Integrating Green HRM and Green Knowledge Management to Foster Employee Green Behavior and Corporate Sustainability

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Abstract: The urgency of sustainable business practices encourages companies to adopt Green Human Resource Management (GHRM) and Green Knowledge Management (GKM) as important Corporate Sustainability (CS) strategies. This research investigates the impact of GHRM and GKM on CS, with Employee Green Behavior (EGB) as an intervening variable. The research was conducted on a population of 130 permanent employees. The results showed that GKM and EGB had a significant influence on CS but GHRM had no influence on CS. Apart from that, GHRM and GKM have a positive effect on EGB. Specifically, EGB mediated the relationship between GHRM and CS but did not mediate the relationship between GKM and CS. The novelty of this research is that it examines the combined impact of GHRM and GKM in encouraging desire, and explores EGB as a mediating variable. This study provides valuable insights for organizations looking to improve online training and development programs, emphasizing the importance of knowledge and reducing negative impacts on the environment. By addressing the research gap in understanding the integration of GHRM and GKM, and highlighting the behavioral dimensions of corporate desirability, this research contributes to the growing body of literature on sustainable business practices, offering practical applications for achieving optimal corporate cessation through employee and environmental engagement. attempts at friendly behavior.

Keywords: Green Human Resource Management, Green Knowledge Management, Employee Green Behavior, Corporate Sustainability.

JEL Classification: J5, L2, Q5.

1. INTRODUCTION

In recent years, the intersection between environmental sustainability and human resource management (HRM) has received great attention as more and more organizations recognize the need to incorporate environmentally friendly initiatives into their operational strategies. This urgency stems from increasing global environmental concerns, government pressure, and stakeholder expectations to reduce carbon footprints and operate more sustainably. The concept of Green Human Resource Management (GHRM) is emerging as an important strategy because it integrates environmental management into HR functions—recruitment, training, performance appraisal, and employee engagement. Likewise, Green Knowledge Management (GKM) focuses on the creation, sharing and utilization of environmental knowledge within organizations, ensuring that sustainability practices are not only known but also embedded in the company culture. The urgency to explore the integration of GHRM and GKM to promote EGB and CS is underscored by the accelerating global environmental crisis. Climate change, resource depletion and biodiversity loss are pushing businesses to adapt or risk becoming obsolete. In 2020, the United Nations Environment Program (UNEP) highlighted that environmental degradation caused by human activities is responsible for exacerbating ecological threats, giving rise to an urgent need for sustainability practices across industries. This is in line with a report from the International Labor Organization (ILO), which estimates that the transition to a more environmentally friendly economy could create up to 24 million jobs globally by 2030, provided businesses implement sustainable HR and operational strategies. Additionally, a survey conducted by the World Economic Forum in 2023 revealed that 86% of global business leaders consider sustainability to be an integral part of their company's agenda, and 64% stated that employees play an important role in implementing green initiatives. Despite this positive attitude, many organizations still struggle to bridge the gap between sustainability goals and employee behavior. According to a 2021 Deloitte report, 78% of companies believe their workforce lacks the environmental knowledge and engagement necessary to drive corporate sustainability goals. This indicates an important need to not only develop environmentally friendly HR practices but also manage environmentally friendly knowledge effectively within organizations.

Several studies highlight the interconnection between GHRM, GKM, EGB, and CS. For example, Jabbour et al. (2020) explored the role of GHRM in encouraging pro-environmental behavior among employees and concluded that organizations that integrate environmentally friendly policies in their HR practices experience a significant increase in employee participation in environmental initiatives.

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In the same vein, Renwick, Redman, and Maguire (2021) emphasize that GHRM practices, such as environmentally friendly training and development, have a positive impact on employee attitudes towards sustainability. In the GKM domain, Chen, Tang, and Zeng (2022) examine how organizations utilize knowledge sharing practices to improve corporate sustainability. They found that companies that invest in environmental knowledge management systems are more likely to achieve long-term sustainability goals through better decision making and innovative environmentally friendly solutions. Additionally, Tang et al. (2023) show that when employees have sufficient knowledge about environmental issues, they are more likely to engage in environmentally friendly behavior that is in line with the company's sustainability goals. The relationship between GHRM and GKM is also the focus of recent research. Dumont, Shen, and Deng (2022) argue that integrating green knowledge into HR practices can strengthen the impact of GHRM by ensuring that employees not only comply with green policies but also understand and embrace the underlying environmental rationale. Additionally, Jackson and Seo (2024) provide evidence that organizations that successfully combine GHRM and GKM practices report higher levels of EGB and, consequently, improve sustainability outcomes. These studies show that the integration of GHRM and GKM is critical to fostering a corporate culture that values and encourages sustainability, with employee behavior as the primary mediator.

