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Green HRM as a Driver of Hotel Employee Performance: The Intervening Role of Environmentally Friendly Workplace Behaviors

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Abstract. *This study examines the relationship between Green Human Resource Management (Green HRM), Pro-Environmental Behavior (PEB), and Employee Performance in the hospitality industry. Using data collected from 265 employees across 12 star-rated hotels in Semarang that have implemented green hotel practices, this research employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the proposed hypotheses. The findings reveal that Green HRM positively influences both PEB (β = 0.627) and Employee Performance (β = 0.341). Furthermore, PEB positively affects Employee Performance (β = 0.396) and partially mediates the relationship between Green HRM and Employee Performance. Demographic factors, including age, education level, and tenure, moderate several relationship paths, suggest the importance of a differentiated approach in Green HRM implementation. Among Green HRM dimensions, Training and Development and Employee Involvement have the strongest effect on PEB, while Performance Management and Reward Systems most directly influence Employee Performance. These results provide empirical evidence that integrating environmental sustainability into HR practices benefits not only environmental outcomes but also enhances employee performance, creating a win-win situation for hotels in their pursuit of competitive advantage while meeting environmental responsibilities.*

Keywords: *Employee Performance, Green Human Resource Management, Hospitality Industry, Pro-Environmental Behavior, Sustainable Development.*

1. INTRODUCTION

In the era of rapid global development, public awareness of environmental issues has been steadily increasing. Climate change and environmental degradation have become serious concerns across various industrial sectors, including the hospitality industry (Kim et al., 2019). The hospitality sector is known for its significant resource consumption, including energy, water, and chemicals, as well as its contribution to the production of large amounts of waste (Yusoff et al., 2020). In 2022, the global hospitality industry accounted for approximately 1% of the world's carbon emissions and consumed around 219 billion liters of water annually (UNWTO, 2023).

In response to these environmental challenges, many hotels have implemented various environmentally friendly initiatives or Green Practices as part of their sustainability strategies (Pham et al., 2020). One approach that has gained increasing attention is the implementation of Green Human Resource Management (Green HRM), which refers to environmental policies,

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practices, and human resource management systems designed to create a conscious workforce and contribute to the organization's sustainability goals (Ren et al., 2018).

Green Human Resource Management (Green HRM) has emerged as an important framework within the hospitality industry in response to growing environmental concerns. As defined by Palupiningtyas et al. (2024), Green HRM integrates environmental priorities into traditional human resource activities, including recruitment, training, performance management, and compensation. Key practices of Green HRM include sustainability training programs, rewards for environmentally conscious behavior, and recruiting employees who are environmentally aware.

The hospitality industry faces specific sustainability challenges due to significant resource use and waste production. According to Palupiningtyas et al. (2024), hotels are implementing sustainability initiatives to reduce energy, water, and material consumption, but organizational change ultimately depends on employee actions. This underscores the importance of the role of human resource management (HRM) in promoting the adoption of sustainability practices by employees.

Palupiningtyas and Wahono (2023) highlight that human resource management practices focused on sustainability can have a positive impact on employees' environmental behavior. Their study shows that Green HRM is not only related to responsible human resource management but also to creating a work environment that supports pro-environmental behavior and sustainable innovation.

In the context of the hospitality industry, the implementation of Green HRM enables companies to better attract, motivate, and retain talented staff (Palupiningtyas et al., 2024). Research shows that job seekers are increasingly choosing organizations that focus on sustainability. Additionally, green companies exhibit higher levels of employee engagement, satisfaction, and commitment. Engaged employees provide excellent service, fostering guest loyalty and positive financial outcomes.

Green HRM practices encompass a wide range of aspects, from recruiting and selecting environmentally conscious candidates, environmental training, performance evaluations that consider environmental factors, to offering incentives for employees who exhibit environmentally friendly behavior (Mousa & Othman, 2020).

