



Effect of work discipline on employee performance with the work environment as a moderating variable at PT SINERGI integra service using the Structural Equation Modeling (SEM) method

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ABSTRACT

PT SINERGI Integra Service is a cleaning contract service provider company that has been established since 2007 with its head office in Jakarta, one of the branches located in Tangerang Regency with a total of 150 employees. Based on Company data from 2019 to 2022 where the average employee performance achievement in 2021 is only 78.4% where this achievement has decreased by 2% compared to 2019. Based on the disciplinary data of PT SINERGI's employees which can be seen in the employee attendance data where there was an increase in the number of employee absence events in 2021 as many as 516 events where the value increased by 328.66% compared to 2019. On the other hand, the work environment also has an impact on employee performance. Based on research conducted by Irawan (2021), it shows that the work environment has a significant effect on the performance of civil servants at the Serpong District Office. Based on the results of research conducted using the Structural Equation Modeling Method, it was found that Work Discipline has an effect on Employee Performance with a p-value of 0.050 and the Work Environment has no effect on Employee Performance with a p-value of 0.330 and it can be concluded that the Work Environment as a moderating variable strengthens the influence of Work Discipline on Employee Performance with a p-value of 0.003.

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1. INTRODUCTION

PT SINERGI Integra Service is a cleaning contract service provider company that has been established since 2007 with its head office in Jakarta with a total of 1500 employees, while a branch company located in Tangerang Regency with a total of 150 employees. The provision of cleaning services provided by the company includes Malls, Office Towers, Banking, Apartments, Hospitals, Restaurants, Dept Stores and others.

The outsourcing service provider business has quite high competition where there are many similar companies that offer similar business (Soedarso, 2016). So it is important

for companies to be able to maintain and improve employee performance to be able to face competition and achieve company targets.

Performance is the result obtained from an employee in carrying out his work in accordance with the responsibilities given to the employee based on the quality and quantity (Hasibuan; Malayu, 2017). Based on Company data from 2019 to 2022 where the average employee performance achievement in 2021 is only 78.4% where this achievement has decreased by 2% compared to 2019 (Astuti & Rahardjo, 2021).

One of the factors that influence employee performance is work discipline, work discipline is a person's behavior in accordance with existing work regulations and procedures or discipline is attitude, behavior, and actions that are in accordance with the rules of the organization both written and unwritten (Dea et al., 2020). Based on previous research that has been done where Work Discipline has a significant effect on Employee Performance at PT Pelindo Marine Service (Stewart, 2021).

Based on the disciplinary data of PT SINERGI's employees which can be seen in the employee attendance data where there was an increase in the number of employee absence events in 2021 as many as 516 events where the value increased by 328.66% compared to 2019 (Dea et al., 2020).

On the other hand, the factors that influence employee performance besides work discipline are the work environment. (Ferawati, 2017) The work environment is something that is in the environment of workers who can influence themselves in carrying out tasks such as temperature, humidity, ventilation, lighting, noise, cleanliness of the workplace and the adequacy of work equipment. Based on previous research that has been done where the work environment has a significant effect on the performance of Civil Servant employees at the Serpong District Office (Nurmayanti & SAP, 2020).

Based on the problems above, it is known that PT SINERGI is a decline in employee performance that will occur in 2021 where one of the factors that affect employee performance based on previous research is Work Discipline and Work Environment. Therefore the title of the research taken is "The Effect of Work Discipline on Employee Performance with the Work Environment as a Moderating Variable at PT SINERGI Integra Service Using the Structural Equation Modeling (SEM) Method".

There are 3 formulations of the problem that will be analyzed in this study including: 1) Is there an influence of Work Discipline on Employee Performance?; 2) Is there an influence of the Work Environment on Employee Performance?; and 3) There is an influence of Work Discipline on Employee Performance with the Work Environment as a moderating variable?

2. RESEARCH METHOD

2.1 Type of Research

The type of research used is quantitative research, the quantitative method is a research method that is based on the philosophy of positivism, the purpose of using this method is to conduct research on a particular population or sample by collecting data using research instruments (Sugiarti, 2021).

