

ARTIKEL JURNAL INTERNASIONAL BEREPUTASI

Judul artikel Jurnal: Green human resources management practices, leadership style and employee engagement: green banking context

Jurnal : Heliyon

Penulis : **Juliansyah Noor, Zakiyya Tunnufus, Voppy Yulia Handrian, Yumhi**

No	Perihal	Tanggal
1	Bukti Konfirmasi Submit Artikel dan Artikel yang di Submit	14 Juni 2023
2	Bukti Konfirmasi Review Pertama dan Bukti Respons kepada Reviewer	30 Juni 2023
3	Bukti Konfirmasi Review Kedua dan Bukti Respons kepada Reviewer	21 Agustus 2023
4	Bukti Konfirmasi Review Ketiga dan Bukti Respons kepada Reviewer	07 November 2023
5	Bukti Konfirmasi Artikel Accepted	13 November 2023
6	Bukti Artikel Published Online	15 November 2023

# 1. BUKTI KONFIRMASI SUBMIT ARTIKEL DAN ARTIKEL YANG DI SUBMIT (14 JUNI 2023)

Fw: Confirming submission to Heliyon Kotak Masuk x



**Yumhi Ahmad**  
kepada saya ▾

10.54 (17 menit yang lalu) ☆ 😊 ↶

----- Pesan yang Diteruskan -----

**Dari:** Heliyon <[em@editorialmanager.com](mailto:em@editorialmanager.com)>

**Kepada:** Yumhi Yumhi <[yumhiahmad@yahoo.co.id](mailto:yumhiahmad@yahoo.co.id)>

**Ter kirim:** Rabu, 14 Juni 2023 pukul 14.44.04 WIB

**Judul:** Confirming submission to Heliyon

You are being carbon copied ("cc:d") on an e-mail "To" "Juliansyah Noor" [juliansyahnoor@latansamashiro.ac.id](mailto:juliansyahnoor@latansamashiro.ac.id)

CC: "Zakiyya Tunnufus" [drzakiiyatunnufus@gmail.com](mailto:drzakiiyatunnufus@gmail.com), "Voppy Handriana" [profjul.noor@gmail.com](mailto:profjul.noor@gmail.com), "Yumhi Yumhi" [yumhiahmad@yahoo.co.id](mailto:yumhiahmad@yahoo.co.id)

\*This is an automated message.\*

Green human resource management practices, leadership styles, and employee engagement: green banking context

Dear Dr Noor,

We have received the above referenced manuscript you submitted to Heliyon. It has been assigned the manuscript number HELIYON-D-23-25499. To track the status of your manuscript, please log in as an author at <https://www.editorialmanager.com/heliyon/>, and navigate to the "Submissions Being Processed" folder.

Kind regards,  
Heliyon

More information and support

# Heliyon

## Green human resource management practices, leadership styles, and employee engagement: green banking context --Manuscript Draft--

<b>Manuscript Number:</b>	HELIYON-D-23-25499
<b>Article Type:</b>	Original Research Article
<b>Section/Category:</b>	Social Sciences
<b>Keywords:</b>	Green Human Resource Management practices; Employee Engagement; Transformational Leadership
<b>Manuscript Classifications:</b>	140.170.140: Management
<b>Corresponding Author:</b>	Juliansyah Noor, Doctor STIE La Tansa Mashiro Rangkasbitung, Banten INDONESIA
<b>First Author:</b>	Juliansyah Noor, Doctor
<b>Order of Authors:</b>	Juliansyah Noor, Doctor Zakiyya Tunnufus Voppy Handriana Yumhi Yumhi
<b>Abstract:</b>	<p>This paper discusses green human resource management (GHRM) practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how GHRM practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, GHRM practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green HRM practices can promote employee engagement.</p>
<b>Suggested Reviewers:</b>	<p>Ade Jaya Sutisna, Doktor Lecturer, STIE La Tansa Mashiro adejayasutisna_64@gmail.com He is a good reviewer</p> <p>Soleh Soleh, Doctor Lecturer, STIE La Tansa Mashiro kangenceh@gmail.com He is a good Reviewer</p> <p>Azahari bin Ramli, Ph.D Associate Prof., Universiti Utara Malaysia College of Arts and Sciences arie@uum.edu.my He is a Good Reviewer</p>
<b>Opposed Reviewers:</b>	

# Green human resources management practices, leadership style and employee engagement: green banking context

Juliansyah Noor<sup>1</sup>, Zakiyya Tunnufus, Voppy Yulia Handrian, Yumhi

*Department of Management, La Tansa Mashiro University, Banten, Indonesia*

## Abstract

This paper discusses green human resource management (GHRM) practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how GHRM practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, GHRM practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green HRM practices can promote employee engagement.

**Keywords:** Green human resource management practices, Employee engagement, Transformational leadership

JEL classification: J81, M12, M21

## 1. Introduction

In recent years, issues regarding green banking have been widely discussed by people around the world. This issue arises along with the increasing global concern about the harmful effects of pollution and environmental contamination. In simple terms, green banking can be interpreted as the banking business concept with a green environmental perspective. This concept is aimed at creating a green industry in the context of restoring environmental pollution and sustainable ecological balance (Bhardwaj & Malhotra, 2013; Rehman et al., 2021). Currently, the majority of banks around the world have implemented this concept into their business, which is governed by formal rules and laws. However, will they be successful in achieving the goals of the concept? A number of researchers argue that The successful attainment of an organization's strategic sustainability goals relies on having employees of competent, possessing an extensive technical and managerial skill (e.g., Al-Romeedy, 2019; Roscoe et al., 2019; Ansari et al., 2021; Renwick et al., 2016). In other words, achieving the goals of a sustainability strategy depends on green human resource management (GHRM) practices, employee engagement, and organizational leadership.

It is undeniable that human resources are the main factor for achieving organizational goals, including in building a sustainable organization (Roscoe et al., 2019). GHRM practices are needed to produce quality, manage and develop environmentally sound employees. However, this practice also does not fully guarantee the natural resources and its environment preservation. This is because issues related to the environment are interdisciplinary in nature, which requires initiative and pro-environmental behavior from each individual (Zientara & Zamojska, 2018; Paillé et al., 2014). Therefore, this practice becomes very important when it is able to foster employee involvement when carrying out activities related to the environment (Renwick et al., 2016) and encourages innovation environment (Roscoe et al., 2019). When employees are involved, both formally and informally, this can encourage high-level initiatives, innovative behavior, role expansion, and have the ability to adapt to change (Ababneh et al., 2021). In addition, employee involvement can also encourage them to be psychologically present when carrying out their work, and comply with formal employment prerequisites and organizational regulations (Presbitero, 2017).

On the other hand, organizational leadership also plays an important role in the link between GHRM practices and employee engagement. Belief in attaining objectives and practices within the organization (including GHRM practices) is the result of reciprocal exchanges between leaders and their subordinates (Ababneh et al., 2021).

---

\*Coressponding author:

email: [juliansyahnoor@latansamashiro.ac.id](mailto:juliansyahnoor@latansamashiro.ac.id) (Juliansyah Noor)

1 Individuals feel compelled to respond to the economic, emotional, and social support provided by their leaders.  
2 (Ćerne et al., 2018). Therefore, the engagement variable, which comprises implications of creative, pro-social, and  
3 proactive behavior, can be encouraged by positive interactions between individuals and their leaders (Ababneh et  
4 al., 2019; Azim et al., 2019). Specifically, Ababneh et al. (2021) have demonstrated the important leadership role  
5 in the link between GHRM practices and employee engagement. Theirs is the first study to explore this, and found  
6 a significant positive interaction influence transformational leadership on the relationship.

7 The concept of green banking has been widely implemented in Indonesia, especially since the implementation  
8 of "Law No. 32 of 2009" pertains to the protection and management of the environment. However, the new green  
9 banking boom began in 2015. Until now, studies on green banking practices in the human resources context are  
10 still limited. The majority of existing studies also focus on organizational and environmental performance (for  
11 example, Yu et al., 2020; Acquah et al., 2021). Studies on the link between GHRM practices and performance can  
12 indeed help to understand organizational conditions and practices, but are unable to identify how employees  
13 understand, interact, and adapt to a green-based work environment (Dumont et al., 2016; Roscoe et al., 2019;  
14 Ababneh et al., 2021). This is the first study to examine the link between GHRM practices, employee engagement,  
15 and transformational leadership in the context of green banking in Indonesia.

## 16 **2. Literature Review and Hypothesis Development**

### 17 *2.1 Green Human Resource Management Practices*

18 GHRM practices have been broadly defined, but all definitions lead to green environment oriented aspects.  
19 Al-Romeedy (2019) defines it as “the involvement of all activities in the development, implementation and  
20 maintenance of a sustainable system, with the aim of making employees and organizations environmentally  
21 aware.” Meanwhile, Amrutha and Geetha (2020) define it as “policies, practices and systems that make  
22 organizational employees green for the benefit of individuals, society, the environment and business.” Rana and  
23 Sharma (2019) define it as “the application of HRM practices with the aim of promoting the use of sustainable  
24 resources, which prioritizes environmental preservation to increase employee awareness and commitment to  
25 environmental management issues.” This is in line with Deshwal (2015), who views it as “an organizational  
26 strategy to increase employees' environmental awareness.” As such, the GHRM practice refers to traditional HRM  
27 practices with a focus on a green environment orientation. So, in principle, GHRM practices are the same as  
28 traditional HRM practices. Conventional HRM practices center on hiring and choosing personnel, enhancing their  
29 skills and expertise, providing remuneration, evaluating their performance, while GHRM practices do more than  
30 just that. GHRM practices need to integrate conventional HRM practices with managing the environment with the  
31 aim of promoting and affecting attitudes, knowledge, motivation, and behavior related to employee sustainability  
32 (Anwar et al., 2020; Kim et al., 2019; Pham et al., 2020). This practice adopts a comprehensive comprehension of  
33 the "triple bottom-line concept," which involves practices that are aligned with the three pillars of “environmental,  
34 social, and economic balance sustainability” (Yusoff et al., 2020), and bring long-term benefits (Ehnert et al.,  
35 2016).

36 Just like traditional HRM practice, GHRM practice also includes factors, such as recruitment and selection,  
37 training and development, performance evaluation, compensation, etc., but all of them are green environment  
38 oriented. To illustrate, in a green recruitment and selection process, GHRM practices emphasize the recruitment  
39 and selection of employees who endorse and exhibit interest in the environment (S. Ren et al., 2018). During the  
40 job analysis phase, environmental aspects and accomplishments should be elucidated and emphasized in job  
41 descriptions and individual specifications, and elaborate on the expectations for prospective environmentally-  
42 conscious employees (S. Ren et al., 2018; Yong et al., 2022). Thus, this recruitment and selection can ensure that  
43 new employees comprehend the organization's green culture and uphold its environmental principles (Bahuguna  
44 et al., 2023). In line with this, training and development are also more focused on aspects that are environmentally  
45 friendly (Jabbour et al., 2019), and this is the most significant factor for creating green behavior from employees  
46 (Amrutha & Geetha, 2020). Likewise related to performance evaluation and compensation are also focused on  
47 green environment- oriented aspects, such as providing feedback for employees to be able to support continuous  
48 improvement (Anwar et al., 2020; S. Ren et al., 2018), “giving awards to employees for their commitment to  
49 environmental practices” (Jabbour & Jabbour, 2016).

### 50 *2.2 Employee engagement*

51 Saks and Gruman (2014) defined employee engagement as “a multidimensional construct consisting of  
52 physical, cognitive, affective, and behavioral components.” Employees who are engaged feel capable of  
53 completing their assigned tasks, as they possess higher levels of energy and connection towards their work (Robijn  
54 et al., 2020). Knight et al. (2019) identified four types of employee engagement: (1) “personal resource  
55 development,” the focus of personal resource development is on enhancing individual strengths, such as “self-  
56 efficacy, resilience, and optimism”; (2) “development of employment resources,” the aim of employment resource  
57 development is to cultivate positive dimensions of the employee engagement, such as "autonomy, social support,  
58 feedback, and development opportunities"; (3) “leadership training,” leadership training is designed to enhance  
59  
60  
61  
62  
63  
64  
65

managerial leadership skills through a combination of educational and hands-on training methods, such as group-based exercises in “goal-setting and problem-solving”; and (4) “health promotion,” the main objective of health promotion is to enhance individual health and well-being while minimizing stress.

### 2.3 Relationship between GHRM practices and employee engagement

Park et al. (2010) developed the Ability Motivation Opportunity (AMO) theory. They give a framework for examining the relationship between employee engagement and GHRM practices. This theory posits that employee capabilities can be enhanced through the recruitment of skilled and competent staff, and/or by effective training and development program implementations. The selection of competent employees is aligned with Employee engagement's task-performance dimension, in which engaged employees are present psychologically when performing their formal duties (Presbitero et al., 2016; Ali Ababneh et al., 2021). While it is not always necessary for employees to be creative and innovative when dealing with environmental issues, there are instances where adherence to pre-developed policies and procedures is required to control certain behaviors in the workplace. Therefore, efforts to improve the alignment between employee competencies, values, and goals, and organizational goals are important (Dumont et al., 2016). Hiring environmentally knowledgeable employees positively influences their perceptions and cognitive evaluations of corporate environmental initiatives, which leads to their full engagement in carrying out tasks in an environmentally friendly manner (Jabbour et al., 2019; Renwick et al., 2013). Engagement variables can also link training and development to the goal orientation and task performance domains (Pinzone et al., 2019). Designing training and orientation and programs that focus on environmental aspects can increase employee awareness of their surrounding environment and their role in achieving these goals effectively. Several studies have also confirmed the positive impact of “GHRM practices on employee engagement” (Naz et al., 2023; Renwick et al., 2016; Pinzone et al., 2019). Thus, this study hypothesizes that:

**H1.** GHRM practices have a positive effect on employee engagement.

### 2.4 Moderating effects of transformational leadership

The leadership quality paradigm known as transformational leadership (Ali Ababneh et al., 2021) aligns individual values and employee demands with organizational vision, mission, strategy, and goals. Transformational leaders have the ability to inspire, empower, and persuade their subordinates to take part in organizational change and achieve goals (Naz et al., 2023). They are crucial for promoting positive social interactions with subordinates and are known for their skills in exciting, inspiring, building trust, providing meaning and challenge, and reinforcing proactivity and adaptability in the workplace (Bass & Riggio, 2005). As a result, transformational leaders play an important role in aligning followers' self-actualization with organizational values and systems.

The AMO framework describes that transformational leadership can enhance the relationship between GHRM practices and employee engagement. Sosik et al. (2004) stated that leaders who exhibit transformational qualities are capable of creating a culture of learning that motivates subordinates to seek out new learning opportunities. As a result, employees become actively engaged in training programs designed to improve their knowledge and skills related to solving environmental issues (Renwick et al., 2016). Furthermore, transformational leaders possess the necessary vision and judgment to select employees who have the appropriate experience and knowledge for the organization's environment, standards of performance, and goals. This indicates that transformational leaders are inclined to foster the development of new competencies, and the recruitment of environmentally knowledgeable employees reinforces the abilities dimension of AMO. Additionally, transformational leadership can play a motivational role in the AMO framework.

Transformational leaders motivate and inspire their subordinates by sharing their vision, communicating expectations and standards of performance, providing feedback on their performance, and recognizing their achievements both intrinsically and extrinsically. Additionally, recognizing and appraising employees' ongoing behavior can enhance their sense of role meaningfulness, which, in turn, increases their enthusiasm and energy towards achieving superior performance (Kotzé et al., 2014). Finally, transformational leaders' behaviors can also bolster employee engagement. Thus, this study hypothesizes that:

**H2.** Transformational leadership moderates the relationship between GHRM practices and employee engagement.

## 1. Research methods

Data was collected through the distribution of electronic questionnaires to employees working in green banking in Indonesia. The questionnaire contains a number of questions, which are measured with a 5 Likert scale, namely “strongly disagree,” “disagree,” “undecided, agree,” and “strongly agree.” This electronic questionnaire was distributed via social media in the period from 1 to 30 September 2021. Until the specified deadline, only 363 questionnaires were filled in. Specifically, 54.1% of them were filled by female respondents and the other 45.9%

by men. Based on age, 39.1% of them were filled by respondents aged 21-30 years, 43.6% aged 31-40 years, and 17.3% aged more than 40 years. Based on education, 33.1% were respondents with diploma education, 53.4% undergraduate, and 13.5% postgraduate. Based on tenure, 35.3% were filled by respondents with tenures of 3-5 years, 54.2% with tenures of 6-10 years, and 10.5% with tenures of more than 10 years.

In this study, employee engagement is defined as an employee's assessment of his or her feelings, which reflects the extent to which an employee is psychologically present in an organizational role. The indicators and questionnaire to measure employee engagement were adopted from Ren et al. (2022) and Schaufeli et al. (2006). Meanwhile, GHRM practice is defined as an employee's assessment of the process of finding and selecting prospective employees to fill job vacancies in their organization. The indicators and questionnaires to measure this were adopted from Tang et al. (2018). Meanwhile, transformational leadership is defined as an assessment of the way leaders build close relationships with their subordinates. The indicators and questionnaires for their measurement are adopted from Singh et al. (2020)

Data analysis using the regression model. The regression models developed for this research are:

$$EE = \beta_1RS + \beta_2TD + \beta_3TL + \beta_4(RS * TL) + \beta_5(TD * TL) + \beta_6Gender + \beta_7Age + \beta_8Edu + \beta_9Tenure + \varepsilon \dots\dots\dots (1)$$

where: EE is employee engagement; RS is recruitment and selection; TD is training and development; TL stands for transformational leadership; (RS\*TL) is the interaction between recruitment and selection with transformational leadership; (TD\*TL) is the interaction between training and development and transformational leadership; Gender, Age, Education, and Tenure are the demographic factors of the respondents (control variables);  $\beta$  is the slope; and  $\varepsilon$  is the residual error.

**2. Results and discussion**

*4.1 Statistics and Description*

The results of the study show that employee engagement (EE) in activities with a green environmental perspective is not optimal. This can be seen from the average value of the indicators which is still smaller than a scale of 4 (mean = 2.49), which means that respondents are doubtful about their involvement in activities with a green environmental perspective. Likewise with green recruitment and selection (RS) (mean = 2.56), and green training and development (TD) (mean = 2.36). Meanwhile, the bank's leadership style is also not completely transformational (mean = 2.45). These four aspects are positively correlated with each other, indicating that if one of these aspects is improved, the other aspects will also increase. Their correlation level is very large, which is more than 50% (see Table 1).

**Table 1.**  
Statistics result

	Mean	SD	EE	RS	TD	TL	Gen	Age	Edu
Employee engagement (EE) <sup>a</sup>	2.49	0.71	1.00						
Recruitment & selection (RS) <sup>a</sup>	2.56	0.86	0.62***	1.00					
Training & development (TD) <sup>a</sup>	2.36	0.75	0.65***	0.58***	1.00				
Transformational leadership (TL) <sup>a</sup>	2.45	0.80	0.68***	0.65***	0.72***	1.00			
Gender (Gen) <sup>b</sup>	1.54	0.50	0.06	0.10	0.08	0.14*	1.00		
Age (Age) <sup>c</sup>	1.78	0.72	0.15*	0.05	0.11	0.05	-0.01	1.00	
Education (Edu) <sup>d</sup>	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) <sup>e</sup>	1.80	0.57	0.10	-0.03	-0.03	0.05	0.08	0.68***	0.16*

Note: “a) the data was measured using a Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree; b) data is measured with an ordinal scale, where 1 = male and 0 = female; c) data is measured on an ordinal scale, where 1 = 21-30 years, 2 = 31-40 years, and 3 = >40 years; d) data is measured by ordinal scale, where 1 = diploma, 2 = undergraduate, and 3 = postgraduate; e) data is measured by ordinal scale, where 1 = 3-5 years, 2 = 6-10 years, and 3 = <10 years; \*\*\* significant 1%, \*\* significant 5%, and \* significant 10%.”

From a demographic perspective, the correlation of employee engagement is only significant with age, while the correlation with gender, education, and tenure is not significant. The positive and significant correlation between EE and age indicates that the higher the employee's age, the higher the engagement. Meanwhile, these demographic factors are not correlated with green RS. Likewise with green TD and TL. For the demographic factor itself, gender does not have a significant correlation with age, education, education and tenure. Age is only

positively correlated with tenure, but not with other demographic factors. This shows that the older the employees, the higher their tenure. Education is only correlated with tenure, but not with other demographic factors. The positive and significant correlation between education and tenure shows that the higher the education level of employees, the higher their tenure, or vice versa.

#### 4.2 Relationship between GHRM practices and employee engagement

Specifically, “green recruitment and selection” (RS) and “green training and development” (TD) are positively and significantly related to “green employee engagement” (EE), both partially and simultaneously, even after controlling for demographic factors such as gender, age, education, and tenure (see Table 2, Models I, II, and III). The relationship between green RS and green TD with green EE is quite strong ( $R = 0.63$ ), with a relatively high explanatory variance ( $\text{Adj. } R^2 = 0.40$ ). This shows that green RS and green TD can drive green EE significantly. When compared between the two, the contribution of green TD to green EE is greater than the effect of green RS ( $\beta = 0.44$  vs.  $0.37$ ). This shows that green TD is more effective in creating EE than RS. Nevertheless, both are strong predictors of building green EE.

High EE with organizational environmental initiatives depends on the influence of the effectiveness of green RS and individual personality propositions (awareness and positive influence). That is, various aspects of individual behavior (“voluntary and involuntary”) are influenced by the congruence between employees' individual “perceptions, values, and norms and organizational practices, goals, and norms” (Saks & Gruman, 2014). Therefore, in an environmental context, a variable set of green RS is likely to motivate employees to engage with corporate environmental initiatives (Bailey et al., 2017). Contrary to the theoretical arguments developed earlier in this study, proactive personality reports a non-significant effect on the relationship between green RS and EE. This can be attributed to the disruptive influence of “cultural norms, beliefs, and values” that employees may have on how they interpret role requirements and procedures, adapt to changing business requirements, and understand green RS (Dumont et al., 2016). In other words, individual perceptions and interpretations of an organization's actions and initiatives on the environment may vary according to their differences in “cultural norms, standards, traditions and principles.”

Meanwhile, sustainability requires not only adherence to formal rules but also EE with voluntary green initiatives in the workplace. And this can result from having green training and development practices (Naz et al., 2023). Implementing sustainability in green training and development practices helps in obtaining different benefits for the organization such as cutting costs, retaining and attracting employees with green behavior and awareness, and improving the company's business. One of the important aspects of this practice is green training and development practices which can influence various environmentally friendly behaviors of employees, especially employee engagement (Roscoe et al., 2019). Implementing appropriate green training and development practices through their impact on employee engagement will increase the competitive advantage of these organizations (Davis & Van der Heijden, 2018).

Meanwhile, green transformational leadership (TL) is proven to moderate the link between GHRM practices and employee engagement (EE). Statistically, the interaction of GHRM practices (RS\*TL and TD\*TL) did not show a significant effect. However, the contribution of GHRM practices (RS and TD), respectively, increases when interaction variables are included in the model, both in partial and full interaction models (see Table 2, Models IV, V, and VI). Specifically, green transformational leadership can enhance the link between green RS and green EE. Directly, green RS can increase green EE, but this capability is further enhanced by green transformational leadership. This shows that the role of the leader is very strategic in creating the environment and achieving organizational goals. Likewise with green training and development, it can directly increase the involvement of green work, and will further increase when there is green transformation leadership.

**Table 2.**  
Regressions results

	I	II	III	IV	V	VI
Recruitment & selection (RS)	0.62***		0.37***	0.72***		0.74**
Training & development (TD)		0.66***	0.44***		0.76***	0.82**
Transformational leadership (TL)				0.51***	0.79***	0.57**
RS*TL				-0.04		-0.47
TD*TL					-0.64	-0.44
Gender (Gen)	-0.01	0.01	-0.02	-0.04	-0.04	-0.04
Age (Age)	0.05	-0.02	-0.02	0.07	0.03	0.01
Education (Edu)	-0.03	-0.05	-0.04	-0.05	-0.04	-0.04
Tenure (Ten)	0.08	0.14	0.15*	0.04	0.09	0.11

Memo item:

<i>R</i>	0.63	0.66	0.73	0.73	0.79	0.76
<i>R Square</i>	0.40	0.44	0.53	0.54	0.54	0.57
<i>Adj. R<sup>2</sup></i>	0.38	0.42	0.51	0.51	0.52	0.55
<i>F-stat.</i>	17.31***	20.37***	24.14***	21.06***	21.44***	21.24***
<i>No. of Obs.</i>	133	133	133	133	133	133

Note: \*\*\* significant 1%, \*\* significant 5%, and \* significant 10%.

The role of TL in the relationship between GHRM practices and green EE can also be seen from the *R*, *R square*, and *Adj values*. *R<sup>2</sup>*. These values increase when the interaction effects of transformational leadership are included in the model. The relationship of GHRM practices to employee engagement is strong (*R* = 0.73, see Model III), and gets stronger when interaction effects are included in the model (*R* = 0.76, see Model VI). The variance of GHRM practices in explaining green employee engagement also increases when interaction effects are included in the model. The variance of GHRM practices in explaining green employee engagement is high (*Adj. R<sup>2</sup>* = 0.51), while when interaction effects are included in the model, the variance of GHRM practices increases (*Adj. R<sup>2</sup>* = 0.55).

The role of TL in encouraging and motivating followers, managing change, shaping perceptions and values, and promoting innovative thinking and problem-solving skills in the workplace has increased in recent years (Burns, 2007). To this end, leadership has been suggested to enhance employees' favorable perceptions of green RS that involve organizational goals, policies, and systems, since the conduct and practices of leaders are closely linked to the performance of subordinates/employees (Wefald et al., 2011). This can be viewed through the lens of social exchange theory, in which individuals exhibit diverse patterns while engaging in social structures that they encounter at work (Černe et al., 2018).

To achieve positive individual interactions such as achieving desired goals and performing assigned tasks, it is essential to meet employees' expectations of recognition and reward, such as “autonomy, praise, and compensation” (Davis & Van der Heijden, 2018). Furthermore, beliefs in corporate initiatives, practices, and intentions arise from the social approvals exchanged between leaders and the individual values of their subordinates, which can be negatively or positively affected by such social interactions. As a result, individuals' expectations of role fulfillment depend on their evaluations of the quality of these exchanges, which rely on how much each member of the dyad is willing to comply with their role obligations and face the associated consequences and expectations (Davis & Van der Heijden, 2018; Černe et al., 2018)

In the leadership literature, TL is regarded as the leadership quality paradigm that fosters alignment and gradual identification between the values and demands of individual employees and the organization's mission, vision, and strategic goals (Bass et al., 2003). TL possess characteristics such as “ideal influence, individual consideration, intellectual stimulation, and inspirational motivation” that allow them to motivate, empower, and persuade subordinates to participate in organizational change and goal attainment processes (Rothfelder et al., 2012).

Consequently, transformational leaders are viewed as having qualities that are critical in promoting positive social exchanges with their subordinates. TL are known for their ability to energize, inspire, build trust, provide meaning and challenge, and reinforce proactiveness and workplace adaptability (Bass et al., 2003). Given the above arguments that emphasize the critical role of transformational leaders in aligning subordinates' self-actualization with organizational systems and values, it is reasonable to propose a moderating impact of TL on the link between green RS and EE in an environmental context.

The results of the data analysis also show that the effects of GHRM practices and the interaction effects of the transformational on green employee engagement vary (see Table 3, Model I). Green recruitment and selection (RS) only significantly influence the behavioral aspects of green employee engagement, but does not significantly affect the affective and cognitive aspects of job engagement. This shows that green recruitment and selection can encourage green behavior of employees, but is not able to affect their affective and cognitive. Meanwhile, green training and development (TD) only significantly influences the affective aspects of employees related to green employee engagement. However, it does not significantly affect cognitive and behavioral aspects. Thus, green recruitment and selection are only able to drive the behavioral aspects of green engagement, while training and development are only able to influence the affective aspects of green employee engagement. As for the cognitive aspects of green employee involvement, it cannot be driven by green RS as well as TD.

**Table 3.**  
Specific regression

	Affective		Cognitive		Behavioraal	
	I	II	I	II	I	II
Recruitment & selection (RS)	0.01	0.08	0.06	0.13	0.58***	0.65***
Training & development (TD)	0.41*	0.48*	0.04	0.11	-0.16	-0.09
Transformational leadership (TL)		0.64***		0.45*		0.52**
<i>RS*TL</i>		0.39		0.26		-0.67
<i>TD*TL</i>		-0.77***		-0.13		0.46
Gender (Gen)	-0.19**	-0.12**	-0.17*	-0.10*	-0.03	0.04
Age (Age)	-0.12	-0.05	0.06	0.01	0.02	0.09
Education (Edu)	-0.12	-0.05	-0.11	-0.04	-0.08	-0.01
Tenure (Ten)	0.06	0.13	-0.04	0.03	-0.06	0.01
Memo item:						
<i>R</i>	0.67	0.74	0.68	0.75	0.70	0.77
<i>R Square</i>	0.48	0.55	0.49	0.56	0.52	0.59
<i>Adj. R<sup>2</sup></i>	0.45	0.52	0.46	0.53	0.49	0.56
<i>F-stat.</i>	16.83***	16.90***	17.51***	17.58***	19.89***	19.96***
<i>No. of Obs.</i>	133	133	133	133	133	133

Note: \*\*\* significant 1%, \*\* significant 5%, and \* significant 10%.

The link between GHRM practices and green EE can be moderated by TL, particularly in the affective and behavioral aspects, as shown in Table 3, Model II. Green recruitment and selection can boost the behavioral aspect of green EE, especially when the organization is led by TL. Similarly, green TD can promote the affective aspect of green EE, which is also amplified by TD.

TL also plays a significant role in fully mediating the relationship between green TD and EE. TL tend to create a learning environment that motivates subordinates to seek new learning opportunities, reflected in the involvement of private bank employees in organizational training programs that enhance their knowledge and awareness of environmental issues (Saks & Gruman, 2014). Moreover, TL have the vision and judgment to select employees who align with environmental values, performance standards, and organizational goals. By facilitating learning and acquiring new competencies, and hiring environmentally-minded employees, transformational leadership strengthens the "ability" dimension (Roscoe et al., 2019).

TL can also enhance the "motivation" dimension by inspiring and motivating subordinates through vision-sharing, communicating role expectations and performance standards, providing constant feedback, and recognizing employee performance and goal attainment. By recognizing employees' ongoing behavior in appraisal practices, their perception of role meaningfulness increases, leading to extra performance.

Furthermore, TL can strengthen the "opportunity" dimension by stimulating the intellectual abilities of followers, encouraging a creative flow of thought and innovative behavior, and cultivating an engaging environment where employees' voices are heard (Sosik et al., 2004). These open channels of communication can enhance employee involvement in developing innovative environmental initiatives.

### 3. Conclusion implication, and limitation

In general, GHRM practices such as green RS, and green TD, have a significant and positive relationship with employee engagement, albeit with varying impacts on different aspects of engagement. Green RS affect only the behavioral aspect of green EE, while green TD only affect the affective aspect. The positive and significant correlation between GHRM practices and EE is strengthened by the presence of green TL, and the relationship shows a high explanatory variance.

