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

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

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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

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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).

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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
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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); β is the slope; and ε 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) ^a	2.49	0.71	1.00						
Recruitment & selection (RS) ^a	2.56	0.86	0.62***	1.00					
Training & development (TD) ^a	2.36	0.75	0.65***	0.58***	1.00				
Transformational leadership (TL) ^a	2.45	0.80	0.68***	0.65***	0.72***	1.00			
Gender (Gen) ^b	1.54	0.50	0.06	0.10	0.08	0.14*	1.00		
Age (Age) ^c	1.78	0.72	0.15*	0.05	0.11	0.05	-0.01	1.00	
Education (Edu) ^d	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) ^e	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. R²</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. *R²*. 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. R²* = 0.51), while when interaction effects are included in the model, the variance of GHRM practices increases (*Adj. R²* = 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. R²</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.

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2. Bukti konfirmasi review dan hasil review pertama (21 Agustus 2023)

----- Original Message -----

Subject: Decision on submission HELIYON-D-23-25499R1 to Heliyon

Date: 2023-08-21 23:44

From: "Heliyon" <em@editorialmanager.com>

To: "Juliansyah Noor" <juliansyahnoor@latansamashiro.ac.id>

Reply-To: "Heliyon" <info@heliyon.com>

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>.

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?dgci>

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

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:

Reviewer's Responses to Questions

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.

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 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

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

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.

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

3. Bukti Konfirmasi Revisi Pertama, Respon kepada Reviewer (09 September 2023)

RESPONSE TO THE REVIEWERS
HELIYON
MANUSCRIPT ID: D-23-25499

Dear Reviewer,

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.

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

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.

Responds:

Thank you for your feedback. We apologize for any oversight in addressing your previous comments. We have thoroughly reviewed your suggestions and will make sure to address all of them in our revised submission.

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).

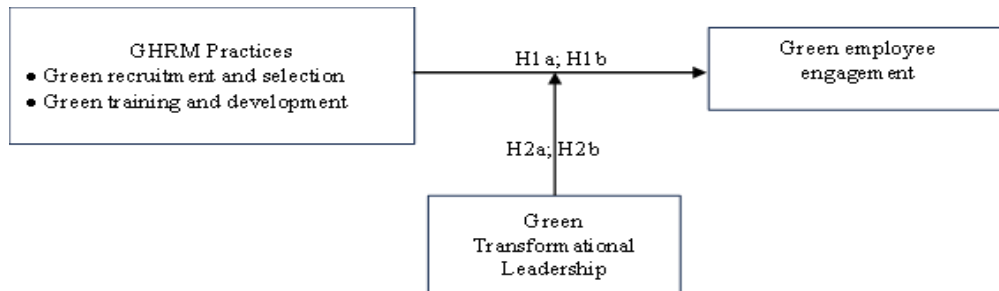


Figure 1 Research Model

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?

Reviewer #2: Acceptable

Responds: Thank you for accepting our revision

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

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.

Responds: Thank you for your feedback. We apologize for any oversight in addressing your previous comments.

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.

Reviewer #2: Acceptable

Responds: Thank you for accepting our revision

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

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.

Responds: Thank you for your feedback. We apologize for any oversight in addressing your previous comments.

1. 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)

Reviewer #2: Acceptable

Responds: Thank you for accepting our revision

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

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.

Responds: Yes, the existing tables and figures are complete and acceptable for publication, example below:

Table 1.
Descriptive statistics and correlations matrix

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

Reviewer #2: Acceptable

Responds: Thank you for accepting our revision

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

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.

Responds: Thank you for your feedback. We apologize for any oversight in addressing your previous comments.

4.1 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

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.

Reviewer #2: Acceptable

Responds: Thank you for accepting our revision

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

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.