2.2 Research Variables

a. Independent Variable

The independent variable in this study is work discipline. Discipline is a person's awareness and willingness to comply with all company regulations and applicable norms, awareness is the attitude of someone who voluntarily obeys all regulations and is aware of their duties and responsibilities (Ghozali, 2008).

b. Dependent Variable

c. The dependent variable in this study is employee performance. Performance is the result of work and work behavior that has been achieved in completing the tasks and responsibilities given within a certain period(Mangkunegara, 2015).

d. Moderating Variable

The Moderating Variable in this study is the Work Environment. The work environment is everything that exists around workers that can influence them in carrying out the tasks assigned(Hasibuan;Malayu, 2017).

2.3 Research Framework

The thinking framework in this study can be seen in the figure below where the Discipline variable has 4 indicators, the work environment variable has 8 indicators and the performance variable has 5 indicators(Sutrisno, 2016).

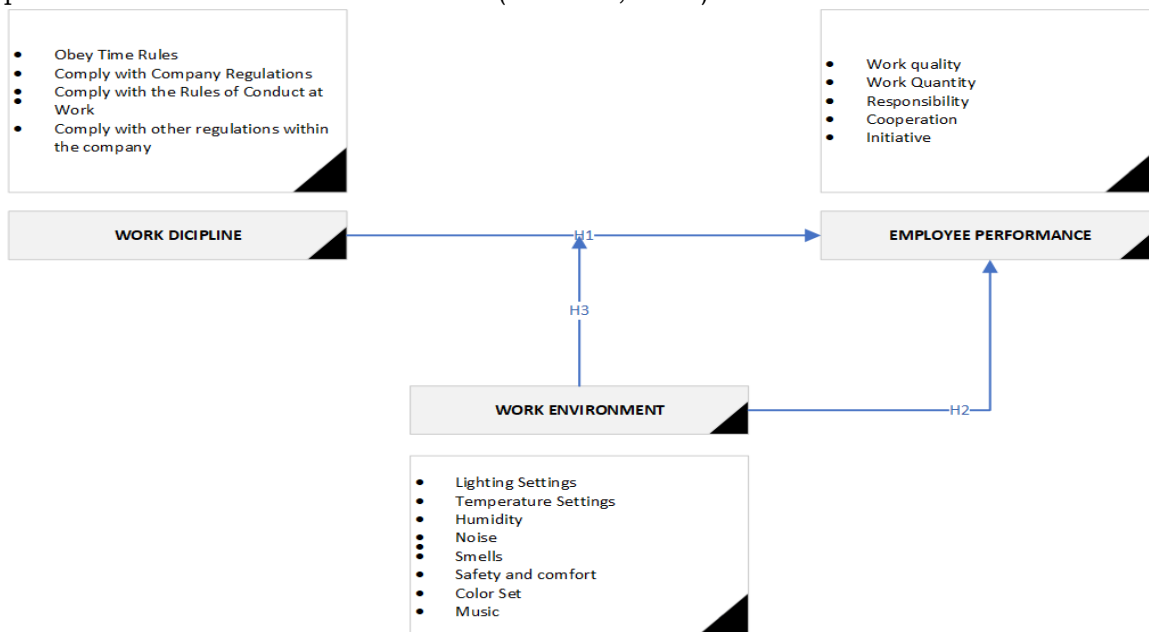


Figure 1. Research Framework

2.4 Hypothesis Development

The hypothesis is a temporary answer to the formulation of the problem that has been stated in the form of a sentence(Ummah, 2017). The hypotheses put forward in this study include:

Ho1 : There is no significant effect between Work Discipline on Employee Performance at PT SINERGI

Ha1 : There is a significant influence between Work Discipline on Employee Performance at PT SINERGI

Ho2 : There is no significant effect between the Work Environment on Employee Performance at PT SINERGI

Ha2 : There is a significant influence between the Work Environment on Employee Performance at PT SINERGI

Ho3 There is no significant effect between Work Discipline on Employee Performance and the Work Environment as a Moderating Variable for PT SINERGI

Ha3 : There is a significant influence between Work Discipline on Employee Performance and the Work Environment as a Moderating Variable at PT SINERGI

2.5 Population and Sample

The population used is all PT SINERGI employees located in Tangerang Regency, totaling 150 people.