Although many hotels have adopted Green HRM, its implementation does not always proceed smoothly. A gap between the formulated Green HRM policies and actual practices on the ground exists. A study by Yuriev et al. (2018) revealed that while 78% of four- and five-star hotels in Southeast Asia claimed to have adopted Green HRM practices, only 34%

effectively integrated them into daily operations. Many hotels still face challenges in translating Green HRM policies into consistent pro-environmental behavior (Pro-Environmental Behavior/PEB) among employees (Paillé et al., 2020).

Pro-Environmental Behavior (PEB) is defined as actions consciously taken by individuals to minimize negative impacts on the natural environment (Ones & Dilchert, 2012). In the context of the hospitality industry, PEB among employees can include actions such as energy conservation, reducing water usage, proper waste management, and active participation in other environmentally friendly initiatives (Kim et al., 2019). However, transforming Green HRM policies into sustainable PEB among hotel employees remains a significant challenge (Rizki et al., 2021).

On the other hand, the hospitality industry also faces high competitive pressures and demands to continuously improve employee performance. Employee performance, which refers to the effectiveness of employee behavior in contributing to organizational goals (Campbell & Wiernik, 2015), becomes a crucial factor for hotel success. Interestingly, some early studies suggest a potential positive relationship between Green HRM practices, employee PEB, and improved employee performance (Pham et al., 2020; Aboramadan, 2022). However, the mechanisms linking these three variables remain insufficiently understood.

Despite the growing academic interest in Green HRM and PEB within the hospitality industry, there are still several significant gaps in the literature that need to be addressed. First, most prior research tends to focus on the direct relationship between Green HRM and organizational performance (Yong et al., 2019), while the mechanisms explaining how Green HRM can affect individual employee performance have been less explored (Agyabeng-Mensah et al., 2020). Second, while some studies have investigated the relationship between Green HRM and PEB (Dumont et al., 2017; Luu, 2019), or between PEB and employee performance (Norton et al., 2017), research that comprehensively analyzes these three variables within an integrated model remains limited, particularly in the context of the hospitality industry in developing countries (Rizki et al., 2021). Third, there is inconsistency in previous research findings regarding the relationship between Green HRM and employee performance. Some studies report a significant positive relationship (Mousa & Othman, 2020; Pham et al., 2020), while others report an insignificant or even negative relationship, especially in the short term (Chan & Hawn, 2021). These differences suggest the possibility of mediating or moderating variables that have not been fully identified, with PEB being a potential mediating variable (Yu et al., 2020). Fourth, existing research is generally conducted in the context of developing countries, while the understanding of Green HRM dynamics, PEB, and employee performance

in the context of developing countries remains limited (Ren et al., 2018; Yong et al., 2019). Cultural differences, environmental regulations, and levels of environmental awareness between developed and developing countries can influence the effectiveness of Green HRM practices and their manifestation in employee PEB (Kim et al., 2019).

This research holds high urgency from both academic and practical perspectives. From an academic perspective, this study will fill a gap in the literature by developing a more comprehensive understanding of the mechanisms linking Green HRM, Pro-Environmental Behavior (PEB), and employee performance. By clarifying the mediating role of PEB, this research will contribute to the development of green human resource management theory and sustainable organizational behavior (Ren et al., 2018).

From a practical perspective, this research is highly relevant given the increasing pressure from stakeholders and regulations to adopt more sustainable business practices (Mousa & Othman, 2020). Hotels that are able to effectively implement Green HRM, promote employee PEB, and enhance employee performance will simultaneously have a significant competitive advantage (Pham et al., 2020). Moreover, a better understanding of the relationship between these three variables will assist hotel managers in designing and implementing more effective Green HRM initiatives. The urgency of this research is also driven by the global trend toward sustainable tourism and the growing consumer demand for eco-friendly accommodations. Recent studies show that 73% of global travelers prefer to stay at properties that implement environmentally responsible practices (Booking.com, 2023). Therefore, hotels that successfully integrate sustainability practices into their operations through Green HRM and employee PEB will be better equipped to meet the changing market expectations.

