

# Determination of Green Human Resource Management: Analysis of Green Knowledge Sharing Green Competitive Advantage Green Training Green Psychological Climate and Green Innovation

Sayed Syahridhan<sup>1\*</sup>, Primadi Candra Susanto<sup>2</sup>

<sup>1</sup>Student Doctor Universitas Mercu Buana, Jakarta, Indonesia, waledtaza@gmail.com (S.S.)

<sup>2</sup>Institut Transportasi dan Logistik Trisakti, Jakarta, Indonesia, primstrisakti@gmail.com (P.C.S.)

**Abstract.** The purpose of this literature research is expected to help hypotheses for future authors in determining research related to green human resource management. The research article Determining Green Human Resource Management: analysis of Green Knowledge Sharing, Green Competitive Advantage, green training, Green Psychological Climate, and Green Innovation is a scientific literature article on the scope of human resource management. The approach used in this literature review research is descriptive qualitative. The data collection technique is to use literature studies or conduct literature reviews of relevant previous articles. The data used in this study are secondary data, which are sourced from academic online media such as Thomson Reuters Journals, Sage, Springer, Taylor & Francis, Scopus Emerald, Elsevier, Sage, Springer, Web of Science, Sinta Journals, DOAJ, EBSCO, Google Scholar and digital reference books. In previous studies, 1 relevant previous article was used to review each independent variable. The results of this literature review article are: 1) Green Knowledge Sharing affects Green Human Resource Management; 2) Green Competitive Advantage affects Green Human Resource Management; 3) Green Training affects Green Human Resource Management; 4) Green Psychological Climate affects Green Human Resource Management; and 5) Green Innovation affects Green Human Resource Management.

**Keywords:** Green Competitive Advantage, Green Human Resource Management, Green Innovation, Green Knowledge Sharing, Green Psychological Climate, Green Training,

## 1. INTRODUCTION

In an era of rapid globalization, attention to environmental issues is becoming increasingly urgent. Companies around the world are faced with the challenge of not only achieving economic gains, but also contributing to environmental sustainability. In this context, Green Human Resource Management (GHRM) is emerging as an innovative approach that integrates sustainability principles into human resource management practices. GHRM focuses not only on managing employees, but also on how employees can contribute to the company's environmental goals (Ali et al., 2023).

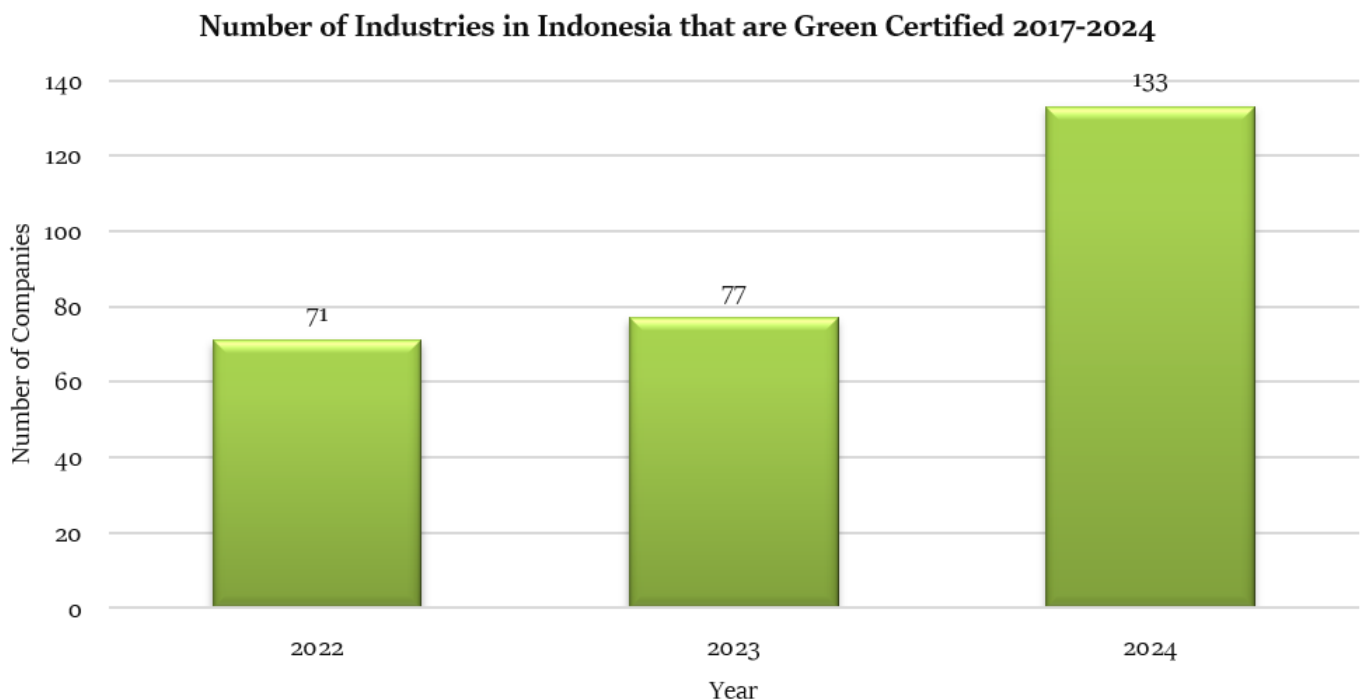


Figure 1: Suggested structure.  
Source: BBSPJI Textil.

In Figure 1, it shows that in supporting green human resource management, it is necessary to carry out green certification standards which indicate that the company is serious in supporting green energy. Where there is a significant increase from 2022 to 2024 regarding the number of companies that have been certified with green industry standards. In 2022, the number of companies that have been certified with green standards is 71

companies, then in 2023 it has increased to 77 companies, and in 2024, the number of companies that have been certified with green standards is 133 companies. This indicates the seriousness of the company in supporting green human resource management.

