can be considered a moderating variable that has the potential to strengthen or weaken the influence of work discipline on work productivity.

PT Hanjaya Mandala Sampoerna Tbk is a company operating in the tobacco industry in Indonesia. The company faces challenges in maintaining productivity and operational efficiency amidst business competition, regulatory changes, and evolving market conditions. In this situation, human resource management is crucial for the company's operational effectiveness. Based on the description in the thesis by Rivai, V., & Sagala, (2019) , employee productivity at PT Hanjaya Mandala Sampoerna needs to be studied by considering work discipline and the work

environment. These two variables are relevant to research because they relate to work execution, compliance with regulations, and conditions that support employees in achieving company targets.

Phenomena related to work productivity can be seen from the sales development of PT Hanjaya Mandala Sampoerna during the 2020–2023 period. Based on data presented in the thesis of Rivai, V., & Sagala (2019) , the company's total sales were recorded at IDR 92.43 trillion in 2020, increasing to IDR 98.87 trillion in 2021, then to IDR 109.02 trillion in 2022 and IDR 111.57 trillion in 2023. However, sales volume changed from 83.4 billion cigarettes in 2022 to 81.9 billion cigarettes in 2023. This condition indicates that an increase in sales value is not always followed by an increase in sales volume. This change needs to be viewed by considering various factors, including market conditions, company policies, and operational efficiency. Therefore, managing workforce productivity remains a crucial concern for the company so that operational activities can run optimally.

One factor that needs to be considered in increasing work productivity is employee work discipline. Work discipline relates to compliance with working hours, attendance, work completion, and implementation of established company procedures. Sunaryo et al. (2024) stated that work discipline influences employee performance. Well-implemented discipline can encourage employees to work optimally and utilize work time effectively. This opinion is in line with Khoeriyah (2023) and Margono (2015) , who stated that work discipline influences employee work productivity. However, research by Pricilla and Octaviani (2022) showed that work discipline did not affect employee work productivity. The difference in research results indicates that the relationship between work discipline and work productivity still needs further study based on the characteristics and conditions of the companies studied.

The phenomenon of employee discipline in Aisyah's thesis (2023) is shown through internal company data from 2023. The data shows that the employee attendance rate reached 93%, while the company's target is at least 98%. The tardiness rate was recorded at 6–8%, higher than the company's target of a maximum of 2%. In addition, compliance with production standard operating procedures (SOPs) reached 89%, while the company's target was 100%. Compliance with rest schedules was recorded at 94%, while the set target was also 100%. These data show a discrepancy between the company's expected discipline targets and the actual achievement. Low attendance rates, high tardiness, and suboptimal compliance with work procedures are conditions that require attention because they can disrupt the smooth implementation of work and the achievement of the company's operational targets.

In addition to work discipline, the work environment was also a factor considered in this study. A supportive work environment can help employees perform their tasks more comfortably, maintain concentration, and build good cooperation. Conversely, a less supportive environment can cause discomfort and potentially hinder work performance. In the thesis of Rivai, V., & Sagala (2019) , the work environment is discussed through several aspects, including the physical condition of the workplace, relationships between employees, relationships with superiors, work facilities, work safety, organizational culture, and managerial support. These aspects indicate that the work environment is not only related to physical facilities, but also includes social relationships and organizational support received by employees. Therefore, the work environment needs to be considered to create conditions that support the implementation of tasks and the achievement of work productivity.

Previous research has provided mixed results regarding the role of the work environment in the relationship between work discipline and work productivity. Rivai, V., & Sagala (2019) found that the work environment moderates the influence of work discipline on work productivity. Research by Arifin et al. (2024) also showed that the work environment moderates the influence of work discipline and job training on work productivity. These findings suggest that the work environment has the potential to strengthen the relationship between work discipline and work productivity. However, this influence may not necessarily produce the same results in every company because work environment conditions, employee characteristics, and work systems implemented can vary. Therefore, further research is needed to determine whether the work environment also plays a role as a moderating variable in the relationship between work discipline and work productivity at PT Hanjaya Mandala Sampoerna.