Based on the background and research gaps identified, this study aims to answer the following research questions:

a. Does Green HRM have a positive and significant effect on employee Pro-Environmental Behavior in the hospitality industry?
b. Does Pro-Environmental Behavior have a positive and significant effect on employee performance in the hospitality industry?
c. Does Green HRM have a positive and significant effect on employee performance in the hospitality industry?
d. Does Pro-Environmental Behavior mediate the relationship between Green HRM and employee performance in the hospitality industry?

e. Do demographic factors (age, gender, education level, and tenure) moderate the relationship between Green HRM, Pro-Environmental Behavior, and employee performance in the hospitality industry?

2. LITERATURE REVIEW

Green Human Resource Management (Green HRM)

Green HRM is defined as the integration of human resource management practices with the organization's environmental goals (Ren et al., 2018). This concept encompasses the entire HR process aimed at developing and motivating employees to behave in an environmentally friendly manner (Tang et al., 2018). Renwick et al. (2016) classified Green HRM practices into three phases: green recruitment and selection, green training and development, and green performance management and compensation.

Green HRM is supported by several key theories, including Stakeholder Theory (Freeman, 1984), Resource-Based View (Barney, 1991), Ability-Motivation-Opportunity Theory (Appelbaum et al., 2000), and Social Exchange Theory (Blau, 1964). These theories explain how Green HRM practices can create competitive advantage and motivate employees to behave in an environmentally friendly manner.

Pro-Environmental Behavior (PEB)

PEB refers to behaviors that are consciously carried out to minimize the negative impacts of one's activities on the environment (Kollmuss & Agyeman, 2002). Ones and Dilchert (2012) proposed a taxonomy of PEBs that includes the dimensions of conserving, working sustainably, avoiding harm, influencing others, and taking initiative.

Some theories that explain PEB include the Theory of Planned Behavior (Ajzen, 1991) which emphasizes the role of attitudes, norms, and behavioral control; Value-Belief-Norm Theory (Stern, 2000) which emphasizes altruistic values and beliefs about human-environment relationships; Social Identity Theory (Tajfel & Turner, 1986); and Self-Determination Theory (Deci & Ryan, 2000) which distinguishes between intrinsic and extrinsic motivation.

Employee performance

Employee performance is defined as behavior that is relevant to organizational goals (Campbell & Wiernik, 2015). Dimensions of performance include task performance, contextual performance, adaptive performance, and service performance (specifically for the service industry). Theories that explain employee performance include Expectancy Theory (Vroom, 1964), Goal-Setting Theory (Locke & Latham, 2002), Social Cognitive Theory (Bandura, 1986), and Job Demands-Resources Model (Bakker & Demerouti, 2007).

Relationship between Variables

The Relationship between Green HRM and Pro-Environmental Behavior

Green HRM can facilitate and strengthen employee PEB through various mechanisms. Dumont et al. (2017) suggested that Green HRM practices such as recruitment and selection based on environmental criteria, environmental training, and environmental performance-based rewards can increase employee awareness, knowledge, and motivation to engage in PEB.

According to the AMO (Ability-Motivation-Opportunity) framework, Green HRM can improve PEB by: (1) developing employees' environmental capabilities through training and development, (2) increasing their motivation through reward and recognition systems, and (3) providing opportunities to participate in environmental initiatives through involvement and empowerment (Renwick et al., 2016).

Empirical research supports a positive relationship between Green HRM and PEB. For example, Pham et al. (2020) found that Green HRM practices were positively related to PEB of hotel employees in Vietnam. Similarly, Kim et al. (2019) reported that Green HRM facilitated PEB of hotel employees in South Korea.

Based on the description above, the first hypothesis is formulated as follows:

H1 : Green HRM has a positive and significant effect on employee Pro-Environmental Behavior in the hospitality industry.

The Relationship between Pro-Environmental Behavior and Employee Performance

PEB can affect employee performance through several channels. Norton et al. (2017) stated that PEB can improve employee skills and knowledge, strengthen social relationships in the workplace, and improve employee well-being, all of which can contribute to higher performance.