Although the current study provides valuable insights into the theory and practice of GHRM, there are still several areas that require further investigation. Firstly, since this research is limited to the banking industry in Banten, external validity may be a concern. Therefore, future research should explore the proposed framework in other non-bank financial industries and other financial or non-financial sectors to examine whether the results are consistent across different industries.

Secondly, the study focuses on the Indonesian context and examines the influence of green RS, green TD, TL, and EE. Expanding these findings to developing countries and other countries with different cultural backgrounds would yield useful insights for future research.

1 Thirdly, while this study investigates the role of indirect TL in the link between green RS, green TD, and  
2 EE, future research should triangulate this data source by gathering qualitative data using “in-depth interviews” or  
3 “focus groups”. Such an approach would provide additional insights into the mediating effect of TL on EE.

4 Furthermore, there may be other variables that mediate the link between green RS, green TD, and EE, which  
5 future studies should consider. Finally, future research on the link between GHRM practices and EE should  
6 examine moderators, which could provide additional insights into this important link.

## 8 References

- 9  
10 Ababneh, O. M. A., LeFevre, M., & Bentley, T. (2019). Employee engagement: Development of a new measure.  
11 *International Journal of Human Resources Development and Management*, 19(2), 105–134.  
12 <https://doi.org/10.1504/IJHRDM.2019.098623>
- 13 Acquah, I. S. K., Agyabeng-Mensah, Y., & Afum, E. (2021). Examining the link among green human resource  
14 management practices, green supply chain management practices and performance. *Benchmarking*, 28(1),  
15 267–290. <https://doi.org/10.1108/BIJ-05-2020-0205>
- 16 Al-Romeedy, B. S. (2019). Green human resource management in Egyptian travel agencies: constraints of  
17 implementation and requirements for success. *Journal of Human Resources in Hospitality and Tourism*,  
18 18(4), 529–548. <https://doi.org/10.1080/15332845.2019.1626969>
- 19 Ali Ababneh, O. M., Awwad, A. S., & Abu-Haija, A. (2021). The association between green human resources  
20 practices and employee engagement with environmental initiatives in hotels: The moderation effect of  
21 perceived transformational leadership. *Journal of Human Resources in Hospitality and Tourism*, 20(3), 390–  
22 416. <https://doi.org/10.1080/15332845.2021.1923918>
- 23 Amrutha, V. N., & Geetha, S. N. (2020). A systematic review on green human resource management: Implications  
24 for social sustainability. *Journal of Cleaner Production*, 247, 119131.  
25 <https://doi.org/10.1016/j.jclepro.2019.119131>
- 26 Ansari, N. Y., Farrukh, M., & Raza, A. (2021). Green human resource management and employees pro-  
27 environmental behaviours: Examining the underlying mechanism. *Corporate Social Responsibility and*  
28 *Environmental Management*, 28(1), 229–238. <https://doi.org/10.1002/csr.2044>
- 29 Anwar, N., Nik Mahmood, N. H., Yusliza, M. Y., Ramayah, T., Noor Faezah, J., & Khalid, W. (2020). Green  
30 Human Resource Management for organisational citizenship behaviour towards the environment and  
31 environmental performance on a university campus. *Journal of Cleaner Production*, 256, 120401.  
32 <https://doi.org/10.1016/j.jclepro.2020.120401>
- 33 Azim, M. T., Fan, L., Uddin, M. A., Abdul Kader Jilani, M. M., & Begum, S. (2019). Linking transformational  
34 leadership with employees’ engagement in the creative process. *Management Research Review*, 42(7), 837–  
35 858. <https://doi.org/10.1108/MRR-08-2018-0286>
- 36 Bahuguna, P. C., Srivastava, R., & Tiwari, S. (2023). Two-decade journey of green human resource management  
37 research: a bibliometric analysis. *Benchmarking: An International Journal*, 30(2), 585–602.  
38 <https://doi.org/10.1108/BIJ-10-2021-0619>
- 39 Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The Meaning, Antecedents and Outcomes of Employee  
40 Engagement: A Narrative Synthesis. *International Journal of Management Reviews*, 19(1), 31–53.  
41 <https://doi.org/10.1111/ijmr.12077>
- 42 Bass, B. M., & Riggio, R. E. (2005). *Transformational Leadership* (2nd ed, Issue 6). Lawrence Erlbaum  
43 Associates, Inc.
- 44 Bhardwaj, B. R., & Malhotra, A. (2013). Green Banking Strategies: Sustainability through Corporate  
45 Entrepreneurship. *Greener Journal of Business and Management Studies*, 3(4), 180–193.  
46 <https://doi.org/10.15580/gjbms.2013.4.122412343>
- 47 Burns, J. M. (2007). *Transforming Leadership*. Grove Press: New York.
- 48 Černe, M., Batistič, S., & Kenda, R. (2018). HR systems, attachment styles with leaders, and the creativity–  
49 innovation nexus. *Human Resource Management Review*, 28(3), 271–288.  
50 <https://doi.org/10.1016/j.hrmr.2018.02.004>
- 51 Davis, A. S., & Van der Heijden, B. I. J. M. (2018). Reciprocity matters: Idiosyncratic deals to shape the  
52 psychological contract and foster employee engagement in times of austerity. *Human Resource Development*  
53 *Quarterly*, 29(4), 329–355. <https://doi.org/10.1002/hrdq.21327>
- 54 Deshwal, P. (2015). Green HRM : An organizational strategy of greening people. *International Journal of Applied*  
55 *Research* 2015; 1(13): 176-181, 1(13), 176–181.  
56 <http://www.allresearchjournal.com/archives/2015/vol1issue13/PartC/1-12-161.pdf>
- 57 Dumont, J., Shen, J., & Deng, X. (2016). Effects of Green HRM Practices on Employee Workplace Green  
58 Behavior: The Role of Psychological Green Climate and Employee Green Values. *Human Resource*  
59 *Management*, 56(4), 613–627. <https://doi.org/10.1002/hrm>
- 60  
61  
62  
63  
64  
65

- 1 Ehnert, I., Parsa, S., Roper, I., Wagner, M., & Muller-Camen, M. (2016). Reporting on sustainability and HRM: a  
2 comparative study of sustainability reporting practices by the world's largest companies. *International*  
3 *Journal of Human Resource Management*, 27(1), 88–108. <https://doi.org/10.1080/09585192.2015.1024157>
- 4 Jabbour, C. J., & Jabbour, D. S. (2016). Green Human Resource Management and Green Supply Chain  
5 Management: Linking two emerging agendas. *Journal of Cleaner Production*, 112, 1824–1833.  
6 <https://doi.org/10.1016/j.jclepro.2015.01.052>
- 7 Jabbour, C., Jose, C., Sarkis, J., Jabbour, L. de S., Beatriz, A., Renwick, S., William, D., Singh, S. K., Grebinevych,  
8 O., Kruglianskas, I., & Filho, M. G. (2019). Who is in charge? A review and a research agenda on the 'human  
9 side' of the circular economy. *Journal of Cleaner Production*, 222, 793–801.  
10 <https://doi.org/10.1016/j.jclepro.2019.03.038>
- 11 Kim, Y. J., Kim, W. G., Choi, H. M., & Phetvaroon, K. (2019). The effect of green human resource management  
12 on hotel employees' eco-friendly behavior and environmental performance. *International Journal of*  
13 *Hospitality Management*, 76(March 2018), 83–93. <https://doi.org/10.1016/j.ijhm.2018.04.007>
- 14 Knight, C., Patterson, M., & Dawson, J. (2019). Work engagement interventions can be effective: a systematic  
15 review. *European Journal of Work and Organizational Psychology*, 28(3), 348–372.  
16 <https://doi.org/10.1080/1359432X.2019.1588887>
- 17 Kotzé, J., van der Westhuizen, S., & Nel, E. (2014). The relationship between employees' experience of  
18 performance management and work engagement within a South African organisation. *Journal of Psychology*  
19 *in Africa*, 24(6), 475–479. <https://doi.org/10.1080/14330237.2014.997027>
- 20 Naz, S., Jamshed, S., Nisar, Q. A., & Nasir, N. (2023). Green HRM, psychological green climate and pro-  
21 environmental behaviors: An efficacious drive towards environmental performance in China. *Current*  
22 *Psychology*, 42(2), 1346–1361. <https://doi.org/10.1007/s12144-021-01412-4>
- 23 Paillé, P., Chen, Y., Boiral, O., & Jin, J. (2014). The Impact of Human Resource Management on Environmental  
24 Performance: An Employee-Level Study. *Journal of Business Ethics*, 121(3), 451–466.  
25 <https://doi.org/10.1007/s10551-013-1732-0>
- 26 Park, R., Appelbaum, E., & Kruse, D. (2010). Employee involvement and group incentives in manufacturing  
27 companies: A multi-level analysis. *Human Resource Management Journal*, 20(3), 227–243.  
28 <https://doi.org/10.1111/j.1748-8583.2010.00126.x>
- 29 Pham, N. T., Vo Thanh, T., Tučková, Z., & Thuy, V. T. N. (2020). The role of green human resource management  
30 in driving hotel's environmental performance: Interaction and mediation analysis. *International Journal of*  
31 *Hospitality Management*, 88(September). <https://doi.org/10.1016/j.ijhm.2019.102392>
- 32 Pinzone, M., Guerci, M., Lettieri, E., & Huisinigh, D. (2019). Effects of 'green' training on pro-environmental  
33 behaviors and job satisfaction: Evidence from the Italian healthcare sector. *Journal of Cleaner Production*,  
34 226, 221–232. <https://doi.org/10.1016/j.jclepro.2019.04.048>
- 35 Presbitero, A. (2017). How do changes in human resource management practices influence employee engagement?  
36 A longitudinal study in a hotel chain in the Philippines. *Journal of Human Resources in Hospitality and*  
37 *Tourism*, 16(1), 56–70. <https://doi.org/10.1080/15332845.2016.1202061>
- 38 Presbitero, A., Roxas, B., & Chadee, D. (2016). The International Journal of Human Looking beyond HRM  
39 practices in enhancing employee retention in BPOs: focus on employee – organisation value fit. *The*  
40 *International Journal of Human Resource Management*, 27(6), 635–652.  
41 <https://doi.org/10.1080/09585192.2015.1035306>
- 42 Rana, G., & Sharma, R. (2019). Emerging human resource management practices in Industry 4.0. *Strategic HR*  
43 *Review*, 18(4), 176–181. <https://doi.org/10.1108/shr-01-2019-0003>
- 44 Rehman, A., Ullah, I., Afridi, F. e. A., Ullah, Z., Zeeshan, M., Hussain, A., & Rahman, H. U. (2021). Adoption of  
45 green banking practices and environmental performance in Pakistan: a demonstration of structural equation  
46 modelling. *Environment, Development and Sustainability*, 23(9), 13200–13220.  
47 <https://doi.org/10.1007/s10668-020-01206-x>
- 48 Ren, S., Tang, G., & E. Jackson, S. (2018). Green human resource management research in emergence: A review  
49 and future directions. *Asia Pacific Journal of Management*, 35(3), 769–803. <https://doi.org/10.1007/s10490-017-9532-1>
- 50 Ren, Y., Tang, R., & Li, M. (2022). The relationship between delay of gratification and work engagement: The  
51 mediating role of job satisfaction. *Heliyon*, 8(8), 101–120.  
52 <https://doi.org/doi.org/10.1016/j.heliyon.2022.e10111>
- 53 Renwick, D. W. S., Jabbour, C. J. C., Muller-Camen, M., Redman, T., & Wilkinson, A. (2016). Contemporary  
54 developments in Green (environmental) HRM scholarship. *International Journal of Human Resource*  
55 *Management*, 27(2), 114–128. <https://doi.org/10.1080/09585192.2015.1105844>
- 56 Renwick, D. W. S., Redman, T., & Maguire, S. (2013). Green Human Resource Management: A Review and  
57 Research Agenda\*. *International Journal of Management Reviews*, 15(1), 1–14.  
58 <https://doi.org/10.1111/j.1468-2370.2011.00328.x>
- 59 Robijn, W., Euwema, M. C., Schaufeli, W. B., & Deprez, J. (2020). Leaders, teams and work engagement: a basic  
60  
61  
62  
63  
64  
65

needs perspective. *Career Development International*, 25(4), 373–388. <https://doi.org/10.1108/CDI-06-2019-0150>

- 1  
2 Roscoe, S., Subramanian, N., Jabbour, C. J. C., & Chong, T. (2019). Green human resource management and the  
3 enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable  
4 development. *Business Strategy and the Environment*, 28(5), 737–749. <https://doi.org/10.1002/bse.2277>
- 5 Rothfelder, K., Ottenbacher, M. C., & Harrington, R. J. (2012). The impact of transformational, transactional and  
6 non-leadership styles on employee job satisfaction in the German hospitality industry. *Tourism and  
7 Hospitality Research*, 12(4), 201–214. <https://doi.org/10.1177/1467358413493636>
- 8 Saks, A. M., & Gruman, J. A. (2014). What Do We Really Know About Employee Engagement? *Human Resource  
9 Development Quarterly*, 25(2), 155–182. <https://doi.org/https://doi.org/10.1002/hrdq.21187>
- 10 Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short  
11 questionnaire: A cross-national study. *Educational and Psychological Measurement*, 66(4), 701–716.  
12 <https://doi.org/10.1177/0013164405282471>
- 13 Singh, S. K., Giudice, M. Del, Chierici, R., & Graziano, D. (2020). Green innovation and environmental  
14 performance: The role of green transformational leadership and green human resource management.  
15 *Technological Forecasting and Social Change*, 150(1), 1–12.  
16 <https://doi.org/10.1016/j.techfore.2019.119762>
- 17 Sosik, J. J., Godshalk, V. M., & Yammarino, F. J. (2004). Transformational leadership, learning goal orientation,  
18 and expectations for career success in mentor-protégé relationships: A multiple levels of analysis  
19 perspective. *Leadership Quarterly*, 15(2), 241–261. <https://doi.org/10.1016/j.leaqua.2004.02.003>
- 20 Tang, G., Chen, Y., Jiang, Y., Paillé, P., & Jia, J. (2018). Green human resource management practices: scale  
21 development and validity. *Asia Pacific Journal of Human Resources*, 56(1), 31–55.  
22 <https://doi.org/10.1111/1744-7941.12147>
- 23 Wefald, A. J., Reichard, R. J., & Serrano, S. A. (2011). Fitting Engagement Into a Nomological Network: The  
24 Relationship of Engagement to Leadership and Personality. *Journal of Leadership and Organizational  
25 Studies*, 18(4), 522–537. <https://doi.org/10.1177/1548051811404890>
- 26 Yong, J. Y., Yusliza, M. Y., Ramayah, T., & Seles, B. M. R. P. (2022). Testing the stakeholder pressure, relative  
27 advantage, top management commitment and green human resource management linkage. *Corporate Social  
28 Responsibility and Environmental Management*, 29(5), 1283–1299.  
29 <https://doi.org/https://doi.org/10.1002/csr.2269>
- 30 Yu, W., Chavez, R., Feng, M., Wong, C. Y., & Fynes, B. (2020). Green human resource management and  
31 environmental cooperation: An ability-motivation-opportunity and contingency perspective. *International  
32 Journal of Production Economics*, 219(August 2018), 224–235. <https://doi.org/10.1016/j.ijpe.2019.06.013>
- 33 Yusoff, Y. M., Nejati, M., Kee, D. M. H., & Amran, A. (2020). Linking Green Human Resource Management  
34 Practices to Environmental Performance in Hotel Industry. *Global Business Review*, 21(3), 663–680.  
35 <https://doi.org/10.1177/0972150918779294>
- 36 Zientara, P., & Zamojska, A. (2018). Green organizational climates and employee pro-environmental behaviour  
37 in the hotel industry. *Journal of Sustainable Tourism*, 26(7), 1142–1159.  
38 <https://doi.org/10.1080/09669582.2016.1206554>
- 39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65

## 2. BUKTI KONFIRMASI REVIEW PERTAMA DAN BUKTI RESPONS KEPADA REVIEWER (30 JUNI 2023)

**Date:** Jun 30, 2023  
**To:** "Juliansyah Noor" juliansyahnoor@latansamashiro.ac.id  
**From:** "Heliyon" info@heliyon.com  
**Subject:** Your submission HELIYON-D-23-25499 to Heliyon

Manuscript. Number.: HELIYON-D-23-25499

Title: Green human resource management practices, leadership styles, and employee engagement: green banking context

Journal: Heliyon

Dear Dr Noor,

Thank you for submitting your manuscript to Heliyon. Before we begin the review process for your manuscript, we perform an initial check against formal criteria. Though we found your manuscript interesting, in its present form it is not suitable to be sent out for review. We would consider the manuscript for peer-review if you make changes/corrections as detailed in the comments below and re-submit the revised version.

We ask that you respond to each comment by either outlining how the criticism was addressed in the revised manuscript or by providing a rebuttal to the criticism. This should be carried out in a point-by-point fashion as illustrated here: [Guide for Authors: Heliyon](#). Furthermore, please note that Heliyon now uses a Numbered reference style. Please update the references in your manuscript accordingly, if necessary.

To submit your updated manuscript, please log in as an author at <https://www.editorialmanager.com/heliyon/>, and navigate to the "Submissions Needing Revision" folder under the Author Main Menu. Your revision due date is Jul 14, 2023.

If you need additional time to address the concerns that came up in the review process, please let us know so we can discuss a plan for moving your paper forward.

I look forward to receiving your updated manuscript.

Research Elements (optional)

This journal encourages you to share research objects - including your raw data, methods, protocols, software, hardware and more - which support your original research article in a Research Elements journal. Research Elements are open access, multidisciplinary, peer-reviewed journals which make the objects associated with your research more discoverable, trustworthy and promote replicability and reproducibility. As open access journals, there may be an Article Publishing Charge if your paper is accepted for publication. Find out more about the Research Elements journals at [https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?](https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?dgid=ec_em_research_elements_email)

Kind regards,

Yunyang Xiao

Editorial Section Manager

Heliyon

Comments:

Comments from the Associate Editor

We have conducted an initial review of your paper. Your paper is in principle suitable for Heliyon section "Business and Management". However, it is at an early stage and must be improved. Before we start the review process, we ask you to consider the following comments.

Main comments

1)

In the introduction there is one sentence on the contribution of the paper:

"This is the first study to examine the link between GHRM practices, employee engagement, and transformation leadership in the context of green banking in Indonesia."

However, this is too little. Add a sentence on the aim of the paper and provide information on the method and data. The introduction should outline: 1. What is already known about the topic? 2. What is not known about the subject and what does the study intend to examine. This means outline on what is the gap you seek to fill? 3. What are the specific research questions the study focuses on?

2)

"H1. GHRM practices have a positive effect on employee engagement" : Please rewrite the hypotheses. Impacts cannot be estimated using SEM and cross sectional data. Please read: CAUSAL CONCLUSIONS FROM NON-CAUSAL RESEARCH DESIGNS. The only research design that allows causal conclusions is the experiment.

Experiments can be implemented in a laboratory, in the field, or as a survey with an intervention, as long as the researcher controls the presence/absence of the hypothesized cause (Viglia & Dolnicar, 2020). Correlation-based methods (including structural equation modelling) applied to one-off cross-sectional survey data without intervention provide insights into associations, not causes.

Dolnicar, S. (2020). Why quantitative papers based on primary data get desk-rejected by Annals of Tourism Research. Annals of Tourism Research, 83, 102981.

Another common misunderstanding is that directional hypotheses imply causality, but that is generally not true. Instead, the direction is rather a proxy for a theoretical relationship that assumes direction and correlational data should not be treated as causal evidence. Specifically, researchers need to be more careful in the interpretation of results (e.g., not writing "x impacts y", or "has effect on") and generally create awareness that a correlation does not necessarily indicate causation. Apart from acknowledging that endogeneity might be present, there are also ways to deal with endogeneity, such as instrumental variables, control function approaches, propensity score matching, experiments and natural experiments. Hair et al. (2020a) note that four conditions must be met to assume causality: (1) Time sequence —the cause must occur prior to the effect; (2) Covariance —changes in the hypothesized independent variable are associated with changes in the dependent variable; (3) Non-spurious associations — the relationship is not due to other variables that may affect cause and effect; and (4) Theoretical support — a logical explanation for the relationship.

3)

Please look at the structure of the paper and the section titles:

2.4 Moderating effects of transformational leadership

"1. Research methods"

2. Results and discussion 4.1 Statistics and Description

4)

"Data analysis using the regression model."

Provide more information on the method. Have you used Ordinary Least squares?

Gender should be measured as a dummy variable and not coded as 1 and 2.

5)

Statistical reporting must be improved (Pesämaa et al., 2021). Common method bias must be discussed. An assessment of multicollinearity is needed. Please interpret the magnitude of the relationships.

6)

Table should be better labelled and footnotes are needed with explanations.

"Table 2. Regressions results"

"Table 3. Specific regression"

7)

The language must be improved. Reduce the number of abbreviations, particularly in the abstract, introduction and conclusions.

8) We use Vancouver reference and citation style. This can be adjusted at a later stage in the review process.

9) I think the reference list is ok.

Reference

Pesämaa, O., Zwikael, O., Hair Jr, J., & Huemann, M. (2021). Publishing quantitative papers with rigor and transparency. International Journal of Project Management, 39(3), 217-222.

\*\*\*\*\*

More information and support

FAQ: How do I revise my submission in Editorial Manager

[https://service.elsevier.com/app/answers/detail/a\\_id/28463/supporthub/publishing/You will find information relevant for you as an author on Elsevier's Author Hub](https://service.elsevier.com/app/answers/detail/a_id/28463/supporthub/publishing/You%20will%20find%20information%20relevant%20for%20you%20as%20an%20author%20on%20Elsevier's%20Author%20Hub): <https://www.elsevier.com/authors>

FAQ: How can I reset a forgotten password? [https://service.elsevier.com/app/answers/detail/a\\_id/28452/supporthub/publishing/](https://service.elsevier.com/app/answers/detail/a_id/28452/supporthub/publishing/)

For further assistance, please visit our customer service site:

<https://service.elsevier.com/app/home/supporthub/publishing/>

Here you can search for solutions on a range of topics, find answers to frequently asked questions, and learn more about Editorial Manager via interactive tutorials. You can also talk 24/7 to our customer support team by phone and 24/7 by live chat and email

6

#AU\_HELIYON#

To ensure this email reaches the intended recipient, please do not delete the above code

---

*In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Remove my information/details). Please contact the publication office if you have any questions.*

# Heliyon

## Green human resource management practices, leadership styles, and employee engagement: green banking context --Manuscript Draft--

<b>Manuscript Number:</b>	HELIYON-D-23-25499R3
<b>Article Type:</b>	Original Research Article
<b>Section/Category:</b>	Social Sciences
<b>Keywords:</b>	Green Human Resource Management practices; Employee Engagement; Transformational leadership
<b>Manuscript Classifications:</b>	140.170.140: Management
<b>Corresponding Author:</b>	Juliansyah Noor, Doctor STIE La Tansa Mashiro Rangkasbitung, Banten INDONESIA
<b>First Author:</b>	Juliansyah Noor, Doctor
<b>Order of Authors:</b>	Juliansyah Noor, Doctor Zakiyya Tunnufus Voppy Handriana Yumhi Yumhi
<b>Abstract:</b>	<p>This paper discusses green human resource management (GHRM) practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how GHRM practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, GHRM practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green HRM practices can promote employee engagement.</p>
<b>Opposed Reviewers:</b>	

## RESPONS

**Dear Editor,**

Thank you for your valuable feedback. We appreciate your attention to detail and your comments on the specificity of our study.

We have submitted a revised manuscript with all changes highlighted in blue for the convenience of the editors and reviewers. This will help them easily spot the specific revisions made in response to the feedback.

**Editor #1:** I recommend that you elaborate further in your conclusions. This section is too short as it is. Perhaps, you could remove some redundant material from other areas.

*Responds:*

*Thank you for your feedback. We revised and added conclusion section of our manuscript..*

In general, "green human resources management" practices, such as "green recruitment and selection" and "green training and development," demonstrate a significant and positive association with "green employee engagement," although the impacts on different aspects of engagement may vary. The positive and significant correlation between "green human resources management" practices and "green employee engagement" is further strengthened by the presence of "green transformational leadership," and this relationship exhibits a high explanatory variance.

Our research provides valuable recommendations for leaders and managers looking to foster "green employee engagement" and harness it for enhanced environmental performance, outpacing competitors in the market.

Firstly, we propose that investing in "green employee engagement" benefits the banking sector by enhancing its reputation among stakeholders, who increasingly demand eco-friendly processes, products, and services. Our study indicates that banking institutions should prioritize and reinforce "green transformational leadership" behaviors, essential for the successful implementation of "green HRM practices."

Secondly, banking organizations should invest in "green HRM practices" and view them as a strategic asset to direct the workforce toward effective environmental management. We hypothesize that "green HRM" aligns with the bank's strategic commitment to environmental responsibility and motivates employees to adopt eco-conscious work behaviors, thereby reducing pollution impact. Consequently, our research suggests that top management should work on aligning the bank's environmental objectives with green HRM policies and practices to promote and sustain "green employee engagement."

Overall, our study offers practical insights for managers, leaders, and policymakers on how to establish and maintain robust "green HRM practices" and green employee engagement" through "green transformational leadership"

While the current study provides valuable insights into the theory and practice of "green human resources management," there are several areas that require further investigation.

Firstly, considering the limitation of the study being confined to the banking industry in [Indonesia](#), external validity may be a concern. Therefore, future research should explore the proposed framework in other non-bank financial industries and various financial or non-financial sectors to examine the consistency of results across different industries.

Secondly, this study focuses on the Indonesian context and examines the influence of "green recruitment and selection," "green training and development," "green transformational leadership," and "green employee engagement." Extending these findings to developing countries and countries with different cultural backgrounds would provide valuable insights for future research.

Thirdly, while this study examines the **role of** moderating "green transformational leadership" in the relationship between "green recruitment and selection," "green training and development," with "green employee engagement," future research should enhance the data source by incorporating qualitative data through methods such as "in-depth interviews" or "focus groups." Adopting such an approach would offer supplementary insights into the mediating effect of "green transformational leadership" on "green employee engagement."

Furthermore, there may be other variables that mediate the link between "green recruitment and selection," "green training and development," and "green employee engagement," which future studies should consider. Finally, future research on the link between "green human resources management" practices and "green employee engagement" should examine moderators, which could provide additional insights into this important link.

# Green human resources management practices, leadership style and employee engagement: green banking context

Juliansyah Noor<sup>1</sup>, Zakiyya Tunnufus, Voppy Yulia Handrian, Yumhi

*Department of Management, La Tansa Mashiro University, Banten, Indonesia*

## Abstract

This paper discusses green human resource management practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how green human resource management practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, green human resource management practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green human resource management practices can promote employee engagement.

**Keywords:** Green human resource management practices, Employee engagement, Transformational leadership

JEL classification: J81, M12, M21

## 1. Introduction

In recent years, issues regarding green banking have been widely discussed by people around the world. This issue arises along with the increasing global concern about the harmful effects of pollution and environmental contamination. In simple terms, green banking can be interpreted as the banking business concept with a green environmental perspective. This concept is aimed at creating a green industry in the context of restoring environmental pollution and sustainable ecological balance [1],[2]. Currently, the majority of banks around the world have implemented this concept into their business, which is governed by formal rules and laws. However, will they be successful in achieving the goals of the concept? A number of researchers argue that The successful attainment of an organization's strategic sustainability goals relies on having employees of competent, possessing an extensive technical and managerial skill [3],[4],[5],[6]. In other words, achieving the goals of a sustainability strategy depends on “green human resource management” practices, employee engagement, and organizational leadership.

It is undeniable that human resources are the main factor for achieving organizational goals, including in building a sustainable organization [4]. “Green human resource management” practices are needed to produce quality, manage and develop environmentally sound employees. However, this practice also does not fully guarantee the natural resources and its environment preservation. This is because issues related to the environment are interdisciplinary in nature, which requires initiative and pro-environmental behavior from each individual [7],[8]. Therefore, this practice becomes very important when it is able to foster employee involvement when carrying out activities related to the environment [6] and encourages innovation environment [4]. When employees are involved, both formally and informally, this can encourage high-level initiatives, innovative behavior, role expansion, and have the ability to adapt to change [9]. In addition, employee involvement can also encourage them to be psychologically present when carrying out their work, and comply with formal employment prerequisites and organizational regulations [10].

On the other hand, organizational leadership also plays an important role in the link between “green human resource management” practices and employee engagement. Belief in attaining objectives and practices within the organization (including “green human resource management” practices) is the result of reciprocal exchanges between leaders and their subordinates [11]. Individuals feel compelled to respond to the economic, emotional,

---

\*Coressponding author:

email: [juliansyahnoor@latansamashiro.ac.id](mailto:juliansyahnoor@latansamashiro.ac.id) (Juliansyah Noor)

and social support provided by their leaders. [12]. Therefore, the engagement variable, which comprises implications of creative, pro-social, and proactive behavior, can be encouraged by positive interactions between individuals and their leaders [11],[13]. Specifically, Ababneh et al. (2021) have demonstrated the important leadership role in the link between “green human resource management” practices and employee engagement. This is the first study to explore this, and found a significant positive interaction influence transformational leadership on the relationship.

The concept of green banking has been widely implemented in Indonesia, especially since the implementation of "Law No. 32 of 2009" pertains to the protection and management of the environment. However, the new green banking boom began in 2015. Until now, studies on green banking practices in the human resources context are still limited. The majority of existing studies also focus on organizational and environmental performance [14],[15]. Studies on the link between “green human resource management” practices and performance can indeed help to understand organizational conditions and practices, but are unable to identify how employees understand, interact, and adapt to a green-based work environment [16],[4], [9]. This is the first study to examine the link between “green human resource management” practices, employee engagement, and transformational leadership in the context of green banking in Indonesia.

This study aims to empirically examine the moderates’ relationships between “green human resource management” practices and transformational leadership, and employee engagement (see figure 1).

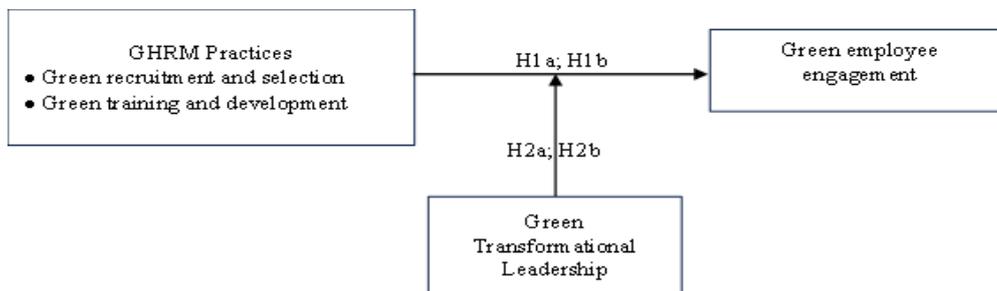


Figure 1 Research Model

The research objectives of this study are as follows:

1. To investigate the associations between GHRM practices and employee engagement.
2. To assess the potential moderating role of transformational leadership in the associations between GHRM practices and employee engagement.

