ECO-BEHAVIOR MEDIATING ROLE IN GREEN HUMAN RESOURCE MANAGEMENT ON ENVIRONMENTAL PERFORMANCE

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ABSTRACT

Introduction: This research aims to examine the role of eco-behavior in moderating the link between environmental performance and green human resource management. Environmental concerns need to be integrated into every business function to strengthen sustainability efforts. Various internal factors can contribute to improving an organization's environmental performance.

Methods: This study recruited 97 participants from the academic community at a university in Yogyakarta, Indonesia. The data were collected through questionnaires and analyzed using SmartPLS. The analysis included checks for validity and reliability, as well as hypothesis testing for both partial and mediation effects.

Results: Research findings show that green human resource management contributes to better environmental performance. Eco-behavior also increases due to green HRM practices. In addition, eco-behavior enhances environmental performance. The relationship between green HRM and environmental performance is strengthened through the mediating role of eco-behavior.

Conclusion and suggestion: The findings imply that effectively implementing green HRM policies can strengthen eco-friendly behavior within an organization. Such environmentally conscious actions from employees will ultimately enhance the organization's environmental performance. Future studies could broaden this research by involving more respondents or exploring additional variables and settings. Research conducted across universities in Indonesia could integrate variables like green attitudes, green innovation, and green culture.

INTRODUCTION

Growing attention has been directed toward business sustainability over the past several decades by researchers, policymakers, and industry professionals, especially following the introduction of the United Nations Sustainable Development Goals (UNSDGs). Companies increasingly recognize that long-term business success relies on protecting the environment and conserving natural resources. Neglecting these aspects can negatively influence both operational and environmental sustainability. Consequently, modern organizations acknowledge the importance of embedding sustainability principles into their activities from environmental, social, and economic perspectives (Elkington, 2018). This shift has encouraged scholars to explore how organizations can become more environmentally responsible, or "green" (Chaudhary, 2020). One indicator of this trend is the growing discussion surrounding the

integration of environmental management practices into green human resource management (GHRM). Previous research has shown that GHRM plays a significant role in supporting sustainable development initiatives within companies (Kim et al., 2019).

Chaudhary (2020) explains that GHRM involves implementing HRM practices that encourage environmental performance by shaping employees' environmentally responsible behaviors. GHRM integrates eco-friendly values into key HR processes such as recruitment, selection, and performance assessments. Pro-environmental behavior refers to any employee action aimed at protecting the environment, such as reducing energy use or managing waste properly (Chaudhary, 2020). These environmentally conscious behaviors contribute positively to an organization's environmental outcomes (Chaudhary, 2020). According to Kim et al. (2019), employees' abilities, motivation, and competencies are essential factors that influence environmental performance and form the basis of a company's environmental management efforts.

Growing environmental awareness has encouraged many organizations to implement environmentally friendly practices (Ahmad, 2015). In the education sector, various green initiatives are introduced to reduce pollution and protect natural resources, helping to lessen environmental damage. Universities and similar service institutions establish environmental guidelines aimed at improving employee awareness. Given current conditions, educational organizations tend to adopt sustainable actions such as using recycled materials, conserving energy, and optimizing office resources to minimize ecological impact (Wang, 2019).

Previous studies have explored the connection between GHRM, pro-environmental behavior, and environmental performance (Chaudhary, 2020; Sobaih et al., 2020; Kim et al., 2019). However, limited research has examined how these variables interact specifically within educational institutions. Most existing work focuses on large business organizations, leaving a gap in the educational context. Therefore, this study aims to address that gap by analyzing how GHRM, employees' environmentally responsible behavior, and environmental performance relate within small tourism-based organizations. Findings from manufacturing industries cannot be directly applied to educational settings like universities because the characteristics of the two sectors differ and may influence environmental management practices (Sobaih et al., 2020). Consequently, leadership becomes essential in ensuring that GHRM practices effectively enhance an organization's environmental performance (Singh et al., 2020).