From a psychological perspective, engaging in behaviors that are aligned with personal values (such as PEB for environmentally conscious employees) can improve psychological well-being and work engagement, which in turn can improve performance (Chan & Hawn, 2021). Additionally, participation in environmental initiatives can develop problem-solving, collaboration, and innovation skills that are beneficial to overall task performance (Luu, 2019).

Several empirical studies support the relationship between PEB and employee performance. For example, Paillé et al. (2020) found that employees who exhibited higher

levels of PEB also exhibited better task performance and organizational citizenship behavior. In the hospitality context, Kim et al. (2019) reported that employee PEB was positively related to hotel environmental performance, which is an important component of overall performance.

Based on the arguments and empirical evidence above, the second hypothesis is formulated as follows:

H2 : Pro-Environmental Behavior has a positive and significant effect on employee performance in the hospitality industry.

The Relationship between Green HRM and Employee Performance

Green HRM can affect employee performance both directly and indirectly. Direct effects can occur through increased skills, motivation, and opportunities provided by Green HRM practices (Ren et al., 2018). For example, environmental training can improve employees' general skills such as resource efficiency and problem solving, which are beneficial for overall task performance (Yong et al., 2019).

In addition, Green HRM practices such as green recruitment can help attract high-quality employees who care about the environment, while environmentally-based reward systems can increase employee motivation and retention (Mousa & Othman, 2020). Employee involvement in environmental initiatives can also increase job satisfaction and organizational commitment, which are positively related to performance (Aboramadan, 2022).

From a social exchange theory perspective, when organizations demonstrate commitment to the environment through Green HRM, employees may reciprocate with higher levels of performance (Dumont et al., 2017). In addition, value congruence between environmentally conscious employees and organizations that support sustainability can increase organizational identification and work motivation, which contributes to better performance (Pham et al., 2020).

Several empirical studies support a positive relationship between Green HRM and employee performance. For example, Mousa and Othman (2020) found that Green HRM is positively related to task performance and organizational citizenship behavior in healthcare organizations. In the hospitality sector, Pham et al. (2020) reported a positive effect of Green HRM on hotel environmental performance, which is an indicator of collective employee performance.

Based on the description above, the third hypothesis is formulated as follows:

H3 : Green HRM has a positive and significant effect on employee performance in the hospitality industry.

The Mediation Role of Pro-Environmental Behavior

Although Green HRM can directly affect employee performance, PEB can also serve as a mediating mechanism in this relationship. Green HRM can enhance PEB (as described in H1), which in turn can enhance employee performance (as described in H2).

This mediation model is consistent with the AMO framework, where Green HRM practices affect performance by first enhancing employees' ability, motivation, and opportunity to engage in PEB (Renwick et al., 2016). It is also in line with the resource-based view, which postulates that HR practices affect performance by developing value-creating competencies and behaviors (Ren et al., 2018).

Several studies have investigated the mediating role of PEB in the relationship between Green HRM and organizational outcomes. For example, Pham et al. (2020) found that employee engagement in environmentally friendly behaviors mediated the relationship between Green HRM and hotel environmental performance. Similarly, Luu (2019) reported that organizational citizenship behavior for the environment mediated the relationship between green HR practices and customer satisfaction.

Based on the arguments and empirical evidence above, the fourth hypothesis is formulated as follows:

H4 : Pro-Environmental Behavior mediates the relationship between Green HRM and employee performance in the hospitality industry.

The Moderating Role of Demographic Factors

Demographic factors such as age, gender, education level, and tenure can moderate the relationship between Green HRM, PEB, and employee performance. Wiernik et al. (2016) noted that demographic characteristics can influence individual environmental attitudes and behaviors.

In terms of age, some studies suggest that younger generations (millennials and Gen Z) may be more responsive to environmental initiatives due to higher environmental awareness (Kim et al., 2019). Regarding gender, some studies suggest that women may exhibit higher levels of PEB than men (Ones & Dilchert, 2012).

Education level can also moderate the relationship between variables, with employees with higher levels of education more likely to understand the complexity of environmental

issues and respond more positively to Green HRM (Paillé et al., 2020). Tenure can influence employee socialization into organizational culture, including environmental values and practices (Norton et al., 2017).