Therefore, this research aims to address the aforementioned gaps in knowledge. In this study, we analyze green HRM practices associate with organizational and individual levels in order to address the following research questions:

RQ1a: Do "green recruitment and selection" associate with employee engagement?

RQ1b: Do "green training and development" associate with employee engagement?

RQ2a: Do transformational leadership moderate the associations between "green recruitment and selection" and employee engagement?

RQ2b: Do transformational leadership moderate the associations between "green training and development" and employee engagement?

## 2. Literature Review and Hypothesis Development

### 2.1 Green Human Resource Management Practices

“Green human resource management” practices have been broadly defined, but all definitions lead to green environment-oriented aspects. Al-Romeedy [3] defines it as “the involvement of all activities in the development, implementation and maintenance of a sustainable system, with the aim of making employees and organizations environmentally aware.” Meanwhile, Amrutha and Geetha [17] define it as “policies, practices and systems that make organizational employees green for the benefit of individuals, society, the environment and business.” Rana and Sharma [18] define it as “the application of “green human resource management” practices with the aim of promoting the use of sustainable resources, which prioritizes environmental preservation to increase employee awareness and commitment to environmental management issues.” This is in line with Deshwal [19], who views it as “an organizational strategy to increase employees' environmental awareness.” As such, the “green human resource management” practice refers to traditional “human resource management” practices with a focus on a green environment orientation. So, in principle, “green human resource management” practices are the same as traditional “human resource management” practices. Conventional “human resource management” practices

center on hiring and choosing personnel, enhancing their skills and expertise, providing remuneration, evaluating their performance, while “green human resource management” practices do more than just that. “Green human resource management” practices need to integrate conventional “human resource management” practices with managing the environment with the aim of promoting and affecting attitudes, knowledge, motivation, and behavior related to employee sustainability [20],[21],[22]. This practice adopts a comprehensive comprehension of the "triple bottom-line concept," which involves practices that are aligned with the three pillars of “environmental, social, and economic balance sustainability” [23], and bring long-term benefits [24].

Just like traditional “human resource management” practice, “green human resource management” practice also includes factors, such as “green recruitment and selection,” “green training and development,” performance evaluation, compensation, etc., but all of them are green environment oriented. To illustrate, in a green recruitment and selection process, “green human resource management” practices emphasize the recruitment and selection of employees who endorse and exhibit interest in the environment [25]. During the job analysis phase, environmental aspects and accomplishments should be elucidated and emphasized in job descriptions and individual specifications, and elaborate on the expectations for prospective environmentally-conscious employees [25],[26]. Thus, this recruitment and selection can ensure that new employees comprehend the organization's green culture and uphold its environmental principles [27]. In line with this, training and development are also more focused on aspects that are environmentally friendly [4], and this is the most significant factor for creating green behavior from employees [17]. Likewise related to performance evaluation and compensation are also focused on green environment- oriented aspects, such as providing feedback for employees to be able to support continuous improvement [20],[25], “giving awards to employees for their commitment to environmental practices” [28].

## 2.2 *Employee engagement*

Saks and Gruman [29] defined employee engagement as “a multidimensional construct consisting of physical, cognitive, affective, and behavioral components.” Employees who are engaged feel capable of completing their assigned tasks, as they possess higher levels of energy and connection towards their work [30]. Knight et al. (2019) identified four types of employee engagement: (1) “personal resource development,” the focus of personal resource development is on enhancing individual strengths, such as “self-efficacy, resilience, and optimism”; (2) “development of employment resources,” the aim of employment resource development is to cultivate positive dimensions of the employee engagement, such as "autonomy, social support, feedback, and development opportunities"; (3) “leadership training,” leadership training is designed to enhance managerial leadership skills through a combination of educational and hands-on training methods, such as group-based exercises in “goal-setting and problem-solving”; and (4) “health promotion,” the main objective of health promotion is to enhance individual health and well-being while minimizing stress.

## 2.3 *Relationship between GHRM practices and employee engagement*

Park et al. [32] developed the Ability Motivation Opportunity (AMO) theory. They give a framework for examining the relationship between employee engagement and “green human resource management” practices. This theory posits that employee capabilities can be enhanced through the recruitment of skilled and competent staff, and/or by effective training and development program implementations. The selection of competent employees is aligned with employee engagement's task-performance dimension, in which engaged employees are present psychologically when performing their formal duties [33],[9]. While it is not always necessary for employees to be creative and innovative when dealing with environmental issues, there are instances where adherence to pre-developed policies and procedures is required to control certain behaviors in the workplace. Therefore, efforts to improve the alignment between employee competencies, values, and goals, and organizational goals are important [16]. Hiring environmentally knowledgeable employees positively influences their perceptions and cognitive evaluations of corporate environmental initiatives, which leads to their full engagement in carrying out tasks in an environmentally friendly manner[34],[35]. Engagement variables can also link training and development to the goal orientation and task performance domains [36]. Designing training and orientation and programs that focus on environmental aspects can increase employee awareness of their surrounding environment and their role in achieving these goals effectively. Several studies have also confirmed the positive association “green recruitment and selection” and “green training and development” with “green employee engagement” [37],[6],[36]. Thus, this study hypothesizes that:

**H1a.** Green recruitment and selection are positively associated with green employee engagement

**H1b.** green training and development are positively associated with green employee engagement

## 2.4 Moderating effects of transformational leadership

The leadership quality paradigm known as transformational leadership [9] aligns individual values and employee demands with organizational vision, mission, strategy, and goals. Transformational leaders have the ability to inspire, empower, and persuade their subordinates to take part in organizational change and achieve goals [37]. They are crucial for promoting positive social interactions with subordinates and are known for their skills in exciting, inspiring, building trust, providing meaning and challenge, and reinforcing proactivity and adaptability in the workplace [38]. As a result, transformational leaders play an important role in aligning followers' self-actualization with organizational values and systems.

The AMO framework describes that transformational leadership can enhance the relationship between GHRM practices and employee engagement. Sosik et al. (2004) stated that leaders who exhibit transformational qualities are capable of creating a culture of learning that motivates subordinates to seek out new learning opportunities. As a result, employees become actively engaged in training programs designed to improve their knowledge and skills related to solving environmental issues [6]. Furthermore, transformational leaders possess the necessary vision and judgment to select employees who have the appropriate experience and knowledge for the organization's environment, standards of performance, and goals. This indicates that transformational leaders are inclined to foster the development of new competencies, and the recruitment of environmentally knowledgeable employees reinforces the abilities dimension of AMO. Additionally, transformational leadership can play a motivational role in the AMO framework.

Transformational leaders motivate and inspire their subordinates by sharing their vision, communicating expectations and standards of performance, providing feedback on their performance, and recognizing their achievements both intrinsically and extrinsically. Additionally, recognizing and appraising employees' ongoing behavior can enhance their sense of role meaningfulness, which, in turn, increases their enthusiasm and energy towards achieving superior performance [40]. Finally, transformational leaders' behaviors can also bolster employee engagement. Thus, this study hypothesizes that:

**H2a.** Green transformational leadership moderates the relationship between green recruitment and selection with green employee engagement.

**H2b.** Green transformational leadership moderates the relationship between green training and development with green employee engagement.

## 3. Research methods

### 3.1 Sample and procedure

Data was collected through the distribution of electronic questionnaires to employees working in green banking in Indonesia. The questionnaire contains a number of questions, which are measured with a 5 Likert scale, namely "strongly disagree," "disagree," "undecided, agree," and "strongly agree." This electronic questionnaire was distributed via social media in the period from 1 to 30 September 2021. Until the specified deadline, only 363 questionnaires were filled in. Specifically, 54.1% of them were filled by female respondents and the other 45.9% by men. Based on age, 39.1% of them were filled by respondents aged 21-30 years, 43.6% aged 31-40 years, and 17.3% aged more than 40 years. Based on education, 33.1% were respondents with diploma education, 53.4% undergraduate, and 13.5% postgraduate. Based on tenure, 35.3% were filled by respondents with tenures of 3-5 years, 54.2% with tenures of 6-10 years, and 10.5% with tenures of more than 10 years.

### 3.2 Measures

In this study, employee engagement is defined as an employee's assessment of his or her feelings, which reflects the extent to which an employee is psychologically present in an organizational role. The indicators and questionnaire to measure employee engagement were adopted from Ren et al. [41] and Schaufeli et al. [42]. Meanwhile, GHRM practice is defined as an employee's assessment of the process of finding and selecting prospective employees to fill job vacancies in their organization. The indicators and questionnaires to measure this were adopted from Tang et al. [43]. Meanwhile, transformational leadership is defined as an assessment of the way leaders build close relationships with their subordinates. The indicators and questionnaires for their measurement are adopted from Singh et al. [44]

### 3.3 Data Analysis

The relationship between the dependent variable (y) and the independent variables (x) is expressed through a regression equation, which captures the functional connection between them [45]. When there is more than one independent variable, it is referred to as multiple regression. In this study, we employ the method of ordinary least squares (OLS) regression to construct a multivariate regression model.[46] "OLS is a statistical technique that minimizes the sum of squared differences between the observed values and the predicted values based on a set of functions and desired variables." [45]

Data analysis using the regression model. The regression models developed for this research are:

$$EE = \beta_1 RS + \beta_2 TD + \beta_3 TL + \beta_4 (RS * TL) + \beta_5 (TD * TL) + \beta_6 Gender + \beta_7 Age + \beta_8 Edu + \beta_9 Tenure + \varepsilon \dots\dots\dots (1)$$

where: EE is “green employee engagement;” RS is “green recruitment and selection;” TD is “green training and development;” TL stands for “green transformational leadership;” (RS\*TL) is the interaction between recruitment and selection with transformational leadership; (TD\*TL) is the interaction between training and development and transformational leadership; Gender, Age, Education, and Tenure are the demographic factors of the respondents (control variables);  $\beta$  is the slope; and  $\varepsilon$  is the residual error.

#### 4. Results and discussion

##### 4.1 Descriptive statistics

The results of the study show that employee engagement (EE) in activities with a green environmental perspective is not optimal. This can be seen from the average value of the indicators which is still smaller than a scale of 5 (mean = 2.49), which means that respondents are doubtful about their involvement in activities with a green environmental perspective. Likewise with green recruitment and selection (RS) (mean = 2.56), and green training and development (TD) (mean = 2.36). Meanwhile, the bank's leadership style is also not completely transformational (mean = 2.45). These four aspects are positively correlated with each other, indicating that if one of these aspects is improved, the other aspects will also increase. Their correlation level is very large, which is more than 50% (see Table 1).

**Table 1.**  
Descriptive statistics and correlations matrix

	Mean	SD	EE	RS	TD	TL	Gen	Age	Edu
Green Employee engagement (EE) <sup>a</sup>	2.49	0.71	1.00						
Green Recruitment & selection (RS) <sup>a</sup>	2.56	0.86	0.62***	1.00					
Green Training & development (TD) <sup>a</sup>	2.36	0.75	0.65***	0.58***	1.00				
Transformational leadership (TL) <sup>a</sup>	2.45	0.80	0.68***	0.65***	0.72***	1.00			
Gender (Gen) <sup>b</sup>	0.54	0.50	0.06	0.10	0.08	0.14*	1.00		
Age (Age) <sup>c</sup>	1.78	0.72	0.15*	0.05	0.11	0.05	-0.01	1.00	
Education (Edu) <sup>d</sup>	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) <sup>e</sup>	1.80	0.57	0.10	-0.03	-0.03	0.05	0.08	0.68***	0.16*

Note: “a) the data was measured using a Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree; b) data is measured with dummy, where male=0 and female=1; c) data is measured on a dummy, where 1 = 21-30 years, 2 = 31-40 years, and 3 = > 40 years; d) data is dummy, where 1 = diploma, 2 = undergraduate, and 3 = postgraduate; e) data is dummy, where 1 = 3-5 years, 2 = 6-10 years, and 3 = <10 years; \*\*\* significant 1%, \*\* significant 5%, and \*significant 10%.”

From a demographic perspective, the correlation of employee engagement is only significant with age, while the correlation with gender, education, and tenure is not significant. The positive and significant correlation between EE and age indicates that the higher the employee's age, the higher the engagement. Meanwhile, these demographic factors are not correlated with green RS. Likewise with green TD and TL. For the demographic factor itself, gender does not have a significant correlation with age, education, education and tenure. Age is only positively correlated with tenure, but not with other demographic factors. This shows that the older the employees, the higher their tenure. Education is only correlated with tenure, but not with other demographic factors. The positive and significant correlation between education and tenure shows that the higher the education level of employees, the higher their tenure, or vice versa.

##### 4.2 Common method bias

If all the data in a study is collected from a single source and during a single time period, there is a potential issue called common method bias (CMB) that can affect the reliability of the findings [47],[46]. In this particular study, the researchers employed Hermann's one-factor test to assess the presence of CMB. The test revealed that the collected data could be categorized into four factors, with the first factor explaining only 39.67% of the

variance, which is significantly lower than 50%. Based on these results, the authors concluded that CMB did not pose a significant risk in the study.

#### 4.3 Relationship between GHRM practices and employee engagement

Specifically, “green recruitment and selection” and “green training and development” are positively and significantly related to “green employee engagement”, partially, even after controlling for demographic factors such as gender, age, education, and tenure (see Table 2). H1a indicate associations between "green recruitment and selection" with “green employee engagement,” and H1b show associations between "green training and development" with “green employee engagement.” In the model proposed in the present study, the direct associations "green recruitment and selection" with “green employee engagement,” ( $\beta = 0.62, p < 0.01$ ), and "green training and development" with “green employee engagement” ( $\beta = 0.66, p < 0.01$ ). Based on these results, H1a was supported, and H1b also was supported. This shows that “green recruitment and selection” and “green training and development” can drive “green employee engagement” significantly. When compared between the two, the contribution of “green training and development” to “green employee engagement” is greater than the effect of “green recruitment and selection” ( $\beta = 0.66$  vs.  $0.62$ ). This shows that “green training and development” is more effective in creating “green employee engagement” than “green recruitment and selection.” Nevertheless, both are strong predictors of building “green employee engagement.”

Meanwhile, the hypotheses (H2a and H2b) proposed that the association between "green recruitment and selection," "green training and development," and “green employee engagement” would be moderated by "green transformational leadership." The findings indicated that the relationship between "green recruitment and selection"\*"green transformational leadership" was significant ( $\beta = 0.25, p < 0.05$ ). In contrast, the relationship between "green training and development"\*"green transformational leadership" was found to be insignificant ( $b = 0.19, p < 0.05$ ). Based on these outcomes, H2a was supported, while H2b was not supported.

**Table 2**

#### Hypotheses testing employing regression analysis

	$\beta$ value	R <sup>2</sup> values	$\rho$ level	Conclusion
Gender (Gen)	-0.04			
Age (Age)	0.07			
Education (Edu)	-0.05			
Tenure (Ten)	0.04			
H1a:				Supported
RS → green employee engagement	0.62***	0.40	0.00***	
H1b:				Supported
TD → green employee engagement	0.66***	0.44	0.00***	
H2a:				Supported
RS*GTL → green employee engagement	0.25**		0.02**	
H2b:				Not Supported
GTD*GTL → green employee engagement	0.11		0.07	

Note: “ $\beta$ = Path Coefficient; R<sup>2</sup> = R Squared\*; = not significant ( $p > 0.05$ ); \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ ” RS = “green recruitment and selection;” TD = “green training and development;” TL = “green transformational leadership”

High “green employee engagement” with organizational environmental initiatives depends on the influence of the effectiveness of “green recruitment and selection” and individual personality propositions (awareness and positive influence). That is, various aspects of individual behavior (“voluntary and involuntary”) are influenced by the congruence between employees' individual “perceptions, values, and norms and organizational practices, goals, and norms” [29]. Therefore, in an environmental context, a variable set of “green recruitment and selection” is likely to motivate employees to engage with corporate environmental initiatives [48]. Contrary to the theoretical arguments developed earlier in this study, proactive personality reports a non- significant effect on the relationship between “green recruitment and selection” and “green employee engagement.” This can be attributed to the disruptive influence of “cultural norms, beliefs, and values” that employees may have on how they interpret role requirements and procedures, adapt to changing business requirements, and understand “green recruitment and selection” [16]. In other words, individual perceptions and interpretations of an organization's actions and initiatives on the environment may vary according to their differences in “cultural norms, standards, traditions and principles.”

Meanwhile, sustainability requires not only adherence to formal rules but also “green employee engagement” with voluntary green initiatives in the workplace. And this can result from having green training and development

practices [37]. Implementing sustainability in green training and development practices helps in obtaining different benefits for the organization such as cutting costs, retaining and attracting employees with green behavior and awareness, and improving the company's business. One of the important aspects of this practice is green training and development practices which can influence various environmentally friendly behaviors of employees, especially employee engagement [4]. Implementing appropriate green training and development practices through their impact on employee engagement will increase the competitive advantage of these organizations [49].

The role of green transformational leadership” in encouraging and motivating followers, managing change, shaping perceptions and values, and promoting innovative thinking and problem-solving skills in the workplace has increased in recent years [50]. To this end, leadership has been suggested to enhance employees' favorable perceptions of “green recruitment and selection” that involve organizational goals, policies, and systems, since the conduct and practices of leaders are closely linked to the performance of subordinates/employees [51]. This can be viewed through the lens of social exchange theory, in which individuals exhibit diverse patterns while engaging in social structures that they encounter at work [12].

To achieve positive individual interactions such as achieving desired goals and performing assigned tasks, it is essential to meet employees' expectations of recognition and reward, such as “autonomy, praise, and compensation” [49]. Furthermore, beliefs in corporate initiatives, practices, and intentions arise from the social approvals exchanged between leaders and the individual values of their subordinates, which can be negatively or positively affected by such social interactions. As a result, individuals' expectations of role fulfillment depend on their evaluations of the quality of these exchanges, which rely on how much each member of the dyad is willing to comply with their role obligations and face the associated consequences and expectations[49],[12].

In the leadership literature, “green transformational leadership” is regarded as the leadership quality paradigm that fosters alignment and gradual identification between the values and demands of individual employees and the organization's mission, vision, and strategic goals (Bass et al., 2003). “Green transformational leadership” possess characteristics such as “ideal influence, individual consideration, intellectual stimulation, and inspirational motivation” that allow them to motivate, empower, and persuade subordinates to participate in organizational change and goal attainment processes [52].

Consequently, transformational leaders are viewed as having qualities that are critical in promoting positive social exchanges with their subordinates. “Green transformational leadership” is known for its ability to energize, inspire, build trust, provide meaning and challenge, and reinforce proactiveness and workplace adaptability (Bass et al., 2003). Given the above arguments that emphasize the critical role of transformational leaders in aligning subordinates' self-actualization with organizational systems and values, it is reasonable to propose a moderating impact of “green transformational leadership” on the link between “green recruitment and selection “and “green employee engagement” in an environmental context.

## 5. Conclusion implication, and limitations

In general, "green human resources management" practices, such as "green recruitment and selection" and "green training and development," demonstrate a significant and positive association with "green employee engagement," although the impacts on different aspects of engagement may vary. The positive and significant correlation between "green human resources management" practices and "green employee engagement" is further strengthened by the presence of "green transformational leadership," and this relationship exhibits a high explanatory variance.

Our research provides valuable recommendations for leaders and managers looking to foster "green employee engagement" and harness it for enhanced environmental performance, outpacing competitors in the market.

Firstly, we propose that investing in "green employee engagement" benefits the banking sector by enhancing its reputation among stakeholders, who increasingly demand eco-friendly processes, products, and services. Our study indicates that banking institutions should prioritize and reinforce "green transformational leadership" behaviors, essential for the successful implementation of "green HRM practices."

Secondly, banking organizations should invest in "green HRM practices" and view them as a strategic asset to direct the workforce toward effective environmental management. We hypothesize that "green HRM" aligns with the bank's strategic commitment to environmental responsibility and motivates employees to adopt eco-conscious work behaviors, thereby reducing pollution impact. Consequently, our research suggests that top management should work on aligning the bank's environmental objectives with green HRM policies and practices to promote and sustain "green employee engagement."

Overall, our study offers practical insights for managers, leaders, and policymakers on how to establish and maintain robust "green HRM practices" and green employee engagement" through "green transformational leadership"

While the current study provides valuable insights into the theory and practice of "green human resources management," there are several areas that require further investigation.

1 Firstly, considering the limitation of the study being confined to the banking industry in [Indonesia](#), external  
2 validity may be a concern. Therefore, future research should explore the proposed framework in other non-bank  
3 financial industries and various financial or non-financial sectors to examine the consistency of results across  
4 different industries.

5 Secondly, this study focuses on the Indonesian context and examines the influence of "green recruitment  
6 and selection," "green training and development," "green transformational leadership," and "green employee  
7 engagement." Extending these findings to developing countries and countries with different cultural backgrounds  
8 would provide valuable insights for future research.

9 Thirdly, while this study examines the [role of moderating "green transformational leadership"](#) in the  
10 relationship between "green recruitment and selection," "green training and development," with "green employee  
11 engagement," future research should enhance the data source by incorporating qualitative data through methods  
12 such as "in-depth interviews" or "focus groups." Adopting such an approach would offer supplementary insights  
13 into the mediating effect of "green transformational leadership" on "green employee engagement."

14 Furthermore, there may be other variables that mediate the link between "green recruitment and selection,"  
15 "green training and development," and "green employee engagement," which future studies should consider.  
16 Finally, future research on the link between "green human resources management" practices and "green employee  
17 engagement" should examine moderators, which could provide additional insights into this important link.

## 20 **Data availability statement**

21 [Data will be made available on request.](#)

## 25 **Additional information**

26 [No additional information is available for this paper.](#)

## 30 **Declaration of competing interest**

31 [The authors declare that they do not have any recognized conflicting financial interests or personal relationships  
32 that might be perceived as having influenced the research presented in this paper.](#)

## 36 **References**

- 37 [1] Bhardwaj BR, Malhotra A. Green Banking Strategies: Sustainability through Corporate  
38 Entrepreneurship. *Greener J Bus Manag Stud* 2013;3:180–93.  
39 <https://doi.org/10.15580/gjbms.2013.4.122412343>.
- 40 [2] Rehman A, Ullah I, Afridi F e. A, Ullah Z, Zeeshan M, Hussain A, et al. Adoption of green banking  
41 practices and environmental performance in Pakistan: a demonstration of structural equation modelling.  
42 *Environ Dev Sustain* 2021;23:13200–20. <https://doi.org/10.1007/s10668-020-01206-x>.
- 43 [3] Al-Romeedy BS. Green human resource management in Egyptian travel agencies: constraints of  
44 implementation and requirements for success. *J Hum Resour Hosp Tour* 2019;18:529–48.  
45 <https://doi.org/10.1080/15332845.2019.1626969>.
- 46 [4] Roscoe S, Subramanian N, Jabbour CJC, Chong T. Green human resource management and the enablers  
47 of green organisational culture: Enhancing a firm's environmental performance for sustainable  
48 development. *Bus Strateg Environ* 2019;28:737–49. <https://doi.org/10.1002/bse.2277>.
- 49 [5] Ansari NY, Farrukh M, Raza A. Green human resource management and employees pro-environmental  
50 behaviours: Examining the underlying mechanism. *Corp Soc Responsib Environ Manag* 2021;28:229–  
51 38. <https://doi.org/10.1002/csr.2044>.
- 52 [6] Renwick DWS, Jabbour CJC, Muller-Camen M, Redman T, Wilkinson A. Contemporary developments  
53 in Green (environmental) HRM scholarship. *Int J Hum Resour Manag* 2016;27:114–28.  
54 <https://doi.org/10.1080/09585192.2015.1105844>.
- 55 [7] Zientara P, Zamojska A. Green organizational climates and employee pro-environmental behaviour in  
56 the hotel industry. *J Sustain Tour* 2018;26:1142–59. <https://doi.org/10.1080/09669582.2016.1206554>.
- 57 [8] Paillé P, Chen Y, Boiral O, Jin J. The Impact of Human Resource Management on Environmental  
58 Performance: An Employee-Level Study. *J Bus Ethics* 2014;121:451–66.  
59 <https://doi.org/10.1007/s10551-013-1732-0>.
- 60  
61  
62  
63  
64  
65

- 1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65
- [9] Ali Ababneh OM, Awwad AS, Abu-Haija A. The association between green human resources practices and employee engagement with environmental initiatives in hotels: The moderation effect of perceived transformational leadership. *J Hum Resour Hosp Tour* 2021;20:390–416. <https://doi.org/10.1080/15332845.2021.1923918>.
- [10] Presbitero A. How do changes in human resource management practices influence employee engagement? A longitudinal study in a hotel chain in the Philippines. *J Hum Resour Hosp Tour* 2017;16:56–70. <https://doi.org/10.1080/15332845.2016.1202061>.
- [11] Ababneh OMA, LeFevre M, Bentley T. Employee engagement: Development of a new measure. *Int J Hum Resour Dev Manag* 2019;19:105–34. <https://doi.org/10.1504/IJHRDM.2019.098623>.
- [12] Černe M, Batistič S, Kenda R. HR systems, attachment styles with leaders, and the creativity–innovation nexus. *Hum Resour Manag Rev* 2018;28:271–88. <https://doi.org/10.1016/j.hrmr.2018.02.004>.
- [13] Azim MT, Fan L, Uddin MA, Abdul Kader Jilani MM, Begum S. Linking transformational leadership with employees’ engagement in the creative process. *Manag Res Rev* 2019;42:837–58. <https://doi.org/10.1108/MRR-08-2018-0286>.
- [14] Yu W, Chavez R, Feng M, Wong CY, Fynes B. Green human resource management and environmental cooperation: An ability–motivation–opportunity and contingency perspective. *Int J Prod Econ* 2020;219:224–35. <https://doi.org/10.1016/j.ijpe.2019.06.013>.
- [15] Acquah ISK, Agyabeng-Mensah Y, Afum E. Examining the link among green human resource management practices, green supply chain management practices and performance. *Benchmarking* 2021;28:267–90. <https://doi.org/10.1108/BIJ-05-2020-0205>.
- [16] Dumont J, Shen J, Deng X. Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values. *Hum Resour Manage* 2016;56:613–627. <https://doi.org/10.1002/hrm>.
- [17] Amrutha VN, Geetha SN. A systematic review on green human resource management: Implications for social sustainability. *J Clean Prod* 2020;247:119131. <https://doi.org/10.1016/j.jclepro.2019.119131>.
- [18] Rana G, Sharma R. Emerging human resource management practices in Industry 4.0. *Strateg HR Rev* 2019;18:176–81. <https://doi.org/10.1108/shr-01-2019-0003>.
- [19] Deshwal P. Green HRM : An organizational strategy of greening people. *Int J Appl Res* 2015; 1(13) 176-181 2015;1:176–81.
- [20] Anwar N, Nik Mahmood NH, Yusliza MY, Ramayah T, Noor Faezah J, Khalid W. Green Human Resource Management for organisational citizenship behaviour towards the environment and environmental performance on a university campus. *J Clean Prod* 2020;256:120401. <https://doi.org/10.1016/j.jclepro.2020.120401>.
- [21] Kim YJ, Kim WG, Choi HM, Phetvaroon K. The effect of green human resource management on hotel employees’ eco-friendly behavior and environmental performance. *Int J Hosp Manag* 2019;76:83–93. <https://doi.org/10.1016/j.ijhm.2018.04.007>.
- [22] Laub JA. Assessing the Servant Organization Development of the Servant Organizational Leadership Assessment (SOLA) Instrument. Florida Atlantic University, 1999.
- [23] Yusoff YM, Nejati M, Kee DMH, Amran A. Linking Green Human Resource Management Practices to Environmental Performance in Hotel Industry. *Glob Bus Rev* 2020;21:663–80. <https://doi.org/10.1177/0972150918779294>.
- [24] Ehnert I, Parsa S, Roper I, Wagner M, Muller-Camen M. Reporting on sustainability and HRM: a comparative study of sustainability reporting practices by the world’s largest companies. *Int J Hum Resour Manag* 2016;27:88–108. <https://doi.org/10.1080/09585192.2015.1024157>.
- [25] Ren S, Tang G, E. Jackson S. Green human resource management research in emergence: A review and future directions. *Asia Pacific J Manag* 2018;35:769–803. <https://doi.org/10.1007/s10490-017-9532-1>.
- [26] Yong JY, Yusliza MY, Ramayah T, Seles BMRP. Testing the stakeholder pressure, relative advantage, top management commitment and green human resource management linkage. *Corp Soc Responsib Environ Manag* 2022;29:1283–99. <https://doi.org/https://doi.org/10.1002/csr.2269>.
- [27] Bahuguna PC, Srivastava R, Tiwari S. Two-decade journey of green human resource management research: a bibliometric analysis. *Benchmarking An Int Journa* 2023;30:585–602. <https://doi.org/10.1108/BIJ-10-2021-0619>.
- [28] Jabbour CJ, Jabbour DS. Green Human Resource Management and Green Supply Chain Management: Linking two emerging agendas. *J Clean Prod* 2016;112:1824–33. <https://doi.org/10.1016/j.jclepro.2015.01.052>.
- [29] Saks AM, Gruman JA. What Do We Really Know About Employee Engagement? *Hum Resour Dev Q* 2014;25:155–82. <https://doi.org/https://doi.org/10.1002/hrdq.21187>.
- [30] Robijn W, Euwema MC, Schaufeli WB, Deprez J. Leaders, teams and work engagement: a basic needs perspective. *Career Dev Int* 2020;25:373–88. <https://doi.org/10.1108/CDI-06-2019-0150>.
- [31] Knight C, Patterson M, Dawson J. Work engagement interventions can be effective: a systematic review.