This is supported by major theories in management, such as systems theory, emphasizing the importance of interactions between various elements in the organization. In the context of GHRM, this means that every part of the organization, including human resources, must work synergistically to achieve sustainability goals. Intermediary theories in human resource management, such as motivation theory and organizational behavior theory, provide a framework for understanding how employees can be motivated to engage in green practices. In this regard, GHRM can be seen as an application of these theories in the context of sustainability (Amrutha & Geetha, 2020).

As an application of these theories, GHRM includes a number of practices designed to increase employees' environmental awareness, encourage green knowledge sharing, and create an organizational culture that supports green innovation. For example, companies that implement green training programs can increase employees' understanding of environmental issues and encourage them to contribute to sustainability initiatives (Lutfiana & Nur Endah Retno Wuryandari, 2020). In addition, research shows that companies that adopt GHRM practices tend to have a better competitive advantage as they can attract and retain talents who have high environmental awareness (Astuti & Datrini, 2021).

In this context, it is important to analyze various aspects of GHRM, including green knowledge sharing, green competitive advantage, green training, green psychological climate, and green innovation. Each of these aspects is interrelated and contributes to the overall effectiveness of GHRM in achieving sustainability goals. By understanding these dynamics, organizations can develop more effective strategies to integrate sustainability into their human resource management practices (Widodo, 2023).

Therefore, this study aims to analyze the determinants of GHRM through the five main aspects already mentioned. Through this approach, it is expected to provide deeper insights into how organizations can use GHRM to achieve sustainable competitive advantage and contribute to environmental preservation. This research will also provide practical recommendations for companies that want to effectively implement GHRM in their operational context.

### **1.1. Problem Formulation**

Based on the background of the problem above, the problem formulation is obtained to be used as a hypothesis for further research, among others: 1) Does Green Knowledge Sharing affect Green Human Resource Management?; 2) Does Green Competitive Advantage affect Green Human Resource Management?; 3) Does Green Training affect Green Human Resource Management?; 4) Does Green Psychological Climate affect Green Human Resource Management?; and 5) Does Green Innovation affect Green Human Resource Management?.

## **2. METHODOLOGY**

This research uses a descriptive qualitative approach. This method was chosen because it allows researchers to understand the research concepts related to green human resource management thoroughly, focusing on the context and meaning contained in green human resource management. Descriptive qualitative data collection and analysis allows researchers to customize their approach to the needs of the research and the characteristics of the subject under study (Vebrianto et al., 2020), (Susanto, Arini, et al., 2024).

### **2.1. Data Source**

The data used in this study comes from previous research related to green human resource management, green knowledge sharing, green competitive advantage, green training, green psychological climate, green innovation. Researchers will analyze existing literature to identify patterns and trends in the concept of green human resource management. By using previous research and other references, researchers can develop stronger, evidence-based arguments and contribute to a broader understanding of green human resource management (Snyder, 2019).

### **2.2. Data Type**

The type of data used in this study is secondary data, which utilizes data from various leading academic journals, including Thomson Reuters Journal, Springer, Taylor & Francis, Scopus, Emerald, Sage, WoS, Sinta Journal, DOAJ, and EBSCO, as well as platforms such as Publish or Perish and Google Scholar. By using these sources, researchers can ensure that the data they collect is valid and accountable. The use of multiple sources also allows researchers to gain a more comprehensive understanding of green human resource management from various perspectives (Acampora et al., 2022).

## **3. RESULTS AND DISCUSSION**

### **3.1. Results**

#### **3.1.1. Green Human Resource Management**

Green Human Resource Management (Green HRM) is an approach to human resource management that integrates environmentally responsible practices into organizational strategy. The ultimate goal is to create an environmentally conscious workforce through recruitment, training, development, and performance evaluation

that supports environmental sustainability. In addition to creating a green workforce, Green HRM also promotes a green work culture, such as encouraging the use of green transportation or remote working to reduce the carbon footprint. By raising environmental awareness in the workplace, Green HRM not only helps organizations meet their social responsibilities but also creates value through operational efficiency and improved public reputation (Kurniawati & Oktarina, 2023).

Indicators or dimensions contained in Green Human Resource Management include: 1) Green Recruitment: A recruitment strategy that prioritizes candidates with sustainability values and environmental awareness, including the use of digital platforms to reduce paper usage; 2) Green Development: Training that focuses on improving employees' skills in managing green practices in the workplace; 3) Green Performance Management: Performance reviews that include employee contributions to the organization's green initiatives; 4) Green Compensation: A reward system that incentivizes employees for achievements in implementing sustainable practices; and 5) Green Employee Involvement: Employee participation in green programs or activities, such as recycling or carbon reduction programs (Kamilia & Nawangsari, 2023).

Green Human Resource Management has been researched and is relevant to previous research researched by: (Hutomo et al., 2020), (Pramudita & Gunawan, 2023), (Aboramadan & Karatepe, 2021), (Susanto, Sawitri, et al., 2024), (Lesmini et al., 2024), (Agarwal et al., 2020), (Alyahya et al., 2023), (Hutomo et al., 2020).

### **3.1.2. Green Knowledge Sharing**

Green Knowledge Sharing is the process of sharing knowledge about sustainable and environmentally friendly practices among individuals, teams or organizations. The focus is on disseminating information, skills, and experiences that support sustainability goals, such as energy management, waste reduction, and efficient use of resources. This process can be accomplished through training, seminars, group discussions, or the use of technology platforms that facilitate the exchange of green information. By encouraging the sharing of green knowledge, organizations can create a culture of collaboration that accelerates the adoption of green innovations and improves overall performance (Borah et al., 2023).

Indicators or dimensions contained in Green Knowledge Sharing include: 1) Willingness to share: The willingness of individuals to share information or knowledge about green practices in the workplace; 2) Knowledge Accessibility: The ease of access to sustainability resources or information within the organization; 3) Knowledge Documentation: The process of documenting sustainability-related best practices for future reference; 4) Collaboration Platforms: The use of technologies such as intranets or dedicated applications to share green knowledge; and 5) Knowledge Leverage: The application of shared information in daily operations to improve sustainability (Rennyta Yusiana et al., 2020).