By using the slovin formula, the number of samples used is 60 respondents. Determination of the number of samples with the Slovin formula is as follows:

$$n = \frac{N}{1 + N(e)^2}$$

n = Number of Samples

N = Total Population

e = error percentage (10%)

2.6 Data Collection Techniques

a. Primary data

Questionnaires are an efficient data collection technique if the researcher knows with whom the variables will be measured and what is expected of the respondents (Sedarmayanti, 2017). The questionnaire was made in the form of statements with answers referring to the Likert scale: Strongly Disagree (Score 1); Disagree (Score 2), Disagree (Score 3); Agree (Score 4) and Strongly Agree (Score 5).

b. Secondary Data

The secondary data used is data sourced from literature studies and data originating from companies such as employee performance, attendance and other data that supports research (Ferawati, 2017).

2.7 Data Analysis Techniques

Data analysis is an activity carried out after data from all respondents or other data sources has been collected. Activities carried out in conducting data analysis include grouping, tabulating data, performing calculations to answer the specified problem formula and carrying out calculations to test the research hypotheses that have been proposed (Maizar & Indra Nara Persada, 2023). Structural Equation Modeling (SEM) is a combination of two analytical methods, namely factor analysis and path analysis (path analysis) into one comprehensive statistical method. Some of the steps carried out in the Structural Equation Modeling (SEM) method include (Ghozali, 2008):

- a. Validity test can be seen in the factor loading weight value of 0.50 or more which is considered to have strong enough validity to explain the latent construct (Aryata et al., 2023).
- b. The reliability test can be seen if the Construct Reliability (CR) value is ≥ 0.70 and the variance extracted value is ≥ 0.50 (Aryata et al., 2023).
- c. The Moderation Test is an approach that allows a relationship between an independent variable and the dependent variable that is influenced by other latent variables. Variables that allow the relationship between one variable and another variable are called moderating variables. One method that can estimate the moderating effect on a complex SEM is the Ping method. Ping (1995) in (Ibrahim & S, 2021) states that a single

indicator should be used as an indicator of a moderating latent variable. This single indicator is a multiplication between the indicator of the exogenous latent variable and the indicator of the moderator variable. For example, the relationship between X and Y is influenced by the latent variable Z. where Y is the manifest dependent variable while X and Z are latent variables and each has an indicator(Kerja & Karyawan, 2023).

- d. Hypothesis testing is done by looking at the significant level of relationship between variables by looking at the P-value <0.05(Ghozali, 2006).
- e. Goodness of Fit is used to test the model used in the study. According to(Irawan et al., 2021), In the SEM analysis technique, several statistical tests are used to test the hypotheses of the developed model. The statistical test used to measure the level of fit of the model in research after the assumptions in the SEM are met. The criteria for Goodness of Fit are as shown in the table below(Ghozali, 2008).

Table 1. Goodness of Fit criteria

Criteria	Value
Chi-Square	0: Perfect FIT, the bigger the less fit
Probability	$\geq \alpha$: FIT, the value of α that can be used is 5%, 1% and 10%
GFI	0: Unwell; 1: Perfect FIT; ≥ 0.9 : FIT
AGFI	0: Unwell; 1: Perfect FIT; ≥ 0.9 : FIT
RMSEA	$\leq 0,05$: FIT ; $>0,1$: No FIT
TLI	0: Not FIT; 1: Perfect FIT; ≥ 0.9 : FIT
NFI	0: Not FIT; 1: Perfect FIT; ≥ 0.9 : FIT
PCFI	0: Not FIT; the bigger the fit
PNFI	0: Not FIT; the bigger the fit

3. RESULTS AND DISCUSSIONS

3.1 Early Models

There are 4 indicators of work discipline, 8 indicators of work environment and 5 indicators of employee performance as shown in Figure 1 above.