Although previous research has established the importance of GHRM and GKM independently, there is a clear research gap in understanding how these two domains can be effectively integrated to promote EGB. Most studies treat GHRM and GKM as separate entities, with limited exploration of their synergistic potential. while Jabbour et al. (2020) highlight the impact of green HR practices on employee engagement, but they do not examine how knowledge management practices can strengthen this impact. Similarly, Chen et al. (2022) focus on the role of knowledge sharing in driving innovation and sustainability, but do not discuss how HR practices can support or hinder these processes. Additionally, there is a lack of empirical studies investigating EGB as a mediating variable between GHRM, GKM, and CS. The majority of existing research focuses on the direct impact of GHRM or GKM on corporate sustainability outcomes, without considering the important role of employee behavior as a mediator. This is a significant gap, because environmentally friendly behavior by employees is often the most visible manifestation of a company's sustainability efforts. Understanding how GHRM and GKM can jointly drive EGB is critical to developing comprehensive strategies that support long-term sustainability. Based on the phenomenon and previous research, research was conducted on the influence of GHRM and GKM on EGB mediated by EGB. The novelty of this study lies in its focus on exploring these interactions and examining how EGB mediates the relationship between GHRM, GKM, and CS.

2. LITERATURE REVIEW AND DEVELOPMENT OF STUDY HYPOTHESIS

Green Human Resource Management (GHRM) refers to the integration of environmental management principles into traditional HRM practices. GHRM aims to promote environmentally friendly behavior among employees by incorporating environmentally friendly criteria in recruitment, performance management, training and development. According to Jabbour et al. (2020), GHRM plays an important role in motivating employees to adopt pro-environmental behavior by aligning personal and organizational goals with sustainability. Environmentally friendly HR policies, such as environmentally friendly recruitment, environmentally friendly training, and performance appraisals that reward environmentally responsible behavior, are the main drivers of Employee Green Behavior (EGB). Furthermore, Renwick, Redman, and Maguire (2021) argue that GHRM can increase employee involvement in sustainability initiatives by fostering a corporate culture that values environmental responsibility. Green training programs, in particular, have been proven to increase employees' environmental awareness and competence, allowing them to contribute effectively to the company's sustainability efforts. A recent study by Dumont, Shen, and Deng (2022) highlights the increasing importance of GHRM in shaping organizational practices that support long-term sustainability goals. Furthermore, Renwick, Redman, and Maguire (2021) argue that GHRM can increase employee involvement in sustainability initiatives by fostering a corporate culture that values environmental responsibility. Green training programs, in particular, have been proven to increase employees' environmental awareness and competence, allowing them to contribute effectively to the company's sustainability efforts. A recent study by Dumont, Shen, and Deng (2022) highlights the increasing importance of GHRM in shaping organizational practices that support long-term sustainability goals.

Green Knowledge Management (GKM) focuses on creating, sharing and utilizing environmental knowledge in organizations. The GKM system ensures that sustainability-related knowledge is disseminated effectively and used as information in decision-making processes. According to Noor and Nawangsari (2021), Knowledge Management is an organizational activity which is a collection of organizational business processes that are developed, to create, maintain and disseminate knowledge to achieve the company's business goals. Chen, Tang, and Zeng (2022) suggest that GKM enhances organizational learning, innovation, and adaptability by incorporating environmental considerations into knowledge sharing practices. Organizations that implement GKM can better equip their employees with the information and tools necessary to engage in sustainable practices. According to Tang et al. (2023), GKM encourages the development of environmentally friendly innovation by facilitating the flow of environmental knowledge across organizational boundaries. This, in turn, allows companies to develop more sustainable products and processes. GKM not only increases employee awareness of environmental issues but also fosters a culture of learning and continuous improvement which is important for achieving company sustainability. However, despite its potential, Jackson and Seo (2024) state that GKM alone may not be enough to drive sustainability outcomes. The authors emphasize that without the support of complementary HR practices, knowledge management systems may fail to produce meaningful changes in employee behavior. This highlights the need for an integrat-

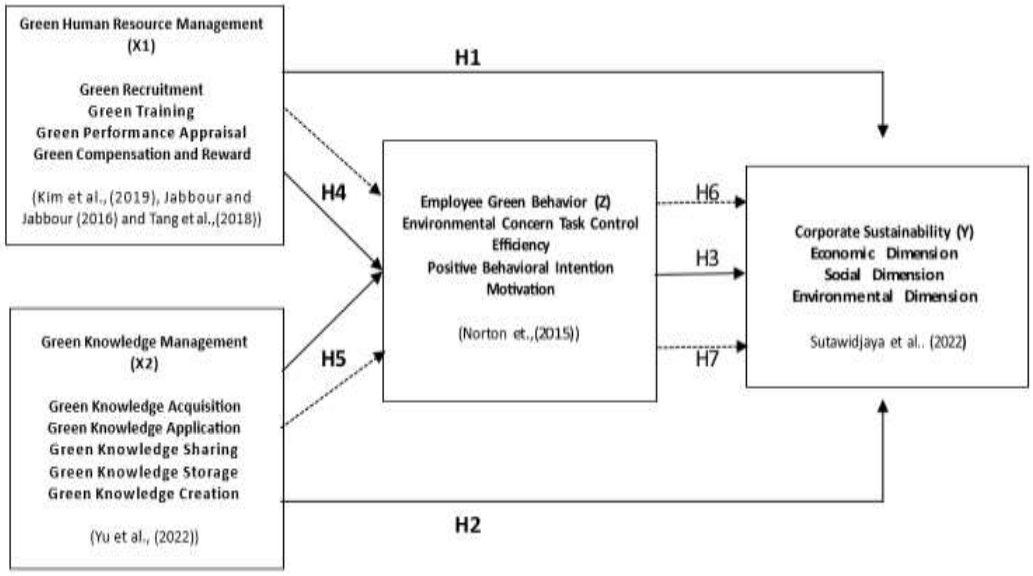

Fig. (1). Conceptual Framework.
Source: Authors.

ed approach that combines GHRM and GKM to achieve optimal corporate sustainability outcomes.