Green Knowledge Sharing has been researched and is relevant to previous research researched by: (Castaneda & Cuellar, 2020), (Shahzad et al., 2020), (Arsawan et al., 2022), (C. Wang & Hu, 2020).

### **3.1.3. Green Competitive Advantage**

Green Competitive Advantage is the competitive advantage an organization gains by implementing policies, products or services that support environmental sustainability. This includes adopting green technologies, reducing carbon emissions, and offering green products that appeal to environmentally conscious consumers. Green Competitive Advantage allows organizations to differentiate themselves in the marketplace by demonstrating a commitment to sustainability while reducing operating costs through energy efficiency or better resource management (Azeem et al., 2021).

Indicators or dimensions contained in the Green Competitive Advantage include: 1) Green Products: Green products as a market differentiator; 2) Operational Efficiency: Reducing costs through more efficient use of resources and sustainable processes; 3) Regulatory Compliance: Compliance with environmental standards and regulations as a competitive advantage; 4) Customer Perception: Building a positive reputation with consumers as a company that cares about the environment; and 5) Sustainability Partnerships: Working with partners or other organizations to support green initiatives (Zameer et al., 2020).

Green Competitive Advantage has been researched and is relevant to previous research researched by: (C.-H. Wang, 2019), (Astuti & Datrini, 2021), (Qiu et al., 2020).

### **3.1.4. Green Training**

Green Training is a training program designed to improve employees' skills, knowledge and awareness of green practices in the workplace. The ultimate goal is to ensure that employees have the ability to implement green solutions in their daily activities. The program covers topics such as waste management, energy reduction, resource conservation, and sustainable product development. Green training is often delivered through workshops, e-learning, or hands-on simulations. By providing green training, organizations can create a workforce that proactively supports sustainability goals and improves operational efficiency (Sinaga & Nawangsari, 2019).

Indicators or dimensions contained in Green Training include: 1) Training Content: Training materials that cover sustainability topics such as waste management and energy efficiency; 2) Training methods: Training methods such as simulations or workshops to increase understanding of green practices; 3) Participant engagement: The level of employee participation in green training programs; 4) Skill enhancement: Improving employees' ability to implement green solutions in the workplace; and 5) Training Outcomes: The impact of

training on improving operational efficiency and organizational sustainability (Pinzone et al., 2019).

Green Training has been researched and is relevant to previous research researched by: (Mayangsari & Nawangsari, 2019), (Pham et al., 2020), (Gull & Idrees, 2022), (Amrutha & Geetha, 2021), (Susita & Murdiono, 2024).

### 3.1.5. Green Psychological Climate

Green Psychological Climate is an employee's perception of the extent to which their organization supports and encourages green practices. This perception includes organizational policies, culture and values that emphasize sustainability and environmental protection. When employees perceive that their organization cares about the environment, they tend to be more motivated to participate in green initiatives (Sabokro et al., 2021).

Indicators or dimensions contained in the Green Psychological Climate include: 1) Organizational Support: Employee perceptions of organizational support for green practices; 2) Environmental Awareness: Employee awareness of the importance of sustainability in daily operations; 3) Policy Clarity: Clarity of organizational policies related to environmental initiatives; 4) Employee Motivation: Employee motivation to participate in environmental programs; and 5) Cultural Alignment: The extent to which organizational values support a culture of sustainability (Bhutto et al., 2021).

Green Psychological Climate has been researched and is relevant to previous research researched by: (M. A. S. Khan et al., 2019), (Shah et al., 2021), (Tahir et al., 2020).

### 3.1.6. Green Innovation

Green innovation is the development and implementation of new environmentally friendly solutions to create value for the organization and society. It includes innovations in products, processes, or business models that reduce environmental impact while improving efficiency and competitiveness. Examples include energy-efficient technologies, biodegradable materials, or clean manufacturing processes that minimize waste. Green innovation not only helps companies comply with environmental regulations, but also enhances their reputation with consumers and other stakeholders (Abbas & Sağsan, 2019).

Indicators or dimensions contained in Green Innovation include: 1) Eco-Design: Product or service design that minimizes environmental impact; 2) Process innovation: Developing more energy- or resource-efficient production processes; 3) Market Exploration: Identifying new market opportunities focused on sustainability; 4) Technology Adoption: Using the latest technology to support efficiency and green practices; and 5) Collaboration for Innovation: Partnering with others to create innovative green solutions (Takalo & Tooranloo, 2021).

Green Innovation has been researched and is relevant to previous research researched by: (Soewarno et al., 2019), (Agrawal et al., 2024), (Luo et al., 2023), (C.-H. Wang, 2019).

### 3.1.7. Previous Research

Based on the findings above and previous studies, the following research discussion is formulated:

**Table 1:** Results of Relevant Previous Research.

No	Author (Year)	Research Results	Similarities With This Article	Differences With This Article
1	(Yong et al., 2019)	-Green Intellectual Capital variable affects Green Human Resource Management  -Green Knowledge Sharing variable affects Green Human Resource Management	This article has in common that it examines the Green Knowledge Sharing variable on the independent variable, and examines the Green Human Resource Management variable on the dependent variable.	The difference with previous research is in the Green Intellectual Capital variable as another independent variable.
2	(Hamadamin & Atan, 2019)	-The Green Competitive Advantage variable affects Green Human Resource Management  -Human Capital Development variable affects Green Human Resource Management  -Employee Commitment variable affects Green Human Resource Management	This article has in common examining the Green Competitive Advantage variable in the independent variable, and examining the Green Human Resource Management variable in the dependent variable.	The difference with previous research is that there are Human Capital Development and Employee Commitment variables as other independent variables.
3	(Amrutha & Geetha, 2020)	-The Green Training variable affects Green Human Resource Management  -Green Appraisal variable affects Green Human Resource Management  -Green Rewards variable has an effect on Green Human Resource Management	This article has in common that it examines the Green Training variable on the independent variable, and examines the Green Human Resource Management variable on the dependent variable.	The difference with previous research is that there are Green Appraisal and Green Rewards variables as other independent variables.
4	(Sabokro et al.,	-Variabel Green Psychological	This article has in common that it	The difference with previous



2021)	Climate berpengaruh terhadap Green Human Resource Management  -Variabel Green Employee Behavior berpengaruh terhadap Green Human Resource Management  - Variabel Corporate Social Responsibility berpengaruh terhadap Green Human Resource Management	examines the Green Psychological Climate variable on the independent variable, and examines the Green Human Resource Management variable on the dependent variable.	research is that there are Green Employee Behavior and Corporate Social Responsibility variables as other dependent variables.
5 (Singh et al., 2020)	-The Green Innovation variable affects Green Human Resource Management  -Environmental Performance variables have an effect on Green Human Resource Management  -Green Transformational Leadership variable affects Green Human Resource Management	This article has in common examining the Green Innovation variable on the independent variable, and examining the Green Human Resource Management variable on the dependent variable.	The difference with previous research is that there are Green Transformational Leadership and Environmental Performance variables as other dependent variables.