Responds: Thank you for your feedback. In our revised submission, we will ensure that we clearly and explicitly highlight the strengths of our work. This has been included: (1) Emphasizing the robustness of our research methods and their appropriateness for addressing the research questions; (2) Demonstrating the novelty and significance of our theoretical framework and how it contributes to the field; (and (3) Discussing the strengths of our argument, including the logical coherence of our findings and their alignment with the research objectives.

Reviewer #2: Acceptable

Responds: Thank you for accepting our revision

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

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.

Responds: Thank you for your feedback. We discussed these limitations in the "Conclusion, implication, and limitations" section of the paper, highlighting potential sources of bias, data constraints, and areas where further research is needed to validate our findings and conclusions.

Reviewer #2: Yes

Responds: Thank you for your positive response to our manuscript revision.

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)

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.

Responds: We appreciate your feedback regarding the manuscript's structure, flow, and writing. We acknowledge the importance of ensuring that the paper is well-organized and easy to follow for readers. To address your review and improve the overall structure and flow, we have (1) the additional subheadings and made it easier for readers to navigate the paper, and (2) made necessary revisions to ensure conciseness while retaining essential content. Thank you for your valuable input, and we will work diligently to make these enhancements.

Reviewer #2: Yes it is clear

Responds: Thank you for your positive response to our manuscript revision.

9. Could the manuscript benefit from language editing?

Reviewer #1: Yes

*Responds: Thank you for your positive response to our manuscript revision.
Responds: as soon as possible, we send our manuscript to Elsevier's Language Editing services*

Reviewer #2: Yes

*Responds: Thank you for your positive response to our manuscript revision.
Responds: as soon as possible, we send our manuscript to Elsevier's Language Editing services*

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

Responds: Thank you for your feedback and for accepting our revised manuscript. We appreciate your encouragement to include information about the research paradigm in our research methodology section.

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."

Responds: Thank you for your feedback on the revised version of our paper, and for your additional comments and suggestions. We appreciate your thorough review, and we are committed to addressing these issues to improve the quality and clarity of our research.

Table 1.
Descriptive statistics and correlations matrix

	Mean	SD	EE	RS	TD	TL	Gen	Age	Edu
Green Employee engagement (EE) ^a	2.49	0.71	1.00						
Green Recruitment & selection (RS) ^a	2.56	0.86	0.62***	1.00					
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Education (Edu) ^d	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) ^e	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%."

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

4. **Bukti konfirmasi submit revisi kedua, respon kepada reviewer, dan artikel yang diresubmit (21 September 2023)**

← Submissions with an Editorial Office Decision for Author

Page: 1 of 1 (1 total completed submissions)

Results per page 10

Action	Manuscript Number	Title	Initial Date Submitted	Status Date	Current Status	Date Final Disposition Set	Final Disposition
View Submission View Decision Letter Manuscript Analysis Services Send E-mail	HELIYON-D-23-25499	Green human resource management practices, leadership styles, and employee engagement: green banking context	Jun 22, 2023	Nov 13, 2023	Completed - Accept	Nov 13, 2023	Accept

Page: 1 of 1 (1 total completed submissions)

Results per page 10

Heliyon

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

Manuscript Number:	HELIYON-D-23-25499R6
Article Type:	Original Research Article
Section/Category:	Social Sciences
Keywords:	Green Human Resource Management practices; Employee Engagement; Transformational Leadership
Manuscript Classifications:	140.170.140: Management
Corresponding Author:	Juliansyah Noor, Doctor STIE La Tansa Mashiro Rangkasbitung, Banten INDONESIA
First Author:	Juliansyah Noor, Doctor
Order of Authors:	Juliansyah Noor, Doctor Zakiyya Tunnufus Voppy Handriana Yumhi Yumhi
Abstract:	<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>
Opposed Reviewers:	
Additional Information:	
Question	Response
Publication ethics	I confirm
Please confirm that you have reviewed our guidelines for Ethics in Publishing as well as Heliyon's Ethics and Editorial Policies .	