Employee Green Behavior (EGB) refers to the voluntary actions of employees that contribute to environmental sustainability within their organizations. According to Yanti and Nawangsari (2021), Employee Green Behavior is the behavior of employees who care about the surrounding environment and try to play a role in improving the situation by preserving the environment such as playing a role in preserving resources and reducing waste in the production process. EGB can be influenced by intrinsic and extrinsic factors, including organizational policies, personal values, and knowledge. According to Shen and Dumont (2023), EGB is an important mediator in the relationship between GHRM, GKM, and Corporate Sustainability. Employees who are encouraged and supported by environmentally friendly HR practices and equipped with relevant knowledge through GKM are more likely to engage in pro-environmental behavior. Robertson and Barling's (2020) research shows that EGB can take various forms, such as reducing waste, saving energy, and participating in environmental initiatives. EGB is strongly influenced by organizational culture and leadership, which play an important role in shaping employee attitudes towards sustainability. Additionally, Norton et al. (2021) argue that employees who feel strong support for their company's green initiatives are more likely to engage in EGB, which contributes to achieving the company's broader sustainability goals.

Corporate Sustainability (CS) refers to a company's ability to operate in a way that meets the needs of the present without compromising the ability of future generations to meet their own needs. CS encompasses economic, social, and environmental dimensions, requiring organizations to balance profitability with responsible environmental management. According to Jabbour et al. (2020), GHRM and GKM play an important role in achieving corporate sustainability by cultivating a workforce that is knowledgeable and committed to sustainability initiatives. Zhao et al. (2022) emphasize that CS is increasingly becoming a key performance metric for companies, driven by increasing stakeholder expectations and regulatory requirements. The authors highlight that companies with strong sustainability practices tend to outperform their peers in terms of financial performance and reputational capital. The literature shows that integrating GHRM and GKM can help organizations achieve their sustainability goals by increasing employee engagement and encouraging environmentally responsible behavior.

The integration of GHRM and GKM is very important to foster Employee Green Behavior and achieve Corporate Sustainability. Studies by Dumont, Shen, and Deng (2022) and Chen et al. (2022) highlight that although GHRM can directly influence EGB by shaping employee attitudes and behavior, GKM complements it by providing the necessary knowledge and resources. Taken together, these two practices create an environment where employees are not only motivated but also equipped to engage in sustainability efforts.

However, research gaps still exist in understanding the specific mechanisms by which GKM and GHRM interact to promote EGB and CS. Tang et al. (2023) suggest that further research is needed to explore how these two practices can be better integrated to maximize their impact on employee behavior and corporate sustainability.

Research hypothesis

H1: GHRM has a positive and significant effect on Corporate Sustainability (CS)

H2: Green Knowledge Management (GKM) has a positive and significant effect on Corporate Sustainability (CS)

H3: EGB has a positive and significant effect on Corporate Sustainability (CS)

H4: GHRM has a positive and significant effect on Employee Green Behavior (EGB)

H5: Green Knowledge Management (GKM) has a positive and significant effect on Employee Green Behavior (EGB)

H6: Employee Green Behavior (EGB) mediates the effect of GHRM on Corporate Sustainability (CS)

H7: Employee Green Behavior (EGB) mediates the effect of Green Knowledge Management (GKM) on Green Knowledge Management

3. RESEARCH METHODOLOGY

This research uses a quantitative research approach to examine the relationship between Green Human Resource Management (GHRM), Green Knowledge Management (GKM), Employee Green Behavior (EGB), and Corporate Sustainability (CS). The population consists of 130 permanent employees at an Indonesian IT services company. Data collection was carried out through a survey method, using a structured questionnaire with a Likert scale to measure respondents' perceptions of GHRM, GKM, EGB and CS. The measurement instrument was adapted from a validated scale. Data were analyzed using Partial Least Squares (PLS), a variance-based structural equation modeling (SEM) technique, suitable for smaller sample sizes and complex models. The reliability and validity of the instrument were tested through Cronbach's alpha and composite reliability. Hypotheses were evaluated using path coefficients and t-statistics, and the structural model was assessed through R^2 values.

4. RESULTS AND DISCUSSION

4.1. Result

4.1.1. Description of Respondents Characteristics

Characteristics of respondents' descriptions in this study are based on gender, age, position and length of work. Description of the characteristics of the respondents as follows.

Table 1. Characteristics of Respondents.