- 1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65
- Eur J Work Organ Psychol 2019;28:348–72. <https://doi.org/10.1080/1359432X.2019.1588887>.
- [32] Park R, Appelbaum E, Kruse D. Employee involvement and group incentives in manufacturing companies: A multi-level analysis. *Hum Resour Manag J* 2010;20:227–43. <https://doi.org/10.1111/j.1748-8583.2010.00126.x>.
- [33] Presbitero A, Roxas B, Chadee D. The International Journal of Human Looking beyond HRM practices in enhancing employee retention in BPOs : focus on employee – organisation value fit. *Int J Hum Resour Manag* 2016;27:635–52. <https://doi.org/10.1080/09585192.2015.1035306>.
- [34] Jabbour C, Jose C, Sarkis J, Jabbour L de S, Beatriz A, Renwick S, et al. Who is in charge? A review and a research agenda on the ‘human side’ of the circular economy. *J Clean Prod* 2019;222:793–801. <https://doi.org/10.1016/j.jclepro.2019.03.038>.
- [35] Renwick DWS, Redman T, Maguire S. Green Human Resource Management: A Review and Research Agenda\*. *Int J Manag Rev* 2013;15:1–14. <https://doi.org/10.1111/j.1468-2370.2011.00328.x>.
- [36] Pinzone M, Guerci M, Lettieri E, Huisingh D. Effects of ‘green’ training on pro-environmental behaviors and job satisfaction: Evidence from the Italian healthcare sector. *J Clean Prod* 2019;226:221–32. <https://doi.org/10.1016/j.jclepro.2019.04.048>.
- [37] Naz S, Jamshed S, Nisar QA, Nasir N. Green HRM, psychological green climate and pro-environmental behaviors: An efficacious drive towards environmental performance in China. *Curr Psychol* 2023;42:1346–61. <https://doi.org/10.1007/s12144-021-01412-4>.
- [38] Bass BM, Riggio RE. *Transformational Leadership*. 2nd ed. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc; 2005.
- [39] Sosik JJ, Godshalk VM, Yammarino FJ. Transformational leadership, learning goal orientation, and expectations for career success in mentor-protégé relationships: A multiple levels of analysis perspective. *Leadersh Q* 2004;15:241–61. <https://doi.org/10.1016/j.leaqua.2004.02.003>.
- [40] Kotzé J, van der Westhuizen S, Nel E. The relationship between employees’ experience of performance management and work engagement within a South African organisation. *J Psychol Africa* 2014;24:475–9. <https://doi.org/10.1080/14330237.2014.997027>.
- [41] Ren Y, Tang R, Li M. The relationship between delay of gratification and work engagement: The mediating role of job satisfaction. *Helyon* 2022;8:101–20. <https://doi.org/doi.org/10.1016/j.heliyon.2022.e10111>.
- [42] Schaufeli WB, Bakker AB, Salanova M. The measurement of work engagement with a short questionnaire: A cross-national study. *Educ Psychol Meas* 2006;66:701–16. <https://doi.org/10.1177/0013164405282471>.
- [43] Tang G, Chen Y, Jiang Y, Paillé P, Jia J. Green human resource management practices: scale development and validity. *Asia Pacific J Hum Resour* 2018;56:31–55. <https://doi.org/10.1111/1744-7941.12147>.
- [44] Singh SK, Giudice M Del, Chierici R, Graziano D. Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technol Forecast Soc Change* 2020;150:1–12. <https://doi.org/10.1016/j.techfore.2019.119762>.
- [45] Zaborovskaia O, Nadezhina O, Avduevskaya E. The impact of digitalization on the formation of human capital at the regional level. *J Open Innov Technol Mark Complex* 2020;6:1–24. <https://doi.org/10.3390/joitmc6040184>.
- [46] Pesämaa O, Zwikael O, Hair JF, Huemann M. Publishing quantitative papers with rigor and transparency. *Int J Proj Manag* 2021;39:217–22. <https://doi.org/10.1016/j.ijproman.2021.03.001>.
- [47] Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *J Appl Psychol* 2003;88:879–903. <https://doi.org/10.1037/0021-9010.88.5.879>.
- [48] Bailey C, Madden A, Alfes K, Fletcher L. The Meaning, Antecedents and Outcomes of Employee Engagement: A Narrative Synthesis. *Int J Manag Rev* 2017;19:31–53. <https://doi.org/10.1111/ijmr.12077>.
- [49] Davis AS, Van der Heijden BIJM. Reciprocity matters: Idiosyncratic deals to shape the psychological contract and foster employee engagement in times of austerity. *Hum Resour Dev Q* 2018;29:329–55. <https://doi.org/10.1002/hrdq.21327>.
- [50] Burns JM. *Transforming Leadership*. New York: Grove Press: New York; 2007.
- [51] Wefald AJ, Reichard RJ, Serrano SA. Fitting Engagement Into a Nomological Network: The Relationship of Engagement to Leadership and Personality. *J Leadersh Organ Stud* 2011;18:522–37. <https://doi.org/10.1177/1548051811404890>.
- [52] Rothfelder K, Ottenbacher MC, Harrington RJ. The impact of transformational, transactional and non-leadership styles on employee job satisfaction in the German hospitality industry. *Tour Hosp Res* 2012;12:201–14. <https://doi.org/10.1177/1467358413493636>.

### 3. BUKTI KONFIRMASI REVIEW KEDUA DAN BUKTI RESPONS KEPADA REVIEWER (21 AGUSTUS 2023)

**Date:** Aug 21, 2023  
**To:** "Juliansyah Noor" juliensyahnoor@latansamashiro.ac.id  
**From:** "Heliyon" info@heliyon.com  
**Subject:** Decision on submission HELIYON-D-23-25499R1 to Heliyon

Manuscript. Number.: HELIYON-D-23-25499R1

Title: Green human resource management practices, leadership styles, and employee engagement: green banking context

Journal: Heliyon

Dear Dr Noor,

Thank you for submitting your manuscript to Heliyon. We have completed the review of your manuscript and a summary is appended below. The reviewers recommend major revisions are required before publication can be considered. If you are able to address all reviewer comments in full, I invite you to resubmit your manuscript. We ask that you respond to each reviewer comment by either outlining how the criticism was addressed in the revised manuscript or by providing a rebuttal to the criticism.

This should be carried out in a point-by-point fashion as illustrated here: <https://www.cell.com/heliyon/guide-for-authors#Revisions>.

Furthermore, please note that Heliyon now uses a Numbered reference style. Please update the references in your manuscript accordingly, if necessary.

To allow the editors and reviewers to easily assess your revised manuscript, we also ask that you upload a version of your manuscript highlighting any revisions made. You may wish to use Microsoft Word's Track Changes tool or, for LaTeX files, the latexdiff Perl script (<https://ctan.org/pkg/latexdiff>). To submit your revised manuscript, please log in as an author at <https://www.editorialmanager.com/heliyon/>, and navigate to the "Submissions Needing Revision" folder.

Please note that our ethics requirements are now updated. Please choose all applicable statements in our ethics declarations list (available here: <https://www.cell.com/heliyon/ethics>) and include them as a complete ethics statement in the declarations section at the end of your manuscript.

Your revision due date is Sep 11, 2023. We understand that the COVID-19 pandemic may well be causing disruption for you and your colleagues. If that is the case for you and it has an impact on your ability to make revisions to address the concerns that came up in the review process, please reach out to us.

If you need additional time to address the concerns that came up in the review process, please let us know so we can discuss a plan for moving your paper forward.

I look forward to receiving your revised manuscript.

Research Elements (optional)

This journal encourages you to share research objects - including your raw data, methods, protocols, software, hardware and more - which support your original research article in a Research Elements journal. Research Elements are open access, multidisciplinary, peer-reviewed journals which make the objects associated with your research more discoverable, trustworthy and promote replicability and reproducibility. As open access journals, there may be an Article Publishing Charge if your paper is accepted for publication. Find out more about the Research Elements journals at [https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?](https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?dgcid=ec_em_research_elements_email)

Kind regards,

Yunyang Xiao

Editorial Section Manager

Heliyon

Editor and Reviewer comments:

Please note that manuscripts with inadequate language quality will not be accepted in the journal. If editors and/or reviewers indicate that language revisions are required for your manuscript, we strongly encourage using a professional language editing service. Elsevier's Language Editing services provides professional and prompt editing of scientific language for research submissions (<https://webshop.elsevier.com/language-editing-services/language-editing/>). All manuscripts edited with Elsevier's Language Editing services are accompanied by a certificate that may be submitted to the journal as proof for language editing. Poor language may lead to rejection of your manuscript even at the revision stage.

Reviewer's Responses to Questions

<https://www2.cloud.editorialmanager.com/heliyon/ViewLetter.aspx?id=9109019&lsid={7BA482F4-0B5B-4E1F-9A4B-ECDBFABCFC9E}>

1/4

Note: In order to effectively convey your recommendations for improvement to the author(s), and help editors make well-informed and efficient decisions, we ask you to answer the following specific questions about the manuscript and provide additional suggestions where appropriate.

1. Are the objectives and the rationale of the study clearly stated?

Please provide suggestions to the author(s) on how to improve the clarity of the objectives and rationale of the study. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

acceptable

---

2. If applicable, is the application/theory/method/study reported in sufficient detail to allow for its replicability and/or reproducibility?

Please provide suggestions to the author(s) on how to improve the replicability/reproducibility of their study. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

have seen it is acceptable

---

3. If applicable, are statistical analyses, controls, sampling mechanism, and statistical reporting (e.g., P-values, CIs, effect sizes) appropriate and well described?

Please clearly indicate if the manuscript requires additional peer review by a statistician. Kindly provide suggestions to the author(s) on how to improve the statistical analyses, controls, sampling mechanism, or statistical reporting. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

Acceptable

---

4. If applicable, are the existing tables and/or figures complete and acceptable for publication?

Please provide specific suggestions for improvements, removals, or additions of figures or tables. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to 6 of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:  
Acceptable

---

5. If applicable, are the interpretation of results and study conclusions supported by the data?

Please provide suggestions (if needed) to the author(s) on how to improve, tone down, or expand the study interpretations/conclusions. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

acceptable

---

6. Have the authors clearly emphasized the strengths of their study/theory/methods/argument?

Please provide suggestions to the author(s) on how to better emphasize the strengths of their study. Please number each suggestion so that the author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

yes

---

7. Have the authors clearly stated the limitations of their study/theory/methods/argument?

Please list the limitations that the author(s) need to add or emphasize. Please number each limitation so that author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

yes

---

8. Is the manuscript's structure, flow, or writing acceptable for publication? (Think for example of the addition of subheadings, shortening of text, reorganization of sections, or moving details from one section to another)

Please provide suggestions to the author(s) on how to improve the manuscript structure and flow. Please number each suggestion so that author(s) can more easily respond.

Reviewer #1: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Mark as appropriate with an X:

Not Applicable  No and here is how they should be improved  Yes, there is no need for improvement

Provide further comments here:

yes it is clear

---

9. Could the manuscript benefit from language editing?

Reviewer #1: Yes

Reviewer #2: Yes

Reviewer #1: The author(s) have not responded to all of my comments. see again and resubmit. I did not see giving credit to any of the mentioned studies as well.

Reviewer #2: Dear author although revised version is acceptable i would encourage to add information about research paradigm in your research methodology section following research will help you to understand Research Design and Methods: A Systematic Review of Research Paradigms, Sampling Issues and Instruments Development overall work is acceptable

Comments from the Associate Editor

The reviewers have commented on the revised version of your paper. I have also looked at the paper. Gender is a dummy variable defined as 1/2 in descriptive statistics. Change to a 0/1 variable. Education and age should be measured as a set of dummy variables. Do not use ordinal explanatory variables. Reporting of statistical results needs to be improved. Please interpret the magnitude of the relationships. Social desirability bias is a problem. Please explain. All three green HRM variables measure the same. Please justify the theoretical model. Show the discriminant validity and all validity and reliability tests for the Likert scales variables and their constructs.

Please change to Vancouver citation and reference style.

"Green human resource management" practices have been broadly defined, but all definitions lead to green environment oriented aspects. Al-Romeedy (2019) defines it as "the involvement of all activities in the development, implementation and maintenance of a sustainable system, with the aim of making employees and organizations environmentally aware." Meanwhile, Amrutha and Geetha (2020) define it as "policies, practices and systems that make organizational employees green for the benefit of individuals, society, the environment and business."

\*\*\*\*\*

More information and support FAQ:

How do I revise my submission in Editorial Manager?

[https://service.elsevier.com/app/answers/detail/a\\_id/28463/supporthub/publishing/](https://service.elsevier.com/app/answers/detail/a_id/28463/supporthub/publishing/)

You will find information relevant for you as an author on Elsevier's Author Hub: <https://www.elsevier.com/authors>

FAQ: How can I reset a forgotten password?

[https://service.elsevier.com/app/answers/detail/a\\_id/28452/supporthub/publishing/](https://service.elsevier.com/app/answers/detail/a_id/28452/supporthub/publishing/)

For further assistance, please visit our customer service site:

<https://service.elsevier.com/app/home/supporthub/publishing/>

Here you can search for solutions on a range of topics, find answers to frequently asked questions, and learn more about Editorial Manager via interactive tutorials. You can also talk 24/7 to our customer support team by phone and 24/7 by live chat and email

This journal uses the Elsevier Article Transfer Service. This means that if an editor feels your manuscript is more suitable for an alternative journal, then you might be asked to consider transferring the manuscript to such a journal. The recommendation might be provided by a Journal Editor, a dedicated Scientific Managing Editor, a tool assisted recommendation, or a combination. For more details see the journal guide for authors.

#AU\_HELIYON#

To ensure this email reaches the intended recipient, please do not delete the above code

---

*In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Remove my information/details). Please contact the publication office if you have any questions.*

6

# Heliyon

## Green human resource management practices, leadership styles, and employee engagement: green banking context --Manuscript Draft--

<b>Manuscript Number:</b>	HELIYON-D-23-25499R4
<b>Article Type:</b>	Original Research Article
<b>Section/Category:</b>	Social Sciences
<b>Keywords:</b>	Green Human Resource Management practices; Employee Engagement; transformational leadership
<b>Manuscript Classifications:</b>	140.170.140: Management
<b>Corresponding Author:</b>	Juliansyah Noor, Doctor STIE La Tansa Mashiro Rangkasbitung, Banten INDONESIA
<b>First Author:</b>	Juliansyah Noor, Doctor
<b>Order of Authors:</b>	Juliansyah Noor, Doctor Zakiyya Tunnufus Voppy Handriana Yumhi Yumhi
<b>Abstract:</b>	<p>This paper discusses green human resource management (GHRM) practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how GHRM practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, GHRM practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green HRM practices can promote employee engagement.</p>
<b>Opposed Reviewers:</b>	

## RESPONS

**Dear Editor,**

Thank you for your valuable feedback. We appreciate your attention to detail and your comments on the specificity of our study.

We have submitted a revised manuscript with all changes highlighted in blue for the convenience of the editors and reviewers. This will help them easily spot the specific revisions made in response to the feedback.

**Editor #1:** Please remove the figure from the Introduction. You are expected to feature this figure after the discussed about your hypotheses.

*Responds:*

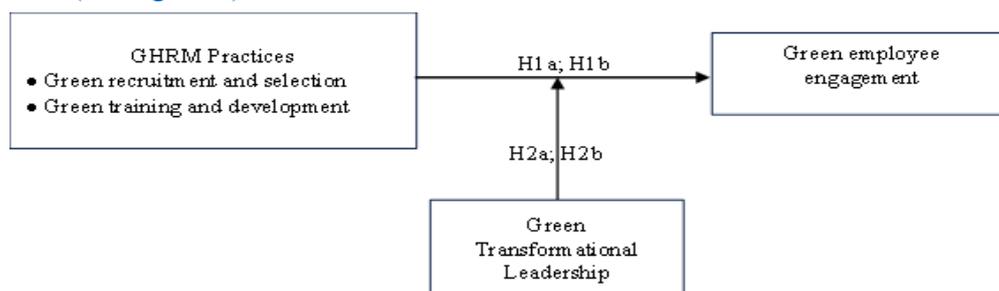
*Thank you for your feedback. We revised and added conclusion section of our manuscript..*

Transformational leaders motivate and inspire their subordinates by sharing their vision, communicating expectations and standards of performance, providing feedback on their performance, and recognizing their achievements both intrinsically and extrinsically. Additionally, recognizing and appraising employees' ongoing behavior can enhance their sense of role meaningfulness, which, in turn, increases their enthusiasm and energy towards achieving superior performance [40]. Finally, transformational leaders' behaviors can also bolster employee engagement. Thus, this study hypothesizes that:

**H2a.** Green transformational leadership moderates the relationship between green recruitment and selection with green employee engagement.

**H2b.** Green transformational leadership moderates the relationship between green training and development with green employee engagement.

This study proposes to empirically examine the moderates' relationships between "green human resource management" practices and transformational leadership, and employee engagement (see figure 1).



**Figure 1** Research Model

**Editor #1:** Kindly elaborate further on the theoretical and practical implications in your conclusions.

*Responds:*

*Thank you for your feedback. We revised and added conclusion section of our manuscript..*

### Theoretical Implications

This study makes several theoretical contributions to the relevant literature. It contributes to the examination of how different resources impact the engagement of employees in green

initiatives. All resources, such as “green transformational leadership” and “green human resources management,” work together to expand the resources available to bank employees. This underscores their importance in driving “green employee engagement” and offers a coherent theoretical framework.

Furthermore, we discovered that “green transformational leadership” acts as a moderating factor in the relationship between “green human resources management” and “green employee engagement.” This extends the theory by demonstrating that contextual resources, like “green human resources management,” contribute to various work outcomes, including “green employee engagement,” due to their positive influence on human resources, such as “green transformational leadership”[9].

### **Practical Implications**

Our research provides valuable recommendations for leaders and managers looking to foster "green employee engagement" and harness it for enhanced environmental performance, outpacing competitors in the market.

Firstly, we propose that investing in "green employee engagement" benefits the banking sector by enhancing its reputation among stakeholders, who increasingly demand eco-friendly processes, products, and services. Our study indicates that banking institutions should prioritize and reinforce "green transformational leadership" behaviors, essential for the successful implementation of "green HRM practices."

Secondly, banking organizations should invest in "green HRM practices" and view them as a strategic asset to direct the workforce toward effective environmental management. We hypothesize that "green HRM" aligns with the bank's strategic commitment to environmental responsibility and motivates employees to adopt eco-conscious work behaviors, thereby reducing pollution impact. Consequently, our research suggests that top management should work on aligning the bank's environmental objectives with green HRM policies and practices to promote and sustain "green employee engagement."

Overall, our study offers practical insights for managers, leaders, and policymakers on how to establish and maintain robust "green HRM practices" and green employee engagement" through "green transformational leadership"

### **Limitation and Future Research**

While the current study provides valuable insights into the theory and practice of "green human resources management," there are several areas that require further investigation.

Firstly, considering the limitation of the study being confined to the banking industry in Indonesia, external validity may be a concern. Therefore, future research should explore the proposed framework in other non-bank financial industries and various financial or non-financial sectors to examine the consistency of results across different industries.

Secondly, this study focuses on the Indonesian context and examines the influence of "green recruitment and selection," "green training and development," "green transformational leadership," and "green employee engagement." Extending these findings to developing countries and countries with different cultural backgrounds would provide valuable insights for future research.

Thirdly, while this study examines the role of moderating "green transformational leadership" in the relationship between "green recruitment and selection," "green training and development," with "green employee engagement," future research should enhance the data source by incorporating qualitative data through methods such as "in-depth interviews" or "focus groups." Adopting such an approach would offer supplementary insights into the mediating effect of "green transformational leadership" on "green employee engagement."

Furthermore, there may be other variables that mediate the link between “green recruitment and selection,” “green training and development,” and “green employee engagement,” which future studies should consider. Finally, future research on the link between “green human resources management” practices and “green employee engagement” should examine moderators, which could provide additional insights into this important link.

# Green human resources management practices, leadership style and employee engagement: green banking context

Juliansyah Noor<sup>1</sup>, Zakiyya Tunnufus, Voppy Yulia Handrian, Yumhi

*Department of Management, La Tansa Mashiro University, Banten, Indonesia*

## Abstract

This paper discusses green human resource management practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how green human resource management practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, green human resource management practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green human resource management practices can promote employee engagement.

**Keywords:** Green human resource management practices, Employee engagement, Transformational leadership

JEL classification: J81, M12, M21

## 1. Introduction

In recent years, issues regarding green banking have been widely discussed by people around the world. This issue arises along with the increasing global concern about the harmful effects of pollution and environmental contamination. In simple terms, green banking can be interpreted as the banking business concept with a green environmental perspective. This concept is aimed at creating a green industry in the context of restoring environmental pollution and sustainable ecological balance [1],[2]. Currently, the majority of banks around the world have implemented this concept into their business, which is governed by formal rules and laws. However, will they be successful in achieving the goals of the concept? A number of researchers argue that The successful attainment of an organization's strategic sustainability goals relies on having employees of competent, possessing an extensive technical and managerial skill [3],[4],[5],[6]. In other words, achieving the goals of a sustainability strategy depends on "green human resource management" practices, employee engagement, and organizational leadership.

It is undeniable that human resources are the main factor for achieving organizational goals, including in building a sustainable organization [4]. "Green human resource management" practices are needed to produce quality, manage and develop environmentally sound employees. However, this practice also does not fully guarantee the natural resources and its environment preservation. This is because issues related to the environment are interdisciplinary in nature, which requires initiative and pro-environmental behavior from each individual [7],[8]. Therefore, this practice becomes very important when it is able to foster employee involvement when carrying out activities related to the environment [6] and encourages innovation environment [4]. When employees are involved, both formally and informally, this can encourage high-level initiatives, innovative behavior, role expansion, and have the ability to adapt to change [9]. In addition, employee involvement can also encourage them to be psychologically present when carrying out their work, and comply with formal employment prerequisites and organizational regulations [10].

On the other hand, organizational leadership also plays an important role in the link between "green human resource management" practices and employee engagement. Belief in attaining objectives and practices within the organization (including "green human resource management" practices) is the result of reciprocal exchanges between leaders and their subordinates [11]. Individuals feel compelled to respond to the economic, emotional,

---

\*Coressponding author:

email: [juliansyahnoor@latansamashiro.ac.id](mailto:juliansyahnoor@latansamashiro.ac.id) (Juliansyah Noor)

1 and social support provided by their leaders. [12]. Therefore, the engagement variable, which comprises  
2 implications of creative, pro-social, and proactive behavior, can be encouraged by positive interactions between  
3 individuals and their leaders [11],[13]. Specifically, Ababneh et al. (2021) have demonstrated the important  
4 leadership role in the link between “green human resource management” practices and employee engagement.  
5 Theirs is the first study to explore this, and found a significant positive interaction influence transformational  
6 leadership on the relationship.

7 The concept of green banking has been widely implemented in Indonesia, especially since the implementation  
8 of "Law No. 32 of 2009" pertains to the protection and management of the environment. However, the new green  
9 banking boom began in 2015. Until now, studies on green banking practices in the human resources context are  
10 still limited. The majority of existing studies also focus on organizational and environmental performance  
11 [14],[15]. Studies on the link between “green human resource management” practices and performance can indeed  
12 help to understand organizational conditions and practices, but are unable to identify how employees understand,  
13 interact, and adapt to a green-based work environment [16],[4], [9]. This is the first study to examine the link  
14 between “green human resource management” practices, employee engagement, and transformational leadership  
15 in the context of green banking in Indonesia.

16 The research objectives of this study are as follows:

17 1. To investigate the associations between GHRM practices and employee engagement.

18 2. To assess the potential moderating role of transformational leadership in the associations between GHRM  
19 practices and employee engagement.

20 Therefore, this research aims to address the aforementioned gaps in knowledge. In this study, we analyze green  
21 HRM practices associate with organizational and individual levels in order to address the following research  
22 questions:

23 RQ1a: Do "green recruitment and selection" associate with employee engagement?

24 RQ1b: Do "green training and development" associate with employee engagement?

25 RQ2a: Do transformational leadership moderate the associations between "green recruitment and selection" and  
26 employee engagement?

27 RQ2b: Do transformational leadership moderate the associations between "green training and development" and  
28 employee engagement?

## 29 **2. Literature Review and Hypothesis Development**

### 30 *2.1 Green Human Resource Management Practices*

31 “Green human resource management” practices have been broadly defined, but all definitions lead to green  
32 environment-oriented aspects. Al-Romeedy [3] defines it as “the involvement of all activities in the development,  
33 implementation and maintenance of a sustainable system, with the aim of making employees and organizations  
34 environmentally aware.” Meanwhile, Amrutha and Geetha [17] define it as “policies, practices and systems that  
35 make organizational employees green for the benefit of individuals, society, the environment and business.” Rana  
36 and Sharma [18] define it as “the application of “green human resource management” practices with the aim of  
37 promoting the use of sustainable resources, which prioritizes environmental preservation to increase employee  
38 awareness and commitment to environmental management issues.” This is in line with Deshwal [19], who views  
39 it as “an organizational strategy to increase employees' environmental awareness.” As such, the “green human  
40 resource management” practice refers to traditional “human resource management” practices with a focus on a  
41 green environment orientation. So, in principle, “green human resource management” practices are the same as  
42 traditional “human resource management” practices. Conventional “human resource management” practices  
43 center on hiring and choosing personnel, enhancing their skills and expertise, providing remuneration, evaluating  
44 their performance, while “green human resource management” practices do more than just that. “Green human  
45 resource management” practices need to integrate conventional “human resource management” practices with  
46 managing the environment with the aim of promoting and affecting attitudes, knowledge, motivation, and behavior  
47 related to employee sustainability [20],[21],[22]. This practice adopts a comprehensive comprehension of the  
48 "triple bottom-line concept," which involves practices that are aligned with the three pillars of “environmental,  
49 social, and economic balance sustainability” [23], and bring long-term benefits [24].

50 Just like traditional “human resource management” practice, “green human resource management” practice  
51 also includes factors, such as “green recruitment and selection,” “green training and development,” performance  
52 evaluation, compensation, etc., but all of them are green environment oriented. To illustrate, in a green recruitment  
53 and selection process, “green human resource management” practices emphasize the recruitment and selection of  
54 employees who endorse and exhibit interest in the environment [25]. During the job analysis phase, environmental  
55 aspects and accomplishments should be elucidated and emphasized in job descriptions and individual  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65

1 specifications, and elaborate on the expectations for prospective environmentally-conscious employees [25],[26].  
2 Thus, this recruitment and selection can ensure that new employees comprehend the organization's green culture  
3 and uphold its environmental principles [27]. In line with this, training and development are also more focused on  
4 aspects that are environmentally friendly [4], and this is the most significant factor for creating green behavior  
5 from employees [17]. Likewise related to performance evaluation and compensation are also focused on green  
6 environment- oriented aspects, such as providing feedback for employees to be able to support continuous  
7 improvement [20],[25], “giving awards to employees for their commitment to environmental practices” [28].

## 8 *2.2 Employee engagement*

9 Saks and Gruman [29] defined employee engagement as “a multidimensional construct consisting of  
10 physical, cognitive, affective, and behavioral components.” Employees who are engaged feel capable of  
11 completing their assigned tasks, as they possess higher levels of energy and connection towards their work [30].  
12 Knight et al. (2019) identified four types of employee engagement: (1) “personal resource development,” the focus  
13 of personal resource development is on enhancing individual strengths, such as “self-efficacy, resilience, and  
14 optimism”; (2) “development of employment resources,” the aim of employment resource development is to  
15 cultivate positive dimensions of the employee engagement, such as "autonomy, social support, feedback, and  
16 development opportunities"; (3) “leadership training,” leadership training is designed to enhance managerial  
17 leadership skills through a combination of educational and hands-on training methods, such as group-based  
18 exercises in “goal-setting and problem-solving”; and (4) “health promotion,” the main objective of health  
19 promotion is to enhance individual health and well-being while minimizing stress.

## 20 *2.3 Relationship between GHRM practices and employee engagement*

21 Park et al. [32] developed the Ability Motivation Opportunity (AMO) theory. They give a framework for  
22 examining the relationship between employee engagement and “green human resource management” practices.  
23 This theory posits that employee capabilities can be enhanced through the recruitment of skilled and competent  
24 staff, and/or by effective training and development program implementations. The selection of competent  
25 employees is aligned with employee engagement's task-performance dimension, in which engaged employees are  
26 present psychologically when performing their formal duties [33],[9]. While it is not always necessary for  
27 employees to be creative and innovative when dealing with environmental issues, there are instances where  
28 adherence to pre-developed policies and procedures is required to control certain behaviors in the workplace.  
29 Therefore, efforts to improve the alignment between employee competencies, values, and goals, and organizational  
30 goals are important [16]. Hiring environmentally knowledgeable employees positively influences their perceptions  
31 and cognitive evaluations of corporate environmental initiatives, which leads to their full engagement in carrying  
32 out tasks in an environmentally friendly manner[34],[35]. Engagement variables can also link training and  
33 development to the goal orientation and task performance domains [36]. Designing training and orientation and  
34 programs that focus on environmental aspects can increase employee awareness of their surrounding environment  
35 and their role in achieving these goals effectively. Several studies have also confirmed the positive association  
36 “green recruitment and selection” and “green training and development” with “green employee engagement”  
37 [37],[6],[36]. Thus, this study hypothesizes that:

41 **H1a. Green recruitment and selection are positively associated with green employee engagement**

42 **H1b. green training and development are positively associated with green employee engagement**

## 43 *2.4 Moderating effects of transformational leadership*

44 The leadership quality paradigm known as transformational leadership [9] aligns individual values and  
45 employee demands with organizational vision, mission, strategy, and goals. Transformational leaders have the  
46 ability to inspire, empower, and persuade their subordinates to take part in organizational change and achieve goals  
47 [37]. They are crucial for promoting positive social interactions with subordinates and are known for their skills  
48 in exciting, inspiring, building trust, providing meaning and challenge, and reinforcing proactivity and adaptability  
49 in the workplace [38]. As a result, transformational leaders play an important role in aligning followers' self-  
50 actualization with organizational values and systems.

51 The AMO framework describes that transformational leadership can enhance the relationship between  
52 GHRM practices and employee engagement. Sosik et al. (2004) stated that leaders who exhibit transformational  
53 qualities are capable of creating a culture of learning that motivates subordinates to seek out new learning  
54 opportunities. As a result, employees become actively engaged in training programs designed to improve their  
55 knowledge and skills related to solving environmental issues [6]. Furthermore, transformational leaders possess  
56 the necessary vision and judgment to select employees who have the appropriate experience and knowledge for  
57 the organization's environment, standards of performance, and goals. This indicates that transformational leaders  
58 are inclined to foster the development of new competencies, and the recruitment of environmentally  
59  
60  
61  
62  
63  
64  
65

knowledgeable employees reinforces the abilities dimension of AMO. Additionally, transformational leadership can play a motivational role in the AMO framework.

Transformational leaders motivate and inspire their subordinates by sharing their vision, communicating expectations and standards of performance, providing feedback on their performance, and recognizing their achievements both intrinsically and extrinsically. Additionally, recognizing and appraising employees' ongoing behavior can enhance their sense of role meaningfulness, which, in turn, increases their enthusiasm and energy towards achieving superior performance [40]. Finally, transformational leaders' behaviors can also bolster employee engagement. Thus, this study hypothesizes that:

**H2a.** Green transformational leadership moderates the relationship between green recruitment and selection with green employee engagement.

**H2b.** Green transformational leadership moderates the relationship between green training and development with green employee engagement.

This study proposes to empirically examine the moderates' relationships between "green human resource management" practices and transformational leadership, and employee engagement (see figure 1).

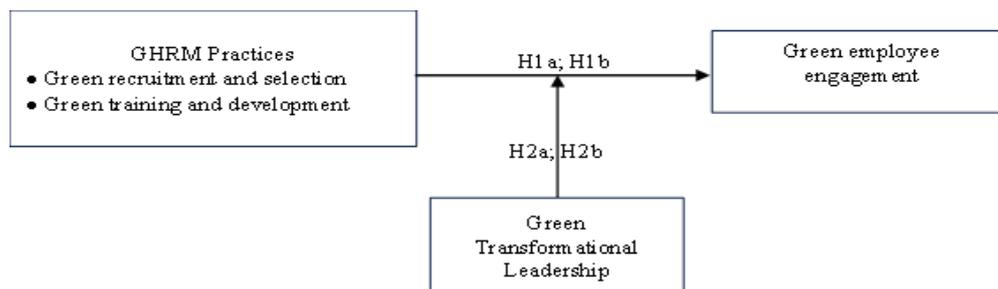


Figure 1 Research Model

### 3. Research methods

#### 3.1 Sample and procedure

Data was collected through the distribution of electronic questionnaires to employees working in green banking in Indonesia. The questionnaire contains a number of questions, which are measured with a 5 Likert scale, namely "strongly disagree," "disagree," "undecided, agree," and "strongly agree." This electronic questionnaire was distributed via social media in the period from 1 to 30 September 2021. Until the specified deadline, only 363 questionnaires were filled in. Specifically, 54.1% of them were filled by female respondents and the other 45.9% by men. Based on age, 39.1% of them were filled by respondents aged 21-30 years, 43.6% aged 31-40 years, and 17.3% aged more than 40 years. Based on education, 33.1% were respondents with diploma education, 53.4% undergraduate, and 13.5% postgraduate. Based on tenure, 35.3% were filled by respondents with tenures of 3-5 years, 54.2% with tenures of 6-10 years, and 10.5% with tenures of more than 10 years.