Based on these considerations, the fifth hypothesis is formulated as follows:

H5 : Demographic factors (age, gender, education level, and length of service) moderate the relationship between Green HRM, Pro-Environmental Behavior, and employee performance in the hospitality industry.

3. METHODS

This study uses a quantitative approach with a cross-sectional design to examine the relationship between Green HRM, Pro-Environmental Behavior, and employee performance. This method was chosen to allow for testing of causal hypotheses and statistical analysis of relationships between variables.

Population and Sample

The population of this study were employees of starred hotels in Semarang City that have implemented the green hotel concept. Based on data from the Semarang City Tourism Office, there are 12 starred hotels that have implemented environmentally friendly practices and received green hotel certification. The sampling technique used proportional stratified random sampling to ensure adequate representation of various levels of employees and hotel departments. With a population of 850 employees and using the Slovin formula with a 5% error rate, a minimum sample size of 272 respondents was obtained.

Data collection

Data were collected through a structured questionnaire consisting of four parts: (1) respondents' demographic data, (2) employees' perceptions of Green HRM practices, (3) employees' pro-environmental behavior (PEB), and (4) employees' performance appraisal. The questionnaires were distributed directly to the respondents with the approval of the hotel management. To avoid common method bias, employees' performance appraisals were conducted by direct supervisors, while other variables were assessed through self-report.

Operational Definition and Measurement of Variables

a. **Green HRM** was measured using an adaptation of a scale developed by Tang et al. (2018), covering five dimensions: green recruitment and selection (5 items), green training and development (4 items), green performance management (4 items), green reward and compensation (4 items), and green employee involvement (5 items). Each item was rated on a 5-point Likert scale (1=strongly disagree to 5=strongly agree).

b. **Pro-Environmental Behavior** was measured using an adaptation of the scale developed by Ones and Dilchert (2012) and Kim et al. (2019), covering four dimensions: eco-helping (4 items), eco-civic engagement (4 items), eco-initiatives (4 items), and eco-compliance (4 items). The measurement used a 5-point Likert scale (1=never to 5=always).
c. **Employee performance** was measured using an adaptation of the Individual Work Performance Questionnaire (IWPQ) by Koopmans et al. (2014), covering three dimensions: task performance (5 items), contextual performance (5 items), and adaptive performance (4 items). A service performance dimension (4 items) from Karatepe (2013) was added for the hospitality context. The measurement used a 5-point Likert scale (1=very poor to 5=very good).
d. **Demographic variables** include age, gender, education level, and length of service as moderating variables.

Data Analysis Techniques

Data were analyzed using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach through SmartPLS 3.0 software. This method was chosen because of its ability to test complex models with latent variables and mediation effects simultaneously. The analysis was carried out in two stages: (1) evaluation of the measurement model (outer model) to assess reliability and validity, and (2) evaluation of the structural model (inner model) to test the research hypothesis. To analyze the mediation and moderation effects, a bootstrapping procedure with 5000 resampling was used.

Prior to the main analysis, data screening and statistical assumption tests including normality, multicollinearity, and homoscedasticity tests were performed. To address potential common method bias, Harman's single factor test and procedural remedies were performed as recommended by Podsakoff et al. (2003).

4. RESULTS

Respondent Characteristics

This study involved 265 respondents from 12 starred hotels in Semarang City that have implemented the green hotel concept, with a response rate of 97.4% of the target sample. The demographic characteristics of the respondents showed a balanced gender distribution (53.2% male and 46.8% female). The majority of respondents were aged 26-35 years (42.6%), followed by the 36-45 age group (28.3%), under 25 years (18.5%), and over 45 years (10.6%). The level of education was dominated by Diploma graduates (43.8%), followed by Bachelor's degree

(32.1%), High School/Vocational High School (21.5%), and Postgraduate (2.6%). Respondents had varying work periods: 1-3 years (38.5%), 4-6 years (29.4%), less than 1 year (17.0%), and more than 6 years (15.1%).