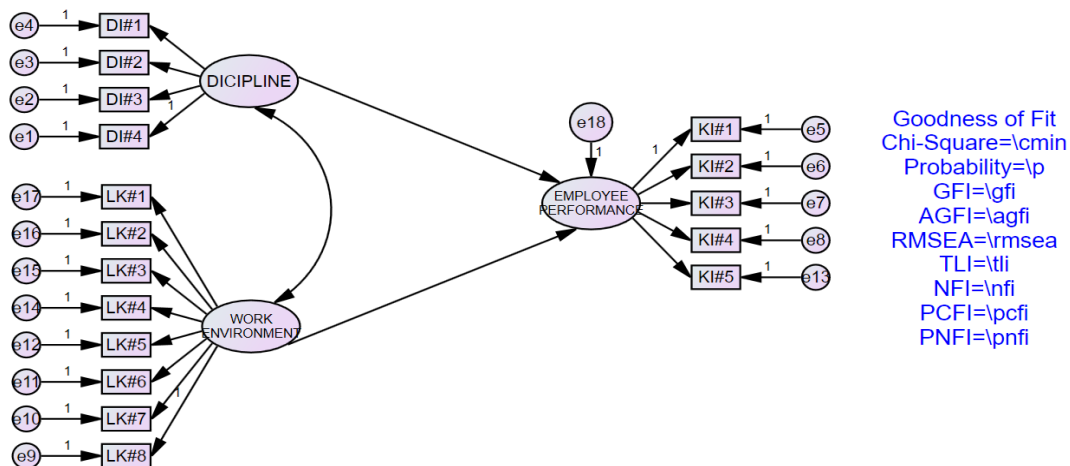


Figure 2. Initial Research Model

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3.2 Validity Test

At this stage a validity test will be carried out where the test is carried out to find out whether the statements used in the questionnaire can be used on the research object being carried out and provide accurate results. (Herlambang, 2023)Based on the output results generated using the AMOS application, it is known that all indicators in the variables used in the research are said to be VALID, this can be seen from the estimated value > 0.50 .

Table 2. Validity Test

			Estimate
DI#4	<---	DISCIPLINE	,887
DI#3	<---	DISCIPLINE	,910
DI#2	<---	DISCIPLINE	,921
DI#1	<---	DISCIPLINE	,895
KI#1	<---	PERFORMANCE	,911
KI#2	<---	PERFORMANCE	,943
KI#3	<---	PERFORMANCE	,917
KI#4	<---	PERFORMANCE	,873
LK#8	<---	WORK ENVIRONMENT	,693
LK#7	<---	WORK ENVIRONMENT	,894
LK#6	<---	WORK ENVIRONMENT	,813
LK#5	<---	WORK ENVIRONMENT	,882
KI#5	<---	PERFORMANCE	,925
LK#4	<---	WORK ENVIRONMENT	,903
LK#3	<---	WORK ENVIRONMENT	,830
LK#2	<---	WORK ENVIRONMENT	,820
LK#1	<---	WORK ENVIRONMENT	,867

3.3 Reliability Test

In the next stage, a reliability test will be carried out to check the consistency of the results throughout the research time, in various places and researchers, and in all parts of the test itself(Salim & Ernanda, 2023). Based on the test results using the AMOS software, it is known that all indicators in the study are RELIABLE, this can be seen from the values of $CR > 0.70$ and $AVE > 0.50$.

Table 3. Reliability Test

Component	Dicipline	Work Environment	Performance
CR	0.9466	0.9502	0.9621
AVE	0.8160	0.7058	0.8356

3.4 Test Moderation

At this stage interaction testing will be carried out by looking at the influence of the Work Environment as a moderating variable in strengthening or weakening the relationship between the independent and dependent variables which in this case is Work Discipline on Employee Performance(Fajri & Heikel, 2023). Following below is the SEM model where the work environment acts as a moderating variable.

