

Optimization Of Green Human Resource Management And Green Transformational Leadership On Employee Performance Through Green Innovation As An Intervening Variable

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Abstract This study aims to analyze the optimization of green human resource management and green transformational leadership on employee performance through green innovation as an intervening variable. The object of the study was employees of PT Segar Murni Utama with a population and census sampling technique of 140 people. The method used in this study is a quantitative research method. The data analysis technique in this study used Partial Least Square (PLS) which is a Structural Equation Modeling (SEM) equation model with an approach based on variance or component-based structural equation modeling by previously conducting validity tests, reliability tests, and hypothesis tests. This study has a complex model and a limited number of samples, so in data analysis using SmartPLS software. The results of the direct influence test prove that green human resource management has a significant influence on green innovation, green transformational leadership has a significant direct influence on green innovation, green human resource management has a significant influence on employee performance, green transformational leadership has a significant direct influence on employee performance and green innovation has a significant influence on employee performance. The intervening influence test proves that green human resource management has a significant effect on employee performance through green innovation, green transformational leadership has a significant effect on employee performance through green innovation.

Keywords: *green human resource management, green transformational leadership, green innovation, kinerja karyawan.*

I. INTRODUCTION

Understanding the importance of human resources in today's global era, one of the efforts that must be achieved by the company is to improve the quality of human resources. By improving the quality of resources, it is hoped that employees can improve their performance. According to Mangkunegara (2017:67) employee performance is the result of work in terms of quality and quantity achieved by employees in carrying out tasks according to the responsibilities given to employees. In other words, the continuity of a company is determined by the performance of its employees. In addition, the company also needs a strategy that not only makes a profit, but also requires a strategy that pays attention to environmental impacts to ensure the sustainability of the business in the future.

Green Innovation is one strategy for a solution for companies in developing their business without violating government regulations (Maulana et al, 2019). Green Innovation refers to innovation that can overcome environmental impacts, which is also in line with achieving the organization's environmental goals and produces many benefits for the environment. Chen et al., (2006) explained that green innovation is an environmentally friendly product or process innovation through software and hardware innovation including technological innovation involved in the company's environmental management process. Based on several previous studies related to green innovation, it states that recruiting environmentally friendly human resources can increase the company's attractiveness in terms of environmental management, that is why

companies employ employees who are in line with environmentally friendly values because employees with a high level of ability towards environmental sensitivity can create more useful ideas and new ideas for environmental management, so that it can increase the company's green innovation. Thus, companies must employ employees who actively participate in environmental practices to create and maintain green innovation (Tonay et al, 2022).

Practices and regulations in human resource management are a major aspect in determining the success of a company. Current developments in HR practices and regulations suggest the importance of attention to preserving the environment. Thus, the concept of Green Human Resource Management (GHRM) is a topic that still needs to be analyzed. The implementation of GHRM requires support from all stakeholders, especially the human resources included in the organization. GHRM can be identified as HR practices that are equipped with environmental concerns, policies, procedures, and operational guidelines that are directly related to organizational goals (Mousa et al., 2020). GHRM is the entirety of the Human Resource Management process that brings awareness to all employees regarding environmentally friendly behavior in the workplace which includes recruitment activities, training, rewards, and development of a workforce that understands and appreciates the existence of environmentally friendly practices, values, and initiatives (Kim et al., 2019). GHRM consists o

f a more environmentally friendly empowerment process, an employee development process that cares about the environment, and all activities aimed at advancing the company without affecting the environment (O'Donohue et al, 2016). The threat of environmental challenges itself has prompted a number of sectors to focus on environmental efforts, from coaching to retraining their employees to act in an environmentally friendly manner (Peng et al., 2024). GHRM can also be used as a strategy to improve the company's reputation and achieve environmental goals. Therefore, GHRM practices are important as an effort to improve the organization's environmental performance (Ren et al, 2018).

The company's commitment to preserving the environment cannot be separated from the existence of a leader. A company that has a transformational leader figure who is oriented towards environmental concerns or called Green Transformational Leadership has an influence on the internal values of the organization and will also improve the organization's green performance (Chen, 2011). The competitive advantage of the organization and the success of a sustainable corporate organization are greatly influenced by the human resources involved in it, for this reason, environmentally friendly HR behaviors are needed to support the creation of this performance. In addition, the achievement of the current HR focus on saving the environment and social ethics to preserve it and this has been discussed in the last few decades, the concept of green human resource management has received special attention (Kim, 2014). Kusumawati (2010) found that leader characteristics (transformational leadership) and product innovation can increase competitive advantage. Saeed (2019) stated that green transformational leadership can increase a company's competitive advantage.

