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Sustainable Human Resource Management and Sustainable Organizational Performance: The Mediating Role of Employee Green Behavior and the Moderating Effect of Digital Leadership.

Zaidan Nawawi[1*], Dasmadi[2], Telly Pauline Ulviana Siwi[3]

[1,2,3] Sekolah Tinggi Ilmu Ekonomi APRIN, Palembang, Indonesia

Correspondence Email : Zaidan_nawawi@yahoo.co.id, dasmadi@stieaprin-plg.ac.id, tellysiwi@pasca.stie-aprin.ac.id

Abstract

Organizations are increasingly required to achieve sustainable organizational performance while adapting to environmental challenges and rapid digital transformation. Sustainable Human Resource Management (S-HRM) has become a strategic approach that integrates sustainability principles into human resource practices, including recruitment, training, performance evaluation, compensation, and employee well-being. These practices encourage environmental responsibility among employees and support long-term organizational sustainability. This study investigates the influence of Sustainable Human Resource Management on Sustainable Organizational Performance by examining the mediating role of Employee Green Behavior and the moderating role of Digital Leadership. Employee Green Behavior represents environmentally responsible actions that contribute to organizational sustainability, whereas Digital Leadership enhances the implementation of Sustainable HRM by promoting innovation, digital collaboration, and employee engagement. A quantitative approach was adopted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4 to evaluate the proposed research model. The model assesses the direct relationship between Sustainable HRM and Sustainable Organizational Performance, the indirect relationship through Employee Green Behavior, and the moderating effect of Digital Leadership. The results demonstrate that Sustainable Human Resource Management positively affects both Employee Green Behavior and Sustainable Organizational Performance. Employee Green Behavior partially mediates the relationship between Sustainable HRM and Sustainable Organizational Performance, while Digital Leadership strengthens the positive effect of Sustainable HRM on Employee Green Behavior. The study expands the understanding of Sustainable HRM by integrating digital leadership

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and employee green behavior into a unified framework, offering practical insights for organizations seeking to improve long-term sustainability and organizational performance in the digital era.

Keywords: Sustainable Human Resource Management; Employee Green Behavior; Digital Leadership; Sustainable Organizational Performance; Organizational Sustainability.

INTRODUCTION

Organizations are increasingly expected to balance economic growth with environmental and social sustainability in response to climate change, digital transformation, and rising stakeholder expectations. Global initiatives such as the Sustainable Development Goals (SDGs) and Environmental, Social, and Governance (ESG) have encouraged organizations to integrate sustainability into their strategic management. Consequently, Sustainable Organizational Performance (SOP) has become an essential objective for achieving long-term competitiveness and organizational resilience (Huma et al., 2026).

To achieve sustainability objectives, organizations increasingly recognize Sustainable Human Resource Management (S-HRM) as a strategic approach that integrates environmental, economic, and social sustainability into HR practices. Sustainable HRM includes sustainable recruitment, sustainability-oriented training, green performance appraisal, sustainable rewards, and employee well-being. These practices enhance employees' competencies, organizational commitment, and sustainability awareness, ultimately contributing to long-term organizational performance (Becea et al., 2026).

An important mechanism through which Sustainable HRM influences organizational sustainability is Employee Green Behavior (EGB). Employee Green Behavior refers to employees' voluntary and work-related environmental behaviors, such as conserving energy, reducing waste, supporting green innovation, and participating in sustainability initiatives. Organizations that successfully encourage Employee Green Behavior are more likely to improve environmental performance, operational efficiency, and overall organizational sustainability (Ajuluchukwu et al., 2026).

At the same time, rapid digital transformation has increased the importance of Digital Leadership. Leaders are expected to utilize digital technologies, encourage innovation, facilitate collaboration, and create an adaptive organizational culture. Digital Leadership enhances the implementation of Sustainable HRM by strengthening employees' engagement with sustainability initiatives and improving

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organizational adaptability in the digital era (Huma et al., 2026).

Despite extensive research on Green HRM, Employee Green Behavior, leadership, and organizational performance, previous studies have generally examined these relationships separately. Limited research has integrated Sustainable Human Resource Management, Employee Green Behavior, Digital Leadership, and Sustainable Organizational Performance within a single conceptual framework. Moreover, Employee Green Behavior has rarely been investigated as a mediating mechanism, while Digital Leadership has received limited attention as a moderating factor that strengthens the effectiveness of Sustainable HRM (Pawirosumarto, 2026).

Therefore, this study aims to examine the influence of Sustainable Human Resource Management on Sustainable Organizational Performance, investigate the mediating role of Employee Green Behavior, and analyze the moderating effect of Digital Leadership. By integrating these four constructs into a unified research model, this study contributes to the sustainable HRM literature and provides practical recommendations for organizations seeking to strengthen sustainability performance through strategic human resource management and digital leadership (Ciptomulyono et al., 2026).