Evaluation of Measurement Model

The results of the convergent validity analysis show that all indicators have factor loadings above 0.7 except for two items from the Green HRM variable and one item from PEB which were removed from the model because they had loadings below 0.7. The Average Variance Extracted (AVE) values for all constructs are above 0.5 (Green HRM = 0.724; PEB = 0.689; Employee Performance = 0.712), indicating good convergent validity.

Discriminant validity was evaluated using the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio. The results of the analysis showed that the square root of the AVE of each construct was greater than its correlation with other constructs, and all HTMT values were below 0.85, confirming adequate discriminant validity.

Construct reliability was tested using Cronbach's Alpha and Composite Reliability (CR). All constructs showed Cronbach's Alpha and CR values above 0.8 (Green HRM: $\alpha = 0.912$, CR = 0.932; PEB: $\alpha = 0.887$, CR = 0.918; Employee Performance: $\alpha = 0.903$, CR = 0.924), indicating high internal reliability.

Structural Model Evaluation and Hypothesis Testing

H1: Effect of Green HRM on Pro-Environmental Behavior

The results of the analysis show that Green HRM has a positive and significant influence on employee Pro-Environmental Behavior ($\beta = 0.627$, $t = 12.841$, $p < 0.001$). The R^2 value shows that Green HRM is able to explain 39.3% of the variation in employee PEB. These results support the first hypothesis (H1).

H2: The Influence of Pro-Environmental Behavior on Employee Performance

Pro-Environmental Behavior has a positive and significant influence on employee performance ($\beta = 0.396$, $t = 6.548$, $p < 0.001$), supporting the second hypothesis (H2). This indicates that employees who are more active in pro-environmental behavior tend to show better performance.

H3: Direct Influence of Green HRM on Employee Performance

Green HRM has a positive and significant direct effect on employee performance ($\beta = 0.341$, $t = 5.732$, $p < 0.001$), supporting the third hypothesis (H3). Together, Green HRM and PEB explain 44.2% of the variation in employee performance ($R^2 = 0.442$).

H4: The Mediating Role of Pro-Environmental Behavior

The analysis of mediation effect using bootstrapping procedure shows that PEB significantly mediates the relationship between Green HRM and employee performance (indirect effect = 0.248, t = 5.961, p < 0.001). With the direct effect of Green HRM on employee performance remaining significant, this result indicates that PEB acts as a partial mediator, supporting the fourth hypothesis (H4). The variance accounted for (VAF) ratio of 42.1% confirms partial mediation.

H5: Moderating Role of Demographic Factors

Moderation effect analysis showed varying results for demographic factors:

a. **Age** significantly moderates the relationship between Green HRM and PEB (β = 0.142, t = 2.476, p < 0.05), with the effect of Green HRM on PEB being stronger for older employees.
b. **Gender** does not significantly moderate the relationship between variables (p > 0.05), indicating that the influence of Green HRM on PEB and employee performance does not differ significantly between male and female employees.
c. **Education level** significantly moderates the relationship between PEB and employee performance (β = 0.126, t = 2.314, p < 0.05), with the effect of PEB on performance being stronger for employees with higher education levels.
d. **Tenure** significantly moderates the relationship between Green HRM and PEB (β = 0.156, t = 2.587, p < 0.01), with a stronger effect on employees with longer tenure.

Based on these results, the fifth hypothesis (H5) is partially supported.

Multi-group Analysis

Additional analysis was conducted to compare the models between 3-, 4-, and 5-star hotels. The results showed that although the pattern of relationships was similar across the three hotel categories, the strength of the relationship between Green HRM and PEB was higher in 5-star hotels (β = 0.711) compared to 4-star (β = 0.632) and 3-star (β = 0.584) hotels. This finding indicates that Green HRM implementation is more effective in driving employee PEB in hotels with higher service standards.