Category	Description	Number of People	Percentage
Gender	Man	60	46%
	Woman	70	54%
Age	≤ 25 year	10	8%
	25 - 34 year	86	66%
	35 - 44 year	20	15%
	45 - 55 year	12	9%
	> 55year	2	2%
Lenght of work	<3 year	39	30%
	3-5 year	40	31%
	6-10 year	17	13%
	>10 year	34	26%

Source: Primary Data Processed (2024)

Based on Table **1**, the characteristics of respondents based on gender show that 60 respondents are male (46%) and the majority are female employees (70 people) (54%). Based on age, 86 people (66%) are aged 25-34 years and are the highest age group of respondents, while the smallest age group is over 55 years. Based on length of service, 39 employees (30%) have worked in the company for less than 3 years, 40 employees (31%) have worked for 3-5 years, 17 employees (13%) have worked for 6-10 years, and 34 other employees (26%) have worked for more than 10 years.

4.1.2. Convergent Validity Test with Outer Loading

The following Table **2**, shows the Outer Loading value of each indicator in the Green Human Resource Management (X1), Green Knowledge Management (X2), Employee Green Behavior (Z), and Corporate Sustainability (Y) variables which have values > 0.7 (Ghozali & Latan, 2021). This indicates that all indicators in this research variable are valid.

Table 2. Results of Convergent Validity Test with Outer Loading.

Indicator	Loading Factor	Information	Indicator	Loading Factor	Information
X1 (*Green Human Resources Management*)			**X2 (*Green Knowledge Management*)**		
X1.1.1	0,929	Valid	X2.1.1	0,877	Valid
X1.1.2	0,922	Valid	X2.1.2	0,896	Valid
X1.2.1	0,881	Valid	X2.2.1	0,962	Valid
X1.2.2	0,869	Valid	X2.2.2	0,963	Valid
X1.3.1	0,941	Valid	X2.3.1	0,882	Valid
X1.3.2	0,925	Valid	X2.3.2	0,904	Valid
X1.4.1	0,908	Valid			
X1.4.2	0,856	Valid			

Indicator	Loading Factor	Information	Indicator	Loading Factor	Information
Z (*Employee Green Behavior*)			**Y (*Corporate Sustainability*)**		
Z.1.1	0,912	Valid	Y.1.1	0,940	Valid
Z.1.2	0,881	Valid	Y.1.2	0,930	Valid
Z.2.1	0,926	Valid	Y.2.1	0,872	Valid
Z.2.2	0,931	Valid	Y.2.2	0,894	Valid
Z.3.1	0,951	Valid	Y.3.1	0,909	Valid
Z.3.2	0,949	Valid	Y.3.2	0,840	Valid
Z.4.1	0,947	Valid			
Z.4.2	0,945	Valid			
Z.5.1	0,902	Valid			
Z.5.2	0,886	Valid			

Source: Primary Data Processed (2024).

Table 3. AVE Test Results.

Variable	*Average Variance Extracted* (AVE)
X1 (*GreenHumanResources Management*)	0,603
X2 (*GreenKnowledgeManagement*)	0,676
Y (*CorporateSustainability*)	0,610
Z (*EmployeeGreenBehavior*)	0,699

Source: Primary Data Processed (2024).

Table 4. Cross Loading Value Results.

Indicator	X1 GHRM	X2 GKM	Y CS	Z EGB
X1.1.1	0,771	0,661	0,653	0,683
X1.1.2	0,736	0,535	0,493	0,561
X1.2.1	0,760	0,600	0,578	0,624
X1.2.2	0,727	0,475	0,392	0,562
X1.3.1	0,867	0,618	0,511	0,698
X1.3.2	0,774	0,581	0,497	0,638
X1.4.1	0,863	0,621	0,545	0,714
X1.4.2	0,697	0,580	0,545	0,618
X2.1.1	0,629	0,738	0,591	0,600
X2.1.2	0,673	0,798	0,683	0,647
X2.2.1	0,577	0,881	0,637	0,633
X2.2.2	0,603	0,892	0,651	0,630
X2.3.1	0,527	0,768	0,467	0,530
X2.3.2	0,705	0,845	0,615	0,769
Y1.1	0,507	0,546	0,808	0,573

Y1.2	0,344	0,559	0,755	0,461
Y2.1	0,443	0,568	0,746	0,597
Y2.2	0,564	0,533	0,815	0,551
Y3.1	0,625	0,610	0,873	0,601
Y3.2	0,690	0,666	0,767	0,614
Z1.1	0,667	0,705	0,658	0,836
Z1.2	0,581	0,567	0,492	0,724
Z2.1	0,724	0,656	0,653	0,835
Z2.2	0,765	0,666	0,569	0,864
Z3.1	0,741	0,671	0,620	0,873
Z3.2	0,691	0,601	0,614	0,854
Z4.1	0,689	0,695	0,616	0,873
Z4.2	0,689	0,649	0,591	0,860
Z5.1	0,710	0,609	0,631	0,842
Z5.2	0,607	0,651	0,606	0,785

Source: Primary Data Processed (2024).

4.1.3. Convergent Validity Test with Average Variance Extracted (AVE)

In addition to the Loading factor value, to analyze the validity of research data, the Average Variance Extracted (AVE) value can be used. The following are the results of the validity test using the AVE value.