The differences in previous research findings indicate a research gap, which serves as the basis for this study. On the one hand, work discipline is considered to increase productivity because it encourages employees to comply with regulations, complete work on time, and carry out tasks according to procedures. On the other hand, research by Pricilla and Octaviani (2022) shows that work discipline has no effect on employee productivity. Differences are also evident in research regarding the work environment as a moderating variable. Aisyah (2023) and Arifin et al. (2024) found a moderating role for the work environment, while the results of research at PT Hanjaya Mandala Sampoerna in Alby's (2025) thesis showed that the work environment did not moderate the influence of work discipline on work productivity. These differences in findings are an important reason to reexamine the relationship between variables based on empirical research. Based on the phenomena and differences in previous research results, this study focuses on the influence of work discipline on work productivity with the work environment as a moderating variable at PT Hanjaya Mandala Sampoerna. This research is important to conduct to determine whether work discipline influences

employee work productivity and whether the work environment can strengthen or weaken this influence. This study used 102 respondents with the Moderated Regression Analysis (MRA) analysis technique, as stated in the thesis of Rivai, V., & Sagala. (2019) . The research results are expected to provide an overview of the relationship between work discipline, work productivity, and the work environment and serve as a consideration for companies in managing human resources.

Based on the description, the purpose of this study is to analyze the influence of work discipline on work productivity at PT Hanjaya Mandala Sampoerna and analyze the role of the work environment in moderating the influence of work discipline on work productivity. Thus, the problem formulation in this study is whether work discipline influences work productivity at PT Hanjaya Mandala Sampoerna and whether the work environment moderates the influence of work discipline on work productivity at PT Hanjaya Mandala Sampoerna.

II. LITERATURE REVIEW

Work Discipline

Work discipline is a crucial aspect of human resource management because it relates to employee compliance with company rules and regulations. Work discipline is essential for employees to carry out their duties and responsibilities regularly and in accordance with established standards. According to Mangkunegara (2020) , work discipline is a management practice that reinforces organizational guidelines. Meanwhile, Hasibuan (2022) explains that discipline is an individual's awareness and willingness to comply with all company regulations and applicable social norms.

Work discipline also reflects an employee's responsibility in carrying out their work. Employees with good work discipline tend to be able to adhere to work schedules, follow operational procedures, and complete tasks according to company regulations. Rivai, V., & Sagala (2019) stated that work discipline is one of the important operational functions of human resource management because the better employee discipline, the higher the work performance they can achieve. Therefore, implementing work discipline is a crucial part of supporting the smooth running of a company's operations.

Work discipline can be influenced by several factors, including compensation, leadership role models, the existence of clear rules, and employee compliance with organizational regulations. Sutrisno (2019) explains that the amount of compensation and leadership role models are factors that can influence the upholding of work discipline. Therefore, work discipline is not only related to company regulations but also influenced by how the company implements these rules and sets an example for its employees.

The relationship between work discipline and productivity has been discussed in several previous studies. Khoeriyah (2023) and Margono (2015) demonstrated a positive relationship between work discipline and productivity. However, research by Pricilla and Octaviani (2022) showed that work discipline had no effect on employee productivity . These differences indicate that the influence of work discipline on productivity still needs to be studied based on company characteristics and employee conditions. In this study, work discipline was positioned as an independent variable to test its effect on employee productivity at PT Hanjaya Mandala Sampoerna.

Work Productivity

Work productivity reflects an employee's ability to produce work by utilizing available resources effectively and efficiently. Productivity is not only related to the quantity of work completed, but also to the quality of the results and the use of time and resources in the work process. Rivai, V., & Sagala (2019) explains that labor productivity is the ability of employees to produce optimal output with available resources. This definition demonstrates that productivity is a crucial aspect in supporting the achievement of company goals.

According to Khoeriyah (2023) , productivity is the ratio of results or output obtained to the level of workforce participation within a specific time period. This participation includes the maximum and efficient use of resources. Meanwhile, Sunaryo et al. (2023) explain that work productivity is related to a mental attitude that views the quality of life today as better than yesterday and tomorrow as better than today. Based on this perspective, work productivity can be understood as the ability and effort of employees to produce better work on an ongoing basis.

Work productivity can be influenced by various factors related to both employees and organizational conditions. Work discipline is one factor that can support productivity because employees who comply with work rules and schedules tend to carry out tasks more regularly. Furthermore, a conducive work environment can support employee comfort and smoothness in completing their work. Khoeriyah (2023) also examined the relationship between work motivation, work environment, and work discipline with employee productivity. The results of this study indicate that all three variables, both partially and simultaneously, have a significant effect on work productivity.