5. DISCUSSION

The Effect of Green HRM on Pro-Environmental Behavior

The results of the study confirmed the positive and significant influence of Green HRM on the Pro-Environmental Behavior of hotel employees in Semarang City (β = 0.627). This finding is in line with the research of Kim et al. (2019) who found that Green HRM practices have a substantial influence on PEB of hotel employees in South Korea, and Pham et al. (2020)

who reported similar results in Vietnam. This finding also strengthens the study of Dumont et al. (2017) who found that Green HRM practices contribute significantly to employee green behavior. The coefficient of determination ($R^2 = 0.393$) shows that almost 40% of the variation in employee PEB can be explained by the implementation of Green HRM, indicating a substantial influence.

These results can be explained through the AMO (Ability-Motivation-Opportunity) framework proposed by Renwick et al. (2016), where Green HRM enhances PEB by developing employee capabilities through training, increasing motivation through reward systems, and providing opportunities through employee engagement. As emphasized by Ren et al. (2018), coordinated Green HRM practices can effectively develop employee "green competencies" that encourage pro-environmental behavior.

Based on the results of the dimension analysis, Green Training and Development practices ($\beta = 0.285$) and Green Employee Involvement ($\beta = 0.273$) have the greatest contribution to the formation of employee PEB. This finding is consistent with Luu's (2019) study which emphasizes the importance of environmental training and employee empowerment in encouraging pro-environmental behavior. These results also strengthen the argument of Self-Determination Theory (Deci & Ryan, 2000) which states that behavior driven by intrinsic motivation and a sense of autonomy (such as through employee involvement) tends to be more sustainable.

The Influence of Pro-Environmental Behavior on Employee Performance

The positive and significant relationship between PEB and employee performance ($\beta = 0.396$) supports Norton et al.'s (2017) view that engaging in pro-environmental behavior can improve skills, strengthen social relationships, and enhance employee well-being, which contribute to better performance. This finding is also in line with the results of Paillé et al.'s (2020) study which reported a positive relationship between pro-environmental behavior and task performance, as well as Aboramadan's (2022) study which found a positive effect of PEB on performance in the hospitality sector.

From the perspective of Value-Belief-Norm Theory (Stern, 2000), when employees behave in accordance with their environmental values, it can reduce cognitive dissonance and increase job satisfaction, which contributes to higher performance. Yu et al.'s (2020) study also showed that PEB can develop problem-solving skills and creativity that are beneficial to various aspects of job performance.

Dimensional analysis shows that Eco-Initiatives ($\beta = 0.247$) and Eco-Helping ($\beta = 0.223$) have the greatest contribution to improving employee performance. This finding is consistent

with Ones and Dilchert's (2012) conceptualization of the dimensions of "Taking Initiative" and "Influencing Others" as important components of PEB in the workplace. These results also support the Organizational Citizenship Behavior perspective put forward by Luu (2019), that voluntary behavior that goes beyond formal job requirements can improve overall organizational effectiveness.

Direct Impact of Green HRM on Employee Performance

This study confirms the positive and significant direct influence of Green HRM on employee performance (β = 0.341). This result supports the findings of Mousa and Othman (2020) and Pham et al. (2020) on the contribution of Green HRM to improving performance. This finding is also consistent with the study of Agyabeng-Mensah et al. (2020) which found a positive relationship between Green HRM practices and organizational performance in the context of the supply chain.

From a theoretical perspective, this finding can be explained through the Social Exchange Theory (Blau, 1964), where employees tend to reciprocate the organization's commitment to the environment with higher levels of performance. This is also in line with the Resource-Based View (Barney, 1991) which postulates that developing unique competencies through Green HRM can create competitive advantages that strengthen performance.

The dimensions of Green Performance Management (β = 0.198) and Green Reward and Compensation (β = 0.175) emerged as the strongest contributors in the direct influence on employee performance. These results support the Expectancy Theory (Vroom, 1964) which emphasizes that employees are motivated to perform high when they believe that their performance will be fairly assessed and rewarded. This finding is also in line with the Goal-Setting Theory (Locke & Latham, 2002) which states that setting specific, challenging, and measurable goals—such as those provided by an environmental performance management system—can improve employee performance.