Based on Table **3**, it is known that all research variables are valid. This is because the AVE value is above the provision of 0.50 (Ghozali, 2021).

4.1.4. Discriminant Validity Test with Cross Loading

An indicator is declared to meet discriminant validity if the cross loading value of the dimension in its variable is the largest compared to other variables (Ghozali, 2021) as shown in the following Table **4**.

4.1.5. Discriminant Validity Test with Fornell Lecker

The Fornell-Lecker Criterion method is a measurement method that suggests comparing the square root value of the Average Variance Extracted (AVE) of each latent variable with the correlation between other latent variables in the Model. If the square root value of AVE for each variable is greater than the correlation value between the variable and other variables in the Model, then the Model is said to have a good discriminant validity value (Fornell and Larker, 1981 in Hair, Tomas, Ringle, Sarstedt, Danks, & Ray, 2021).

In Table **5**, it can be seen that the correlation value of this variable is greater than the correlation of other variables, therefore it can be concluded that all variables are valid for use and can be said to have good discriminant validity values.

Table 5. Fornell Lacker Values.

Variable	X1 GHRM	X2 GKM	Y CS	Z EGB
X1-GHRM	0,877			
X2-GKM	0,754	0,822		
Y-CS	0,679	0,741	0,781	
Z-EGB	0,823	0,775	0,725	0,836

Source: Primary Data Processed (2024).

4.1.6. Discriminant Validity Test with Heterotrait-Monotrait Ratio (HTMT)

The recommended HTMT value should be less than 0.9 where the HTMT value> 0.90 indicates a lack of discriminant validity, while HTMT <0.90 is very good (Hair et al, 2019). The results of the Heterotrait-Monotrait Ratio (HTMT) test are obtained as follows:

Table 6. HTMT Test.

Variable	X1	X2	Y	Z
X1				
X2	0,835			
Y	0,767	0,839		
Z	0,886	0,835	0,788	

Source: Primary Data Processed (2024).

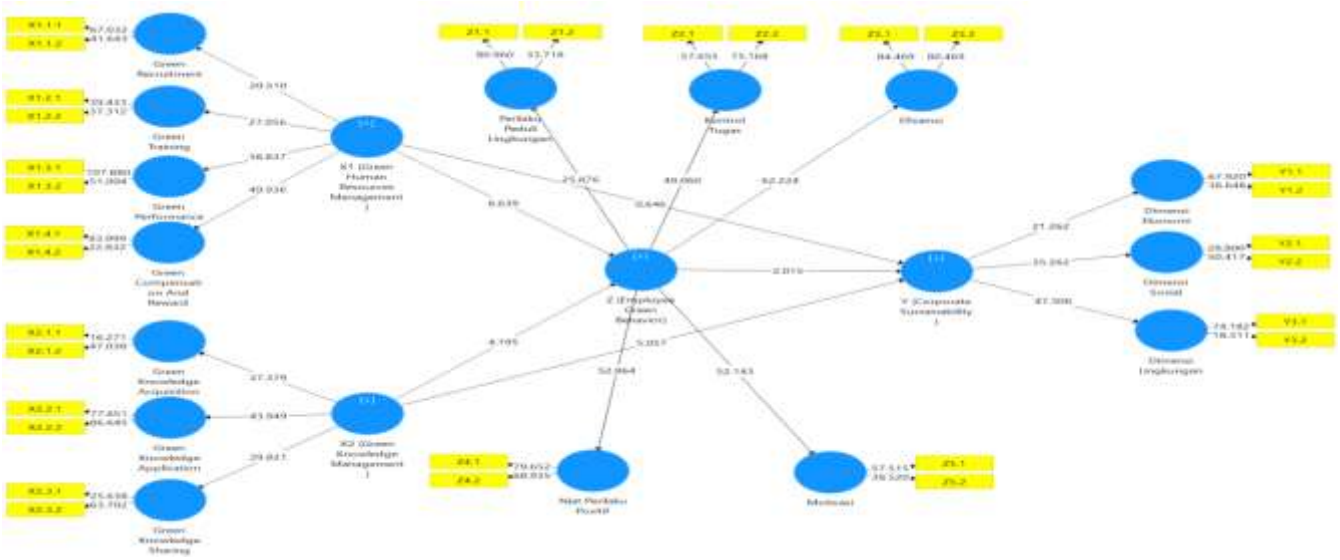

Fig. (2). Bootstrapping with Smart PLS 3.2.9.

Source: Primary Data Processed (2024).

Based on the results of the HTMT test produced in the table above, it can be seen that the HTMT value of all variables is less than 0.90, therefore it can be concluded that all variables are valid for use in discriminant validity.

4.1.7. Reliability Test using Composite Reliability

Based on Table **7**, it can be seen that all constructs in the study are declared reliable because the Composite Reliability value for all constructs is above 0.70 (Ghozali, 2021).

Table 7. Composite Reliability Test Results.

Variabel	Composite Reliability
X1 (GreenHumanResources Management)	0,924
X2 (GreenKnowledgeManagement)	0,926
Y (CorporateSustainability)	0,903
Z (EmployeeGreenBehavior)	0,959

Source: Primary Data Processed (2024).