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Other previous research has yielded mixed results regarding the factors influencing work productivity. Santika (2023) found that work discipline significantly impacts employee productivity. Meanwhile, research conducted by Utami (2023) demonstrated that work discipline has a positive and significant impact on employee productivity. These findings demonstrate the importance of work discipline in supporting employee performance, although research findings on different subjects still warrant consideration.

In this study, work productivity is the dependent variable influenced by work discipline. Employee productivity at PT Hanjaya Mandala Sampoerna is a concern because achieving company targets is related to employees' ability to produce work according to predetermined standards. Therefore, testing work productivity is necessary to determine the extent to which work discipline supports employee performance at the company.

Work environment

The work environment is everything surrounding employees that can influence their work performance. The work environment encompasses not only the physical conditions of the workplace but also the social relationships and atmosphere created within the organization. A positive workplace environment can help employees feel safe and comfortable while performing their duties. Conversely, an unsupportive work environment can hinder the smooth running of work and impact the employee's work experience.

Sunaryo et al. (2023) explain that a conducive work environment plays a crucial role in increasing employee motivation and comfort while working, which ultimately contributes to increased productivity. A good work environment encompasses both physical and non-physical aspects that can create a pleasant, safe, and comfortable atmosphere. Physical aspects relate to workplace conditions and available facilities, while non-physical aspects relate to relationships between employees, relationships with superiors, and the work atmosphere within the organization.

The work environment can be viewed through several aspects, such as the physical condition of the workplace, relationships between employees, relationships with superiors, work facilities, security, and management support. Supportive physical conditions include appropriate lighting, ventilation, and room temperature. Good relationships between employees can encourage cooperation and communication, while good relationships with superiors can support the process of directing, supervising, and providing feedback. Adequate work facilities can also help employees carry out their tasks more effectively.

Previous research has shown that the work environment can be related to work productivity and can play a role in the relationship between work discipline and productivity. Aisyah (2023) found that the work environment moderates the influence of work discipline on the work productivity of employees at the Ministry of Religious Affairs Office in Surabaya. Similar results were also shown by Arifin et al. (2024) , who found that the work environment moderates the influence of work discipline and training on the work productivity of employees at PT Wija Kusuma Nadi Denpasar Bali. These research results indicate that the work environment has the potential to be a factor influencing the strength or weakness of the relationship between work discipline and work productivity.

Based on the above description, the work environment is positioned as a moderating variable in this study. This variable is used to test whether work environment conditions can strengthen or weaken the influence of work discipline on employee productivity at PT Hanjaya Mandala Sampoerna. The placement of the work environment as a moderating variable is based on the view that employee compliance with work rules can interact with the workplace conditions they experience. However, this role needs to be proven through empirical testing because the results of previous studies may differ depending on the research object and conditions.

Work Environment as a Moderating Variable

A moderating variable is a variable used to test whether the relationship between an independent and a dependent variable becomes stronger or weaker under certain conditions. In this study, the work environment acts as a moderating variable linking work discipline and work productivity. This means that the study not only examines the direct effect of work discipline on productivity but also assesses whether the work environment alters the strength of that relationship.

Work discipline relates to employees' awareness and willingness to comply with company regulations and carry out their responsibilities. Meanwhile, the work environment relates to the physical and non-physical conditions that support work performance. When employees have good work discipline and are supported by a conducive work environment, these conditions are expected to facilitate smooth task execution. However, the existence of a positive work environment does not automatically guarantee a stronger influence of work discipline on productivity. This relationship remains contingent on organizational conditions and employee behavior.

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Aisyah (2023) found that the work environment moderates the influence of work discipline on work productivity. Research by Arifin et al. (2024) also showed that the work environment moderates the influence of work discipline and training on employee productivity. Both studies provide empirical evidence that the work environment can play a role in the relationship between employee-related factors and work productivity.

However, the results of previous research do not necessarily apply to every company. Job characteristics, operational systems, implementation of rules, and work environment conditions can all produce different relationships. Therefore, this study at PT Hanjaya Mandala Sampoerna was conducted to determine whether the work environment can moderate the influence of work discipline on employee productivity at the company. Therefore, testing this moderating variable is expected to provide a clearer picture of the relationship between work discipline, the work environment, and employee productivity.