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 Noor¹, Zakiyya Tunnufus², Voppy Yulia Handrian³, Yumhi⁴

^{1,2,3,4}Department of Management, La Tansa Mashiro University, Banten, Indonesia

Coressponding author: Juliansyah Noor. email: 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 Noor¹, Zakiyya Tunnufus², Voppy Yulia Handrian³, Yumhi⁴

^{1,2,3,4}*Department of Management, La Tansa Mashiro University, Banten, Indonesia*

Coessponding author: Juliansyah Noor. email: 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).

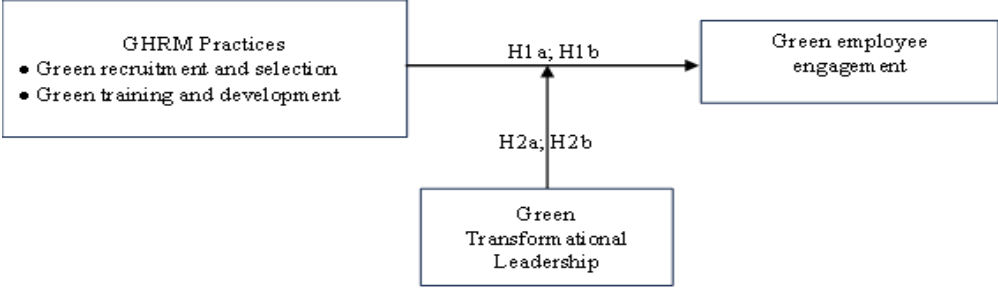


Figure 1 Research Model

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); β is the slope; and ε 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) ^a	2.49	0.71	1.00						
Green Recruitment & selection (RS) ^a	2.56	0.86	0.62***	1.00					
Green Training & development (TD) ^a	2.36	0.75	0.65***	0.58***	1.00				
Transformational leadership (TL) ^a	2.45	0.80	0.68***	0.65***	0.72***	1.00			
Gender (Gen) ^b	0.54	0.50	0.06	0.10	0.08	0.14*	1.00		
Age (Age) ^c	1.78	0.72	0.15*	0.05	0.11	0.05	-0.01	1.00	
Education (Edu) ^d	1.80	0.65	-0.01	0.01	0.03	0.07	0.01	0.08	1.00
Tenure (Ten) ^e	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

	β value	R ² values	ρ 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: " β "= Path Coefficient; R² = 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
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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.

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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.

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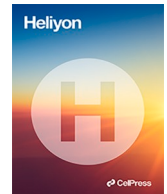
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Green human resources management practices, leadership style and employee engagement: Green banking context

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

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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

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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); β is the slope; and ϵ is the residual error.

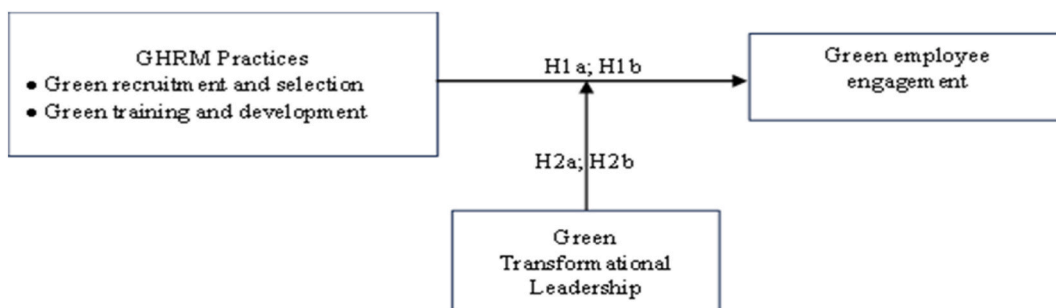


Fig. 1. Research model.

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" and "green employee engagement" was significant ($\beta = 0.25, p < 0.05$). In contrast, the relationship between "green training and development" and "green employee engagement" was not significant.

Table 1
Descriptive statistics and correlations matrix.

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

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

Note: “ β = Path Coefficient; R²=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

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