4.1.8. Reliability Test using Cronbach Alpha

Based on Table **8**, it can be seen that all constructs in the study are declared reliable because the Cronbach's alpha value for all constructs is above 0.70.

Table 8. Cronbach Alpha Test Results.

Variable	Cronbach's Alpha
X1 (*GreenHumanResources Management*)	0,905
X2 (*GreenKnowledgeManagement*)	0,903
Y (*CorporateSustainability*)	0,870
Z (*EmployeeGreenBehavior*)	0,952

Source: Primary Data Processed (2024).

4.1.9. Structural Model (Inner Model)

After the estimated Model meets the Outer Model criteria, the researcher then tests the Structural Model (Inner Model). The structural model test is carried out with the aim of seeing whether the relationship between latent variables, namely exogenous and endogenous constructs, is able to provide answers to questions regarding the relationship between latent variables that have been hypothesized previously.

The following is a picture of the Inner Model in this study which can be seen through (Fig. **2**).

4.1.10.Coefficient of Determination Test (R^2)

Testing the coefficient of determination (R2) is a way to assess how much endogenous variables can be explained by exogenous variables. The coefficient of determination (R2) value is expected to be between 0 and 1. The coefficient test aims to measure the ability of the Model to explain the variance of endogenous (dependent) variables. Through the R Square (R2) analysis carried out on each endogenous latent variable, it shows the level of influence received by the endogenous latent variable from each exogenous variable that contributes to it. The greater the R2 value, the greater the influence received by the endogenous variable (Hair et al., 2021). The following are the R-Square (R2) values in the research construct:

Table 9. Determination Coefficient Test.

Variabel	R Square	R Square Adjusted
Y (*CorporateSustainability*)	0,610	0,600
Z (*EmployeeGreenBehavior*)	0,733	0,729

Source: Primary Data Processed (2024).

Based on Table **9**, it can be seen that the R-Square value for the Corporate Sustainability construct is 0.610. This

Table 10. Direct Influence Significance Test.

Relationship between Variables	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
X1 (GreenHumanResources Management) -> Y (CorporateSustainability)	0,105	0,646	0,518
X1 (GreenHumanResources Management) -> Z (EmployeeGreenBehavior)	0,553	6,639	0,000
X2 (GreenKnowledgeManagement) -> Y (CorporateSustainability)	0,419	5,057	0,000
X2 (GreenKnowledgeManagement) -> Z (EmployeeGreenBehavior)	0,358	4,195	0,000
Z (EmployeeGreenBehavior) -> Y (CorporateSustainability)	0,314	2,015	0,044

Source: Primary Data Processed (2024).

Table 11. Hypothesis Test of Indirect Influence.

Relationship between Variables	Original Sample (O)	T Statistics (|O/STDEV|)	P Values
X1 (*GreenHumanResources Management*) -> Z (*EmployeeGreenBehavior*) -> Y (*CorporateSustainability*)	0,174	2,154	0,032
X2 (*GreenKnowledgeManagement*) -> Z (*EmployeeGreenBehavior*) -> Y (*CorporateSustainability*)	0,112	1,478	0,140

Source: Primary Data Processed (2024).

means that the model has a good level of goodness-fit Model. This also means that the variability of Corporate Sustainability can be explained by the variables in the model by 61%. The R-Square (R2) value for the Employee Green Behavior construct is 0.733. This means that the model has a good level of goodness-fit Model. This also means that the variability of Employee Green Behavior can be explained by the variables in the model by 73.3%.

4.1.11.Goodness of Fit (GoF) Test

Goodness of Fit is conducted to determine whether the PLS model formed has met the requirements to be said to be fit or in accordance with applicable rules. Goodness of Fit (GoF) Testing To validate the performance of the combination of measurement Model (Outer Model) and structural Model (Inner Model), it can be obtained through the following calculations:

$$GoF = \sqrt{AVE \times R^2}$$

$$GoF = \sqrt{0,647 \times 0,671}$$

$$GoF = \sqrt{0,647 \times 0,671}$$

$$GoF = 0,659$$

Information:

AVE = (0,603 + 0,676 + 0,610 + 0,699) / 4 = 0,647

R^2 *= (0,610 + 0,733) / 2 = 0,671*

The results of the Goodness of Fit Index (GoF) calculation produced a value of 0.659, which means that the combined performance of the measurement model (Outer Model) and the structural model (Inner Model) in this study is included in the GoF Large category (0.659 > 0.36).

4.1.12.Significance Test t

To see the significance results of the parameter coefficients, it can be calculated from the dimensions of the variables that have been validated. Researchers want to know whether there is a positive or negative influence and significant or insignificant based on the calculation of P Values which must be below 0.05 and t statistics greater than or equal to 1.96 (Ghozali, 2021). If the t statistic is greater than the t table (1.96) then the two constructs are declared significant and vice versa.