III. RESEARCH METHODS

This study employed a quantitative approach with an associative design. The quantitative approach was employed because the research data were obtained through questionnaires, which were then statistically analyzed to examine the relationships and influences between variables. This study included work discipline as the independent variable, work productivity as the dependent variable, and the work environment as a moderating variable. The associative design was used to determine the relationship between work discipline and work productivity and to examine the role of the work environment in strengthening or weakening this relationship (Sugiyono 2019) .

The research population was employees of PT Hanjaya Mandala Sampoerna Tbk. The research sample consisted of 102 employees who were determined using a saturated sampling technique, namely a sampling technique by using all members of the population as research samples (Rusiadi, Subiantoro, N., & Hidayat 2014) . The data used consisted of primary data and secondary data. Primary data were obtained through distributing questionnaires to respondents, while secondary data were used as supporting data for the research. Data collection was carried out using a survey method with a questionnaire compiled based on indicators for each variable. Measurement of respondents' answers used a Likert scale to determine employee responses to statements related to work discipline, work productivity, and the work environment (Sugiyono 2019) .

Work discipline variables are measured using indicators of attendance, compliance with obligations and regulations, and compliance with norms or rules of behavior in work referring to Dharmawan (2021) . Work productivity is measured using indicators of ability, improvement of work results, work enthusiasm, self-development, quality, and efficiency based on Sutrisno (2019) , with reference to the concept of work productivity Yuniarsih and Suwatno (2016) . Meanwhile, the work environment is measured using indicators of cleanliness, lighting, air exchange, work safety, work equipment or supplies, noise, and employee work relationships with superiors based on Sedarmayanti (2021) . All variables are measured using a Likert scale according to the research instrument used.

Data analysis was conducted using the Structural Equation Modeling–Partial Least Squares (SEM-PLS) method with the help of the SmartPLS version 4 application. This study uses a two-stage embedded approach to analyze the relationship between indicators, dimensions, and constructs of research variables (Sholihin, M., & Ratmono 2013) . The analysis stage includes descriptive statistical analysis, outer model evaluation , and inner model evaluation . Descriptive statistical analysis is used to describe respondents' responses to each research variable. Outer model evaluation is conducted to test the validity and reliability of the instrument through convergent validity. discriminant validity , Cronbach's Alpha, and Composite Reliability . Furthermore, an inner model evaluation was conducted to assess the relationships between variables and the feasibility of the structural model through testing in accordance with the research design.

Hypothesis testing was conducted to determine the effect of work discipline on work productivity and to examine the role of the work environment as a moderating variable. Moderation testing was conducted by examining the interaction between work discipline and the work environment on work productivity. The test results were used to determine whether the work environment strengthens, weakens, or does not moderate the effect of work discipline on employee productivity at PT Hanjaya Mandala Sampoerna Tbk.

IV. RESULTS AND DISCUSSION

Research result

Data testing in this study was conducted using SmartPLS, with evaluation stages for the measurement model (outer model) and the structural model (inner model). The study involved 102 respondents from PT Hanjaya Mandala Sampoerna. The outer model evaluation was conducted to test the construct's validity and reliability, while the inner model evaluation was used to determine the model's ability to explain the research variables and to test for direct and moderating effects.

Table 1. Convergent Validity Test Results

Variables	Average Variance Extracted (AVE)	Information
Work Discipline	0.611	Valid
Work environment	0.548	Valid
Work Environment × Work Discipline	1,000	Valid
Work Productivity	0.538	Valid

Source: Data processed using SmartPLS, 2025.

Based on Table 1, the AVE value for the work discipline variable is 0.611, the work environment is 0.548, and the work productivity is 0.538. These three variables have AVE values above 0.50, thus meeting the convergent validity criteria. Meanwhile, the interaction construct between the work environment and work discipline has an AVE value of 1.000. Thus, based on the AVE values listed in the thesis, the research construct meets the convergent validity criteria.