### 3.2. Discussion

This literature review will be discussed based on the history of the topic, research objectives, problem formulation, indicators or dimensions, and related previous research:

#### 3.2.1. Effect of Green Knowledge Sharing on Green Human Resource Management

Green Knowledge Sharing is the process of sharing knowledge about green practices that involves individuals' willingness to share information, access to green knowledge, documentation of best practices, use of collaboration platforms, and use of knowledge for innovation. Willingness to share is a key element where employees support each other to spread green ideas relevant to human resource management. In the context of Green Recruitment, this willingness to share helps organizations find candidates with sustainability insights and values. By sharing information, the recruitment process becomes more effective in assessing a candidate's fit with the organization's environmental vision.

Knowledge Accessibility is an important element in ensuring that green information is easily accessible to all parties within the organization. This supports green development, where employee training and development can be based on relevant and up-to-date information. Accessibility to green knowledge also facilitates collective learning so that employees can continuously improve their ability to support sustainability goals. In this way, organizations can build a more competent workforce to implement green initiatives.

Knowledge documentation plays a role in recording the best green practices that have been implemented, thus providing a reference for performance evaluation through Green Performance Management. This documentation allows the organization to objectively evaluate employee contributions in support of green strategies. With well-documented data, performance evaluation focuses not only on results, but also on the processes used to achieve them, including efforts that support environmental sustainability.

The collaboration platform is a tool that enables better communication and coordination among employees in sharing green knowledge. In the context of green compensation, these platforms can be used to design fair and relevant incentive programs based on employee contributions to green initiatives. For example, digital platforms can be used to track and publicize employees' green activities, which can then be rewarded through a sustainability-based compensation system. This motivates employees to actively participate in the company's environmental programs.

Knowledge leverage, or the ability to strategically use information that has already been shared, is an important factor in supporting green employee engagement. By leveraging the knowledge shared through collaboration and documentation platforms, organizations can design more effective and impactful employee engagement programs. This knowledge can also be used to motivate employees to adopt green behaviors, such as waste reduction or energy efficiency in the workplace.

The link between green knowledge sharing and green people management creates a synergy that supports the overall sustainability of the organization. By sharing green knowledge, organizations not only strengthen human resource management, but also build a work culture that supports sustainability. The combination of easily accessible, documented and strategically used knowledge with green human resource policies results in a more environmentally conscious, innovative and competitive workforce. This synergy ultimately contributes to the organization's success in achieving long-term sustainability goals.

#### 3.2.2. Effect of Green Competitive Advantage on Green Human Resource Management

Green Competitive Advantage is the competitive advantage companies gain by applying sustainability principles such as green products, operational efficiency, environmental compliance, positive customer perception and sustainable partnerships. One of the key elements, green products, adds value to the company by attracting consumers who care about the environment. This green product also relates to green recruiting, where

companies seek candidates with a deep understanding of sustainability. Candidates with knowledge of green products can help develop new innovations that are more environmentally friendly, creating an additional competitive advantage.

Operational efficiency is another important factor in building a green competitive advantage. Through efficient use of resources, companies can reduce both operating costs and environmental impacts. In the context of green development, operational efficiency requires employee training that focuses on efficient and sustainable practices. This training not only improves employees' technical skills, but also reinforces a culture of sustainability within the organization, making operational efficiency an integral part of corporate strategy.

Compliance with environmental regulations enhances the company's reputation and ensures legal and ethical operations. This compliance supports green performance management, where employee performance reviews can include their contribution to the organization's compliance with environmental regulations. By incorporating compliance into performance reviews, companies encourage employees to be more proactive in complying with and supporting green initiatives.

Customer perceptions of the company also play an important role in the green competitive advantage. Positive consumer perceptions of a company's commitment to sustainability can increase customer loyalty. In the context of green compensation, customer perceptions can be linked to rewards for employees who contribute to an improved corporate image. An incentive system based on sustainability impact not only encourages employees to contribute more, but also strengthens the relationship between employees and customers.

Ongoing partnerships with other organizations or communities that support sustainability create opportunities for co-innovation. These partnerships are also relevant to green employee engagement, where employees are empowered to participate in collaborative projects focused on the environment. By engaging employees in partnership initiatives, companies create a culture of collaboration that fosters a commitment to sustainability.

The relationship between Green Competitive Advantage and Green Human Resource Management creates significant synergies. Elements such as green products, operational efficiency and customer perception support green HRM by providing a relevant framework for recruiting, training and motivating employees. In turn, green HRM policies reinforce elements of competitive advantage by ensuring that employees have the skills, motivation and commitment to support organizational sustainability. This combination helps organizations achieve sustainability goals while maintaining a competitive position in the marketplace.

### **3.2.3. Effect of Green Training on Green Human Resource Management**

Green Training is a training process designed to increase employee awareness, knowledge and skills in implementing environmentally friendly practices. One of the key aspects is the training content, which includes materials on waste management, energy efficiency and sustainability strategies. In the context of green recruitment, relevant training content helps companies align the recruitment process with sustainability standards. By involving potential employees in the initial training program, companies can ensure that their values and skills are aligned with the organization's green vision.