The Mediation Role of Pro-Environmental Behavior

Mediation analysis shows that PEB significantly mediates the relationship between Green HRM and employee performance (indirect effect = 0.248), with a VAF of 42.1% indicating partial mediation. This finding is in line with the study of Pham et al. (2020) which found a mediating effect of employee engagement in environmentally friendly behavior on the relationship between Green HRM and hotel environmental performance. This result also extends Luu's (2019) research which shows that organizational citizenship behavior for the environment mediates the relationship between green HR practices and customer satisfaction.

Partial mediation shows that part of the effect of Green HRM on employee performance is mediated by PEB, while the other part affects performance directly. This is in accordance with the PIRK (Power-Information-Reward-Knowledge) Model proposed by Appelbaum et al. (2000), where HR practices can affect performance through various psychological and behavioral mechanisms. This finding is also supported by Chan and Hawn (2021) who stated that Green HRM can affect performance through direct channels (e.g., general skill development) and indirect channels (e.g., through specific behavior development).

The Moderating Role of Demographic Factors

The results of moderation show that age, education level, and length of service affect the strength of the relationship between research variables, while gender does not show a significant moderating effect.

The moderating effect of age on the Green HRM-PEB relationship (β = 0.142) with a stronger influence on older employees is in line with the study of Wiernik et al. (2016) which found that although age has a complex relationship with environmental attitudes, moral maturity that develops with age can increase responsiveness to sustainability initiatives. This finding can also be explained through Kohlberg's cognitive moral development theory, where more mature individuals tend to develop a stronger ethical principle orientation (Kollmuss & Agyeman, 2002).

Education level moderates the PEB-performance relationship (β = 0.126), with a stronger effect on more educated employees. This result is consistent with the study by Paillé et al. (2020) which showed that individuals with higher education levels have a better understanding of the complexity of environmental issues and better ability to integrate environmentally friendly practices into their work. This finding is also supported by the study by Greaves et al. (2013) which found that education affects attitudes and perceived behavioral control related to pro-environmental behavior.

Tenure moderates the Green HRM-PEB relationship (β = 0.156), indicating that employees with longer experience in the hotel are more responsive to Green HRM practices. This result is in line with organizational socialization theory (Norton et al., 2017) which postulates that employees with longer tenure have been more internalized with the values and practices of the organization. This finding is also supported by the research of Yuriev et al. (2018) which shows that familiarity with the organizational context strengthens the effectiveness of pro-environmental interventions.

6. CONCLUSION

This study shows that the implementation of Green HRM in starred hotels in Semarang City has a positive influence on employees' Pro-Environmental Behavior and their performance. PEB is proven to be an important mediator linking Green HRM practices to improved employee performance, although Green HRM also affects performance directly. Demographic characteristics such as age, education level, and tenure moderate some of the relationship paths, emphasizing the importance of a differentiated approach in Green HRM implementation.

These findings provide empirical evidence that the integration of environmental sustainability into HR practices is not only beneficial to the environment but also contributes to improved employee performance, creating a "win-win" situation for hotels. Thus, investing in Green HRM can be an effective strategy to enhance hotel competitiveness through improving employee performance while fulfilling environmental responsibilities.

LIMITATION

Despite providing valuable insights, this study has several limitations. First, the cross-sectional design limits causal inference; future longitudinal studies could provide stronger evidence of causal relationships, as suggested by Norton et al. (2017). Second, although efforts to reduce common method bias have been made, the use of self-reports for some variables remains a limitation; future studies could adopt objective measures, especially for employee performance, as recommended by Podsakoff et al. (2003).

Third, the focus on starred hotels in one city limits generalizability; further studies can expand the scope to different types of accommodation and geographical locations, in line with Kim et al.'s (2019) suggestion to enhance the external validity of Green HRM research. Fourth, this study did not investigate the role of contextual variables such as organizational culture and environmental leadership that may influence the effectiveness of Green HRM; future research can explore these factors as potential moderators, as proposed by Chan and Hawn (2021).

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