#### 3.2 Measures

In this study, employee engagement is defined as an employee's assessment of his or her feelings, which reflects the extent to which an employee is psychologically present in an organizational role. The indicators and questionnaire to measure employee engagement were adopted from Ren et al. [41] and Schaufeli et al. [42]. Meanwhile, GHRM practice is defined as an employee's assessment of the process of finding and selecting prospective employees to fill job vacancies in their organization. The indicators and questionnaires to measure this were adopted from Tang et al. [43]. Meanwhile, transformational leadership is defined as an assessment of the way leaders build close relationships with their subordinates. The indicators and questionnaires for their measurement are adopted from Singh et al. [44]

#### 3.3 Data Analysis

The relationship between the dependent variable (y) and the independent variables (x) is expressed through a regression equation, which captures the functional connection between them [45]. When there is more than one independent variable, it is referred to as multiple regression. In this study, we employ the method of ordinary least squares (OLS) regression to construct a multivariate regression model.[46] "OLS is a statistical technique that minimizes the sum of squared differences between the observed values and the predicted values based on a set of functions and desired variables." [45]

Data analysis using the regression model. The regression models developed for this research are:

$$EE = \beta_1 RS + \beta_2 TD + \beta_3 TL + \beta_4 (RS * TL) + \beta_5 (TD * TL) + \beta_6 Gender + \beta_7 Age + \beta_8 Edu + \beta_9 Tenure + \varepsilon \dots\dots\dots (1)$$

where: EE is “green employee engagement;” RS is “green recruitment and selection;” TD is “green training and development;” TL stands for “green transformational leadership;” (RS\*TL) is the interaction between recruitment and selection with transformational leadership; (TD\*TL) is the interaction between training and development and transformational leadership; Gender, Age, Education, and Tenure are the demographic factors of the respondents (control variables);  $\beta$  is the slope; and  $\varepsilon$  is the residual error.

#### 4. Results and discussion

##### 4.1 Descriptive statistics

The results of the study show that employee engagement (EE) in activities with a green environmental perspective is not optimal. This can be seen from the average value of the indicators which is still smaller than a scale of 5 (mean = 2.49), which means that respondents are doubtful about their involvement in activities with a green environmental perspective. Likewise with green recruitment and selection (RS) (mean = 2.56), and green training and development (TD) (mean = 2.36). Meanwhile, the bank's leadership style is also not completely transformational (mean = 2.45). These four aspects are positively correlated with each other, indicating that if one of these aspects is improved, the other aspects will also increase. Their correlation level is very large, which is more than 50% (see Table 1).

**Table 1.**  
Descriptive statistics and correlations matrix

	Mean	SD	EE	RS	TD	TL	Gen	Age	Edu
Green Employee engagement (EE) <sup>a</sup>	2.49	0.71	1.00						
Green Recruitment & selection (RS) <sup>a</sup>	2.56	0.86	0.62***	1.00					
Green Training & development (TD) <sup>a</sup>	2.36	0.75	0.65***	0.58***	1.00				
Transformational leadership (TL) <sup>a</sup>	2.45	0.80	0.68***	0.65***	0.72***	1.00			
Gender (Gen) <sup>b</sup>	0.54	0.50	0.06	0.10	0.08	0.14*	1.00		
Age (Age) <sup>c</sup>	1.78	0.72	0.15*	0.05	0.11	0.05	-0.01	1.00	
Education (Edu) <sup>d</sup>	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) <sup>e</sup>	1.80	0.57	0.10	-0.03	-0.03	0.05	0.08	0.68***	0.16*

Note: “a) the data was measured using a Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree; b) data is measured with dummy, where male=0 and female=1; c) data is measured on a dummy, where 1 = 21-30 years, 2 = 31-40 years, and 3 = > 40 years; d) data is dummy, where 1 = diploma, 2 = undergraduate, and 3 = postgraduate; e) data is dummy, where 1 = 3-5 years, 2 = 6-10 years, and 3 = <10 years; \*\*\* significant 1%, \*\* significant 5%, and \*significant 10%.”

From a demographic perspective, the correlation of employee engagement is only significant with age, while the correlation with gender, education, and tenure is not significant. The positive and significant correlation between EE and age indicates that the higher the employee's age, the higher the engagement. Meanwhile, these demographic factors are not correlated with green RS. Likewise with green TD and TL. For the demographic factor itself, gender does not have a significant correlation with age, education, education and tenure. Age is only positively correlated with tenure, but not with other demographic factors. This shows that the older the employees, the higher their tenure. Education is only correlated with tenure, but not with other demographic factors. The positive and significant correlation between education and tenure shows that the higher the education level of employees, the higher their tenure, or vice versa.

##### 4.2 Common method bias

If all the data in a study is collected from a single source and during a single time period, there is a potential issue called common method bias (CMB) that can affect the reliability of the findings [47],[46]. In this particular study, the researchers employed Hermann's one-factor test to assess the presence of CMB. The test revealed that the collected data could be categorized into four factors, with the first factor explaining only 39.67% of the variance, which is significantly lower than 50%. Based on these results, the authors concluded that CMB did not pose a significant risk in the study.

##### 4.3 Relationship between GHRM practices and employee engagement

Specifically, “green recruitment and selection” and “green training and development” are positively and significantly related to “green employee engagement”, partially, even after controlling for demographic factors such as gender, age, education, and tenure (see Table 2). H1a indicate associations between "green recruitment and selection" with “green employee engagement,” and H1b show associations between "green training and development" with “green employee engagement.” In the model proposed in the present study, the direct associations "green recruitment and selection" with “green employee engagement,” ( $\beta = 0.62, p < 0.01$ ), and "green training and development" with “green employee engagement” ( $\beta = 0.66, p < 0.01$ ). Based on these results, H1a was supported, and H1b also was supported. This shows that “green recruitment and selection” and “green training and development” can drive “green employee engagement” significantly. When compared between the two, the contribution of “green training and development” to “green employee engagement” is greater than the effect of “green recruitment and selection” ( $\beta = 0.66$  vs.  $0.62$ ). This shows that “green training and development” is more effective in creating “green employee engagement” than “green recruitment and selection.” Nevertheless, both are strong predictors of building “green employee engagement.”

Meanwhile, the hypotheses (H2a and H2b) proposed that the association between "green recruitment and selection," "green training and development," and “green employee engagement” would be moderated by "green transformational leadership." The findings indicated that the relationship between "green recruitment and selection"\*"green transformational leadership" was significant ( $\beta = 0.25, p < 0.05$ ). In contrast, the relationship between "green training and development"\*"green transformational leadership" was found to be insignificant ( $b = 0.19, p < 0.05$ ). Based on these outcomes, H2a was supported, while H2b was not supported.

**Table 2**  
Hypotheses testing employing regression analysis

	$\beta$ value	R <sup>2</sup> values	p level	Conclusion
Gender (Gen)	-0.04			
Age (Age)	0.07			
Education (Edu)	-0.05			
Tenure (Ten)	0.04			
H1a:				Supported
RS → green employee engagement	0.62***	0.40	0.00***	
H1b:				Supported
TD → green employee engagement	0.66***	0.44	0.00***	
H2a:				Supported
RS*GTL → green employee engagement	0.25**		0.02**	
H2b:				Not Supported
GTD*GTL → green employee engagement	0.11		0.07	

Note: “ $\beta$ = Path Coefficient; R<sup>2</sup> = R Squared\*; = not significant ( $p > 0.05$ ); \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ ” RS = “green recruitment and selection;” TD = “green training and development;” TL = “green transformational leadership”

High “green employee engagement” with organizational environmental initiatives depends on the influence of the effectiveness of “green recruitment and selection” and individual personality propositions (awareness and positive influence). That is, various aspects of individual behavior (“voluntary and involuntary”) are influenced by the congruence between employees' individual “perceptions, values, and norms and organizational practices, goals, and norms” [29]. Therefore, in an environmental context, a variable set of “green recruitment and selection” is likely to motivate employees to engage with corporate environmental initiatives [48]. Contrary to the theoretical arguments developed earlier in this study, proactive personality reports a non- significant effect on the relationship between “green recruitment and selection” and “green employee engagement.” This can be attributed to the disruptive influence of “cultural norms, beliefs, and values” that employees may have on how they interpret role requirements and procedures, adapt to changing business requirements, and understand “green recruitment and selection” [16]. In other words, individual perceptions and interpretations of an organization's actions and initiatives on the environment may vary according to their differences in “cultural norms, standards, traditions and principles.”

Meanwhile, sustainability requires not only adherence to formal rules but also “green employee engagement” with voluntary green initiatives in the workplace. And this can result from having green training and development practices [37]. Implementing sustainability in green training and development practices helps in obtaining different benefits for the organization such as cutting costs, retaining and attracting employees with green behavior and awareness, and improving the company's business. One of the important aspects of this practice is green training

and development practices which can influence various environmentally friendly behaviors of employees, especially employee engagement [4]. Implementing appropriate green training and development practices through their impact on employee engagement will increase the competitive advantage of these organizations [49].

The role of green transformational leadership” in encouraging and motivating followers, managing change, shaping perceptions and values, and promoting innovative thinking and problem-solving skills in the workplace has increased in recent years [50]. To this end, leadership has been suggested to enhance employees' favorable perceptions of “green recruitment and selection” that involve organizational goals, policies, and systems, since the conduct and practices of leaders are closely linked to the performance of subordinates/employees [51]. This can be viewed through the lens of social exchange theory, in which individuals exhibit diverse patterns while engaging in social structures that they encounter at work [12].

To achieve positive individual interactions such as achieving desired goals and performing assigned tasks, it is essential to meet employees' expectations of recognition and reward, such as “autonomy, praise, and compensation” [49]. Furthermore, beliefs in corporate initiatives, practices, and intentions arise from the social approvals exchanged between leaders and the individual values of their subordinates, which can be negatively or positively affected by such social interactions. As a result, individuals' expectations of role fulfillment depend on their evaluations of the quality of these exchanges, which rely on how much each member of the dyad is willing to comply with their role obligations and face the associated consequences and expectations[49],[12].

In the leadership literature, “green transformational leadership” is regarded as the leadership quality paradigm that fosters alignment and gradual identification between the values and demands of individual employees and the organization's mission, vision, and strategic goals (Bass et al., 2003). “Green transformational leadership” possess characteristics such as “ideal influence, individual consideration, intellectual stimulation, and inspirational motivation” that allow them to motivate, empower, and persuade subordinates to participate in organizational change and goal attainment processes [52].

Consequently, transformational leaders are viewed as having qualities that are critical in promoting positive social exchanges with their subordinates. “Green transformational leadership” is known for its ability to energize, inspire, build trust, provide meaning and challenge, and reinforce proactiveness and workplace adaptability (Bass et al., 2003). Given the above arguments that emphasize the critical role of transformational leaders in aligning subordinates' self-actualization with organizational systems and values, it is reasonable to propose a moderating impact of “green transformational leadership” on the link between “green recruitment and selection “and “green employee engagement” in an environmental context.

## 5. Conclusion implication, and limitations

In general, "green human resources management" practices, such as "green recruitment and selection" and "green training and development," demonstrate a significant and positive association with "green employee engagement," although the impacts on different aspects of engagement may vary. The positive and significant correlation between "green human resources management" practices and "green employee engagement" is further strengthened by the presence of "green transformational leadership," and this relationship exhibits a high explanatory variance.

### Theoretical Implications

This study makes several theoretical contributions to the relevant literature. It contributes to the examination of how different resources impact the engagement of employees in green initiatives. All resources, such as “green transformational leadership” and “green human resources management,” work together to expand the resources available to bank employees. This underscores their importance in driving “green employee engagement” and offers a coherent theoretical framework.

Furthermore, we discovered that “green transformational leadership” acts as a moderating factor in the relationship between “green human resources management” and “green employee engagement.” This extends the theory by demonstrating that contextual resources, like “green human resources management,” contribute to various work outcomes, including “green employee engagement,” due to their positive influence on human resources, such as “green transformational leadership”[9].

### Practical Implications

Our research provides valuable recommendations for leaders and managers looking to foster "green employee engagement" and harness it for enhanced environmental performance, outpacing competitors in the market.

Firstly, we propose that investing in "green employee engagement" benefits the banking sector by enhancing its reputation among stakeholders, who increasingly demand eco-friendly processes, products, and services. Our study indicates that banking institutions should prioritize and reinforce "green transformational leadership" behaviors, essential for the successful implementation of "green HRM practices."

1 Secondly, banking organizations should invest in "green HRM practices" and view them as a strategic asset  
2 to direct the workforce toward effective environmental management. We hypothesize that "green HRM" aligns  
3 with the bank's strategic commitment to environmental responsibility and motivates employees to adopt eco-  
4 conscious work behaviors, thereby reducing pollution impact. Consequently, our research suggests that top  
5 management should work on aligning the bank's environmental objectives with green HRM policies and practices  
6 to promote and sustain "green employee engagement."

7 Overall, our study offers practical insights for managers, leaders, and policymakers on how to establish and  
8 maintain robust "green HRM practices" and green employee engagement" through "green transformational  
9 leadership"

#### 10 Limitation and Future Research

11 While the current study provides valuable insights into the theory and practice of "green human resources  
12 management," there are several areas that require further investigation.

13 Firstly, considering the limitation of the study being confined to the banking industry in **Indonesia**, external  
14 validity may be a concern. Therefore, future research should explore the proposed framework in other non-bank  
15 financial industries and various financial or non-financial sectors to examine the consistency of results across  
16 different industries.

17 Secondly, this study focuses on the Indonesian context and examines the influence of "green recruitment  
18 and selection," "green training and development," "green transformational leadership," and "green employee  
19 engagement." Extending these findings to developing countries and countries with different cultural backgrounds  
20 would provide valuable insights for future research.

21 Thirdly, while this study examines the **role of** moderating "green transformational leadership" in the  
22 relationship between "green recruitment and selection," "green training and development," with "green employee  
23 engagement," future research should enhance the data source by incorporating qualitative data through methods  
24 such as "in-depth interviews" or "focus groups." Adopting such an approach would offer supplementary insights  
25 into the mediating effect of "green transformational leadership" on "green employee engagement."

26 Furthermore, there may be other variables that mediate the link between "green recruitment and selection,"  
27 "green training and development," and "green employee engagement," which future studies should consider.  
28 Finally, future research on the link between "green human resources management" practices and "green employee  
29 engagement" should examine moderators, which could provide additional insights into this important link.  
30  
31

#### 32 Data availability statement

33 Data will be made available on request.  
34  
35  
36

#### 37 Additional information

38 No additional information is available for this paper.  
39  
40  
41

#### 42 Declaration of competing interest

43 The authors declare that they do not have any recognized conflicting financial interests or personal relationships  
44 that might be perceived as having influenced the research presented in this paper.  
45  
46  
47

#### 48 References

- 49 [1] Bhardwaj BR, Malhotra A. Green Banking Strategies: Sustainability through Corporate  
50 Entrepreneurship. *Greener J Bus Manag Stud* 2013;3:180–93.  
51 <https://doi.org/10.15580/gjbms.2013.4.122412343>.
- 52 [2] Rehman A, Ullah I, Afridi F e. A, Ullah Z, Zeeshan M, Hussain A, et al. Adoption of green banking  
53 practices and environmental performance in Pakistan: a demonstration of structural equation modelling.  
54 *Environ Dev Sustain* 2021;23:13200–20. <https://doi.org/10.1007/s10668-020-01206-x>.
- 55 [3] Al-Romeedy BS. Green human resource management in Egyptian travel agencies: constraints of  
56 implementation and requirements for success. *J Hum Resour Hosp Tour* 2019;18:529–48.  
57 <https://doi.org/10.1080/15332845.2019.1626969>.
- 58 [4] Roscoe S, Subramanian N, Jabbour CJC, Chong T. Green human resource management and the enablers  
59 of green organisational culture: Enhancing a firm's environmental performance for sustainable  
60  
61  
62  
63  
64  
65

development. *Bus Strateg Environ* 2019;28:737–49. <https://doi.org/10.1002/bse.2277>.

- [5] Ansari NY, Farrukh M, Raza A. Green human resource management and employees pro-environmental behaviours: Examining the underlying mechanism. *Corp Soc Responsib Environ Manag* 2021;28:229–38. <https://doi.org/10.1002/csr.2044>.
- [6] Renwick DWS, Jabbour CJC, Muller-Camen M, Redman T, Wilkinson A. Contemporary developments in Green (environmental) HRM scholarship. *Int J Hum Resour Manag* 2016;27:114–28. <https://doi.org/10.1080/09585192.2015.1105844>.
- [7] Zientara P, Zamojska A. Green organizational climates and employee pro-environmental behaviour in the hotel industry. *J Sustain Tour* 2018;26:1142–59. <https://doi.org/10.1080/09669582.2016.1206554>.
- [8] Paillé P, Chen Y, Boiral O, Jin J. The Impact of Human Resource Management on Environmental Performance: An Employee-Level Study. *J Bus Ethics* 2014;121:451–66. <https://doi.org/10.1007/s10551-013-1732-0>.
- [9] Ali Ababneh OM, Awwad AS, Abu-Haija A. The association between green human resources practices and employee engagement with environmental initiatives in hotels: The moderation effect of perceived transformational leadership. *J Hum Resour Hosp Tour* 2021;20:390–416. <https://doi.org/10.1080/15332845.2021.1923918>.
- [10] Presbitero A. How do changes in human resource management practices influence employee engagement? A longitudinal study in a hotel chain in the Philippines. *J Hum Resour Hosp Tour* 2017;16:56–70. <https://doi.org/10.1080/15332845.2016.1202061>.
- [11] Ababneh OMA, LeFevre M, Bentley T. Employee engagement: Development of a new measure. *Int J Hum Resour Dev Manag* 2019;19:105–34. <https://doi.org/10.1504/IJHRDM.2019.098623>.
- [12] Černe M, Batistič S, Kenda R. HR systems, attachment styles with leaders, and the creativity–innovation nexus. *Hum Resour Manag Rev* 2018;28:271–88. <https://doi.org/10.1016/j.hrmr.2018.02.004>.
- [13] Azim MT, Fan L, Uddin MA, Abdul Kader Jilani MM, Begum S. Linking transformational leadership with employees’ engagement in the creative process. *Manag Res Rev* 2019;42:837–58. <https://doi.org/10.1108/MRR-08-2018-0286>.
- [14] Yu W, Chavez R, Feng M, Wong CY, Fynes B. Green human resource management and environmental cooperation: An ability-motivation-opportunity and contingency perspective. *Int J Prod Econ* 2020;219:224–35. <https://doi.org/10.1016/j.ijpe.2019.06.013>.
- [15] Acquah ISK, Agyabeng-Mensah Y, Afum E. Examining the link among green human resource management practices, green supply chain management practices and performance. *Benchmarking* 2021;28:267–90. <https://doi.org/10.1108/BIJ-05-2020-0205>.
- [16] Dumont J, Shen J, Deng X. Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values. *Hum Resour Manage* 2016;56:613–627. <https://doi.org/10.1002/hrm>.
- [17] Amrutha VN, Geetha SN. A systematic review on green human resource management: Implications for social sustainability. *J Clean Prod* 2020;247:119131. <https://doi.org/10.1016/j.jclepro.2019.119131>.
- [18] Rana G, Sharma R. Emerging human resource management practices in Industry 4.0. *Strateg HR Rev* 2019;18:176–81. <https://doi.org/10.1108/shr-01-2019-0003>.
- [19] Deshwal P. Green HRM : An organizational strategy of greening people. *Int J Appl Res* 2015; 1(13) 176-181 2015;1:176–81.
- [20] Anwar N, Nik Mahmood NH, Yusliza MY, Ramayah T, Noor Faezah J, Khalid W. Green Human Resource Management for organisational citizenship behaviour towards the environment and environmental performance on a university campus. *J Clean Prod* 2020;256:120401. <https://doi.org/10.1016/j.jclepro.2020.120401>.
- [21] Kim YJ, Kim WG, Choi HM, Phetvaroon K. The effect of green human resource management on hotel employees’ eco-friendly behavior and environmental performance. *Int J Hosp Manag* 2019;76:83–93. <https://doi.org/10.1016/j.ijhm.2018.04.007>.
- [22] Laub JA. *Assessing the Servant Organization Development of the Servant Organizational Leadership Assessment (SOLA) Instrument*. Florida Atlantic University, 1999.
- [23] Yusoff YM, Nejati M, Kee DMH, Amran A. Linking Green Human Resource Management Practices to Environmental Performance in Hotel Industry. *Glob Bus Rev* 2020;21:663–80. <https://doi.org/10.1177/0972150918779294>.
- [24] Ehnert I, Parsa S, Roper I, Wagner M, Muller-Camen M. Reporting on sustainability and HRM: a comparative study of sustainability reporting practices by the world’s largest companies. *Int J Hum Resour Manag* 2016;27:88–108. <https://doi.org/10.1080/09585192.2015.1024157>.
- [25] Ren S, Tang G, E. Jackson S. Green human resource management research in emergence: A review and future directions. *Asia Pacific J Manag* 2018;35:769–803. <https://doi.org/10.1007/s10490-017-9532-1>.
- [26] Yong JY, Yusliza MY, Ramayah T, Seles BMRP. Testing the stakeholder pressure, relative advantage, top management commitment and green human resource management linkage. *Corp Soc Responsib*

Environ Manag 2022;29:1283–99. <https://doi.org/https://doi.org/10.1002/csr.2269>.

- [27] Bahuguna PC, Srivastava R, Tiwari S. Two-decade journey of green human resource management research: a bibliometric analysis. *Benchmarking An Int Jouna* 2023;30:585–602. <https://doi.org/10.1108/BIJ-10-2021-0619>.
- [28] Jabbour CJ, Jabbour DS. Green Human Resource Management and Green Supply Chain Management: Linking two emerging agendas. *J Clean Prod* 2016;112:1824–33. <https://doi.org/10.1016/j.jclepro.2015.01.052>.
- [29] Saks AM, Gruman JA. What Do We Really Know About Employee Engagement? *Hum Resour Dev Q* 2014;25:155–82. <https://doi.org/https://doi.org/10.1002/hrdq.21187>.
- [30] Robijn W, Euwema MC, Schaufeli WB, Deprez J. Leaders, teams and work engagement: a basic needs perspective. *Career Dev Int* 2020;25:373–88. <https://doi.org/10.1108/CDI-06-2019-0150>.
- [31] Knight C, Patterson M, Dawson J. Work engagement interventions can be effective: a systematic review. *Eur J Work Organ Psychol* 2019;28:348–72. <https://doi.org/10.1080/1359432X.2019.1588887>.
- [32] Park R, Appelbaum E, Kruse D. Employee involvement and group incentives in manufacturing companies: A multi-level analysis. *Hum Resour Manag J* 2010;20:227–43. <https://doi.org/10.1111/j.1748-8583.2010.00126.x>.
- [33] Presbitero A, Roxas B, Chadee D. The International Journal of Human Looking beyond HRM practices in enhancing employee retention in BPOs : focus on employee – organisation value fit. *Int J Hum Resour Manag* 2016;27:635–52. <https://doi.org/10.1080/09585192.2015.1035306>.
- [34] Jabbour C, Jose C, Sarkis J, Jabbour L de S, Beatriz A, Renwick S, et al. Who is in charge? A review and a research agenda on the ‘human side’ of the circular economy. *J Clean Prod* 2019;222:793–801. <https://doi.org/10.1016/j.jclepro.2019.03.038>.
- [35] Renwick DWS, Redman T, Maguire S. Green Human Resource Management: A Review and Research Agenda\*. *Int J Manag Rev* 2013;15:1–14. <https://doi.org/10.1111/j.1468-2370.2011.00328.x>.
- [36] Pinzone M, Guerci M, Lettieri E, Huisingh D. Effects of ‘green’ training on pro-environmental behaviors and job satisfaction: Evidence from the Italian healthcare sector. *J Clean Prod* 2019;226:221–32. <https://doi.org/10.1016/j.jclepro.2019.04.048>.
- [37] Naz S, Jamshed S, Nisar QA, Nasir N. Green HRM, psychological green climate and pro-environmental behaviors: An efficacious drive towards environmental performance in China. *Curr Psychol* 2023;42:1346–61. <https://doi.org/10.1007/s12144-021-01412-4>.
- [38] Bass BM, Riggio RE. *Transformational Leadership*. 2nd ed. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc; 2005.
- [39] Sosik JJ, Godshalk VM, Yammarino FJ. Transformational leadership, learning goal orientation, and expectations for career success in mentor-protégé relationships: A multiple levels of analysis perspective. *Leadersh Q* 2004;15:241–61. <https://doi.org/10.1016/j.leaqua.2004.02.003>.
- [40] Kotzé J, van der Westhuizen S, Nel E. The relationship between employees’ experience of performance management and work engagement within a South African organisation. *J Psychol Africa* 2014;24:475–9. <https://doi.org/10.1080/14330237.2014.997027>.
- [41] Ren Y, Tang R, Li M. The relationship between delay of gratification and work engagement: The mediating role of job satisfaction. *Helyon* 2022;8:101–20. <https://doi.org/doi.org/10.1016/j.heliyon.2022.e10111>.
- [42] Schaufeli WB, Bakker AB, Salanova M. The measurement of work engagement with a short questionnaire: A cross-national study. *Educ Psychol Meas* 2006;66:701–16. <https://doi.org/10.1177/0013164405282471>.
- [43] Tang G, Chen Y, Jiang Y, Paillé P, Jia J. Green human resource management practices: scale development and validity. *Asia Pacific J Hum Resour* 2018;56:31–55. <https://doi.org/10.1111/1744-7941.12147>.
- [44] Singh SK, Giudice M Del, Chierici R, Graziano D. Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technol Forecast Soc Change* 2020;150:1–12. <https://doi.org/10.1016/j.techfore.2019.119762>.
- [45] Zaborovskaia O, Nadezhina O, Avduevskaya E. The impact of digitalization on the formation of human capital at the regional level. *J Open Innov Technol Mark Complex* 2020;6:1–24. <https://doi.org/10.3390/joitmc6040184>.
- [46] Pesämaa O, Zwikaël O, Hair JF, Huemann M. Publishing quantitative papers with rigor and transparency. *Int J Proj Manag* 2021;39:217–22. <https://doi.org/10.1016/j.ijproman.2021.03.001>.
- [47] Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *J Appl Psychol* 2003;88:879–903. <https://doi.org/10.1037/0021-9010.88.5.879>.
- [48] Bailey C, Madden A, Alfes K, Fletcher L. The Meaning, Antecedents and Outcomes of Employee Engagement: A Narrative Synthesis. *Int J Manag Rev* 2017;19:31–53.

<https://doi.org/10.1111/ijmr.12077>.

- 1 [49] Davis AS, Van der Heijden BIJM. Reciprocity matters: Idiosyncratic deals to shape the psychological  
2 contract and foster employee engagement in times of austerity. *Hum Resour Dev Q* 2018;29:329–55.  
3 <https://doi.org/10.1002/hrdq.21327>.
- 4 [50] Burns JM. *Transforming Leadership*. New York: Grove Press: New York; 2007.
- 5 [51] Wefald AJ, Reichard RJ, Serrano SA. Fitting Engagement Into a Nomological Network: The  
6 Relationship of Engagement to Leadership and Personality. *J Leadersh Organ Stud* 2011;18:522–37.  
7 <https://doi.org/10.1177/1548051811404890>.
- 8 [52] Rothfelder K, Ottenbacher MC, Harrington RJ. The impact of transformational, transactional and non-  
9 leadership styles on employee job satisfaction in the German hospitality industry. *Tour Hosp Res*  
10 2012;12:201–14. <https://doi.org/10.1177/1467358413493636>.
- 11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65

## 4. BUKTI KONFIRMASI REVIEW KETIGA DAN BUKTI RESPONS KEPADA REVIEWER (07 NOVEMBER 2023)

**Date:** Nov 07, 2023  
**To:** "Juliansyah Noor" juliansyahnoor@latansamashiro.ac.id  
**From:** "Heliyon" info@heliyon.com  
**Subject:** Decision on submission HELIYON-D-23-25499R5 to Heliyon

Ms. No.: HELIYON-D-23-25499R5  
Title: Green human resource management practices, leadership styles, and employee engagement: green banking context  
Journal: Heliyon

Dear Dr Noor,

Thank you for submitting your manuscript to Heliyon.

We have now received all of the editor and reviewer comments on your recent submission to Heliyon. Your paper will become acceptable for publication after implementation of minor formatting and/or administrative changes outlined below.

Editor and Reviewer comments:

We have received footnote (\*) for the corresponding author and the designator which is not denoted in the author list.

We have received designator (1), but the affiliation is missing in author group.

The declaration of competing interests that you upload should be in a standard and editable format. Please select the suitable option and upload it with this submission. You can download the standard declaration of competing interests form from the following link.  
<https://declarations.elsevier.com/>

Heliyon is an online publication only, so the use of black and white images is discouraged. If you have a colour version of your figure [1], we would encourage you to use this one instead when resubmitting.

To submit your revised manuscript, please log in as an author at <https://www.editorialmanager.com/heliyon/>, and navigate to the "Submissions Needing Revision" folder under the Author Main Menu.

When submitting your revised manuscript, please ensure that you upload your most recent document with the "Revised manuscript file - highlighting revisions made" item type.

If you need additional time to address the concerns that came up in the review process, please let us know so we can discuss a plan for moving your paper forward.

We encourage authors of original research papers to share the research objects – including raw data, methods, protocols, software, hardware and other outputs – associated with their paper. More information on how our open access Research Elements journals can help you do this is available at [https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?dgcid=ec\\_em\\_research\\_elements\\_email](https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?dgcid=ec_em_research_elements_email).

Kind regards,

Yunyang Xiao  
Editorial Section Manager  
Heliyon

Embargo

Embargos are not automatically set for papers published in Heliyon. Papers appear online a few days after acceptance. To request a media embargo and/or publication on a specific date, please reach out to the Heliyon team (info@heliyon.com) and cc our press office (press@cell.com) as soon as possible and we will do our best to accommodate your request. For any other questions about publicity, please contact our press office.

More information and support

FAQ: How do I revise my submission in Editorial Manager?

[https://service.elsevier.com/app/answers/detail/a\\_id/28463/supporthub/publishing/](https://service.elsevier.com/app/answers/detail/a_id/28463/supporthub/publishing/)

You will find information relevant for you as an author on Elsevier's Author Hub: <https://www.elsevier.com/authors>

FAQ: How can I reset a forgotten password?