The training methods used in green training, such as simulations, case studies, and interactive workshops, play an important role in creating an effective learning experience. These methods also support green development, where employees are introduced to innovative ways to address environmental challenges in their work. By using a variety of training approaches, companies can ensure that each employee gains a deep understanding of his or her contribution to the organization's sustainability.

Participant engagement in green training is a critical factor in its success. Employees who actively participate are more likely to internalize sustainability values and apply them in their daily work. This is closely related to green performance management, where participant engagement during training can be measured and used as a basis for performance evaluation. In this way, participant engagement becomes an indicator of the training's success in supporting the organization's strategic goals.

The improved skills gained through green training have a direct impact on employees' ability to implement green practices. In the context of green compensation, these skill improvements can be rewarded through incentives based on sustainability contributions. By rewarding employees who successfully apply green skills, companies not only increase their motivation, but also strengthen their commitment to green goals.

Training results, such as increased operational efficiency and reduced environmental impact, become the ultimate measure of green training success. These results also support green employee engagement, where employees who see a positive impact from training are more motivated to participate in other green initiatives. Through clear training results, companies create a virtuous cycle that links green training to sustainable human resource management.

The relationship between green training and green people management creates a powerful synergy in achieving the organization's sustainability goals. Well-designed training content and methods support employee recruitment and development, while participant engagement and training outcomes strengthen performance evaluation and green compensation. Ultimately, green training not only improves individual skills, but also builds an organizational culture that supports sustainability, creating a more productive, innovative and environmentally friendly work environment.

### **3.2.4. Effect of Green Psychological Climate on Green Human Resource Management**

Green Psychological Climate is an employee's perception of the extent to which their work environment supports sustainability and green values. An important element is organizational support, where companies demonstrate a genuine commitment to green practices through environmentally friendly policies, facilities and leadership. This support is particularly important in green recruitment, as potential employees tend to be more interested in joining organizations that demonstrate a commitment to sustainability. By clearly demonstrating this commitment, companies can attract individuals whose values align with the organization's green culture.

Employee environmental awareness is also a core aspect of green psychological climate. When companies promote awareness of the importance of green practices through communication and education, employees become more engaged in supporting the organization's green goals. This is relevant to Green Development, where sustainability-focused training programs increase employees' environmental awareness. This awareness ultimately leads to proactive behavior in reducing environmental impact and improving operational efficiency.

The clarity of an organization's sustainability policy provides employees with clear guidance on their role in achieving green goals. When green policies are well communicated, employees have a better understanding of the company's expectations. This relates to green performance management, where employees' performance can be evaluated based on their contribution to green initiatives. Policy clarity also helps ensure that individuals are moving in the same direction in support of the organization's environmental vision.

Employees' motivation to engage in green initiatives is influenced by their perception of the personal and professional benefits of such engagement. By providing rewards through green compensation, such as sustainability-based incentives, companies can increase employee motivation to actively participate in green programs. This motivation not only increases employee engagement, but also has a positive impact on the company's sustainability results.

Aligning corporate culture with sustainability values ensures that all employees feel connected to the company's green goals. When an organization's culture encourages collaboration, innovation and environmental stewardship, employees are more likely to demonstrate high levels of green employee engagement. This cultural alignment also strengthens employees' sense of belonging to the organization, thereby increasing their loyalty and commitment to the sustainability mission.

The interaction between Green Psychological Climate and Green Human Resource Management creates a synergistic relationship that strengthens organizational sustainability. Organizational support, environmental awareness and policy clarity strengthen green recruitment and development, while employee motivation and cultural alignment improve performance evaluation, compensation and engagement. By creating a positive green psychological climate, companies not only encourage green behavior, but also build a more motivated, productive and innovative workforce to support long-term sustainability goals.

### **3.2.5. Effect of Green Innovation on Green Human Resource Management**

Green innovation is the process of creating new solutions that support environmental sustainability and includes eco-design, process innovation, market exploration, technology adoption, and collaboration for innovation. An important element is eco-design, which focuses on developing products or services that minimize environmental impact. Through green hiring, companies look for individuals with the skills and understanding of eco-design to form innovative teams capable of delivering creative solutions. This recruitment process ensures that the talent on board is aligned with the company's green mission.

Process innovation supports waste reduction and improved operational efficiency through the implementation of new methods. This is relevant to Green Development, where employees are trained to implement innovative processes that support sustainability. This training not only strengthens employees' ability to implement innovation, but also creates an organizational culture that is open to positive change in daily operations.

Market research is an important element of green innovation, enabling companies to identify new opportunities for green products or services. This activity requires the support of Green Performance Management, which measures employee performance based on their contribution to green market development. This assessment provides additional motivation for employees to look for innovative ways to expand market reach while maintaining a commitment to sustainability.

Technology adoption plays an important role in driving green innovation by introducing new environmentally friendly tools or systems. These technologies require the support of Green Compensation, where companies reward employees who demonstrate the ability to use technology to achieve more sustainable results. This innovation-based reward system encourages employees to continue researching and using technologies that support the organization's green goals.

Collaboration for innovation involves working with various stakeholders, including external partners, to create more effective green solutions. This is closely related to green employee engagement, where employees are empowered to contribute to collaborative projects that support sustainability. Through this collaboration, companies not only gain new perspectives, but also create a greater sense of ownership among employees for green initiatives.

The link between green innovation and green people management creates a virtuous circle that strengthens both. Green design, process innovation and market exploration support green HRM by providing a context for employee recruitment, development and evaluation. In turn, green HRM policies provide a strong foundation to

drive technology adoption and innovation collaboration. This synergy enables companies to achieve sustainability goals while strengthening their competitive position in the marketplace.