4.1.13. Test Results of Hypothesis Testing

From the results of the hypothesis testing calculations using SmartPLS 3.2.9. can be seen in Table **10** and **11** as follows:

4.2. Discussion

GHRM has no direct effect on Corporate Sustainability. Although GHRM can create green policies within a company, its implementation may not always result in significant behavioral changes in employees. GHRM policies such as green training or green hiring often take time to be internalized by employees and do not necessarily produce an immediate impact on corporate sustainability. Research by Rahman et al. (2021) show that GHRM practices such as green recruitment, green pay, and employee engagement have a positive effect on CS, but green training alone does not show a significant direct relationship with CS. This shows that the effectiveness of GHRM is highly dependent on its influence on Employee Green Behavior (EGB), which then translates into sustainable results.

1. GKM has a direct effect on Corporate Sustainability. Green Knowledge Management (GKM) has a direct influence on Corporate Sustainability (CS) because managing environmental knowledge in companies enables better decision making, increased environmentally friendly innovation, and adaptation to environmental changes. GKM ensures that knowledge related to sustainable practices is disseminated effectively and implemented in operational processes, thereby directly influencing the company's sustainability performance. Through GKM, companies can 1). Increasing innovation in products and processes that are more environmentally friendly, 2). Building employee environmental competence that supports achieving sustainability goals and 3). Reducing environmental impacts through energy efficiency, reducing waste and increasing resource efficiency. Research conducted by Chen, Tang, & Zeng (2022) found that GKM directly influences sustainability performance by ensuring that environmental knowledge is managed and applied effectively throughout the organization. This knowledge enables companies to make more environmentally friendly decisions and drives green innovation, ultimately improving corporate sustainability. Research by Zhao et al. (2022) concluded that GKM plays an important role in improving corporate sustainability by increasing employees' environmental knowledge and integrating sustainable practices in daily operations.
2. EGB has an effect on CS. Employee Green Behavior (EGB) has a direct influence on Corporate Sustainability (CS) because pro-environmental employee behavior plays an important role in reducing the company's environmental impact and increasing resource efficiency. Employees who engage in environmentally friendly behaviors, such as energy savings, waste management, and efficient use of resources, contribute to achieving a company's sustainability goals. EGB also helps create a work culture that supports environmentally friendly practices, which ultimately strengthens the company's reputation and sustainability performance in the eyes of stakeholders. Research conducted by Norton et al. (2021) shows that employees who engage in environmentally friendly behavior significantly improve the company's sustainability performance. It was also proven that environmentally friendly behavior in the workplace, such as reducing energy use and recycling, directly affects a company's environmental impact and drives operational efficiency. Robertson & Barling's (2020) research found that EGB triggered by environmental leadership in the workplace contributes directly to reduced carbon emissions and more efficient use of resources. By increasing pro-environmental behavior in the workplace, employees contribute to achieving the company's sustainability goals
3. GHRM has an effect on EGB. Green Human Resource Management (GHRM) has a direct effect on Employee Green Behavior (EGB) because GHRM policies create an environment that encourages pro-environmental behavior in the workplace. Through environmentally friendly recruitment, environmentally friendly training, environmentally friendly performance appraisals, and reward systems, employees are empowered to behave environmentally friendly. GHRM facilitates employees' understanding of the importance of environmentally friendly behavior through education and training, and encourages them to implement these behaviors in their daily work. Additionally, green incentives provided for pro-environmental performance strengthen employees' commitment to green initiatives. Several previous studies that support the results of this research are the research of Jabbour et al. (2020) concluded that GHRM practices, such as green hiring and training, directly increase employees' green behavior. They found that well-structured GHRM policies increase employee involvement in environmental activities, such as waste management and energy savings. Dumont, Shen, & Deng (2022) stated that environmentally friendly training plays an important role in shaping employee environmentally friendly behavior. They show that employees who receive training on environmentally friendly practices are more likely to adopt environmentally friendly behavior at work. Renwick et al. (2021) outline that GHRM not only encourages employee environmentally friendly behavior through formal policies but also through an organizational culture that supports sustainability. This culture strengthens employee motivation to participate in environmentally friendly activities.
4. GKM has an effect on EGB. Green Knowledge Management (GKM) has a direct influence on Employee Green Behavior (EGB) because GKM facilitates the creation, dissemination and utilization of environmental knowledge within the company. When knowledge regarding environmentally friendly practices is shared effectively, employees are more likely to understand the importance of environmentally friendly behavior and implement it in their daily work. GKM enables employees to gain skills, understanding and in-depth awareness of environmental issues, ultimately motivating them to engage in pro-environmental actions at work. By providing access to relevant information and training, GKM also encourages innovation in environmentally friendly practices. Research results by Chen, Tang, & Zeng (2022) prove that Environmentally Friendly Knowledge Management plays an important role in shaping employee environmentally friendly behavior. This study shows that spreading appropriate environmental knowledge can increase employees' awareness and ability to act environmentally friendly, which significantly contributes to the development of Employee Green Behavior (EGB). Research by Tang et al. (2023) emphasize that green knowledge shared through GKM encourages employees to adopt environmentally friendly behavior, because they are equipped with

the information and training necessary to implement environmentally friendly practices in daily work activities. This knowledge also increases employee motivation to participate in environmentally friendly innovation,