[https://service.elsevier.com/app/answers/detail/a\\_id/28452/supporthub/publishing/](https://service.elsevier.com/app/answers/detail/a_id/28452/supporthub/publishing/)

For further assistance, please visit our customer service site:

<https://service.elsevier.com/app/home/supporthub/publishing/>

<https://www2.cloud.editorialmanager.com/heliyon/ViewLetter.aspx?id=10621399&lsid={6EC490DF-8AC1-4A75-8FCE-B49CA4BBAEFF}>



Here you can search for solutions on a range of topics, find answers to frequently asked questions, and learn more about Editorial Manager via interactive tutorials. You can also talk 24/7 to our customer support team by phone and 24/7 by live chat and email

At Elsevier, we want to help all our authors to stay safe when publishing. Please be aware of fraudulent messages requesting money in return for the publication of your paper. If you are publishing open access with Elsevier, bear in mind that we will never request payment before the paper has been accepted. We have prepared some guidelines (<https://www.elsevier.com/connect/authors-update/seven-top-tips-on-stopping-apc-scams>) that you may find helpful, including a short video on Identifying fake acceptance letters (<https://www.youtube.com/watch?v=o5I8thD9XtE>). Please remember that you can contact Elsevier's Researcher Support team (<https://service.elsevier.com/app/home/supporthub/publishing/>) at any time if you have questions about your manuscript, and you can log into Editorial Manager to check the status of your manuscript ([https://service.elsevier.com/app/answers/detail/a\\_id/29155/c/10530/supporthub/publishing/kw/status/](https://service.elsevier.com/app/answers/detail/a_id/29155/c/10530/supporthub/publishing/kw/status/)).  
#AU\_HELIYON#

To ensure this email reaches the intended recipient, please do not delete the above code

---

*In compliance with data protection regulations, you may request that we remove your personal registration details at any time. ([Remove my information/details](#)). Please contact the publication office if you have any questions.*

# Heliyon

## Green human resource management practices, leadership styles, and employee engagement: green banking context --Manuscript Draft--

<b>Manuscript Number:</b>	HELIYON-D-23-25499R6
<b>Article Type:</b>	Original Research Article
<b>Section/Category:</b>	Social Sciences
<b>Keywords:</b>	Green Human Resource Management practices; Employee Engagement; Transformational Leadership
<b>Manuscript Classifications:</b>	140.170.140: Management
<b>Corresponding Author:</b>	Juliansyah Noor, Doctor STIE La Tansa Mashiro Rangkasbitung, Banten INDONESIA
<b>First Author:</b>	Juliansyah Noor, Doctor
<b>Order of Authors:</b>	Juliansyah Noor, Doctor Zakiyya Tunnufus Voppy Handriana Yumhi Yumhi
<b>Abstract:</b>	<p>This paper discusses green human resource management (GHRM) practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how GHRM practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, GHRM practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green HRM practices can promote employee engagement.</p>
<b>Opposed Reviewers:</b>	
<b>Additional Information:</b>	
<b>Question</b>	<b>Response</b>
<b>Publication ethics</b>	I confirm
Please confirm that you have reviewed our guidelines for <a href="#">Ethics in Publishing</a> as well as Heliyon's <a href="#">Ethics and Editorial Policies</a> .	

## RESPONS

**Dear Editor,**

Thank you for your valuable feedback. We appreciate your attention to detail and your comments on the specificity of our study.

We have submitted a revised manuscript with all changes highlighted **in blue** for the convenience of the editors and reviewers. This will help them easily spot the specific revisions made in response to the feedback.

**Editor :** We have received footnote (\*) for the corresponding author and the designator which is not denoted in the author list.

*Responds:*

*Thank you for your feedback. We revised our manuscript.*

**Green human resources management practices, leadership style and employee engagement: green banking context**

**Juliansyah Noor<sup>1</sup>, Zakiyya Tunnufus<sup>2</sup>, Voppy Yulia Handrian<sup>3</sup>, Yumhi<sup>4</sup>**

*<sup>1,2,3,4</sup>Department of Management, La Tansa Mashiro University, Banten, Indonesia*

Coressponding author: Juliansyah Noor. email: [profjul.noor@gmail.com](mailto:profjul.noor@gmail.com)

**Editor:** We have received designator (1), but the affiliation is missing in author group. The declaration of competing interests that you upload should be in a standard and editable format. Please select the suitable option and upload it with this submission. You can download the standard declaration of competing interests form from the following link.

<https://declarations.elsevier.com/>

*Responds:*

*Thank you for your feedback. We have been update the declaration of competing interests.*

# Green human resources management practices, leadership style and employee engagement: green banking context

Juliansyah Noor<sup>1</sup>, Zakiyya Tunnufus<sup>2</sup>, Voppy Yulia Handrian<sup>3</sup>, Yumhi<sup>4</sup>

<sup>1,2,3,4</sup>*Department of Management, La Tansa Mashiro University, Banten, Indonesia*

Coessponding author: Juliansyah Noor. email: [profjul.noor@gmail.com](mailto:profjul.noor@gmail.com)

## Abstract

This paper discusses green human resource management practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how green human resource management practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, green human resource management practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green human resource management practices can promote employee engagement.

**Keywords:** Green human resource management practices, Employee engagement, Transformational leadership

JEL classification: J81, M12, M21

## 1. Introduction

In recent years, issues regarding green banking have been widely discussed by people around the world. This issue arises along with the increasing global concern about the harmful effects of pollution and environmental contamination. In simple terms, green banking can be interpreted as the banking business concept with a green environmental perspective. This concept is aimed at creating a green industry in the context of restoring environmental pollution and sustainable ecological balance [1],[2]. Currently, the majority of banks around the world have implemented this concept into their business, which is governed by formal rules and laws. However, will they be successful in achieving the goals of the concept? A number of researchers argue that The successful attainment of an organization's strategic sustainability goals relies on having employees of competent, possessing an extensive technical and managerial skill [3],[4],[5],[6]. In other words, achieving the goals of a sustainability strategy depends on “green human resource management” practices, employee engagement, and organizational leadership.

It is undeniable that human resources are the main factor for achieving organizational goals, including in building a sustainable organization [4]. “Green human resource management” practices are needed to produce quality, manage and develop environmentally sound employees. However, this practice also does not fully guarantee the natural resources and its environment preservation. This is because issues related to the environment are interdisciplinary in nature, which requires initiative and pro-environmental behavior from each individual [7],[8]. Therefore, this practice becomes very important when it is able to foster employee involvement when carrying out activities related to the environment [6] and encourages innovation environment [4]. When employees are involved, both formally and informally, this can encourage high-level initiatives, innovative behavior, role expansion, and have the ability to adapt to change [9]. In addition, employee involvement can also encourage them to be psychologically present when carrying out their work, and comply with formal employment prerequisites and organizational regulations [10].

On the other hand, organizational leadership also plays an important role in the link between “green human resource management” practices and employee engagement. Belief in attaining objectives and practices within the organization (including “green human resource management” practices) is the result of reciprocal exchanges between leaders and their subordinates [11]. Individuals feel compelled to respond to the economic, emotional, and social support provided by their leaders. [12]. Therefore, the engagement variable, which comprises implications of creative, pro-social, and proactive behavior, can be encouraged by positive interactions between individuals and their leaders [11],[13]. Specifically, Ababneh et al. (2021) have demonstrated the important

leadership role in the link between “green human resource management” practices and employee engagement. Theirs is the first study to explore this, and found a significant positive interaction influence transformational leadership on the relationship.

The concept of green banking has been widely implemented in Indonesia, especially since the implementation of "Law No. 32 of 2009" pertains to the protection and management of the environment. However, the new green banking boom began in 2015. Until now, studies on green banking practices in the human resources context are still limited. The majority of existing studies also focus on organizational and environmental performance [14],[15]. Studies on the link between “green human resource management” practices and performance can indeed help to understand organizational conditions and practices, but are unable to identify how employees understand, interact, and adapt to a green-based work environment [16],[4], [9]. This is the first study to examine the link between “green human resource management” practices, employee engagement, and transformational leadership in the context of green banking in Indonesia.

The research objectives of this study are as follows:

1. To investigate the associations between GHRM practices and employee engagement.
2. To assess the potential moderating role of transformational leadership in the associations between GHRM practices and employee engagement.

Therefore, this research aims to address the aforementioned gaps in knowledge. In this study, we analyze green HRM practices associate with organizational and individual levels in order to address the following research questions:

RQ1a: Do "green recruitment and selection" associate with employee engagement?

RQ1b: Do "green training and development" associate with employee engagement?

RQ2a: Do transformational leadership moderate the associations between "green recruitment and selection" and employee engagement?

RQ2b: Do transformational leadership moderate the associations between "green training and development" and employee engagement?

## 2. Literature Review and Hypothesis Development

### 2.1 Green Human Resource Management Practices

“Green human resource management” practices have been broadly defined, but all definitions lead to green environment-oriented aspects. Al-Romeedy [3] defines it as “the involvement of all activities in the development, implementation and maintenance of a sustainable system, with the aim of making employees and organizations environmentally aware.” Meanwhile, Amrutha and Geetha [17] define it as “policies, practices and systems that make organizational employees green for the benefit of individuals, society, the environment and business.” Rana and Sharma [18] define it as “the application of “green human resource management” practices with the aim of promoting the use of sustainable resources, which prioritizes environmental preservation to increase employee awareness and commitment to environmental management issues.” This is in line with Deshwal [19], who views it as “an organizational strategy to increase employees' environmental awareness.” As such, the “green human resource management” practice refers to traditional “human resource management” practices with a focus on a green environment orientation. So, in principle, “green human resource management” practices are the same as traditional “human resource management” practices. Conventional “human resource management” practices center on hiring and choosing personnel, enhancing their skills and expertise, providing remuneration, evaluating their performance, while “green human resource management” practices do more than just that. “Green human resource management” practices need to integrate conventional “human resource management” practices with managing the environment with the aim of promoting and affecting attitudes, knowledge, motivation, and behavior related to employee sustainability [20],[21],[22]. This practice adopts a comprehensive comprehension of the "triple bottom-line concept," which involves practices that are aligned with the three pillars of “environmental, social, and economic balance sustainability” [23], and bring long-term benefits [24].

Just like traditional “human resource management” practice, “green human resource management” practice also includes factors, such as “green recruitment and selection,” “green training and development,” performance evaluation, compensation, etc., but all of them are green environment oriented. To illustrate, in a green recruitment and selection process, “green human resource management” practices emphasize the recruitment and selection of employees who endorse and exhibit interest in the environment [25]. During the job analysis phase, environmental aspects and accomplishments should be elucidated and emphasized in job descriptions and individual specifications, and elaborate on the expectations for prospective environmentally-conscious employees [25],[26]. Thus, this recruitment and selection can ensure that new employees comprehend the organization's green culture and uphold its environmental principles [27]. In line with this, training and development are also more focused on

1 aspects that are environmentally friendly [4], and this is the most significant factor for creating green behavior  
2 from employees [17]. Likewise related to performance evaluation and compensation are also focused on green  
3 environment- oriented aspects, such as providing feedback for employees to be able to support continuous  
4 improvement [20],[25], “giving awards to employees for their commitment to environmental practices” [28].

## 5 2.2 *Employee engagement*

6 Saks and Gruman [29] defined employee engagement as “a multidimensional construct consisting of  
7 physical, cognitive, affective, and behavioral components.” Employees who are engaged feel capable of  
8 completing their assigned tasks, as they possess higher levels of energy and connection towards their work [30].  
9 Knight et al. (2019) identified four types of employee engagement: (1) “personal resource development,” the focus  
10 of personal resource development is on enhancing individual strengths, such as “self-efficacy, resilience, and  
11 optimism”; (2) “development of employment resources,” the aim of employment resource development is to  
12 cultivate positive dimensions of the employee engagement, such as "autonomy, social support, feedback, and  
13 development opportunities"; (3) “leadership training,” leadership training is designed to enhance managerial  
14 leadership skills through a combination of educational and hands-on training methods, such as group-based  
15 exercises in “goal-setting and problem-solving”; and (4) “health promotion,” the main objective of health  
16 promotion is to enhance individual health and well-being while minimizing stress.

## 17 2.3 *Relationship between GHRM practices and employee engagement*

18 Park et al. [32] developed the Ability Motivation Opportunity (AMO) theory. They give a framework for  
19 examining the relationship between employee engagement and “green human resource management” practices.  
20 This theory posits that employee capabilities can be enhanced through the recruitment of skilled and competent  
21 staff, and/or by effective training and development program implementations. The selection of competent  
22 employees is aligned with employee engagement’s task-performance dimension, in which engaged employees are  
23 present psychologically when performing their formal duties [33],[9]. While it is not always necessary for  
24 employees to be creative and innovative when dealing with environmental issues, there are instances where  
25 adherence to pre-developed policies and procedures is required to control certain behaviors in the workplace.  
26 Therefore, efforts to improve the alignment between employee competencies, values, and goals, and organizational  
27 goals are important [16]. Hiring environmentally knowledgeable employees positively influences their perceptions  
28 and cognitive evaluations of corporate environmental initiatives, which leads to their full engagement in carrying  
29 out tasks in an environmentally friendly manner[34],[35]. Engagement variables can also link training and  
30 development to the goal orientation and task performance domains [36]. Designing training and orientation and  
31 programs that focus on environmental aspects can increase employee awareness of their surrounding environment  
32 and their role in achieving these goals effectively. Several studies have also confirmed the positive association  
33 “green recruitment and selection” and “green training and development” with “green employee engagement”  
34 [37],[6],[36]. Thus, this study hypothesizes that:

35 **H1a.** Green recruitment and selection are positively associated with green employee engagement

36 **H1b.** green training and development are positively associated with green employee engagement

## 37 2.4 *Moderating effects of transformational leadership*

38 The leadership quality paradigm known as transformational leadership [9] aligns individual values and  
39 employee demands with organizational vision, mission, strategy, and goals. Transformational leaders have the  
40 ability to inspire, empower, and persuade their subordinates to take part in organizational change and achieve goals  
41 [37]. They are crucial for promoting positive social interactions with subordinates and are known for their skills  
42 in exciting, inspiring, building trust, providing meaning and challenge, and reinforcing proactivity and adaptability  
43 in the workplace [38]. As a result, transformational leaders play an important role in aligning followers' self-  
44 actualization with organizational values and systems.

45 The AMO framework describes that transformational leadership can enhance the relationship between  
46 GHRM practices and employee engagement. Sosik et al. (2004) stated that leaders who exhibit transformational  
47 qualities are capable of creating a culture of learning that motivates subordinates to seek out new learning  
48 opportunities. As a result, employees become actively engaged in training programs designed to improve their  
49 knowledge and skills related to solving environmental issues [6]. Furthermore, transformational leaders possess  
50 the necessary vision and judgment to select employees who have the appropriate experience and knowledge for  
51 the organization's environment, standards of performance, and goals. This indicates that transformational leaders  
52 are inclined to foster the development of new competencies, and the recruitment of environmentally  
53 knowledgeable employees reinforces the abilities dimension of AMO. Additionally, transformational leadership  
54 can play a motivational role in the AMO framework.

Transformational leaders motivate and inspire their subordinates by sharing their vision, communicating expectations and standards of performance, providing feedback on their performance, and recognizing their achievements both intrinsically and extrinsically. Additionally, recognizing and appraising employees' ongoing behavior can enhance their sense of role meaningfulness, which, in turn, increases their enthusiasm and energy towards achieving superior performance [40]. Finally, transformational leaders' behaviors can also bolster employee engagement. Thus, this study hypothesizes that:

**H2a.** Green transformational leadership moderates the relationship between green recruitment and selection with green employee engagement.

**H2b.** Green transformational leadership moderates the relationship between green training and development with green employee engagement.

This study proposes to empirically examine the moderates' relationships between "green human resource management" practices and transformational leadership, and employee engagement (see figure 1).

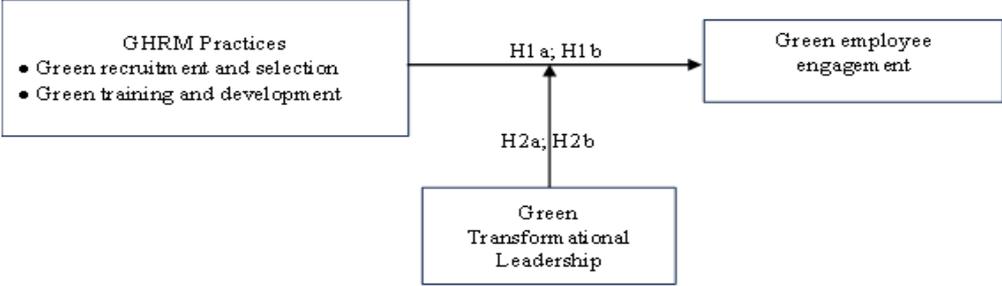


Figure 1 Research Model

3. Research methods

3.1 Sample and procedure

Data was collected through the distribution of electronic questionnaires to employees working in green banking in Indonesia. The questionnaire contains a number of questions, which are measured with a 5 Likert scale, namely "strongly disagree," "disagree," "undecided, agree," and "strongly agree." This electronic questionnaire was distributed via social media in the period from 1 to 30 September 2021. Until the specified deadline, only 363 questionnaires were filled in. Specifically, 54.1% of them were filled by female respondents and the other 45.9% by men. Based on age, 39.1% of them were filled by respondents aged 21-30 years, 43.6% aged 31-40 years, and 17.3% aged more than 40 years. Based on education, 33.1% were respondents with diploma education, 53.4% undergraduate, and 13.5% postgraduate. Based on tenure, 35.3% were filled by respondents with tenures of 3-5 years, 54.2% with tenures of 6-10 years, and 10.5% with tenures of more than 10 years.

3.2 Measures

In this study, employee engagement is defined as an employee's assessment of his or her feelings, which reflects the extent to which an employee is psychologically present in an organizational role. The indicators and questionnaire to measure employee engagement were adopted from Ren et al. [41] and Schaufeli et al. [42]. Meanwhile, GHRM practice is defined as an employee's assessment of the process of finding and selecting prospective employees to fill job vacancies in their organization. The indicators and questionnaires to measure this were adopted from Tang et al. [43]. Meanwhile, transformational leadership is defined as an assessment of the way leaders build close relationships with their subordinates. The indicators and questionnaires for their measurement are adopted from Singh et al. [44]

3.3 Data Analysis

The relationship between the dependent variable (y) and the independent variables (x) is expressed through a regression equation, which captures the functional connection between them [45]. When there is more than one independent variable, it is referred to as multiple regression. In this study, we employ the method of ordinary least squares (OLS) regression to construct a multivariate regression model.[46] "OLS is a statistical technique that minimizes the sum of squared differences between the observed values and the predicted values based on a set of functions and desired variables."[45]

Data analysis using the regression model. The regression models developed for this research are:

$$EE = \beta_1RS + \beta_2TD + \beta_3TL + \beta_4(RS * TL) + \beta_5(TD * TL) + \beta_6Gender + \beta_7Age + \beta_8Edu + \beta_9Tenure + \epsilon \dots\dots\dots (1)$$

where: EE is “green employee engagement;” RS is “green recruitment and selection;” TD is “green training and development;” TL stands for “green transformational leadership;” (RS\*TL) is the interaction between recruitment and selection with transformational leadership; (TD\*TL) is the interaction between training and development and transformational leadership; Gender, Age, Education, and Tenure are the demographic factors of the respondents (control variables);  $\beta$  is the slope; and  $\varepsilon$  is the residual error.

## 4. Results and discussion

### 4.1 Descriptive statistics

The results of the study show that employee engagement (EE) in activities with a green environmental perspective is not optimal. This can be seen from the average value of the indicators which is still smaller than a scale of 5 (mean = 2.49), which means that respondents are doubtful about their involvement in activities with a green environmental perspective. Likewise with green recruitment and selection (RS) (mean = 2.56), and green training and development (TD) (mean = 2.36). Meanwhile, the bank's leadership style is also not completely transformational (mean = 2.45). These four aspects are positively correlated with each other, indicating that if one of these aspects is improved, the other aspects will also increase. Their correlation level is very large, which is more than 50% (see Table 1).

**Table 1.**

**Descriptive statistics and correlations matrix**

	Mean	SD	EE	RS	TD	TL	Gen	Age	Edu
Green Employee engagement (EE) <sup>a</sup>	2.49	0.71	1.00						
Green Recruitment & selection (RS) <sup>a</sup>	2.56	0.86	0.62***	1.00					
Green Training & development (TD) <sup>a</sup>	2.36	0.75	0.65***	0.58***	1.00				
Transformational leadership (TL) <sup>a</sup>	2.45	0.80	0.68***	0.65***	0.72***	1.00			
Gender (Gen) <sup>b</sup>	0.54	0.50	0.06	0.10	0.08	0.14*	1.00		
Age (Age) <sup>c</sup>	1.78	0.72	0.15*	0.05	0.11	0.05	-0.01	1.00	
Education (Edu) <sup>d</sup>	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) <sup>e</sup>	1.80	0.57	0.10	-0.03	-0.03	0.05	0.08	0.68***	0.16*

Note: “a) the data was measured using a Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree; b) data is measured with dummy, where male=0 and female=1; c) data is measured on a dummy, where 1 = 21-30 years, 2 = 31-40 years, and 3 = > 40 years; d) data is dummy, where 1 = diploma, 2 = undergraduate, and 3 = postgraduate; e) data is dummy, where 1 = 3-5 years, 2 = 6-10 years, and 3 = <10 years; \*\*\* significant 1%, \*\* significant 5%, and \*significant 10%.”

From a demographic perspective, the correlation of employee engagement is only significant with age, while the correlation with gender, education, and tenure is not significant. The positive and significant correlation between EE and age indicates that the higher the employee's age, the higher the engagement. Meanwhile, these demographic factors are not correlated with green RS. Likewise with green TD and TL. For the demographic factor itself, gender does not have a significant correlation with age, education, education and tenure. Age is only positively correlated with tenure, but not with other demographic factors. This shows that the older the employees, the higher their tenure. Education is only correlated with tenure, but not with other demographic factors. The positive and significant correlation between education and tenure shows that the higher the education level of employees, the higher their tenure, or vice versa.

### 4.2 Common method bias

If all the data in a study is collected from a single source and during a single time period, there is a potential issue called common method bias (CMB) that can affect the reliability of the findings [47],[46]. In this particular study, the researchers employed Hermann's one-factor test to assess the presence of CMB. The test revealed that the collected data could be categorized into four factors, with the first factor explaining only 39.67% of the variance, which is significantly lower than 50%. Based on these results, the authors concluded that CMB did not pose a significant risk in the study.

### 4.3 Relationship between GHRM practices and employee engagement

Specifically, “green recruitment and selection” and “green training and development” are positively and significantly related to “green employee engagement”, partially, even after controlling for demographic factors such as gender, age, education, and tenure (see Table 2). H1a indicate associations between "green recruitment and

selection" with "green employee engagement," and H1b show associations between "green training and development" with "green employee engagement." In the model proposed in the present study, the direct associations "green recruitment and selection" with "green employee engagement," ( $\beta = 0.62, p < 0.01$ ), and "green training and development" with "green employee engagement" ( $\beta = 0.66, p < 0.01$ ). Based on these results, H1a was supported, and H1b also was supported. This shows that "green recruitment and selection" and "green training and development" can drive "green employee engagement" significantly. When compared between the two, the contribution of "green training and development" to "green employee engagement" is greater than the effect of "green recruitment and selection" ( $\beta = 0.66$  vs.  $0.62$ ). This shows that "green training and development" is more effective in creating "green employee engagement" than "green recruitment and selection." Nevertheless, both are strong predictors of building "green employee engagement."

Meanwhile, the hypotheses (H2a and H2b) proposed that the association between "green recruitment and selection," "green training and development," and "green employee engagement" would be moderated by "green transformational leadership." The findings indicated that the relationship between "green recruitment and selection"\*"green transformational leadership" was significant ( $\beta = 0.25, p < 0.05$ ). In contrast, the relationship between "green training and development"\*"green transformational leadership" was found to be insignificant ( $b = 0.19, p < 0.05$ ). Based on these outcomes, H2a was supported, while H2b was not supported.

**Table 2**

Hypotheses testing employing regression analysis

	$\beta$ value	R <sup>2</sup> values	$\rho$ level	Conclusion
Gender (Gen)	-0.04			
Age (Age)	0.07			
Education (Edu)	-0.05			
Tenure (Ten)	0.04			
H1a:				Supported
RS → green employee engagement	0.62***	0.40	0.00***	
H1b:				Supported
TD → green employee engagement	0.66***	0.44	0.00***	
H2a:				
RS*GTL → green employee engagement	0.25**		0.02**	Supported
H2b:				
GTD*GTL → green employee engagement	0.11		0.07	Not Supported

Note: " $\beta$ "= Path Coefficient; R<sup>2</sup> = R Squared\*; = not significant ( $p > 0.05$ ); \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ " RS = "green recruitment and selection;" TD = "green training and development;" TL = "green transformational leadership"

High "green employee engagement" with organizational environmental initiatives depends on the influence of the effectiveness of "green recruitment and selection" and individual personality propositions (awareness and positive influence). That is, various aspects of individual behavior ("voluntary and involuntary") are influenced by the congruence between employees' individual "perceptions, values, and norms and organizational practices, goals, and norms" [29]. Therefore, in an environmental context, a variable set of "green recruitment and selection" is likely to motivate employees to engage with corporate environmental initiatives [48]. Contrary to the theoretical arguments developed earlier in this study, proactive personality reports a non-significant effect on the relationship between "green recruitment and selection" and "green employee engagement." This can be attributed to the disruptive influence of "cultural norms, beliefs, and values" that employees may have on how they interpret role requirements and procedures, adapt to changing business requirements, and understand "green recruitment and selection" [16]. In other words, individual perceptions and interpretations of an organization's actions and initiatives on the environment may vary according to their differences in "cultural norms, standards, traditions and principles."

Meanwhile, sustainability requires not only adherence to formal rules but also "green employee engagement" with voluntary green initiatives in the workplace. And this can result from having green training and development practices [37]. Implementing sustainability in green training and development practices helps in obtaining different benefits for the organization such as cutting costs, retaining and attracting employees with green behavior and awareness, and improving the company's business. One of the important aspects of this practice is green training and development practices which can influence various environmentally friendly behaviors of employees, especially employee engagement [4]. Implementing appropriate green training and development practices through their impact on employee engagement will increase the competitive advantage of these organizations [49].

1 The role of green transformational leadership” in encouraging and motivating followers, managing change,  
2 shaping perceptions and values, and promoting innovative thinking and problem-solving skills in the workplace  
3 has increased in recent years [50]. To this end, leadership has been suggested to enhance employees' favorable  
4 perceptions of “green recruitment and selection” that involve organizational goals, policies, and systems, since the  
5 conduct and practices of leaders are closely linked to the performance of subordinates/employees [51]. This can  
6 be viewed through the lens of social exchange theory, in which individuals exhibit diverse patterns while engaging  
7 in social structures that they encounter at work [12].

8 To achieve positive individual interactions such as achieving desired goals and performing assigned tasks, it  
9 is essential to meet employees' expectations of recognition and reward, such as “autonomy, praise, and  
10 compensation” [49]. Furthermore, beliefs in corporate initiatives, practices, and intentions arise from the social  
11 approvals exchanged between leaders and the individual values of their subordinates, which can be negatively or  
12 positively affected by such social interactions. As a result, individuals' expectations of role fulfillment depend on  
13 their evaluations of the quality of these exchanges, which rely on how much each member of the dyad is willing  
14 to comply with their role obligations and face the associated consequences and expectations[49],[12].

15 In the leadership literature, “green transformational leadership” is regarded as the leadership quality paradigm  
16 that fosters alignment and gradual identification between the values and demands of individual employees and the  
17 organization's mission, vision, and strategic goals (Bass et al., 2003). “Green transformational leadership” possess  
18 characteristics such as “ideal influence, individual consideration, intellectual stimulation, and inspirational  
19 motivation” that allow them to motivate, empower, and persuade subordinates to participate in organizational  
20 change and goal attainment processes [52].

21 Consequently, transformational leaders are viewed as having qualities that are critical in promoting positive  
22 social exchanges with their subordinates. “Green transformational leadership” is known for its ability to energize,  
23 inspire, build trust, provide meaning and challenge, and reinforce proactiveness and workplace adaptability (Bass  
24 et al., 2003). Given the above arguments that emphasize the critical role of transformational leaders in aligning  
25 subordinates' self-actualization with organizational systems and values, it is reasonable to propose a moderating  
26 impact of “green transformational leadership” on the link between “green recruitment and selection “and “green  
27 employee engagement” in an environmental context.

## 28 **5. Conclusion implication, and limitations**

29 In general, "green human resources management" practices, such as "green recruitment and selection" and  
30 "green training and development," demonstrate a significant and positive association with "green employee  
31 engagement," although the impacts on different aspects of engagement may vary. The positive and significant  
32 correlation between "green human resources management" practices and "green employee engagement" is further  
33 strengthened by the presence of "green transformational leadership," and this relationship exhibits a high  
34 explanatory variance.

### 35 **Theoretical Implications**

36 This study makes several theoretical contributions to the relevant literature. It contributes to the examination of  
37 how different resources impact the engagement of employees in green initiatives. All resources, such as “green  
38 transformational leadership” and “green human resources management,” work together to expand the resources  
39 available to bank employees. This underscores their importance in driving “green employee engagement” and  
40 offers a coherent theoretical framework.

41 Furthermore, we discovered that “green transformational leadership” acts as a moderating factor in the relationship  
42 between “green human resources management” and “green employee engagement.” This extends the theory by  
43 demonstrating that contextual resources, like “green human resources management,” contribute to various work  
44 outcomes, including “green employee engagement,” due to their positive influence on human resources, such as  
45 “green transformational leadership”[9].

### 46 **Practical Implications**

47 Our research provides valuable recommendations for leaders and managers looking to foster "green  
48 employee engagement" and harness it for enhanced environmental performance, outpacing competitors in the  
49 market.

50 Firstly, we propose that investing in "green employee engagement" benefits the banking sector by  
51 enhancing its reputation among stakeholders, who increasingly demand eco-friendly processes, products, and  
52 services. Our study indicates that banking institutions should prioritize and reinforce "green transformational  
53 leadership" behaviors, essential for the successful implementation of "green HRM practices."

54 Secondly, banking organizations should invest in "green HRM practices" and view them as a strategic asset  
55 to direct the workforce toward effective environmental management. We hypothesize that "green HRM" aligns  
56 with the bank's strategic commitment to environmental responsibility and motivates employees to adopt eco-  
57 conscious work behaviors, thereby reducing pollution impact. Consequently, our research suggests that top  
58  
59  
60  
61  
62  
63  
64  
65

management should work on aligning the bank's environmental objectives with green HRM policies and practices to promote and sustain "green employee engagement."

Overall, our study offers practical insights for managers, leaders, and policymakers on how to establish and maintain robust "green HRM practices" and "green employee engagement" through "green transformational leadership"

### Limitation and Future Research

While the current study provides valuable insights into the theory and practice of "green human resources management," there are several areas that require further investigation.