This research explores the direct link between GHRM and environmental performance by considering pro-environmental behavior within private universities in Yogyakarta, Indonesia. The study has two main objectives. First, it assesses the extent to which GHRM influences both environmental performance and employees' environmentally responsible actions in higher education institutions. Second, it investigates whether pro-environmental behavior acts as a mediating factor in the connection between GHRM and environmental performance in universities. The study adopts a comprehensive framework to evaluate the two-way relationship between GHRM and environmental performance through employees' eco-friendly behavior—an approach that has not previously been applied within the educational sector, particularly at universities. Guided by the resource-based view theory and GHRM concepts from Singh et al. (2020), this research offers valuable contributions for scholars and practitioners. It highlights how private universities can enhance sustainability and achieve better environmental outcomes by strengthening GHRM practices and encouraging pro-environmental behavior among staff.

LITERATURE REVIEW

Applying green human resource management practices helps improve both organizational outcomes and environmental performance. When GHRM concepts are incorporated into HR activities, organizations are able to cultivate constructive attitudes, environmentally responsible behaviors, and better overall results (Farrukh et al., 2022). GHRM initiatives also play an important role in shaping outcomes at both the individual and organizational levels (Faisal, 2023). Ren et al. (2018) note that GHRM practices instill ecological responsibility in employees, influencing the way they think and act in support of environmental sustainability. In addition, Albloush et al. (2022) found a strong positive connection between GHRM and organizational performance.

GHRM is anticipated to shape employees' eco-behavior for several key reasons. First, organizations can express their commitment to environmental sustainability during recruitment and factor in applicants' ecological values when making hiring decisions (Renwick et al., 2013). Second, by involving staff in environmental initiatives and offering green-oriented training, employees can develop the knowledge, abilities, and competencies needed to participate in eco-friendly practices. Implementing GHRM policies also signals that the organization is serious about protecting the environment, which in turn motivates employees to help achieve its sustainability objectives. This view is reinforced by Dumont et al. (2017), who found that GHRM directly affects eco-behavior. Similarly, Saeed et al. (2019) demonstrated that GHRM initiatives positively shape employees' environmentally responsible actions. Because eco-behaviors are formally recognized and encouraged within GHRM systems, such actions are expected to become part of employees' everyday work routines.

Previous research has explored how employees' eco-friendly behavior relates to environmental performance. Findings indicate that staff actions that support environmental protection have a direct effect on improving environmental outcomes (Paillé et al., 2014). When employees engage in environmentally conscious practices—such as reducing waste—organizations are better able to meet their environmental objectives and strengthen their overall environmental performance. In the same way, Roy et al. (2013) highlight that eco-behavior enhances environmental performance by supporting stronger environmental management systems. Elshaer et al. (2023) further report that the adoption of GHRM practices contributes to higher organizational performance, including improvements in environmental outcomes. Employee eco-behavior can also strengthen this positive relationship (Elshaer et al. 2023).

RESEARCH METHODS

This research involved participants drawn from a private university community in Yogyakarta, Indonesia. Data were collected using a convenience sampling method, where individuals encountered by the researchers were invited to complete the survey. From the distribution process, 97 usable responses were obtained. The questionnaire consisted of indicator items representing each research construct.For the green human resource management variable, items were adapted from Kim et al. (2019), Fawehinmi et al. (2020), and Elshaer et al. (2021). Environmental performance indicators were based on Paillé et al. (2014) and Kim et al. (2019). Measures for eco-behavior were taken from Dumont et al. (2017), Kim et al. (2019), and Elshaer et al. (2021). Each construct included eight items rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).SmartPLS was used to perform the data analysis, including validity checks, reliability assessments, and hypothesis testing (both direct effects and mediation). Validity was evaluated using outer loading values, which had to exceed 0.6; items falling below this threshold were removed and re-tested. Once all indicators met the validity requirement, reliability was assessed for each construct. A variable was considered reliable if its composite reliability exceeded 0.7 and its Cronbach's alpha was above 0.6. Hypothesis testing was conducted by examining the p-values for each proposed relationship. Hypotheses were supported when the p-value was below 0.05, and rejected when the value exceeded 0.05. All analytical decisions followed the guidelines set out by Hair et al. (2020).