### 3.2.6. Conceptual Framework

The conceptual framework is determined based on the formulation of the problem, research objectives and previous studies that are relevant to the discussion of this literature research:

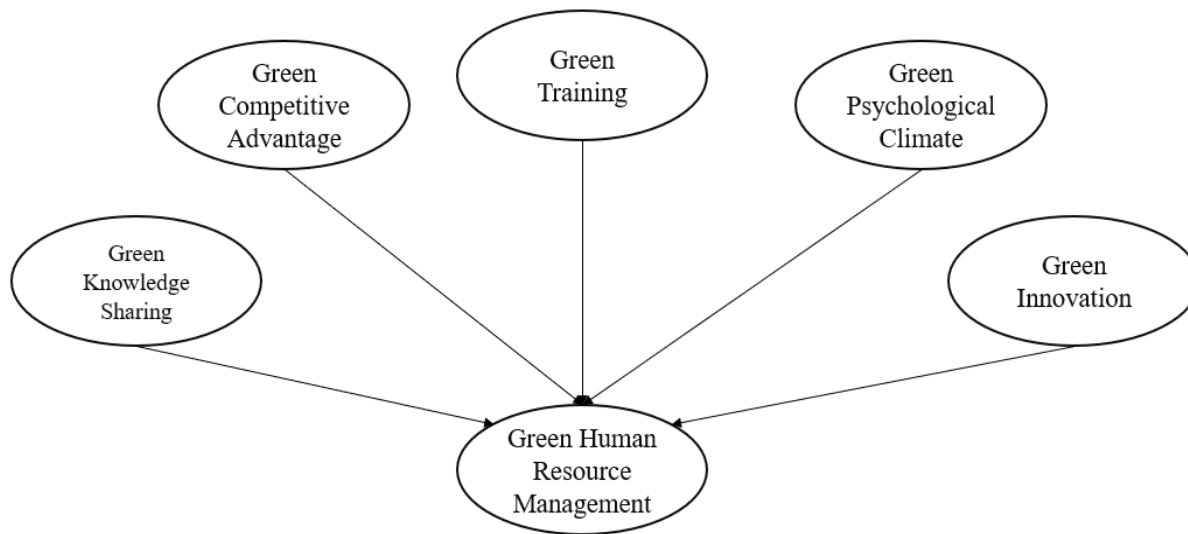


Figure 2: Suggested structure.

Based on Figure 2 above, green knowledge sharing, green competitive advantage, green training, green psychological climate, green innovation influence green human resource management. However, in addition to the variables green knowledge sharing, green competitive advantage, green training, green psychological climate and green innovation that influence green, there are other variables that influence, including:

- 1) Green Technology: (Mugoni et al., 2023), (Bradou et al., 2022), (Du & Li, 2019), (Feng et al., 2022).
- 2) Green Policy: (S. A. R. Khan et al., 2019), (C. H. Wang & Juo, 2021), (Camilleri, 2020), (Murphy & Gouldson, 2020).
- 3) Employee Engagement: (Gabriela et al., 2023), (Shafi et al., 2021), (Duyen et al., 2023).

## 4. CONCLUSION

Based on the problem formulation, results and discussion above, the conclusions of this study are: 1) Green Knowledge Sharing affects Green Human Resource Management; 2) Green Competitive Advantage affects Green Human Resource Management; 3) Green Training has an effect on Green Human Resource Management; 4) Green Psychological Climate affects Green Human Resource Management; and 5) Green Innovation affects Green Human Resource Management.

## REFERENCES

- Abbas, J., & Sağsan, M. (2019). Impact of knowledge management practices on green innovation and corporate sustainable development: A structural analysis. *Journal of Cleaner Production*, 229, 611–620.
- Aboramadan, M., & Karatepe, O. M. (2021). Green human resource management, perceived green organizational support and their effects on hotel employees' behavioral outcomes. *International Journal of Contemporary Hospitality Management*, 33(10), 3199–3222. <https://doi.org/10.1108/IJCHM-12-2020-1440>
- Acampora, A., Lucchetti, M. C., Merli, R., & Ali, F. (2022). The theoretical development and research methodology in green hotels research: A systematic literature review. *Journal of Hospitality and Tourism Management*, 51, 512–528.
- Agarwal, N., Kumar, S., Anand, S. K., Rafique, N., & Dharwal, M. (2020). Green HRM for sustainable development. *Materials Today: Proceedings*, 49(xxxx), 3439–3442. <https://doi.org/10.1016/j.matpr.2021.03.393>
- Agrawal, R., Agrawal, S., Samadhiya, A., Kumar, A., Luthra, S., & Jain, V. (2024). Adoption of green finance and green innovation for achieving circularity: An exploratory review and future directions. *Geoscience Frontiers*, 15(4), 101669.
- Ali, H., Saputra, F., & Mahaputra, M. R. (2023). Penerapan Green Economy: Analisis Kendaraan Listrik, Pariwisata dan Batu Bara (Studi Literature). *Jurnal Humaniora, Ekonomi Syariah Dan Muamalah (JHESM)*, 1(1), 1–14.
- Alyahya, M., Aliedan, M., Agag, G., & Abdelmoety, Z. H. (2023). The Antecedents of Hotels' Green Creativity: The Role of Green HRM, Environmentally Specific Servant Leadership, and Psychological Green Climate. *Sustainability (Switzerland)*, 15(3). <https://doi.org/10.3390/su15032629>
- Amrutha, V. N., & Geetha, S. N. (2020). A systematic review on green human resource management: Implications for social sustainability. *Journal of Cleaner Production*, 247, 119131. <https://doi.org/10.1016/j.jclepro.2019.119131>
- Amrutha, V. N., & Geetha, S. N. (2021). Linking organizational green training and voluntary workplace green behavior: Mediating role of green supporting climate and employees' green satisfaction. *Journal of Cleaner Production*, 290, 125876. <https://doi.org/10.1016/j.jclepro.2021.125876>
- Arsawan, I. W. E., Koval, V., Rajiani, I., Rustiarni, N. W., Supartha, W. G., & Suryantini, N. P. S. (2022). Leveraging knowledge sharing and innovation culture into SMEs sustainable competitive advantage. *International Journal of Productivity and Performance Management*, 71(2), 405–428.
- Astuti, P., & Datriani, L. (2021). Green competitive advantage: Examining the role of environmental consciousness and green intellectual