5. EGB mediates the influence of GHRM on CS. GHRM creates an environment that supports environmentally friendly behavior, but its impact on corporate sustainability depends largely on whether employees actually adopt green behavior in their daily work. EGB acts as a conduit that transforms GHRM policies and practices into concrete actions that produce sustainability impacts. Although GHRM policies are important, it is the environmentally friendly behavior of employees who are actively involved in environmental initiatives that directly influences a company's sustainability performance. Norton et al. (2021) emphasize that pro-environmental employee behavior, encouraged by the company's environmentally friendly policies, is a key element in achieving operational sustainability and corporate reputation. According to Dumont et al. (2022), environmentally friendly behavior triggered by GHRM policies allows companies to achieve better sustainability results by reducing negative operational impacts, increasing resource efficiency, and creating environmentally friendly innovations. EGB ensures that GHRM policies are truly implemented at the individual level and have a direct impact on sustainability outcomes. Research by Ali et al. (2024) support the idea that environmentally friendly organizational culture and employee pro-environmental behavior act as mediators between GHRM and sustainability performance. This means that without cultivating a strong eco-friendly culture or nurturing individual employee behavior, GHRM practices alone will not achieve substantial corporate sustainability.

6. EGB mediates the influence of GKM on CS. Employee Green Behavior (EGB) mediates the influence of Green Knowledge Management (GKM) on Corporate Sustainability (CS) because GKM provides the knowledge and resources needed to motivate employees to engage in pro-environmental behavior. However, environmental knowledge obtained through GKM will not have a significant impact on the company's sustainability if employees do not apply this knowledge in their daily actions. This is where EGB acts as a mediating variable, connecting the knowledge disseminated through GKM with real behavior that has a direct impact on sustainability. GKM allows companies to disseminate important information regarding environmentally friendly practices to employees. Research by Chen, Tang, & Zeng (2022) found that shared environmental knowledge effectively increases employees' ability and motivation to engage in environmentally friendly behavior. However, the impact on sustainability will only be felt when this knowledge is applied in daily behavior by employees. Although GKM can provide a strong knowledge base, without EGB, this information will not be translated into actions that contribute to Corporate Sustainability. Research by Tang et al. (2023) show that employee environmentally friendly behavior driven by environmentally friendly knowledge management has an important role in supporting corporate sustainability initiatives through reducing carbon footprints and increasing resource efficiency. Zhao et al. (2022) emphasize that employees who apply the knowledge gained from GKM in their daily work, such as energy savings or waste management, contribute significantly to achieving the company's sustainability goals. EGB is a channel that ensures that knowledge is used to create sustainable impact.

5. CONCLUSION& SUGGESTION

This research proves that there is a direct influence of GKM and EGB on CS and a direct influence of GHRM and GKM on EGB, while GHRM is not proven to have a direct influence. Research also proves that EGB mediates the effect of GHRM on CS but not GKM on CS. , the integration of GHRM and GKM offers a promising path to foster EGB and improve corporate sustainability. This research not only addresses critical gaps in the literature but also provides practical insights for organizations seeking to align human resource and knowledge management practices with their sustainability goals. As businesses continue to face greater environmental challenges, understanding how to effectively manage and leverage employee behavior will be critical to achieving long-term sustainability goals.

Managerial Implication

Based on the results of the analysis, there are several managerial suggestions as follows:

Strengthen Green Knowledge Management (GKM) by investing more in GKM systems to facilitate the dissemination of green knowledge and training that encourages employee green behavior (EGB). This knowledge must be applied in the company's operational practices to achieve Corporate Sustainability (CS).

Encourage Employee Environmentally Friendly Behavior (EGB) by implementing reward and recognition programs for employees who are actively involved in environmentally friendly behavior, such as recycling or saving energy. Provide ongoing training on environmentally friendly practices.

Optimize GHRM to support EGB, GHRM has a direct impact on EGB, integrate sustainability indicators in performance evaluation and employee recruitment to strengthen their commitment to pro-environmental behavior.

GKM Effectiveness Audit by reviewing how green knowledge is disseminated and applied in the company. Identify barriers that prevent employees from applying the knowledge they have acquired.

Building a Culture of Sustainability by developing a corporate culture that supports sustainability by including environmental values in the company's vision, mission and daily practices.

Sugesstion for Further Researchers

The results of this research show that Employee Green Behavior (EGB) mediates the influence of Green Human Resource Management (GHRM) on Corporate Sustainability (CS), but does not mediate the influence of Green Knowledge Management (GKM), so further research can be more in-depth. explores why EGB does not mediate the relationship between GKM and CS. Further research could look at other factors that might mediate this relationship, such as green innovation, green organizational culture, or environmental leadership.

This research proves that GHRM has not been proven to have a direct effect on CS, so further research can consider moderator variables such as top management commitment to sustainability, organizational support, or sustainability culture to see whether these factors can strengthen the relationship between GHRM and CS.

Future studies could focus on how specific elements of GKM, such as the management of tacit and explicit knowledge, influence specific aspects of corporate sustainability, for example environmental innovation or operational efficiency.

Given the many dynamic variables such as employee behavior and organizational policies that develop over time, future research could use a longitudinal design to look at changes in GHRM, GKM, EGB, and CS. This will provide a deeper understanding of how these relationships develop and adapt over time.

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