1. RESEARCH METHODS

The method used in this study is included in the type of quantitative research, by collecting data through distributing questionnaires to the research object, namely employees working at PT Segar Murni Utama employees with a population and census sampling technique of 140 people. Testing in this study uses Structural Equation Modeling (SEM) which analyzes the relationship between variables. All statement items are measured using a Likert measurement scale, namely 1 to 5. Statements for green human resource management are measured with 4 statement items, for green transformational leadership are measured with 4 statement items, for green innovation are measured with 5, and for employee performance are measured with 4 statement items.

The data analysis method used is Partial Least Squares (PLS) which is commonly referred to as soft modeling. With PLS, structural equations with relatively small sample sizes can be modeled and multivariate normal assumptions are not required. The measurement model is used in testing the validity and reliability of measuring instruments, and the structural model is used in testing causal relationships. PLS path modeling was developed as

an alternative to Structural Equation Modeling (SEM) with a weak theoretical basis.

Tabel 1. Operational Definition and Variable Indicators

No	Variabel	Indikator	Measurement Scales
1	Green Human Resource Management A part of a company or organization that contains human resource efforts that aim to transform the organization's employees into green employees with a vision to achieve the organization's sustainability goals as well as competitive advantage. (Wijonarko & Wirapraja, 2022)	Consists of 4 indicators : • Employee Life Cycle • Rewards • Education and Training • Employee Empowerment	Score 1: Strongly Disagree Score 5: Strongly Agree
2	Green Transformational Leadership The attitude of leaders in motivating their followers to achieve environmental goals, performing beyond the expected level of environmental performance. (Rizki et al., 2019)	Consists of 4 indicators : • Green Stimulation Intellectual • Green Individualized Consideration • Green Idealized Influence • Green Inspirational Motivation	Score 1: Strongly Disagree Score 5: Strongly Agree
3	Green Innovation Efforts undertaken in the industry can be carried out in all	Consists of 5 indicators : • Adoption of Clean Technology	Score 1: Strongly Disagree Score 5: Strongly Agree

	aspects and developed sustainably as developments are reviewed from an environmental perspective. (Chan et al., 2016)	<ul style="list-style-type: none"> Employee Education and Engagement Employee Recognition and Certification Energy Efficiency Use of Environmentally Friendly Raw Materials 	
4	Employee Performance The work results in terms of quality and quantity achieved by an employee in carrying out his duties according to the responsibilities given to him. (Raditya, et al. 2019)	Consists of 4 indicators : <ul style="list-style-type: none"> Quality of Work Quantity of Work Execution of Tasks Job Responsibilities 	Score 1: Strongly Disagree Score 5: Strongly Agree

2. RESULTS AND DISCUSSIONS

1). Convergent validity test results

Table 2. Convergent Validity Test Results

	Green Human Resource Management (X1)	Green Transformational Leadership (X2)	Green Innovation (Z)	Employee Performance (Y)
X1.1	0.900			
X1.2	0.855			
X1.3	0.761			
X1.4	0.666			
X2.1		0.838		
X2.2		0.788		
X2.3		0.850		
X2.4		0.822		
Z1			0.884	

Z2			0.871	
Z3			0.879	
Z4			0.890	
Z5			0.810	
Y1				0.794
Y2				0.737
Y3				0.815
Y4				0.814

The test results in the table above show that all outer loading indicators of the construct have a loading value > 0.5, so it can be concluded that this measurement meets convergent validity.

2). Composite Reliability

Table 3. Composite Reliability (pc)

Variabel	Composite Reliability	Nilai Kriteria	Keterangan
Green Human Resource Management (X1)	0,876	> 0,7	Reliabel
Green Transformational Leadership (X2)	0,895		Reliabel
Green Innovation (Z)	0,938		Reliabel
Employee Performance (Y)	0,870		Reliabel

According to Ghozali (2016), a construct is declared reliable if the composite reliability value is above 0.7. Therefore, it can be concluded that all research variables are declared reliable.

3) Inner Model

Table 4. R-Square Calculation Value

Variabel	R-Square	Keterangan
Green Innovation (Z)	0,886	Reliabel
Employee Performance (Y)	0,958	Reliabel

Sumber: Hasil Olah Data Partial Least Square (PLS)
It can be concluded that:

- a. The Employee Performance (Y) variable is influenced by Green Human Resource Management (X1), Green Transformational Leadership (X2) and Green Innovation (Z) by 0.958 or 95.8% (good). While the remaining 4.2% is influenced by other variables that were not studied further.
- b. The Green Innovation (Z) variable is influenced by Green Human Resource Management (X1) and Green Transformational Leadership (X2) by 0.886 or 88.6%

(good). While the remaining 11.4% is influenced by other variables that were not studied further.