- capital. *Management Science Letters*, 11(4), 1141–1152.
- Azeem, M., Ahmed, M., Haider, S., & Sajjad, M. (2021). Expanding competitive advantage through organizational culture, knowledge sharing and organizational innovation. *Technology in Society*, 66(January), 101635. <https://doi.org/10.1016/j.techsoc.2021.101635>
- Bhutto, T. A., Farooq, R., Talwar, S., Awan, U., & Dhir, A. (2021). Green inclusive leadership and green creativity in the tourism and hospitality sector: Serial mediation of green psychological climate and work engagement. *Journal of Sustainable Tourism*, 29(10), 1716–1737.
- Borah, P. S., Dogbe, C. S. K., Pomegbe, W. W. K., Bamfo, B. A., & Hornuvo, L. K. (2023). Green market orientation, green innovation capability, green knowledge acquisition and green brand positioning as determinants of new product success. *European Journal of Innovation Management*, 26(2), 364–385.
- Bradu, P., Biswas, A., Nair, C., Sreevalsakumar, S., Patil, M., Kannampuzha, S., Mukherjee, A. G., Wanjari, U. R., Renu, K., & Vellingiri, B. (2022). Recent advances in green technology and Industrial Revolution 4.0 for a sustainable future. *Environmental Science and Pollution Research International*, 1.
- Camilleri, M. A. (2020). European environment policy for the circular economy: Implications for business and industry stakeholders. *Sustainable Development*, 28(6), 1804–1812.
- Castaneda, D. I., & Cuellar, S. (2020). Knowledge sharing and innovation: A systematic review. *Knowledge and Process Management*, 27(3), 159–173.
- Du, K., & Li, J. (2019). Towards a green world: How do green technology innovations affect total-factor carbon productivity. *Energy Policy*, 131, 240–250.
- Duyen, C. T. Le, Phat, L. T. N., Liem, N. T., Canh, N. M., & Mong, D. T. (2023). Impact of Leadership Styles on Organizational Commitment: Empirical Evidence from Small and Medium Enterprises in Can Tho - Vietnam. *Migration Letters*, 20(8), 751–764. <https://doi.org/10.59670/ml.v20i8.5541>
- Feng, S., Zhang, R., & Li, G. (2022). Environmental decentralization, digital finance and green technology innovation. *Structural Change and Economic Dynamics*, 61, 70–83.
- Gabriela, M. G. L., Eloy, S. A. S., Useff, A. D. M. A., Antonieta, A. G. F. M., Jorge, G. P., & Morales Bedoya, M. A. (2023). Current Trends in Organizational Culture: Driving Employee Engagement. *Migration Letters*, 20, 1228–1240. <https://doi.org/10.59670/ml.v20iS9.4971>
- Gull, S., & Idrees, H. (2022). Green training and organizational efficiency: mediating role of green competencies. *European Journal of Training and Development*, 46(1/2), 105–119.
- Hamadamin, H. H., & Atan, T. (2019). The impact of strategic human resource management practices on competitive advantage sustainability: The mediation of human capital development and employee commitment. *Sustainability*, 11(20), 5782.
- Hutomo, A., Marditama, T., Limakrisna, N., Sentosa, I., Lee, J., & Yew, K. (2020). Green Human Resource Management, Customer Environmental Collaboration and the Enablers of Green Employee Empowerment: Enhancing an Environmental Performance. *Dinasti International Journal of Economics, Finance & Accounting*, 1(2), 358–372. <https://doi.org/10.38035/DIJEFA>
- Kamilia, A. R., & Nawangsari, L. C. (2023). The Effect of Green Human Resource Management on Business Sustainability Through Competitive Advantage in MSMEs in DKI Jakarta. *International Journal of Environmental, Sustainability, and Social Science*, 4(4), 1211–1222. <https://doi.org/10.38142/ijesss.v4i4.745>
- Khan, M. A. S., Jianguo, D., Ali, M., Saleem, S., & Usman, M. (2019). Interrelations between ethical leadership, green psychological climate, and organizational environmental citizenship behavior: A moderated mediation model. *Frontiers in Psychology*, 10, 1977.
- Khan, S. A. R., Sharif, A., Golpîra, H., & Kumar, A. (2019). A green ideology in Asian emerging economies: From environmental policy and sustainable development. *Sustainable Development*, 27(6), 1063–1075.
- Kurniawati, M., & Oktarina, C. A. (2023). Green Human Resource Management Practices Towards Organizational Commitment At Pt Bahtera Utama Magarindo Surabaya. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, 7(2), 286–302.
- Lesmini, L., Subagio, M., Setyawati, A., & Syahrudin, S. (2024). Concept and Application of Green Human Resources : A Literature Review Study. *Dinasti International Journal Of Management Science*, 6(2), 282–294.
- Luo, S., Yimamu, N., Li, Y., Wu, H., Irfan, M., & Hao, Y. (2023). Digitalization and sustainable development: How could digital economy development improve green innovation in China? *Business Strategy and the Environment*, 32(4), 1847–1871.
- Lutfiana, D., & Nur Endah Retno Wuryandari. (2020). Conceptual Green Development in Organic Product: a Consumer Behavior Approach. *Dinasti International Journal of Management Science*, 1(5), 740–749. <https://doi.org/10.31933/dijms.v1i5.296>
- Mayangsari, R. E., & Nawangsari, L. C. (2019). The Effect Of Green Recruitment, Green Training On Environmental Performance In Pt Wira Cipta Perkasa Using Employee Green Behavior As Mediation Variable. *Dinasti International Journal of Management Science*, 1(2), 217–231. <https://doi.org/10.31933/DIJMS>
- Mugoni, E., Nyagadza, B., & Hove, P. K. (2023). Green reverse logistics technology impact on agricultural entrepreneurial marketing firms' operational efficiency and sustainable competitive advantage. *Sustainable Technology and Entrepreneurship*, 2(2), 100034. <https://doi.org/10.1016/j.stae.2022.100034>
- Murphy, J., & Gouldson, A. (2020). Environmental policy and industrial innovation: integrating environment and economy through ecological modernisation. *The Ecological Modernisation Reader*, 275–294.
- Pham, N. T., Vo-Thanh, T., Shahbaz, M., Duc Huynh, T. L., & Usman, M. (2020). Managing environmental challenges: Training as a solution to improve employee green performance. *Journal of Environmental Management*, 269(April), 110781. <https://doi.org/10.1016/j.jenvman.2020.110781>
- Pinzone, M., Guerci, M., Lettieri, E., & Huisingh, D. (2019). Effects of 'green' training on pro-environmental behaviors and job satisfaction: Evidence from the Italian healthcare sector. *Journal of Cleaner Production*, 226, 221–232. <https://doi.org/10.1016/j.jclepro.2019.04.048>
- Pramudita, E. J., & Gunawan, A. W. (2023). The influence of green human resource management, green human capital, and green innovation on environmental performance through green human capital and green innovation. *Journal of Comprehensive Science (JCS)*, 2(2), 738–739.
- Qiu, L., Jie, X., Wang, Y., & Zhao, M. (2020). Green product innovation, green dynamic capability, and competitive advantage: Evidence from Chinese manufacturing enterprises. *Corporate Social Responsibility and Environmental Management*, 27(1), 146–165.
- Rennyta Yusiana, Arry Widodo, Hidayat, A. M., & Oktaviani, P. K. (2020). Green Brand Effects on Green Purchase Intention (Life Restaurant Never Ended). *Dinasti International Journal of Management Science*, 1(5), 762–768. <https://doi.org/10.31933/dijms.v1i5.298>
- Sabokro, M., Masud, M. M., & Kayedian, A. (2021). The effect of green human resources management on corporate social responsibility, green psychological climate and employees' green behavior. *Journal of Cleaner Production*, 313, 127963.
- Shafi, M. Q., Raza, A., Bajwa, A. H., & Gul, N. (2021). Impact of Paternalistic Leadership on Organizational Readiness for Change: Mediating Role of Employee Engagement and Moderating Role of Islamic Work Ethics. *Journal of Islamic Business and Management (JIBM)*, 11(01), 126–143. <https://doi.org/10.26501/jibm/2021.1101-009>
- Shah, S. M. A., Jiang, Y., Wu, H., Ahmed, Z., Ullah, I., & Adebayo, T. S. (2021). Linking green human resource practices and environmental economics performance: the role of green economic organizational culture and green psychological climate. *International Journal of Environmental Research and Public Health*, 18(20), 10953.