RESULT AND ANALYSIS

Table 1. Validity Test Result

Indicator	Green Human Resource Management	Environmental Performance	Eco-Behavior
GHRM2	0.761		
GHRM3	0.875		
GHRM4	0.838		
GHRM7	0.757		
EP1		0.879	
EP3		0.875	
EP4		0.862	
EB3			0.848
EB6			0.879

Table 1 presents the results of the validity assessment using outer loading values generated by SmartPLS. From this evaluation, several indicators across the three research constructs had to be removed because their outer loading values were below 0.7. For the green human resource management construct, four items were excluded (GHRM1, GHRM5, GHRM6, and GHRM8). Five items were dropped from the environmental performance construct (EP2, EP5, EP6, EP7, and EP8). In the eco-behavior construct, six items were eliminated (EB1, EB2, EB4, EB5, EB7, and EB8). The indicators that remain in Table 1 meet the validity criteria, as each has an outer loading value above 0.7, consistent with the standards recommended by Hair et al. (2020). Figure 2 illustrates the SmartPLS model along with the corresponding outer loading values.
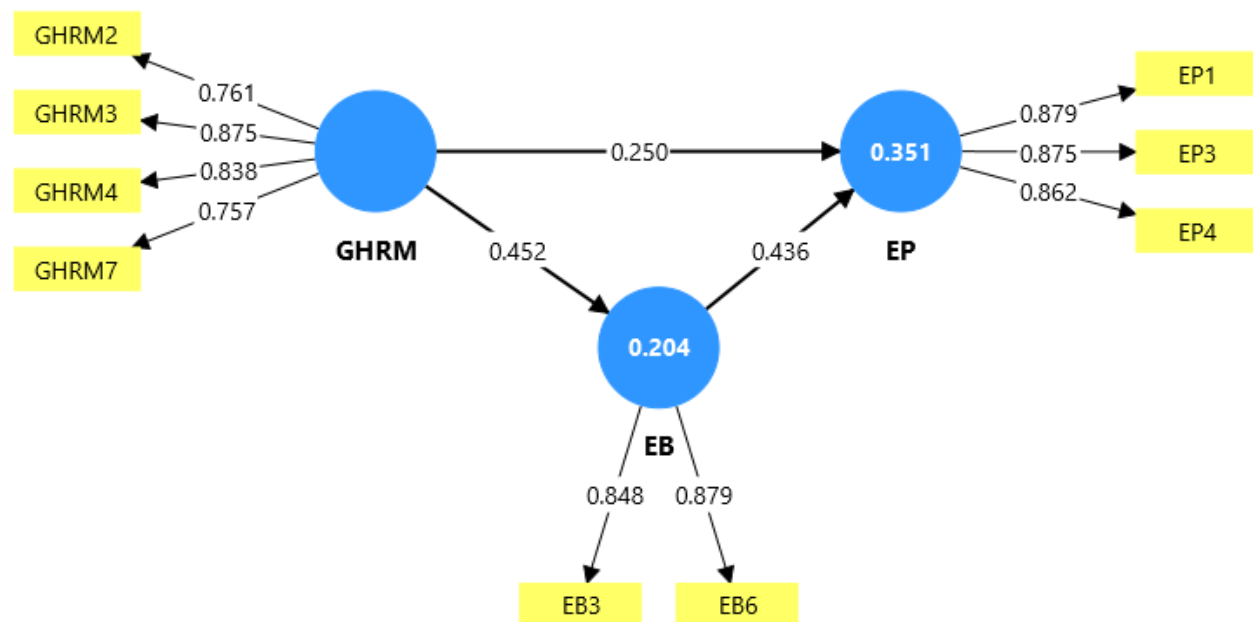
Figure 2. Measurement Model

Table 2. Reliability Test Result

Variable	Cronbach's Alpha	Composite Reliability
Green Human Resource Management	0.661	0.855
Environmental Performance	0.842	0.905
Eco-Behavior	0.824	0.883

Table 2 shows the reliability test results with Cronbach's alpha and composite reliability measurements using SmartPLS. Based on these test results, all research variables were proven to be reliable, as evidenced by Cronbach's alpha values greater than 0.6 and composite reliability values greater than 0.7 (Hair et al., 2020).