4) Direct Effect

Table 5. Direct Hypothesis Testing Results

	Pengaruh Langsung	t tabel	t statistics	P-value	Keterangan
H 1	Green Human Resource Management (X1) → Green Innovation (Z)	2.030	5.070	0.000	Signifikan
H 2	Green Transformational Leadership (X2) → Green Innovation (Z)	2.030	2.335	0.020	Signifikan
H 3	Green Human Resource Management (X1) → Employee Performance (Y)	2.030	2.721	0.007	Signifikan
H 4	Green Transformational Leadership (X2) → Employee Performance (Y)	2.030	2.427	0.015	Signifikan
H 5	Green Innovation (Z) → Employee Performance (Y)	2.030	3.774	0.000	Signifikan

It can be concluded that:

- a. The influence of Green Human Resource Management (X1) on Green Innovation (Z) is significant with a P-value of 0.000 (<0.05) and a t statistic of 5.070 (>2.030).
- b. The influence of Green Transformational Leadership (X2) on Green Innovation (Z) is significant with a P-value of 0.020 (<0.05) and a t statistic of 2.335 (>2.030).
- c. The influence of Green Human Resource Management (X1) on Employee Performance (Y) is significant with

a P-value of 0.007 (<0.05) and a t statistic of 2.721 (>2.030).

- d. The influence of Green Transformational Leadership (X2) on Employee Performance (Y) is significant with a P-value of 0.015 (<0.05) and a t statistic of 2.427 (>2.030). Thus, hypothesis 4 (H4) in this study which states that "Work Discipline has an effect on Employee Performance" is accepted.
- e. The influence of Green Innovation (Z) on Employee Performance (Y) is significant with a P-value of 0.000 (<0.05) and a t statistic of 3.774 (>2.030).

5) Indirect Effect

Table 6. Indirect Hypothesis Testing Results

	Pengaruh Tidak Langsung	t tabel	t statistics	P-value	Keterangan
H 6	Green Human Resource Management (X1) → Green Innovation (Z) → Employee Performance (Y)	2.030	2.847	0.004	Signifikan
H 7	Green Transformational Leadership (X2) → Green Innovation (Z) → Employee Performance (Y)	2.030	2.039	0.042	Signifikan

Sumber: Hasil Olah Data Partial Least Square (PLS).

It can be concluded that:

- f. The influence of Green Human Resource Management (X1) on Employee Performance (Y) through Green Innovation (Z) is significant with a P-value of 0.004 (<0.05) and a t statistic of 2.847 (>2.030). It can be seen that the indirect influence of Green Human Resource Management (X1) on Employee Performance (Y) through Green Innovation (Z) has a t statistic value (2.847) greater than the direct influence of Green Human Resource Management (X1) on Employee Performance (Y) (2.721). Full Mediation means that the independent variable is unable to significantly influence the dependent variable without going through the mediator variable.
- g. The influence of Green Transformational Leadership (X2) on Employee Performance (Y) through Green

Innovation (Z) is significant with a P-value of 0.042 (<0.05) and a t statistic of 2.039 (>2.030). It can be seen that the indirect influence of Green Transformational Leadership (X2) on Employee Performance (Y) through Green Innovation (Z) has a smaller t statistic value (2.039) compared to the direct influence of Green Transformational Leadership (X2) on Employee Performance (Y) (2.427). Part Mediation means that the independent variable is able to significantly influence the dependent variable without going through/involving the mediator variable.

3. CONCLUSION

The conclusions in this study are as follows:

1. Green Human Resource Management (X1) has a significant effect on Green Innovation (Z) on employees of PT Segar Murni Utama.
2. Green Transformational Leadership (X2) has a significant effect on Green Innovation (Z) on employees of PT Segar Murni Utama.
3. Green Human Resource Management (X1) has a significant effect on Employee Performance (Y) on employees of PT Segar Murni Utama.
4. Green Transformational Leadership (X2) has a significant effect on Employee Performance (Y) on employees of PT Segar Murni Utama.
5. Green Innovation (Z) has a significant effect on Employee Performance (Y) on employees of PT Segar Murni Utama.
6. Green Human Resource Management (X1) has a significant effect on Employee Performance (Y) through Green Innovation (Z) of PT Segar Murni Utama.
7. Green Transformational Leadership (X2) has a significant effect on Employee Performance (Y) through Green Innovation (Z) of PT Segar Murni Utama.

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