Discriminant validity testing was conducted using the Fornell-Larcker Criterion and cross-loading approaches . The results of the Fornell-Larcker Criterion test showed that the square root of the AVE for the work discipline variable was 0.782, the work environment was 0.740, and the work productivity was 0.733. These values were greater than the correlations of each variable with other constructs. These results support the fulfillment of discriminant validity in these constructs.

Table 2. Reliability Test Results

Variables	Cronbach's Alpha	Composite Reliability	Information
Work Discipline	0.685	0.825	Reliable
Work environment	0.857	0.892	Reliable
Work Environment × Work Discipline	1,000	1,000	Reliable
Work Productivity	0.842	0.873	Reliable

Source: Data processed using SmartPLS, 2025.

Based on Table 2, the Cronbach's Alpha value for the work discipline variable is 0.685, the work environment is 0.857, and the work productivity is 0.842. These values meet the reliability limit of 0.60 used in this thesis. The Composite Reliability values for the three variables are also above 0.70, namely 0.825, 0.892, and 0.873, respectively. Meanwhile, the interaction construct has a Cronbach's Alpha and Composite Reliability value of 1.000. Thus, the test results indicate that the research construct meets the reliability criteria based on the reported values.

Table 3. Model Fit Test Results

Indicator	Saturated Model	Estimated Model
SRMR	0.139	0.140
d_ULS	2,640	2,657
d_G	1,507	1,505
Chi-Square	577,238	577,530
NFI	0.505	0.505

Source: Data processed using SmartPLS, 2025.

Based on Table 3, the SRMR value for the saturated model is 0.139, while for the estimated model it is 0.140. These results represent the model fit values reported in the thesis. Assessment of model fit should refer to the SRMR limits used consistently in the research methodology. Therefore, interpretation of model fit should be adjusted to the evaluation criteria established in the research.

Table 4. Results of the Determination Coefficient

Endogenous Variables	R-Square	Adjusted R-Square
Work Productivity	0.332	0.311

Source: Data processed using SmartPLS, 2025.

Based on Table 4, the R-Square value for work productivity is 0.332, while the Adjusted R-Square value is 0.311. The Adjusted R-Square value indicates that work discipline and work environment in the research model can explain 31.1% of the variation in work productivity. Meanwhile, the remaining 68.9% is related to other factors not included in this research model.

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Table 5. Results of Direct and Moderation Effect Tests

Variable Relationship	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics	P Values
Work Discipline → Work Productivity	0.335	0.341	0.113	2,962	0.003
Work Environment → Work Productivity	0.378	0.396	0.117	3,240	0.001
Work Environment × Work Discipline → Work Productivity	0.034	0.038	0.068	0.501	0.617

Source: Data processed using SmartPLS, 2025.

Based on Table 5, work discipline has a path coefficient of 0.335, with a t-statistic of 2.962 and a p-value of 0.003. These results indicate that work discipline has a positive and significant effect on work productivity. This means that increased work discipline is associated with increased employee productivity.

The work environment has a path coefficient of 0.378, a t-statistic of 3.240, and a p-value of 0.001. These results indicate that the work environment also has a positive and significant influence on work productivity. Thus, a supportive work environment is associated with higher employee productivity.

Meanwhile, the interaction between the work environment and work discipline has a path coefficient of 0.034, a t-statistic of 0.501, and a p-value of 0.617. This p-value is greater than 0.10, indicating that the interaction effect is not significant. These results indicate that the work environment has not been proven to moderate the influence of work discipline on work productivity at PT Hanjaya Mandala Sampoerna.

Table 6. Hypothesis Testing Results

Hypothesis	Variable Relationship	Path Coefficient	P-Value	Conclusion
H1	Work Discipline → Work Productivity	0.335	0.003	Positive and significant impact
H2	Work Environment × Work Discipline → Work Productivity	0.034	0.617	There is no significant moderating effect

Source: Data processed using SmartPLS, 2025.

The results of the hypothesis testing indicate that H1 is statistically supported because work discipline has a positive coefficient of 0.335 and a p-value of 0.003. These findings indicate that work discipline has a positive and significant effect on work productivity.

In H2, the interaction coefficient between work environment and work discipline was 0.034 with a p-value of 0.617. Because this value is greater than 0.10, the moderating effect is not significant. Thus, the work environment has not been shown to strengthen or weaken the relationship between work discipline and work productivity.