- Shahzad, M., Qu, Y., Zafar, A. U., Rehman, S. U., & Islam, T. (2020). Exploring the influence of knowledge management process on corporate sustainable performance through green innovation. *Journal of Knowledge Management*, *24*(9), 2079–2106.
- Sinaga, S. A., & Nawangsari, L. C. (2019). The Effect Of Green Recruitment, Green Training On Employee Performance In Pt Tru Using Organization Citizenship For Environment As Mediation Variable. *Dinasti International Journal of Management Science*, *1*(2), 204–216. <https://doi.org/10.31933/DIJMS>
- Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting and Social Change*, *150*, 119762.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, *104*(July), 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Soewarno, N., Tjahjadi, B., & Fithrianti, F. (2019). Green innovation strategy and green innovation: The roles of green organizational identity and environmental organizational legitimacy. *Management Decision*, *57*(11), 3061–3078.
- Susanto, P. C., Arini, D. U., Marlita, D., & Yuntina, L. (2024). Mixed Methods Research Design Concepts : Quantitative , Qualitative , Exploratory Sequential , Exploratory Sequential , Embedded and Parallel Convergent. *International Journal of Advance Multidisciplinary*, *3*(3), 471–485. <https://doi.org/https://doi.org/10.38035/ijam.v3i3>
- Susanto, P. C., Sawitri, N. N., Ali, H., & Rony, Z. T. (2024). Determinations of employee engagement and employee performance at international freight forwarding company. *Edelweiss Applied Science and Technology*, *8*(6), 356–373. <https://doi.org/10.55214/25768484.v8i6.2080>
- Susita, D., & Murdiono, J. (2024). Green Human Resource : a New Perspective Green Recruitment , Employee Workplace Green Behavior and Green Training ( Study Literature Review ). *Greenation International Journal of Law and Social Science*, *2*(4), 227–239.
- Tahir, R., Athar, M. R., & Afzal, A. (2020). The impact of greenwashing practices on green employee behaviour: Mediating role of employee value orientation and green psychological climate. *Cogent Business & Management*, *7*(1), 1781996.
- Takalo, S. K., & Tooranloo, H. S. (2021). Green innovation: A systematic literature review. *Journal of Cleaner Production*, *279*, 122474.
- Vebrianto, R., Thahir, M., Putriani, Z., Mahartika, I., & Ilhami, A. (2020). Mixed Methods Research: Trends and Issues in Research Methodology. *Bedelau: Journal of Education and Learning*, *1*(2), 63–73.
- Wang, C.-H. (2019). How organizational green culture influences green performance and competitive advantage: The mediating role of green innovation. *Journal of Manufacturing Technology Management*, *30*(4), 666–683.
- Wang, C. H., & Juo, W. (2021). An environmental policy of green intellectual capital: Green innovation strategy for performance sustainability. *Business Strategy and the Environment*, *30*(7), 3241–3254.
- Wang, C., & Hu, Q. (2020). Knowledge sharing in supply chain networks: Effects of collaborative innovation activities and capability on innovation performance. *Technovation*, *94*, 102010.
- Widodo, D. S. (2023). The Effect of Leadership Style on Turnover Intention and Job Satisfaction. *International Journal of Psychology and Health Science*, *1*(1), 19–29.
- Yong, J. Y., Yusliza, M. Y., Ramayah, T., & Fawehinmi, O. (2019). Nexus between green intellectual capital and green human resource management. *Journal of Cleaner Production*, *215*, 364–374. <https://doi.org/10.1016/j.jclepro.2018.12.306>
- Zameer, H., Wang, Y., & Yasmeen, H. (2020). Reinforcing green competitive advantage through green production, creativity and green brand image: Implications for cleaner production in China. *Journal of Cleaner Production*, *247*, 119119.