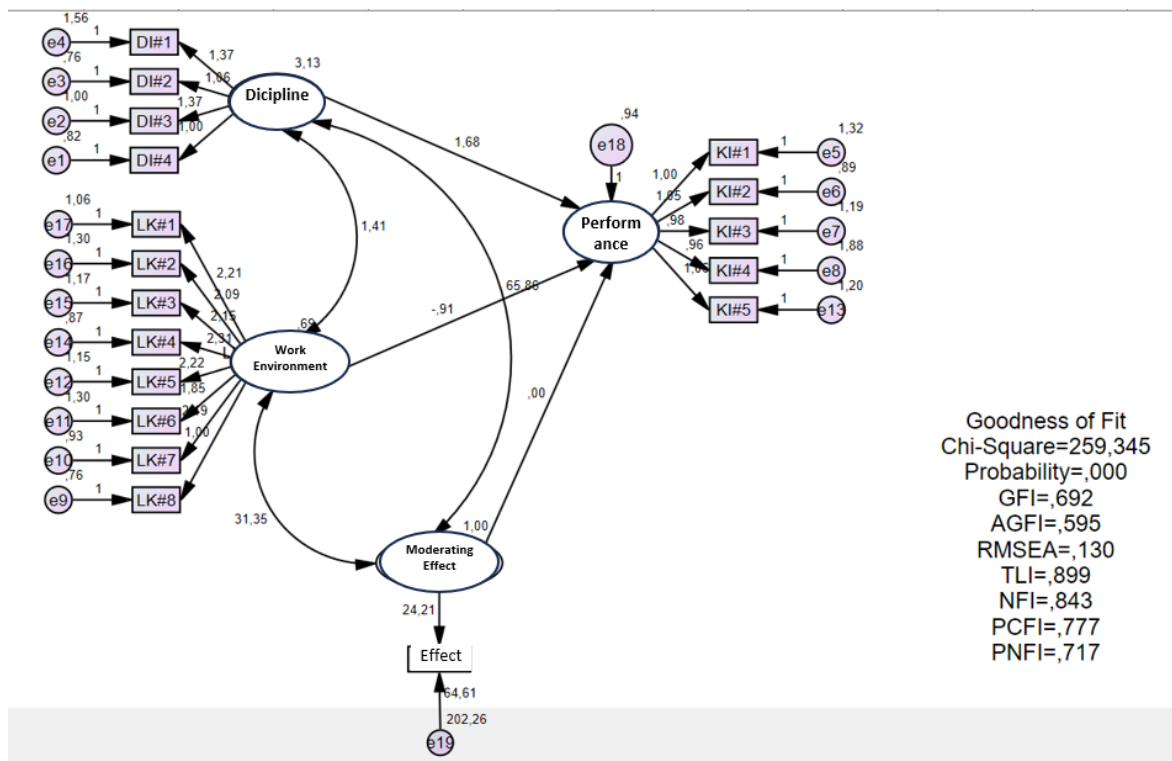


Figure 3. Moderation Effects Model

3.5 Hypothesis Test

Based on the results of tests conducted using the AMOS software, it was found that Work Discipline has an influence on employee performance. This can be seen from the p-value of 0.004 so that Ho1 is rejected while the work environment has no effect on employee performance (Aryata & Marendra, 2023). This can be seen from the p-value of 0.444 so that Ho2 is accepted. When the work environment influences employee performance when it acts as a moderating variable that moderates the relationship between work discipline and employee performance with a p-value of 0.011 so Ho3 is rejected.

Table 4. Hypothesis Test

			Estimate	S.E.	C.R.	P
PERFORMANCE	<---	DICIPLINE	1,677	0,575	2,915	0,004
PERFORMANCE	<---	WORK ENVIRONMENT	-0,906	1,183	-0,766	0,444
PERFORMANCE	<---	Moderation Effect	0,002	0,001	2,549	0,011

3.6 Goodness of Fit

At this stage a model suitability test will be carried out against the model being developed, from the results of the Goodness of Fit test it is found that most of the criteria have been declared Fit as shown in the table below.

Table 5. Goodness of Fit Model

Criteria	Test Value	Information
Chi-Square	259,345	FIT
Probability	0,000	NOT FIT
GFI	0,692	NOT FIT
AGFI	0,595	NOT FIT
RMSEA	0,130	NOT FIT
TLI	0,899	FIT

NFI	0,843	FIT
PCFI	0,777	FIT
PNFI	0,717	FIT

Based on the table above, it is known that there are several criteria that are not FIT, including: 1) the probability value is smaller than the specified α value of 1%, 5% and 10%; 2) the GFI value is quite far from the specified value of 0.9; the AGFI value is quite far from the specified value of 0.9; and 4) the RSMEA value is greater than the specified value of ≤ 0.05 (Mukrodi, 2018).

3.7 Model Modification

Model modifications were made to obtain compatibility between the sample data used and the expected data. The image below is a modification of the model made to obtain conformity or Goodness of Fit.