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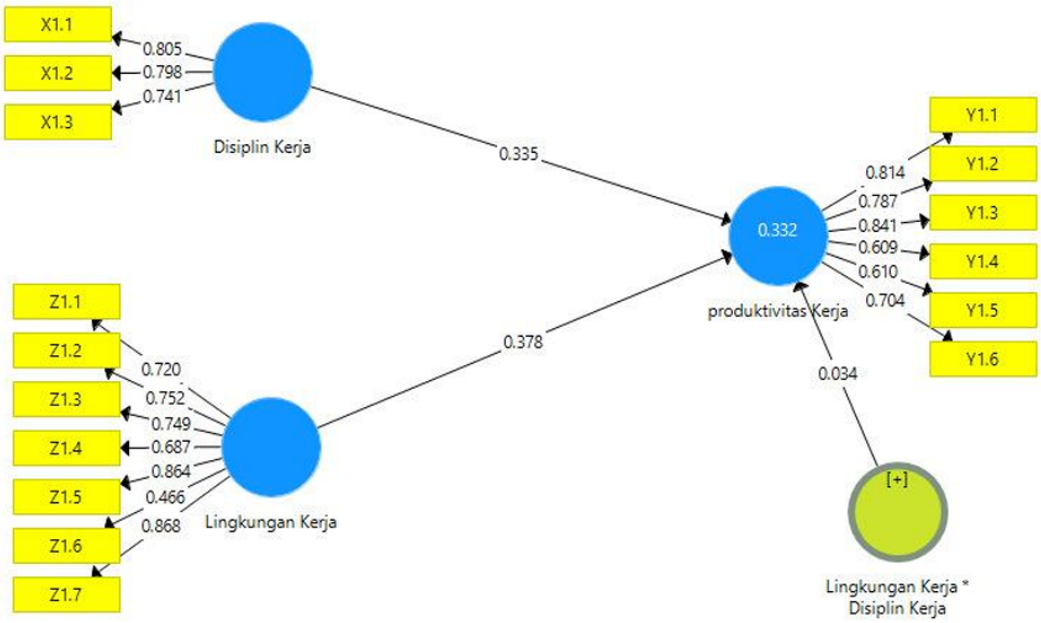


Figure 1. SEM-PLS Model Test Results

Source: Data processed using SmartPLS, 2025.

The SEM-PLS model image in the thesis shows the relationship between work discipline, work environment, and work productivity, including the interaction between work discipline and work environment. The path coefficient indicates the direction and magnitude of the influence between variables, while the t-statistic and p-value are used to assess the significance of the relationship. Based on the test results, work discipline and work environment have a positive and significant influence on work productivity, while the interaction between the two variables does not show a significant effect.

Discussion

The Influence of Work Discipline on Work Productivity

The results of the study indicate that work discipline has a positive and significant effect on work productivity at PT Hanjaya Mandala Sampoerna. This is indicated by a path coefficient of 0.335, a t-statistic of 2.962, and a p-value of 0.003. These values indicate that better employee work discipline leads to higher work productivity.

Work discipline reflects employee compliance with company regulations, punctuality, and responsibility in carrying out their work. Disciplined employees tend to complete tasks in accordance with applicable regulations, allowing operations to run more orderly. Conversely, low work discipline can lead to delays, errors in task execution, and disruption to the achievement of work targets.

These findings align with Hasibuan's (2022) theory of work discipline , which emphasizes the importance of employee awareness and willingness to comply with company regulations. These findings also align with research by Khoeriyah (2023) and Margono (2015) , discussed in this thesis, which demonstrates a relationship between work discipline and productivity. Therefore, improving work discipline is an important aspect for companies to consider in their efforts to increase employee productivity.

The Influence of the Work Environment on Work Productivity

The test results show that the work environment has a positive and significant effect on work productivity, with a path coefficient of 0.378, a t-statistic of 3.240, and a p-value of 0.001. These results indicate that an increasingly supportive work environment is associated with increased employee work productivity.

The work environment encompasses both physical and non-physical conditions that can impact job performance. Physical conditions include cleanliness, lighting, air circulation, security, work equipment, and noise levels. Meanwhile, non-physical conditions encompass the relationship between employees and superiors. A comfortable and supportive work environment can help employees perform their jobs better.