Table 3. Hypothesis Test Result

Hypothesis	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
Green Human Resource Management → Environmental Performance	0.250	0.254	0.094	2.667	0.008
Green Human Resource Management → Eco-Behavior	0.452	0.458	0.084	5.358	0.000
Eco-Behavior → Environmental Performance	0.436	0.436	0.101	4.308	0.000
Green Human Resource Management → Eco-Behavior → Environmental Performance	0.197	0.199	0.060	3.305	0.001

Table 3 presents the outcomes of both the partial and mediation hypothesis tests. All hypotheses in this study were found to be accepted or supported. This is indicated by positive original sample values and p-values below 0.05 (Hair et al., 2020). The results confirm that eco-behavior functions as a mediating variable in the relationship between green HRM and environmental performance. Paillé et al. (2020) highlight that employees who receive adequate HRM support—such as training, development opportunities, and rewards—tend to show improved job performance, which contributes to overall organizational effectiveness. Prior studies consistently indicate that GHRM enhances environmental performance (Kim et al., 2019; Roscoe et al., 2019). More precisely, GHRM encourages employees to engage in environmentally responsible behavior (Chaudhary, 2020) and strengthens an organization's environmental outcomes (Singh et al., 2020). Organizations implementing well-designed environmental management systems, including GHRM policies and practices, generally achieve stronger environmental performance levels.

Employee eco-behavior is driven by their personal motivation (Norton et al., 2017). Such behavior involves initiating environmental initiatives, supporting green policies, and motivating colleagues to become more environmentally aware. This reflects employees' willingness to carry out their tasks in an environmentally responsible

manner. GHRM refers to a set of HR practices designed to enhance an organization's environmental outcomes and encourage staff to engage in eco-friendly actions (Renwick et al., 2013). According to Cheema et al. (2020), GHRM promotes green behavior by selecting individuals whose values align with the institution's sustainability goals, offering training to strengthen environmental knowledge, attitudes, and skills, and integrating environmental criteria into performance assessments, rewards, and employee empowerment (Sancho et al., 2018). GHRM practices can shape and influence eco-behavior among employees. Highlighting environmental values during recruitment increases the likelihood of attracting environmentally conscious candidates. Green training initiatives help employees better understand ecological issues and enhance their ability to solve related problems. Furthermore, performance appraisals, promotions, and rewards that incorporate environmental contributions encourage workers to take responsibility and actively engage in green behaviors (Dumont et al., 2017).

Businesses often rely on eco-behavior as a strategy to achieve strong environmental performance (Dubois & Dubois, 2012). Eco-behavior refers to employees' actions aimed at conserving natural resources or minimizing negative environmental impacts (Chaudhary, 2020). Such environmentally responsible behavior among workers has been shown to enhance an organization's environmental outcomes (Kim et al., 2019). These actions may include conserving energy and materials, reducing resource use, recycling, and supporting environmentally friendly initiatives (Kim et al., 2019). Previous studies also confirm a positive link between employees' eco-behavior and the environmental performance of the organization (Anwar et al., 2020; Pham et al., 2020). Based on green behavior theory, firms can reduce environmental harm by adopting environmentally conscious policies and practices (Ojo et al., 2022; Naz et al., 2023). Furthermore, GHRM has been identified as a significant predictor of both environmental performance (Singh et al., 2020) and employee eco-behavior (Chaudhary, 2020). Research by Kim et al. (2019) and Pham et al. (2020) demonstrates that GHRM contributes to environmental performance not only directly but also indirectly through fostering employee commitment and eco-friendly behavior.

CONCLUSION

The results indicate that green human resource management contributes to improved environmental performance. Green HRM also has a positive effect on employees' eco-behavior, and this environmentally responsible behavior, in turn, enhances environmental performance. In addition, eco-behavior serves as a mediating factor in the relationship between green HRM and environmental performance. These outcomes suggest that effectively implementing green HRM practices will naturally encourage stronger eco-behavior among employees, which ultimately supports better environmental outcomes for the organization. However, this study has limitations. The respondent pool was relatively small and restricted only to individuals within a single private university in Yogyakarta, Indonesia. Consequently, the findings cannot be generalized to represent all universities in Yogyakarta or the broader academic population in Indonesia. Future studies could improve representativeness by involving a larger number of participants, using different research contexts, or incorporating additional variables. Potential variables for further exploration include green attitudes, green innovation, and green culture, especially when expanding the scope to a wider range of universities across Indonesia.

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