Firstly, considering the limitation of the study being confined to the banking industry in Indonesia, external validity may be a concern. Therefore, future research should explore the proposed framework in other non-bank financial industries and various financial or non-financial sectors to examine the consistency of results across different industries.

Secondly, this study focuses on the Indonesian context and examines the influence of "green recruitment and selection," "green training and development," "green transformational leadership," and "green employee engagement." Extending these findings to developing countries and countries with different cultural backgrounds would provide valuable insights for future research.

Thirdly, while this study examines the role of moderating "green transformational leadership" in the relationship between "green recruitment and selection," "green training and development," with "green employee engagement," future research should enhance the data source by incorporating qualitative data through methods such as "in-depth interviews" or "focus groups." Adopting such an approach would offer supplementary insights into the mediating effect of "green transformational leadership" on "green employee engagement."

Furthermore, there may be other variables that mediate the link between "green recruitment and selection," "green training and development," and "green employee engagement," which future studies should consider. Finally, future research on the link between "green human resources management" practices and "green employee engagement" should examine moderators, which could provide additional insights into this important link.

### Data availability statement

Data will be made available on <https://repository.latansamashiro.ac.id/>

### Additional information

No additional information is available for this paper.

### Declaration of competing interest

The authors declare that they do not have any recognized conflicting financial interests or personal relationships that might be perceived as having influenced the research presented in this paper.

### References

- [1] Bhardwaj BR, Malhotra A. Green Banking Strategies: Sustainability through Corporate Entrepreneurship. *Greener J Bus Manag Stud* 2013;3:180–93. <https://doi.org/10.15580/gjbms.2013.4.122412343>.
- [2] Rehman A, Ullah I, Afridi F e. A, Ullah Z, Zeeshan M, Hussain A, et al. Adoption of green banking practices and environmental performance in Pakistan: a demonstration of structural equation modelling. *Environ Dev Sustain* 2021;23:13200–20. <https://doi.org/10.1007/s10668-020-01206-x>.
- [3] Al-Romeedy BS. Green human resource management in Egyptian travel agencies: constraints of implementation and requirements for success. *J Hum Resour Hosp Tour* 2019;18:529–48. <https://doi.org/10.1080/15332845.2019.1626969>.
- [4] Roscoe S, Subramanian N, Jabbour CJC, Chong T. Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development. *Bus Strateg Environ* 2019;28:737–49. <https://doi.org/10.1002/bse.2277>.
- [5] Ansari NY, Farrukh M, Raza A. Green human resource management and employees pro-environmental behaviours: Examining the underlying mechanism. *Corp Soc Responsib Environ Manag* 2021;28:229–

38. <https://doi.org/10.1002/csr.2044>.

- [6] Renwick DWS, Jabbour CJC, Muller-Camen M, Redman T, Wilkinson A. Contemporary developments in Green (environmental) HRM scholarship. *Int J Hum Resour Manag* 2016;27:114–28. <https://doi.org/10.1080/09585192.2015.1105844>.
- [7] Zientara P, Zamojska A. Green organizational climates and employee pro-environmental behaviour in the hotel industry. *J Sustain Tour* 2018;26:1142–59. <https://doi.org/10.1080/09669582.2016.1206554>.
- [8] Paillé P, Chen Y, Boiral O, Jin J. The Impact of Human Resource Management on Environmental Performance: An Employee-Level Study. *J Bus Ethics* 2014;121:451–66. <https://doi.org/10.1007/s10551-013-1732-0>.
- [9] Ali Ababneh OM, Awwad AS, Abu-Haija A. The association between green human resources practices and employee engagement with environmental initiatives in hotels: The moderation effect of perceived transformational leadership. *J Hum Resour Hosp Tour* 2021;20:390–416. <https://doi.org/10.1080/15332845.2021.1923918>.
- [10] Presbitero A. How do changes in human resource management practices influence employee engagement? A longitudinal study in a hotel chain in the Philippines. *J Hum Resour Hosp Tour* 2017;16:56–70. <https://doi.org/10.1080/15332845.2016.1202061>.
- [11] Ababneh OMA, LeFevre M, Bentley T. Employee engagement: Development of a new measure. *Int J Hum Resour Dev Manag* 2019;19:105–34. <https://doi.org/10.1504/IJHRDM.2019.098623>.
- [12] Černe M, Batistič S, Kenda R. HR systems, attachment styles with leaders, and the creativity–innovation nexus. *Hum Resour Manag Rev* 2018;28:271–88. <https://doi.org/10.1016/j.hrmr.2018.02.004>.
- [13] Azim MT, Fan L, Uddin MA, Abdul Kader Jilani MM, Begum S. Linking transformational leadership with employees’ engagement in the creative process. *Manag Res Rev* 2019;42:837–58. <https://doi.org/10.1108/MRR-08-2018-0286>.
- [14] Yu W, Chavez R, Feng M, Wong CY, Fynes B. Green human resource management and environmental cooperation: An ability–motivation–opportunity and contingency perspective. *Int J Prod Econ* 2020;219:224–35. <https://doi.org/10.1016/j.ijpe.2019.06.013>.
- [15] Acquah ISK, Agyabeng-Mensah Y, Afum E. Examining the link among green human resource management practices, green supply chain management practices and performance. *Benchmarking* 2021;28:267–90. <https://doi.org/10.1108/BIJ-05-2020-0205>.
- [16] Dumont J, Shen J, Deng X. Effects of Green HRM Practices on Employee Workplace Green Behavior: The Role of Psychological Green Climate and Employee Green Values. *Hum Resour Manage* 2016;56:613–627. <https://doi.org/10.1002/hrm>.
- [17] Amrutha VN, Geetha SN. A systematic review on green human resource management: Implications for social sustainability. *J Clean Prod* 2020;247:119131. <https://doi.org/10.1016/j.jclepro.2019.119131>.
- [18] Rana G, Sharma R. Emerging human resource management practices in Industry 4.0. *Strateg HR Rev* 2019;18:176–81. <https://doi.org/10.1108/shr-01-2019-0003>.
- [19] Deshwal P. Green HRM : An organizational strategy of greening people. *Int J Appl Res* 2015; 1(13) 176–181 2015;1:176–81.
- [20] Anwar N, Nik Mahmood NH, Yusliza MY, Ramayah T, Noor Faezah J, Khalid W. Green Human Resource Management for organisational citizenship behaviour towards the environment and environmental performance on a university campus. *J Clean Prod* 2020;256:120401. <https://doi.org/10.1016/j.jclepro.2020.120401>.
- [21] Kim YJ, Kim WG, Choi HM, Phetvaroon K. The effect of green human resource management on hotel employees’ eco-friendly behavior and environmental performance. *Int J Hosp Manag* 2019;76:83–93. <https://doi.org/10.1016/j.ijhm.2018.04.007>.
- [22] Laub JA. *Assessing the Servant Organization Development of the Servant Organizational Leadership Assessment (SOLA) Instrument*. Florida Atlantic University, 1999.
- [23] Yusoff YM, Nejati M, Kee DMH, Amran A. Linking Green Human Resource Management Practices to Environmental Performance in Hotel Industry. *Glob Bus Rev* 2020;21:663–80. <https://doi.org/10.1177/0972150918779294>.
- [24] Ehnert I, Parsa S, Roper I, Wagner M, Muller-Camen M. Reporting on sustainability and HRM: a comparative study of sustainability reporting practices by the world’s largest companies. *Int J Hum Resour Manag* 2016;27:88–108. <https://doi.org/10.1080/09585192.2015.1024157>.
- [25] Ren S, Tang G, E. Jackson S. Green human resource management research in emergence: A review and future directions. *Asia Pacific J Manag* 2018;35:769–803. <https://doi.org/10.1007/s10490-017-9532-1>.
- [26] Yong JY, Yusliza MY, Ramayah T, Seles BMRP. Testing the stakeholder pressure, relative advantage, top management commitment and green human resource management linkage. *Corp Soc Responsib Environ Manag* 2022;29:1283–99. <https://doi.org/https://doi.org/10.1002/csr.2269>.
- [27] Bahuguna PC, Srivastava R, Tiwari S. Two-decade journey of green human resource management research: a bibliometric analysis. *Benchmarking An Int Jouna* 2023;30:585–602.

<https://doi.org/10.1108/BIJ-10-2021-0619>.

- [28] Jabbour CJ, Jabbour DS. Green Human Resource Management and Green Supply Chain Management: Linking two emerging agendas. *J Clean Prod* 2016;112:1824–33. <https://doi.org/10.1016/j.jclepro.2015.01.052>.
- [29] Saks AM, Gruman JA. What Do We Really Know About Employee Engagement? *Hum Resour Dev Q* 2014;25:155–82. <https://doi.org/https://doi.org/10.1002/hrdq.21187>.
- [30] Robijn W, Euwema MC, Schaufeli WB, Deprez J. Leaders, teams and work engagement: a basic needs perspective. *Career Dev Int* 2020;25:373–88. <https://doi.org/10.1108/CDI-06-2019-0150>.
- [31] Knight C, Patterson M, Dawson J. Work engagement interventions can be effective: a systematic review. *Eur J Work Organ Psychol* 2019;28:348–72. <https://doi.org/10.1080/1359432X.2019.1588887>.
- [32] Park R, Appelbaum E, Kruse D. Employee involvement and group incentives in manufacturing companies: A multi-level analysis. *Hum Resour Manag J* 2010;20:227–43. <https://doi.org/10.1111/j.1748-8583.2010.00126.x>.
- [33] Presbitero A, Roxas B, Chadee D. The International Journal of Human Looking beyond HRM practices in enhancing employee retention in BPOs : focus on employee – organisation value fit. *Int J Hum Resour Manag* 2016;27:635–52. <https://doi.org/10.1080/09585192.2015.1035306>.
- [34] Jabbour C, Jose C, Sarkis J, Jabbour L de S, Beatriz A, Renwick S, et al. Who is in charge? A review and a research agenda on the ‘human side’ of the circular economy. *J Clean Prod* 2019;222:793–801. <https://doi.org/10.1016/j.jclepro.2019.03.038>.
- [35] Renwick DWS, Redman T, Maguire S. Green Human Resource Management: A Review and Research Agenda\*. *Int J Manag Rev* 2013;15:1–14. <https://doi.org/10.1111/j.1468-2370.2011.00328.x>.
- [36] Pinzone M, Guerci M, Lettieri E, Huisingh D. Effects of ‘green’ training on pro-environmental behaviors and job satisfaction: Evidence from the Italian healthcare sector. *J Clean Prod* 2019;226:221–32. <https://doi.org/10.1016/j.jclepro.2019.04.048>.
- [37] Naz S, Jamshed S, Nisar QA, Nasir N. Green HRM, psychological green climate and pro-environmental behaviors: An efficacious drive towards environmental performance in China. *Curr Psychol* 2023;42:1346–61. <https://doi.org/10.1007/s12144-021-01412-4>.
- [38] Bass BM, Riggio RE. *Transformational Leadership*. 2nd ed. Mahwah, New Jersey: Lawrence Erlbaum Associates, Inc; 2005.
- [39] Sosik JJ, Godshalk VM, Yammarino FJ. Transformational leadership, learning goal orientation, and expectations for career success in mentor-protégé relationships: A multiple levels of analysis perspective. *Leadersh Q* 2004;15:241–61. <https://doi.org/10.1016/j.leaqua.2004.02.003>.
- [40] Kotzé J, van der Westhuizen S, Nel E. The relationship between employees’ experience of performance management and work engagement within a South African organisation. *J Psychol Africa* 2014;24:475–9. <https://doi.org/10.1080/14330237.2014.997027>.
- [41] Ren Y, Tang R, Li M. The relationship between delay of gratification and work engagement: The mediating role of job satisfaction. *Helyon* 2022;8:101–20. <https://doi.org/doi.org/10.1016/j.helyon.2022.e10111>.
- [42] Schaufeli WB, Bakker AB, Salanova M. The measurement of work engagement with a short questionnaire: A cross-national study. *Educ Psychol Meas* 2006;66:701–16. <https://doi.org/10.1177/0013164405282471>.
- [43] Tang G, Chen Y, Jiang Y, Paillé P, Jia J. Green human resource management practices: scale development and validity. *Asia Pacific J Hum Resour* 2018;56:31–55. <https://doi.org/10.1111/1744-7941.12147>.
- [44] Singh SK, Giudice M Del, Chierici R, Graziano D. Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technol Forecast Soc Change* 2020;150:1–12. <https://doi.org/10.1016/j.techfore.2019.119762>.
- [45] Zaborovskaia O, Nadezhina O, Avduevskaya E. The impact of digitalization on the formation of human capital at the regional level. *J Open Innov Technol Mark Complex* 2020;6:1–24. <https://doi.org/10.3390/joitmc6040184>.
- [46] Pesämaa O, Zwikael O, Hair JF, Huemann M. Publishing quantitative papers with rigor and transparency. *Int J Proj Manag* 2021;39:217–22. <https://doi.org/10.1016/j.ijproman.2021.03.001>.
- [47] Podsakoff PM, MacKenzie SB, Lee JY, Podsakoff NP. Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies. *J Appl Psychol* 2003;88:879–903. <https://doi.org/10.1037/0021-9010.88.5.879>.
- [48] Bailey C, Madden A, Alfes K, Fletcher L. The Meaning, Antecedents and Outcomes of Employee Engagement: A Narrative Synthesis. *Int J Manag Rev* 2017;19:31–53. <https://doi.org/10.1111/ijmr.12077>.
- [49] Davis AS, Van der Heijden BIJM. Reciprocity matters: Idiosyncratic deals to shape the psychological contract and foster employee engagement in times of austerity. *Hum Resour Dev Q* 2018;29:329–55.

<https://doi.org/10.1002/hrdq.21327>.

- 1 [50] Burns JM. Transforming Leadership. New York: Grove Press: New York; 2007.  
2 [51] Wefald AJ, Reichard RJ, Serrano SA. Fitting Engagement Into a Nomological Network: The  
3 Relationship of Engagement to Leadership and Personality. *J Leadersh Organ Stud* 2011;18:522–37.  
4 <https://doi.org/10.1177/1548051811404890>.  
5 [52] Rothfelder K, Ottenbacher MC, Harrington RJ. The impact of transformational, transactional and non-  
6 leadership styles on employee job satisfaction in the German hospitality industry. *Tour Hosp Res*  
7 2012;12:201–14. <https://doi.org/10.1177/1467358413493636>.  
8  
9  
10  
11  
12  
13  
14  
15  
16  
17  
18  
19  
20  
21  
22  
23  
24  
25  
26  
27  
28  
29  
30  
31  
32  
33  
34  
35  
36  
37  
38  
39  
40  
41  
42  
43  
44  
45  
46  
47  
48  
49  
50  
51  
52  
53  
54  
55  
56  
57  
58  
59  
60  
61  
62  
63  
64  
65

### Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Juliansyah Noor reports financial support, administrative support, equipment, drugs, or supplies, and statistical analysis were provided by La Tansa Mashiro University. Zakiyya Tunnufus reports financial support, administrative support, article publishing charges, travel, and writing assistance were provided by La Tansa Mashiro University. Voppy Yulia Handrian reports financial support, article publishing charges, equipment, drugs, or supplies, travel, and writing assistance were provided by La Tansa Mashiro University. Yumhi reports financial support, administrative support, article publishing charges, and writing assistance were provided by La Tansa Mashiro University. Juliansyah Noor reports a relationship with La Tansa Mashiro University that includes: employment, funding grants, non-financial support, and speaking and lecture fees. Zakiyya Tunnufus reports a relationship with La Tansa Mashiro University that includes: board membership, consulting or advisory, employment, equity or stocks, funding grants, paid expert testimony, and travel reimbursement. Voppy Yulia Handrian reports a relationship with La Tansa Mashiro University that includes: funding grants, non-financial support, paid expert testimony, and speaking and lecture fees. Yumhi reports a relationship with La Tansa Mashiro University that includes: consulting or advisory, funding grants, paid expert testimony, and speaking and lecture fees. Juliansyah Noor has patent licensed to Juliansyah noor. Zakiyya Tunnufus has patent licensed to Zakiyya Tunnufus. Voppy Yulia Handrian has patent licensed to Voppy Yulia Handrian. Yumhi has patent licensed to Yumhi. Correspondent author's previously employed by La Tansa University-JN Co-author previously employed by La Tansa University-ZT Co-author previously employed by La Tansa University-VY Co-author previously employed by La Tansa University-YM If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## 5. BUKTI KONFIRMASI ARTIKEL ACCEPTED (13 NOVEMBER 2023)

<b>Date:</b>	Nov 13, 2023
<b>To:</b>	"Juliansyah Noor" juliansyahnoor@latansamashiro.ac.id
<b>From:</b>	"Heliyon" info@heliyon.com
<b>Subject:</b>	Decision on submission to Heliyon

---

Manuscript Number: HELIYON-D-23-25499R6  
Title: Green human resource management practices, leadership styles, and employee engagement: green banking context  
Journal: Heliyon

Dear Dr Noor,

Thank you for submitting your manuscript to Heliyon.

I am pleased to inform you that your manuscript has been accepted for publication.

Your accepted manuscript will now be transferred to our production department. We will create a proof which you will be asked to check, and you will also be asked to complete a number of online forms required for publication. If we need additional information from you during the production process, we will contact you directly.

We appreciate and value your contribution to Heliyon. We regularly invite authors of recently published manuscript to participate in the peer review process. If you were not already part of the journal's reviewer pool, you have now been added to it. We look forward to your continued participation in our journal, and we hope you will consider us again for future submissions.

We encourage authors of original research papers to share the research objects – including raw data, methods, protocols, software, hardware and other outputs – associated with their paper. More information on how our open access Research Elements journals can help you do this is available at [https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?dgcid=ec\\_em\\_research\\_elements\\_email](https://www.elsevier.com/authors/tools-and-resources/research-elements-journals?dgcid=ec_em_research_elements_email).

Kind regards,  
Yunyang Xiao, MSc  
Editorial Section Manager  
Heliyon

**Embargo**  
Embargos are not automatically set for papers published in Heliyon. Papers appear online a few days after acceptance. To request a media embargo and/or publication on a specific date to assist an institutional press release, please reach out to the Heliyon team (info@heliyon.com) as soon as possible and we will do our best to accommodate your request.

Editor and Reviewer comments:

## 6. BUKTI ARTIKEL PUBLISHED ONLINE (15 NOVEMBER 2023)



[Download full issue](#)

---

# Heliyon



Volume 9, Issue 12, December 2023, e22473

---

## Green human resources management practices, leadership style and employee engagement: Green banking context

[Juliansyah Noor](#)  , [Zakiyya Tunnufus](#), [Voppy Yulia Handrian](#), [Yumhi Yumhi](#)



# Green human resources management practices, leadership style and employee engagement: Green banking context

Juliansyah Noor<sup>\*</sup>, Zakiyya Tunnufus, Voppy Yulia Handrian, Yumhi Yumhi

Department of Management, La Tansa Mashiro University, Banten, Indonesia

## ARTICLE INFO

### JEL classification:

J81  
M12  
M21

### Keywords:

Green human resource management practices  
Employee engagement  
Transformational leadership

## ABSTRACT

This paper discusses green human resource management practices, employee engagement, and transformational leadership in green banking. Specifically, we explore how green human resource management practices influence employee engagement, and how the role of transformational leadership influences their relationships. We used a random sample of 363 green bank employees in Indonesia. Data was collected through online surveys and analyzed using regression modeling. The results show that in general, green human resource management practices are positively and significantly related to employee engagement, and transformational leadership is shown to moderate the relationship. However, specifically, green recruitment and selection only affects the behavioral factors of employee engagement, but not affective and cognitive factors. Meanwhile, training and development only affect the affective factors of employee engagement, but not cognitive and behavioral factors. Furthermore, this research presents novel discoveries regarding how the interplay of contextual and institutional factors between transformational leadership behaviors and green human resource management practices can promote employee engagement.

## 1. Introduction

In recent years, issues regarding green banking have been widely discussed by people around the world. This issue arises along with the increasing global concern about the harmful effects of pollution and environmental contamination. In simple terms, green banking can be interpreted as the banking business concept with a green environmental perspective. This concept is aimed at creating a green industry in the context of restoring environmental pollution and sustainable ecological balance [1,2]. Currently, the majority of banks around the world have implemented this concept into their business, which is governed by formal rules and laws. However, will they be successful in achieving the goals of the concept? A number of researchers argue that The successful attainment of an organization's strategic sustainability goals relies on having employees of competent, possessing an extensive technical and managerial skill [3–6]. In other words, achieving the goals of a sustainability strategy depends on “green human resource management” practices, employee engagement, and organizational leadership.

It is undeniable that human resources are the main factor for achieving organizational goals, including in building a sustainable organization [4]. “Green human resource management” practices are needed to produce quality, manage and develop environmentally sound employees. However, this practice also does not fully guarantee the natural resources and its environment preservation. This is because issues related to the environment are interdisciplinary in nature, which requires initiative and pro-environmental behavior

<sup>\*</sup> Corresponding author.

E-mail address: [profjul.noor@gmail.com](mailto:profjul.noor@gmail.com) (J. Noor).

<https://doi.org/10.1016/j.heliyon.2023.e22473>

Received 22 June 2023; Received in revised form 8 November 2023; Accepted 13 November 2023

Available online 15 November 2023

2405-8440/© 2023 Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

from each individual [7,8]. Therefore, this practice becomes very important when it is able to foster employee involvement when carrying out activities related to the environment [6] and encourages innovation environment [4]. When employees are involved, both formally and informally, this can encourage high-level initiatives, innovative behavior, role expansion, and have the ability to adapt to change [9]. In addition, employee involvement can also encourage them to be psychologically present when carrying out their work, and comply with formal employment prerequisites and organizational regulations [10].

On the other hand, organizational leadership also plays an important role in the link between “green human resource management” practices and employee engagement. Belief in attaining objectives and practices within the organization (including “green human resource management” practices) is the result of reciprocal exchanges between leaders and their subordinates [11]. Individuals feel compelled to respond to the economic, emotional, and social support provided by their leaders [12]. Therefore, the engagement variable, which comprises implications of creative, pro-social, and proactive behavior, can be encouraged by positive interactions between individuals and their leaders [11,13]. Specifically, Ababneh et al. (2021) have demonstrated the important leadership role in the link between “green human resource management” practices and employee engagement. Theirs is the first study to explore this, and found a significant positive interaction influence transformational leadership on the relationship.

The concept of green banking has been widely implemented in Indonesia, especially since the implementation of “Law No. 32 of 2009” pertains to the protection and management of the environment. However, the new green banking boom began in 2015. Until now, studies on green banking practices in the human resources context are still limited. The majority of existing studies also focus on organizational and environmental performance [14,15]. Studies on the link between “green human resource management” practices and performance can indeed help to understand organizational conditions and practices, but are unable to identify how employees understand, interact, and adapt to a green-based work environment [4,9,16]. This is the first study to examine the link between “green human resource management” practices, employee engagement, and transformational leadership in the context of green banking in Indonesia.

The research objectives of this study are as follows:

1. To investigate the associations between GHRM practices and employee engagement.
2. To assess the potential moderating role of transformational leadership in the associations between GHRM practices and employee engagement.

Therefore, this research aims to address the aforementioned gaps in knowledge. In this study, we analyze green HRM practices associate with organizational and individual levels in order to address the following research questions:

**RQ1a.** Do “green recruitment and selection” associate with employee engagement?

**RQ1b.** Do “green training and development” associate with employee engagement?

**RQ2a.** Do transformational leadership moderate the associations between “green recruitment and selection” and employee engagement?

**RQ2b.** Do transformational leadership moderate the associations between “green training and development” and employee engagement?

## 2. Literature review and hypothesis development

### 2.1. Green human resource management practices

“Green human resource management” practices have been broadly defined, but all definitions lead to green environment-oriented aspects. Al-Romeedy [3] defines it as “the involvement of all activities in the development, implementation and maintenance of a sustainable system, with the aim of making employees and organizations environmentally aware.” Meanwhile, Amrutha and Geetha [17] define it as “policies, practices and systems that make organizational employees green for the benefit of individuals, society, the environment and business.” Rana and Sharma [18] define it as “the application of “green human resource management” practices with the aim of promoting the use of sustainable resources, which prioritizes environmental preservation to increase employee awareness and commitment to environmental management issues.” This is in line with Deshwal [19], who views it as “an organizational strategy to increase employees’ environmental awareness.” As such, the “green human resource management” practice refers to traditional “human resource management” practices with a focus on a green environment orientation. So, in principle, “green human resource management” practices are the same as traditional “human resource management” practices. Conventional “human resource management” practices center on hiring and choosing personnel, enhancing their skills and expertise, providing remuneration, evaluating their performance, while “green human resource management” practices do more than just that. “Green human resource management” practices need to integrate conventional “human resource management” practices with managing the environment with the aim of promoting and affecting attitudes, knowledge, motivation, and behavior related to employee sustainability [20–22]. This practice adopts a comprehensive comprehension of the “triple bottom-line concept,” which involves practices that are aligned with the three pillars of “environmental, social, and economic balance sustainability” [23], and bring long-term benefits [24].

Just like traditional “human resource management” practice, “green human resource management” practice also includes factors, such as “green recruitment and selection,” “green training and development,” performance evaluation, compensation, etc., but all of them are green environment oriented. To illustrate, in a green recruitment and selection process, “green human resource management”

practices emphasize the recruitment and selection of employees who endorse and exhibit interest in the environment [25]. During the job analysis phase, environmental aspects and accomplishments should be elucidated and emphasized in job descriptions and individual specifications, and elaborate on the expectations for prospective environmentally-conscious employees [25,26]. Thus, this recruitment and selection can ensure that new employees comprehend the organization's green culture and uphold its environmental principles [27]. In line with this, training and development are also more focused on aspects that are environmentally friendly [4], and this is the most significant factor for creating green behavior from employees [17]. Likewise related to performance evaluation and compensation are also focused on green environment-oriented aspects, such as providing feedback for employees to be able to support continuous improvement [20,25], "giving awards to employees for their commitment to environmental practices" [28].

## 2.2. Employee engagement

Saks and Gruman [29] defined employee engagement as "a multidimensional construct consisting of physical, cognitive, affective, and behavioral components." Employees who are engaged feel capable of completing their assigned tasks, as they possess higher levels of energy and connection towards their work [30]. [31] identified four types of employee engagement: (1) "personal resource development," the focus of personal resource development is on enhancing individual strengths, such as "self-efficacy, resilience, and optimism"; (2) "development of employment resources," the aim of employment resource development is to cultivate positive dimensions of the employee engagement, such as "autonomy, social support, feedback, and development opportunities"; (3) "leadership training," leadership training is designed to enhance managerial leadership skills through a combination of educational and hands-on training methods, such as group-based exercises in "goal-setting and problem-solving"; and (4) "health promotion," the main objective of health promotion is to enhance individual health and well-being while minimizing stress.

## 2.3. Relationship between GHRM practices and employee engagement

Park et al. [32] developed the Ability Motivation Opportunity (AMO) theory. They give a framework for examining the relationship between employee engagement and "green human resource management" practices. This theory posits that employee capabilities can be enhanced through the recruitment of skilled and competent staff, and/or by effective training and development program implementations. The selection of competent employees is aligned with employee engagement's task-performance dimension, in which engaged employees are present psychologically when performing their formal duties [9,33]. While it is not always necessary for employees to be creative and innovative when dealing with environmental issues, there are instances where adherence to pre-developed policies and procedures is required to control certain behaviors in the workplace. Therefore, efforts to improve the alignment between employee competencies, values, and goals, and organizational goals are important [16]. Hiring environmentally knowledgeable employees positively influences their perceptions and cognitive evaluations of corporate environmental initiatives, which leads to their full engagement in carrying out tasks in an environmentally friendly manner [34,35]. Engagement variables can also link training and development to the goal orientation and task performance domains [36]. Designing training and orientation and programs that focus on environmental aspects can increase employee awareness of their surrounding environment and their role in achieving these goals effectively. Several studies have also confirmed the positive association "green recruitment and selection" and "green training and development" with "green employee engagement" [6,36,37]. Thus, this study hypothesizes that:

**H1a.** Green recruitment and selection are positively associated with green employee engagement

**H1b.** green training and development are positively associated with green employee engagement

## 2.4. Moderating effects of transformational leadership

The leadership quality paradigm known as transformational leadership [9] aligns individual values and employee demands with organizational vision, mission, strategy, and goals. Transformational leaders have the ability to inspire, empower, and persuade their subordinates to take part in organizational change and achieve goals [37]. They are crucial for promoting positive social interactions with subordinates and are known for their skills in exciting, inspiring, building trust, providing meaning and challenge, and reinforcing proactivity and adaptability in the workplace [38]. As a result, transformational leaders play an important role in aligning followers' self-actualization with organizational values and systems.

The AMO framework describes that transformational leadership can enhance the relationship between GHRM practices and employee engagement. [39] stated that leaders who exhibit transformational qualities are capable of creating a culture of learning that motivates subordinates to seek out new learning opportunities. As a result, employees become actively engaged in training programs designed to improve their knowledge and skills related to solving environmental issues [6]. Furthermore, transformational leaders possess the necessary vision and judgment to select employees who have the appropriate experience and knowledge for the organization's environment, standards of performance, and goals. This indicates that transformational leaders are inclined to foster the development of new competencies, and the recruitment of environmentally knowledgeable employees reinforces the abilities dimension of AMO. Additionally, transformational leadership can play a motivational role in the AMO framework.

Transformational leaders motivate and inspire their subordinates by sharing their vision, communicating expectations and standards of performance, providing feedback on their performance, and recognizing their achievements both intrinsically and extrinsically. Additionally, recognizing and appraising employees' ongoing behavior can enhance their sense of role meaningfulness, which, in turn, increases their enthusiasm and energy towards achieving superior performance [40]. Finally, transformational leaders' behaviors

can also bolster employee engagement. Thus, this study hypothesizes that:

**H2a.** Green transformational leadership moderates the relationship between green recruitment and selection with green employee engagement.

**H2b.** Green transformational leadership moderates the relationship between green training and development with green employee engagement.

This study proposes to empirically examine the moderates' relationships between "green human resource management" practices and transformational leadership, and employee engagement (see Fig. 1).

### 3. Research methods

#### 3.1. Sample and procedure

Data was collected through the distribution of electronic questionnaires to employees working in green banking in Indonesia. The questionnaire contains a number of questions, which are measured with a 5 Likert scale, namely "strongly disagree," "disagree," "undecided, agree," and "strongly agree." This electronic questionnaire was distributed via social media in the period from 1 to 30 September 2021. Until the specified deadline, only 363 questionnaires were filled in. Specifically, 54.1 % of them were filled by female respondents and the other 45.9 % by men. Based on age, 39.1 % of them were filled by respondents aged 21–30 years, 43.6 % aged 31–40 years, and 17.3 % aged more than 40 years. Based on education, 33.1 % were respondents with diploma education, 53.4 % undergraduate, and 13.5 % postgraduate. Based on tenure, 35.3 % were filled by respondents with tenures of 3–5 years, 54.2 % with tenures of 6–10 years, and 10.5 % with tenures of more than 10 years.