These findings indicate that the work environment remains significantly related to work productivity. Therefore, companies need to prioritize comfort, safety, equipment availability, and good working relationships to enable employees to perform their tasks effectively. However, the direct influence of the work environment must be

distinguished from its moderating role, as a direct work environment does not necessarily strengthen the relationship between work discipline and productivity.

Work Environment Does Not Moderate the Effect of Work Discipline on Work Productivity

The results of the study indicate that the work environment does not significantly moderate the effect of work discipline on work productivity. This is indicated by an interaction coefficient of 0.034, a t-statistic of 0.501, and a p-value of 0.617. Because the p-value is greater than 0.10, the interaction effect is declared insignificant.

This finding indicates that the work environment is neither proven to strengthen nor weaken the influence of work discipline on work productivity in the research model. Although the work environment has a direct influence on work productivity, this influence is not sufficient to show that the work environment changes the strength of the relationship between work discipline and work productivity.

One explanation discussed in the thesis is that work discipline can be related to employee awareness, responsibility, and habits in complying with company regulations. If employees are accustomed to working according to procedures, their work productivity can still be influenced by their discipline even when the work environment conditions differ. However, this explanation is an interpretation of the research results and does not prove that all work environments in companies are the same.

The results of this study differ from those of Aisyah (2023) and Arifin et al. (2024) , which were discussed in this thesis and found that the work environment can moderate the relationship between work discipline and work productivity. These differences in results indicate that the role of the work environment as a moderating variable can vary depending on the research context and the characteristics of the organization being studied.

The Model's Ability to Explain Work Productivity

The results of the determination coefficient test showed an R-squared value of 0.332 and an adjusted R-squared value of 0.311 for the work productivity variable. The adjusted R-squared value indicates that the research model is able to explain 31.1% of the variation in work productivity based on the variables included in the model. Meanwhile, the remaining 68.9% is related to other factors outside the research model.

These results indicate that work discipline and work environment are factors that need to be considered in explaining work productivity, but they do not encompass all factors that may be related to employee productivity. Other factors, such as work motivation, leadership, and organizational commitment, could be considered in future research. These variables are suggestions for future research, not variables tested in this study.

Overall, research at PT Hanjaya Mandala Sampoerna shows that work discipline has a positive and significant effect on work productivity. The work environment also has a positive and significant direct effect on work productivity, but it has not been shown to moderate the relationship between work discipline and work productivity. Therefore, companies need to continuously strengthen employee work discipline while maintaining a supportive work environment to maintain and improve productivity.

V. Conclusion and Suggestions

Conclusion

Based on the results of research on the influence of work discipline on work productivity with the work environment as a moderating variable at PT Hanjaya Mandala Sampoerna Tbk., it can be concluded that work discipline has a positive and significant effect on work productivity. These results indicate that better employee work discipline tends to increase work productivity. Discipline in complying with company regulations, adhering to working hours, and carrying out tasks according to provisions is one of the important factors in supporting the achievement of optimal work results.

Further testing results indicate that the work environment does not significantly moderate the relationship between work discipline and productivity. This means that the work environment has not been proven to strengthen or weaken the influence of work discipline on employee productivity. Thus, work discipline still plays a significant role in increasing productivity, while the work environment has not been shown to act as a moderating variable in this relationship.

Suggestion

For PT Hanjaya Mandala Sampoerna Tbk., the results of this study are expected to be used as a reference in improving employee productivity by strengthening work discipline. The company needs to maintain and improve employee compliance with regulations, punctuality, and responsibility in carrying out their work. Monitoring of

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regulation implementation, employee development, and consistent application of rewards and sanctions can be carried out to support discipline and maintain work productivity.

For human resource management, the work environment remains a key consideration, even though this study did not prove it moderates the relationship between work discipline and productivity. Companies need to maintain comfort, cleanliness, safety, lighting, and good working relationships between employees and superiors. A supportive work environment is expected to help employees perform their tasks comfortably, reduce burnout, and maintain long-term work morale.

For future researchers, this study could be expanded by adding other variables that could potentially moderate the relationship between work discipline and productivity, such as work motivation, leadership, or organizational commitment. Future research could also expand the scope of the study to other companies or industries to allow for comparison and provide a broader picture of the factors influencing employee productivity.

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