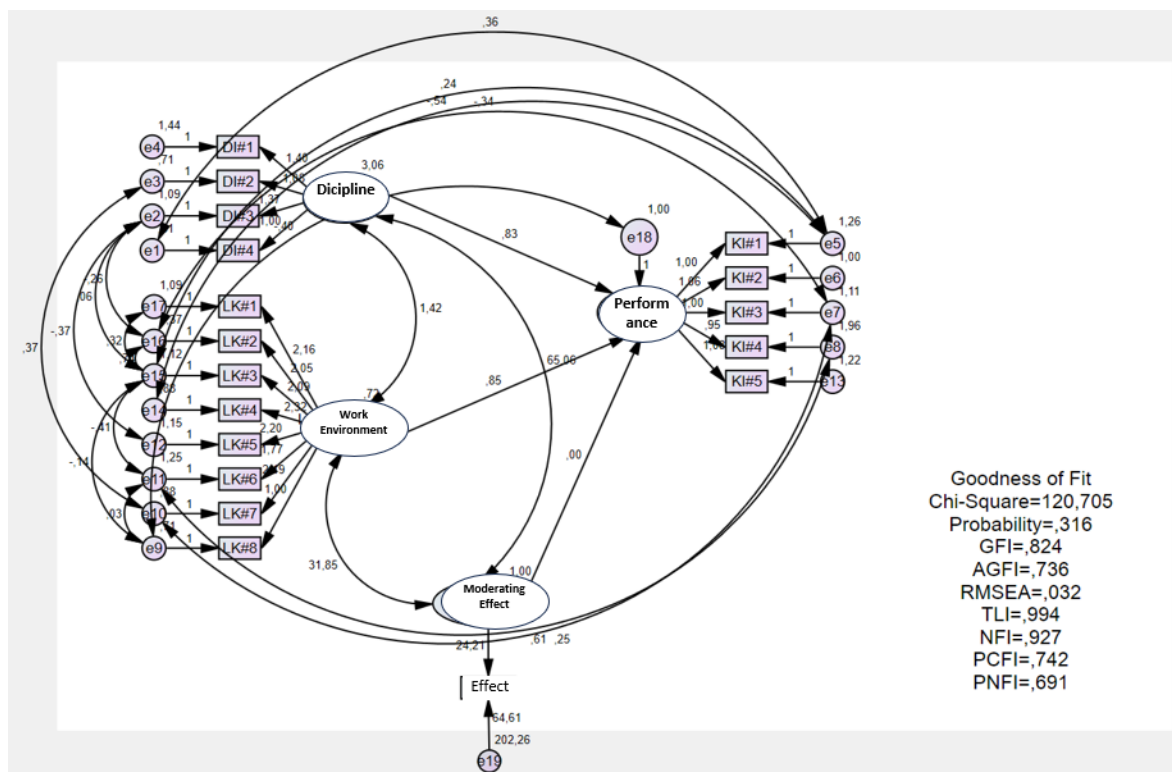


Figure 4. Model Modification

From the modifications made to the model, it was found that the model met the Goodness of Fit with the resulting values meeting or approaching the expected parameters.

Table 6. Goodness of Fit Model Modification

Criteria	Test Value	Information
Chi-Square	120,705	FIT
Probability	0,316	FIT
GFI	0,824	FIT
AGFI	0,736	FIT
RMSEA	0,032	FIT
TLI	0,994	FIT
NFI	0,927	FIT
PCFI	0,742	FIT
PNFI	0,691	FIT

From the results of the modification of the model carried out, it was found that the relationship between variables changed where Work Discipline has an influence on employee performance. This can be seen from the p-value of 0.050 so that Ho1 is rejected while the work environment has no effect on employee performance (John Fernos, 2023). This can be seen from the p-value of 0.330 so that Ho2 is accepted. When the work environment is able to strengthen the influence of work discipline on employee performance, it can be seen from the p-value of 0.003 where the value is smaller than the p-value of work discipline on employee performance so that Ho3 is rejected.

Table 7. Model Modification Hypothesis Test

			Estimate	S.E.	C.R.	P
PERFORMANCE	<---	DICIPLINE	0,83	0,423	1,962	0,050
PERFORMANCE	<---	WORK ENVIRONMENT	0,852	0,875	0,974	0,330
PERFORMANCE	<---	Moderation Effect	0,003	0,001	2,998	0,003

From the results of the data analysis carried out, it is known that the indicators used are declared valid and the variables used are declared reliable so that the model created can be continued to the next stage of moderation testing to see the influence of the work environment on work discipline in strengthening employee performance. (Marendra et al., 2023) From the results of the hypothesis, it is known that the work environment strengthens the influence of work discipline on employee performance. And from the model modification (goodness of fit) carried out, it was found that the conformity between the sample data used and the expected data with the test results met the goodness of fit criteria.

4. CONCLUSION

Based on the research results, it is known that the Work Environment as a moderating variable will strengthen the influence of Work Discipline on employee performance with a p-value of 0.003.

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