#### 3.2. Measures

In this study, employee engagement is defined as an employee's assessment of his or her feelings, which reflects the extent to which an employee is psychologically present in an organizational role. The indicators and questionnaire to measure employee engagement were adopted from Ren et al. [41] and Schaufeli et al. [42]. Meanwhile, GHRM practice is defined as an employee's assessment of the process of finding and selecting prospective employees to fill job vacancies in their organization. The indicators and questionnaires to measure this were adopted from Tang et al. [43]. Meanwhile, transformational leadership is defined as an assessment of the way leaders build close relationships with their subordinates. The indicators and questionnaires for their measurement are adopted from Singh et al. [44].

#### 3.3. Data analysis

The relationship between the dependent variable (y) and the independent variables (x) is expressed through a regression equation, which captures the functional connection between them [45]. When there is more than one independent variable, it is referred to as multiple regression. In this study, we employ the method of ordinary least squares (OLS) regression to construct a multivariate regression model [46]. "OLS is a statistical technique that minimizes the sum of squared differences between the observed values and the predicted values based on a set of functions and desired variables." [45].

Data analysis using the regression model. The regression models developed for this research are:

$$EE = \beta_1RS + \beta_2TD + \beta_3TL + \beta_4(RS * TL) + \beta_5(TD * TL) + \beta_6Gender + \beta_7Age + \beta_8Edu + \beta_9Tenure + \epsilon \tag{1}$$

where: EE is "green employee engagement;" RS is "green recruitment and selection;" TD is "green training and development;" TL stands for "green transformational leadership;" (RS\*TL) is the interaction between recruitment and selection with transformational leadership; (TD\*TL) is the interaction between training and development and transformational leadership; Gender, Age, Education, and Tenure are the demographic factors of the respondents (control variables);  $\beta$  is the slope; and  $\epsilon$  is the residual error.

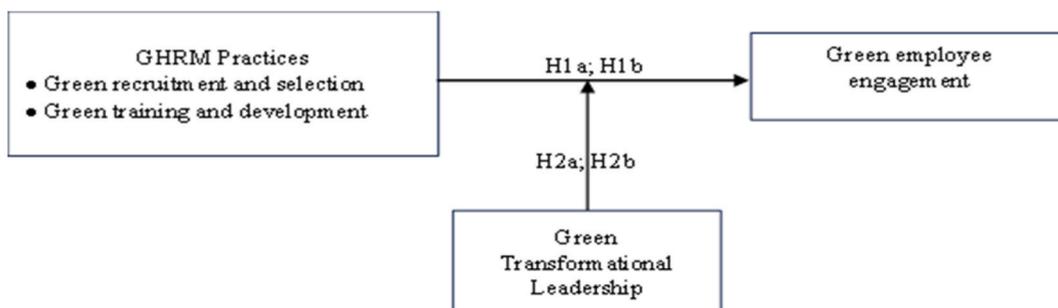


Fig. 1. Research model.

## 4. Results and discussion

### 4.1. Descriptive statistics

The results of the study show that employee engagement (EE) in activities with a green environmental perspective is not optimal. This can be seen from the average value of the indicators which is still smaller than a scale of 5 (mean = 2.49), which means that respondents are doubtful about their involvement in activities with a green environmental perspective. Likewise with green recruitment and selection (RS) (mean = 2.56), and green training and development (TD) (mean = 2.36). Meanwhile, the bank's leadership style is also not completely transformational (mean = 2.45). These four aspects are positively correlated with each other, indicating that if one of these aspects is improved, the other aspects will also increase. Their correlation level is very large, which is more than 50 % (see Table 1).

From a demographic perspective, the correlation of employee engagement is only significant with age, while the correlation with gender, education, and tenure is not significant. The positive and significant correlation between EE and age indicates that the higher the employee's age, the higher the engagement. Meanwhile, these demographic factors are not correlated with green RS. Likewise with green TD and TL. For the demographic factor itself, gender does not have a significant correlation with age, education, and tenure. Age is only positively correlated with tenure, but not with other demographic factors. This shows that the older the employees, the higher their tenure. Education is only correlated with tenure, but not with other demographic factors. The positive and significant correlation between education and tenure shows that the higher the education level of employees, the higher their tenure, or vice versa.

### 4.2. Common method bias

If all the data in a study is collected from a single source and during a single time period, there is a potential issue called common method bias (CMB) that can affect the reliability of the findings [46,47]. In this particular study, the researchers employed Hermann's one-factor test to assess the presence of CMB. The test revealed that the collected data could be categorized into four factors, with the first factor explaining only 39.67 % of the variance, which is significantly lower than 50 %. Based on these results, the authors concluded that CMB did not pose a significant risk in the study.

### 4.3. Relationship between GHRM practices and employee engagement

Specifically, "green recruitment and selection" and "green training and development" are positively and significantly related to "green employee engagement", partially, even after controlling for demographic factors such as gender, age, education, and tenure (see Table 2). H1a indicate associations between "green recruitment and selection" with "green employee engagement," and H1b show associations between "green training and development" with "green employee engagement." In the model proposed in the present study, the direct associations "green recruitment and selection" with "green employee engagement," ( $\beta = 0.62, p < 0.01$ ), and "green training and development" with "green employee engagement" ( $\beta = 0.66, p < 0.01$ ). Based on these results, H1a was supported, and H1b also was supported. This shows that "green recruitment and selection" and "green training and development" can drive "green employee engagement" significantly. When compared between the two, the contribution of "green training and development" to "green employee engagement" is greater than the effect of "green recruitment and selection" ( $\beta = 0.66$  vs.  $0.62$ ). This shows that "green training and development" is more effective in creating "green employee engagement" than "green recruitment and selection." Nevertheless, both are strong predictors of building "green employee engagement."

Meanwhile, the hypotheses (H2a and H2b) proposed that the association between "green recruitment and selection," "green training and development," and "green employee engagement" would be moderated by "green transformational leadership." The findings indicated that the relationship between "green recruitment and selection"\*"green transformational leadership" was significant ( $\beta = 0.25, p < 0.05$ ). In contrast, the relationship between "green training and development"\*"green transformational leadership" was

**Table 1**  
Descriptive statistics and correlations matrix.

	Mean	SD	EE	RS	TD	TL	Gen	Age	Edu
Green Employee engagement (EE) <sup>a</sup>	2.49	0.71	1.00						
Green Recruitment & selection (RS) <sup>a</sup>	2.56	0.86	0.62***	1.00					
Green Training & development (TD) <sup>a</sup>	2.36	0.75	0.65***	0.58***	1.00				
Transformational leadership (TL) <sup>a</sup>	2.45	0.80	0.68***	0.65***	0.72***	1.00			
Gender (Gen) <sup>b</sup>	0.54	0.50	0.06	0.10	0.08	0.14*	1.00		
Age (Age) <sup>c</sup>	1.78	0.72	0.15*	0.05	0.11	0.05	-0.01	1.00	
Education (Edu) <sup>d</sup>	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) <sup>e</sup>	1.80	0.57	0.10	-0.03	-0.03	0.05	0.08	0.68***	0.16*

Note: "a) the data was measured using a Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = undecided, 4 = agree, and 5 = strongly agree; b) data is measured with dummy, where male = 0 and female = 1; c) data is measured on a dummy, where 1 = 21–30 years, 2 = 31–40 years, and 3 = > 40 years; d) data is dummy, where 1 = diploma, 2 = undergraduate, and 3 = postgraduate; e) data is dummy, where 1 = 3–5 years, 2 = 6–10 years, and 3 = <10 years; \*\*\* significant 1 %, \*\* significant 5 %, and \*significant 10 %".

**Table 2**  
Hypotheses testing employing regression analysis.

	$\beta$ value	R <sup>2</sup> values	$\rho$ level	Conclusion
Gender (Gen)	-0.04			
Age (Age)	0.07			
Education (Edu)	-0.05			
Tenure (Ten)	0.04			
<b>H1a:</b> RS → green employee engagement	0.62***	0.40	0.00***	Supported
<b>H1b:</b> TD → green employee engagement	0.66***	0.44	0.00***	Supported
<b>H2a:</b> RS*GTL → green employee engagement	0.25**		0.02**	Supported
<b>H2b:</b> GTD*GTL → green employee engagement	0.11		0.07	Not Supported

Note: “ $\beta$  = Path Coefficient; R<sup>2</sup>=R Squared\*”; = not significant ( $p > 0.05$ ); \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ ” RS = “green recruitment and selection;” TD = “green training and development;” TL = “green transformational leadership”.

found to be insignificant ( $b = 0.19, p < 0.05$ ). Based on these outcomes, **H2a** was supported, while **H2b** was not supported.

High “green employee engagement” with organizational environmental initiatives depends on the influence of the effectiveness of “green recruitment and selection” and individual personality propositions (awareness and positive influence). That is, various aspects of individual behavior (“voluntary and involuntary”) are influenced by the congruence between employees’ individual “perceptions, values, and norms and organizational practices, goals, and norms” [29]. Therefore, in an environmental context, a variable set of “green recruitment and selection” is likely to motivate employees to engage with corporate environmental initiatives [48]. Contrary to the theoretical arguments developed earlier in this study, proactive personality reports a non-significant effect on the relationship between “green recruitment and selection” and “green employee engagement.” This can be attributed to the disruptive influence of “cultural norms, beliefs, and values” that employees may have on how they interpret role requirements and procedures, adapt to changing business requirements, and understand “green recruitment and selection” [16]. In other words, individual perceptions and interpretations of an organization’s actions and initiatives on the environment may vary according to their differences in “cultural norms, standards, traditions and principles.”

Meanwhile, sustainability requires not only adherence to formal rules but also “green employee engagement” with voluntary green initiatives in the workplace. And this can result from having green training and development practices [37]. Implementing sustainability in green training and development practices helps in obtaining different benefits for the organization such as cutting costs, retaining and attracting employees with green behavior and awareness, and improving the company’s business. One of the important aspects of this practice is green training and development practices which can influence various environmentally friendly behaviors of employees, especially employee engagement [4]. Implementing appropriate green training and development practices through their impact on employee engagement will increase the competitive advantage of these organizations [49].

The role of green transformational leadership” in encouraging and motivating followers, managing change, shaping perceptions and values, and promoting innovative thinking and problem-solving skills in the workplace has increased in recent years [50]. To this end, leadership has been suggested to enhance employees’ favorable perceptions of “green recruitment and selection” that involve organizational goals, policies, and systems, since the conduct and practices of leaders are closely linked to the performance of subordinates/employees [51]. This can be viewed through the lens of social exchange theory, in which individuals exhibit diverse patterns while engaging in social structures that they encounter at work [12].

To achieve positive individual interactions such as achieving desired goals and performing assigned tasks, it is essential to meet employees’ expectations of recognition and reward, such as “autonomy, praise, and compensation” [49]. Furthermore, beliefs in corporate initiatives, practices, and intentions arise from the social approvals exchanged between leaders and the individual values of their subordinates, which can be negatively or positively affected by such social interactions. As a result, individuals’ expectations of role fulfillment depend on their evaluations of the quality of these exchanges, which rely on how much each member of the dyad is willing to comply with their role obligations and face the associated consequences and expectations [12,49].

In the leadership literature, “green transformational leadership” is regarded as the leadership quality paradigm that fosters alignment and gradual identification between the values and demands of individual employees and the organization’s mission, vision, and strategic goals (Bass et al., 2003). “Green transformational leadership” possess characteristics such as “ideal influence, individual consideration, intellectual stimulation, and inspirational motivation” that allow them to motivate, empower, and persuade subordinates to participate in organizational change and goal attainment processes [52].

Consequently, transformational leaders are viewed as having qualities that are critical in promoting positive social exchanges with their subordinates. “Green transformational leadership” is known for its ability to energize, inspire, build trust, provide meaning and challenge, and reinforce proactiveness and workplace adaptability (Bass et al., 2003). Given the above arguments that emphasize the critical role of transformational leaders in aligning subordinates’ self-actualization with organizational systems and values, it is reasonable to propose a moderating impact of “green transformational leadership” on the link between “green recruitment and selection” and “green employee engagement” in an environmental context.

## 5. Conclusion implication, and limitations

In general, “green human resources management” practices, such as “green recruitment and selection” and “green training and development,” demonstrate a significant and positive association with “green employee engagement,” although the impacts on different aspects of engagement may vary. The positive and significant correlation between “green human resources management” practices and “green employee engagement” is further strengthened by the presence of “green transformational leadership,” and this relationship exhibits a high explanatory variance.

### 5.1. Theoretical implications

This study makes several theoretical contributions to the relevant literature. It contributes to the examination of how different resources impact the engagement of employees in green initiatives. All resources, such as “green transformational leadership” and “green human resources management,” work together to expand the resources available to bank employees. This underscores their importance in driving “green employee engagement” and offers a coherent theoretical framework.

Furthermore, we discovered that “green transformational leadership” acts as a moderating factor in the relationship between “green human resources management” and “green employee engagement.” This extends the theory by demonstrating that contextual resources, like “green human resources management,” contribute to various work outcomes, including “green employee engagement,” due to their positive influence on human resources, such as “green transformational leadership” [9].

### 5.2. Practical implications

Our research provides valuable recommendations for leaders and managers looking to foster “green employee engagement” and harness it for enhanced environmental performance, outpacing competitors in the market.

Firstly, we propose that investing in “green employee engagement” benefits the banking sector by enhancing its reputation among stakeholders, who increasingly demand eco-friendly processes, products, and services. Our study indicates that banking institutions should prioritize and reinforce “green transformational leadership” behaviors, essential for the successful implementation of “green HRM practices.”

Secondly, banking organizations should invest in “green HRM practices” and view them as a strategic asset to direct the workforce toward effective environmental management. We hypothesize that “green HRM” aligns with the bank’s strategic commitment to environmental responsibility and motivates employees to adopt eco-conscious work behaviors, thereby reducing pollution impact. Consequently, our research suggests that top management should work on aligning the bank’s environmental objectives with green HRM policies and practices to promote and sustain “green employee engagement.”

Overall, our study offers practical insights for managers, leaders, and policymakers on how to establish and maintain robust “green HRM practices” and green employee engagement” through “green transformational leadership”.

## 6. Limitation and future research

While the current study provides valuable insights into the theory and practice of “green human resources management,” there are several areas that require further investigation.

Firstly, considering the limitation of the study being confined to the banking industry in Indonesia, external validity may be a concern. Therefore, future research should explore the proposed framework in other non-bank financial industries and various financial or non-financial sectors to examine the consistency of results across different industries.

Secondly, this study focuses on the Indonesian context and examines the influence of “green recruitment and selection,” “green training and development,” “green transformational leadership,” and “green employee engagement.” Extending these findings to developing countries and countries with different cultural backgrounds would provide valuable insights for future research.

Thirdly, while this study examines the role of moderating “green transformational leadership” in the relationship between “green recruitment and selection,” “green training and development,” with “green employee engagement,” future research should enhance the data source by incorporating qualitative data through methods such as “in-depth interviews” or “focus groups.” Adopting such an approach would offer supplementary insights into the mediating effect of “green transformational leadership” on “green employee engagement.”

Furthermore, there may be other variables that mediate the link between “green recruitment and selection,” “green training and development,” and “green employee engagement,” which future studies should consider. Finally, future research on the link between “green human resources management” practices and “green employee engagement” should examine moderators, which could provide additional insights into this important link.

### Data availability statement

Data will be made available on <https://repository.latansamashiro.ac.id/>

## Additional information

No additional information is available for this paper.

## CRedit authorship contribution statement

**Juliansyah Noor:** Writing – original draft, Validation, Supervision, Methodology, Formal analysis, Data curation, Conceptualization. **Zakiyya Tunnufus:** Writing – review & editing, Validation, Resources, Methodology, Funding acquisition. **Voppy Yulia Handrian:** Validation, Software, Resources, Project administration. **Yumhi Yumhi:** Validation, Software, Resources, Project administration, Investigation, Validation, Software, Resources, Project administration, Investigation.

## Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Juliansyah Noor reports financial support, administrative support, equipment, drugs, or supplies, and statistical analysis were provided by La Tansa Mashiro University. Zakiyya Tunnufus reports financial support, administrative support, article publishing charges, travel, and writing assistance were provided by La Tansa Mashiro University. Voppy Yulia Handrian reports financial support, article publishing charges, equipment, drugs, or supplies, travel, and writing assistance were provided by La Tansa Mashiro University. Yumhi reports financial support, administrative support, article publishing charges, and writing assistance were provided by La Tansa Mashiro University. Juliansyah Noor reports a relationship with La Tansa Mashiro University that includes: employment, funding grants, non-financial support, and speaking and lecture fees. Zakiyya Tunnufus reports a relationship with La Tansa Mashiro University that includes: board membership, consulting or advisory, employment, equity or stocks, funding grants, paid expert testimony, and travel reimbursement. Voppy Yulia Handrian reports a relationship with La Tansa Mashiro University that includes: funding grants, non-financial support, paid expert testimony, and speaking and lecture fees. Yumhi reports a relationship with La Tansa Mashiro University that includes: consulting or advisory, funding grants, paid expert testimony, and speaking and lecture fees. Juliansyah Noor has patent licensed to Juliansyah noor. Zakiyya Tunnufus has patent licensed to Zakiyya Tunnufus. Voppy Yulia Handrian has patent licensed to Voppy Yulia Handrian. Yumhi has patent licensed to Yumhi. Correspondent author's previously employed by La Tansa University-JN Co-author previously employed by La Tansa University-ZT Co-author previously employed by La Tansa University-VY Co-author previously employed by La Tansa University-YM If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## References

- [1] B.R. Bhardwaj, A. Malhotra, Green banking strategies: sustainability through corporate entrepreneurship, *Greener J Bus Manag Stud* 3 (2013) 180–193, <https://doi.org/10.15580/gjbms.2013.4.122412343>.
- [2] A. Rehman, I. Ullah, F.e.A. Afridi, Z. Ullah, M. Zeeshan, A. Hussain, et al., Adoption of green banking practices and environmental performance in Pakistan: a demonstration of structural equation modelling, *Environ. Dev. Sustain.* 23 (2021) 13200–13220, <https://doi.org/10.1007/s10668-020-01206-x>.
- [3] B.S. Al-Romeedy, Green human resource management in Egyptian travel agencies: constraints of implementation and requirements for success, *J. Hum. Resour. Hospit. Tourism* 18 (2019) 529–548, <https://doi.org/10.1080/15332845.2019.1626969>.
- [4] S. Roscoe, N. Subramanian, C.J.C. Jabbour, T. Chong, Green human resource management and the enablers of green organisational culture: enhancing a firm's environmental performance for sustainable development, *Bus. Strat. Environ.* 28 (2019) 737–749, <https://doi.org/10.1002/bse.2277>.
- [5] N.Y. Ansari, M. Farrukh, A. Raza, Green human resource management and employees pro-environmental behaviours: examining the underlying mechanism, *Corp. Soc. Responsib. Environ. Manag.* 28 (2021) 229–238, <https://doi.org/10.1002/csr.2044>.
- [6] D.W.S. Renwick, C.J.C. Jabbour, M. Muller-Camen, T. Redman, A. Wilkinson, Contemporary developments in Green (environmental) HRM scholarship, *Int. J. Hum. Resour. Manag.* 27 (2016) 114–128, <https://doi.org/10.1080/09585192.2015.1105844>.
- [7] P. Zientara, A. Zamojska, Green organizational climates and employee pro-environmental behaviour in the hotel industry, *J. Sustain. Tourism* 26 (2018) 1142–1159, <https://doi.org/10.1080/09669582.2016.1206554>.
- [8] P. Paillé, Y. Chen, O. Boiral, J. Jin, The impact of human resource management on environmental performance: an employee-level study, *J. Bus. Ethics* 121 (2014) 451–466, <https://doi.org/10.1007/s10551-013-1732-0>.
- [9] O.M. Ali Ababneh, A.S. Awwad, A. Abu-Haija, The association between green human resources practices and employee engagement with environmental initiatives in hotels: the moderation effect of perceived transformational leadership, *J. Hum. Resour. Hospit. Tourism* 20 (2021) 390–416, <https://doi.org/10.1080/15332845.2021.1923918>.
- [10] A. Presbitero, How do changes in human resource management practices influence employee engagement? A longitudinal study in a hotel chain in the Philippines, *J. Hum. Resour. Hospit. Tourism* 16 (2017) 56–70, <https://doi.org/10.1080/15332845.2016.1202061>.
- [11] O.M.A. Ababneh, M. LeFevre, T. Bentley, Employee engagement: development of a new measure, *Int. J. Hum. Resour. Dev. Manag.* 19 (2019) 105–134, <https://doi.org/10.1504/IJHRDM.2019.098623>.
- [12] M. Černe, S. Batistič, R. Kenda, HR systems, attachment styles with leaders, and the creativity–innovation nexus, *Hum. Resour. Manag. Rev.* 28 (2018) 271–288, <https://doi.org/10.1016/j.hrmr.2018.02.004>.
- [13] M.T. Azim, L. Fan, M.A. Uddin, M.M. Abdul Kader Jilani, S. Begum, Linking transformational leadership with employees' engagement in the creative process, *Manag Res Rev* 42 (2019) 837–858, <https://doi.org/10.1108/MRR-08-2018-0286>.
- [14] W. Yu, R. Chavez, M. Feng, C.Y. Wong, B. Fynes, Green human resource management and environmental cooperation: an ability-motivation-opportunity and contingency perspective, *Int. J. Prod. Econ.* 219 (2020) 224–235, <https://doi.org/10.1016/j.ijpe.2019.06.013>.
- [15] I.S.K. Acquah, Y. Agyabeng-Mensah, E. Afum, Examining the link among green human resource management practices, green supply chain management practices and performance, *Benchmarking* 28 (2021) 267–290, <https://doi.org/10.1108/BJL-05-2020-0205>.
- [16] J. Dumont, J. Shen, X. Deng, Effects of green HRM practices on employee workplace green behavior: the role of psychological green climate and employee green values, *Hum. Resour. Manag.* 56 (2016) 613–627, <https://doi.org/10.1002/hrm>.
- [17] V.N. Amrutha, S.N. Geetha, A systematic review on green human resource management: implications for social sustainability, *J. Clean. Prod.* 247 (2020), 119131, <https://doi.org/10.1016/j.jclepro.2019.119131>.

- [18] G. Rana, R. Sharma, Emerging human resource management practices in Industry 4.0, *Strateg. HR Rev.* 18 (2019) 176–181, <https://doi.org/10.1108/shr-01-2019-0003>.
- [19] P. Deshwal, Green HRM : an organizational strategy of greening people, *Int J Appl Res* 1 (13) (2015) 176–181, 2015;1:176–81.
- [20] N. Anwar, N.H. Nik Mahmood, M.Y. Yusliza, T. Ramayah, J. Noor Faezah, W. Khalid, Green Human Resource Management for organisational citizenship behaviour towards the environment and environmental performance on a university campus, *J. Clean. Prod.* 256 (2020), 120401, <https://doi.org/10.1016/j.jclepro.2020.120401>.
- [21] Y.J. Kim, W.G. Kim, H.M. Choi, K. Phetvaroon, The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance, *Int. J. Hospit. Manag.* 76 (2019) 83–93, <https://doi.org/10.1016/j.ijhm.2018.04.007>.
- [22] J.A. Laub, *Assessing the Servant Organization Development of the Servant Organizational Leadership Assessment (SOLA) Instrument*, Florida Atlantic University, 1999.
- [23] Y.M. Yusoff, M. Nejadi, D.M.H. Kee, A. Amran, Linking green human resource management practices to environmental performance in hotel industry, *Global Bus. Rev.* 21 (2020) 663–680, <https://doi.org/10.1177/0972150918779294>.
- [24] I. Ehnert, S. Parsa, I. Roper, M. Wagner, M. Muller-Camen, Reporting on sustainability and HRM: a comparative study of sustainability reporting practices by the world's largest companies, *Int. J. Hum. Resour. Manag.* 27 (2016) 88–108, <https://doi.org/10.1080/09585192.2015.1024157>.
- [25] S. Ren, G. Tang, E. Jackson, S. Green human resource management research in emergence: a review and future directions, *Asia Pac. J. Manag.* 35 (2018) 769–803, <https://doi.org/10.1007/s10490-017-9532-1>.
- [26] J.Y. Yong, M.Y. Yusliza, T. Ramayah, B.M.R.P. Seles, Testing the stakeholder pressure, relative advantage, top management commitment and green human resource management linkage, *Corp. Soc. Responsib. Environ. Manag.* 29 (2022) 1283–1299, <https://doi.org/10.1002/csr.2269>.
- [27] P.C. Bahuguna, R. Srivastava, S. Tiwari, Two-decade journey of green human resource management research: a bibliometric analysis, *Benchmarking An Int Journa* 30 (2023) 585–602, <https://doi.org/10.1108/BJJ-10-2021-0619>.
- [28] C.J. Jabbour, D.S. Jabbour, Green human resource management and green supply chain management: linking two emerging agendas, *J. Clean. Prod.* 112 (2016) 1824–1833, <https://doi.org/10.1016/j.jclepro.2015.01.052>.
- [29] A.M. Saks, J.A. Gruman, What do we really know about employee engagement?, *J. Hum. Resour. Dev. Q.* 25 (2014) 155–182, <https://doi.org/10.1002/hrdq.21187>.
- [30] W. Robijn, M.C. Euwema, W.B. Schaufeli, J. Deprez, Leaders, teams and work engagement: a basic needs perspective, *Career Dev. Int.* 25 (2020) 373–388, <https://doi.org/10.1108/CDI-06-2019-0150>.
- [31] C. Knight, M. Patterson, J. Dawson, Work engagement interventions can be effective: a systematic review, *Eur. J. Work. Organ. Psychol.* 28 (2019) 348–372, <https://doi.org/10.1080/1359432X.2019.1588887>.
- [32] R. Park, E. Appelbaum, D. Kruse, Employee involvement and group incentives in manufacturing companies: a multi-level analysis, *Hum. Resour. Manag. J.* 20 (2010) 227–243, <https://doi.org/10.1111/j.1748-8583.2010.00126.x>.
- [33] A. Presbitero, B. Roxas, D. Chadee, The International Journal of Human Looking beyond HRM practices in enhancing employee retention in BPOs : focus on employee – organisation value fit, *Int. J. Hum. Resour. Manag.* 27 (2016) 635–652, <https://doi.org/10.1080/09585192.2015.1035306>.
- [34] C. Jabbour, C. Jose, J. Sarkis, L. de S. Jabbour, A. Beatriz, S. Renwick, et al., Who is in charge? A review and a research agenda on the 'human side' of the circular economy, *J. Clean. Prod.* 222 (2019) 793–801, <https://doi.org/10.1016/j.jclepro.2019.03.038>.
- [35] D.W.S. Renwick, T. Redman, S. Maguire, Green human resource management: a review and research agenda, *Int. J. Manag. Rev.* 15 (2013) 1–14, <https://doi.org/10.1111/j.1468-2370.2011.00328.x>.
- [36] M. Pinzone, M. Guerci, E. Lettieri, D. Husingh, Effects of 'green' training on pro-environmental behaviors and job satisfaction: evidence from the Italian healthcare sector, *J. Clean. Prod.* 226 (2019) 221–232, <https://doi.org/10.1016/j.jclepro.2019.04.048>.
- [37] S. Naz, S. Jamshe, Q.A. Nisar, N. Nasir, Green HRM, psychological green climate and pro-environmental behaviors: an efficacious drive towards environmental performance in China, *Curr. Psychol.* 42 (2023) 1346–1361, <https://doi.org/10.1007/s12144-021-01412-4>.
- [38] B.M. Bass, R.E. Riggio, *Transformational Leadership*, second ed., Lawrence Erlbaum Associates, Inc, Mahwah, New Jersey, 2005.
- [39] J.J. Sosik, V.M. Godshalk, F.J. Yammarino, Transformational leadership, learning goal orientation, and expectations for career success in mentor-protégé relationships: a multiple levels of analysis perspective, *Leader. Q.* 15 (2004) 241–261, <https://doi.org/10.1016/j.leaqua.2004.02.003>.
- [40] J. Kotzé, S. van der Westhuizen, E. Nel, The relationship between employees' experience of performance management and work engagement within a South African organisation, *J. Psychol. Afr.* 24 (2014) 475–479, <https://doi.org/10.1080/14330237.2014.997027>.
- [41] Y. Ren, R. Tang, M. Li, The relationship between delay of gratification and work engagement: the mediating role of job satisfaction, *Heliyon* 8 (2022) 101–120, <https://doi.org/10.1016/j.heliyon.2022.e10111>.
- [42] W.B. Schaufeli, A.B. Bakker, M. Salanova, The measurement of work engagement with a short questionnaire: a cross-national study, *Educ. Psychol. Meas.* 66 (2006) 701–716, <https://doi.org/10.1177/0013164405282471>.
- [43] G. Tang, Y. Chen, Y. Jiang, P. Paillé, J. Jia, Green human resource management practices: scale development and validity, *Asia Pac. J. Hum. Resour.* 56 (2018) 31–55, <https://doi.org/10.1111/1744-7941.12147>.
- [44] S.K. Singh, M Del Giudice, R. Chierici, D. Graziano, Green innovation and environmental performance: the role of green transformational leadership and green human resource management, *Technol. Forecast. Soc. Change* 150 (2020) 1–12, <https://doi.org/10.1016/j.techfore.2019.119762>.
- [45] O. Zaborovskaia, O. Nadezhina, E. Avduevskaya, The impact of digitalization on the formation of human capital at the regional level, *J Open Innov Technol Mark Complex* 6 (2020) 1–24, <https://doi.org/10.3390/joitmc6040184>.
- [46] O. Pesämaa, O. Zwikael, J.F. Hair, M. Huemann, Publishing quantitative papers with rigor and transparency, *Int. J. Proj. Manag.* 39 (2021) 217–222, <https://doi.org/10.1016/j.ijproman.2021.03.001>.
- [47] P.M. Podsakoff, S.B. MacKenzie, J.Y. Lee, N.P. Podsakoff, Common method biases in behavioral research: a critical review of the literature and recommended remedies, *J. Appl. Psychol.* 88 (2003) 879–903, <https://doi.org/10.1037/0021-9010.88.5.879>.
- [48] C. Bailey, A. Madden, K. Alfes, L. Fletcher, The meaning, antecedents and outcomes of employee engagement: a narrative synthesis, *Int. J. Manag. Rev.* 19 (2017) 31–53, <https://doi.org/10.1111/ijmr.12077>.
- [49] A.S. Davis, B.L.J.M. Van der Heijden, Reciprocity matters: idiosyncratic deals to shape the psychological contract and foster employee engagement in times of austerity, *Hum. Resour. Dev. Q.* 29 (2018) 329–355, <https://doi.org/10.1002/hrdq.21327>.
- [50] J.M. Burns, *Transforming Leadership*, Grove Press: New York, New York, 2007.
- [51] A.J. Wefald, R.J. Reichard, S.A. Serrano, Fitting engagement into a nomological network: the relationship of engagement to leadership and personality, *J. Leader. Organ Stud.* 18 (2011) 522–537, <https://doi.org/10.1177/1548051811404890>.
- [52] K. Rothfelder, M.C. Ottenbacher, R.J. Harrington, The impact of transformational, transactional and non-leadership styles on employee job satisfaction in the German hospitality industry, *Tourism Hospit. Res.* 12 (2012) 201–214, <https://doi.org/10.1177/1467358413493636>.