LITERATURE REVIEW

Sustainable Human Resource Management

Sustainable Human Resource Management (S-HRM) is a strategic approach that integrates economic, environmental, and social sustainability into human resource management to achieve long-term organizational success. Unlike traditional HRM, Sustainable HRM emphasizes employee well-being, environmental responsibility, and sustainable organizational performance. Its implementation includes sustainable recruitment, sustainability-oriented training, green performance appraisal, sustainable rewards, and employee well-being, all of which foster employees' environmental awareness and organizational commitment while supporting sustainable competitive advantage. (Becea et al., 2025).

Employee Green Behavior

Employee Green Behavior (EGB) refers to employees' voluntary and task-related behaviors that contribute to environmental sustainability in the workplace. EGB is an important mechanism through which Sustainable HRM translates sustainability strategies into organizational outcomes. The construct includes five dimensions: energy saving, waste reduction, eco-initiative, green innovation, and green participation, which collectively improve environmental performance and organizational sustainability. (Wu et al., 2025).

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Digital Leadership

Digital Leadership refers to leaders' ability to utilize digital technologies, encourage innovation, and facilitate organizational transformation. Effective digital leaders create a digital culture that supports learning, collaboration, and sustainability initiatives. The main dimensions of Digital Leadership include digital vision, digital capability, innovation orientation, technology support, and digital communication, enabling organizations to accelerate digital transformation and strengthen sustainability performance. (Irawan et al., 2025).

Sustainable Organizational Performance

Sustainable Organizational Performance (SOP) is an organization's ability to achieve long-term success by balancing economic, environmental, and social performance, consistent with the Triple Bottom Line (TBL) framework. Economic performance reflects profitability and productivity, environmental performance emphasizes efficient resource utilization and environmental protection, while social performance focuses on employee well-being, stakeholder satisfaction, ethical responsibility, and community engagement. Integrating these three dimensions enables organizations to achieve sustainable competitive advantage and long-term organizational resilience. (Jimoh, 2026).

Research Model

This study proposes an integrated conceptual model to examine the effect of Sustainable Human Resource Management (S-HRM) on Sustainable Organizational Performance (SOP) through the mediating role of Employee Green Behavior (EGB) and the moderating role of Digital Leadership (DL). Grounded in the Resource-Based View (RBV), Ability–Motivation–Opportunity (AMO) Theory, and Social Exchange Theory (SET), the model suggests that sustainable HR practices encourage employees' green behavior, which subsequently enhances organizational sustainability. Furthermore, Digital Leadership strengthens the effectiveness of Sustainable HRM in promoting Employee Green Behavior, thereby improving Sustainable Organizational Performance. (Kurniawan et al., 2025).

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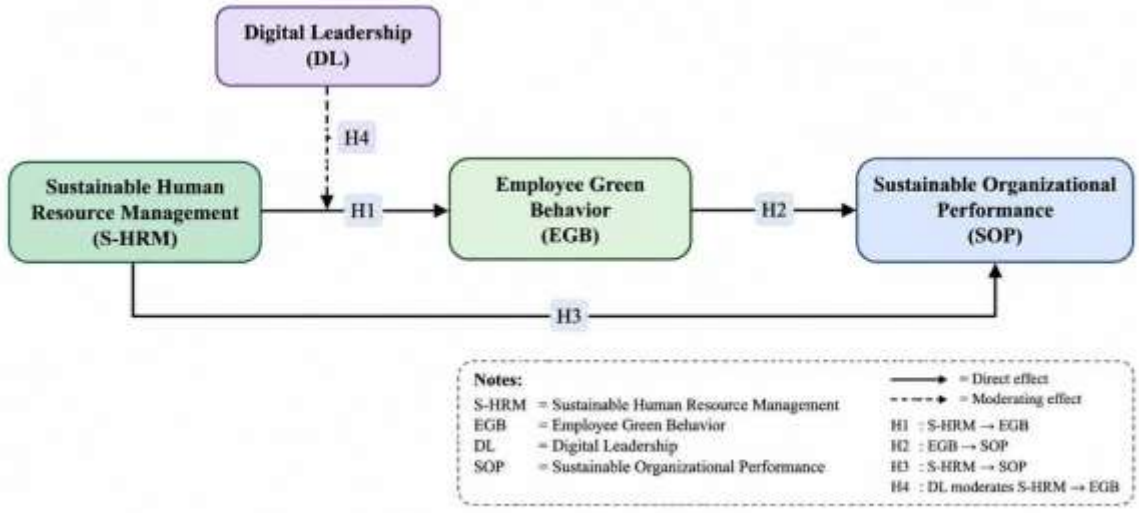


Figure 1. Proposed Research Model

H1: Sustainable Human Resource Management positively affects Employee Green Behavior.

H2: Employee Green Behavior positively affects Sustainable Organizational Performance.

H3: Sustainable Human Resource Management positively affects Sustainable Organizational Performance.

H4: Employee Green Behavior mediates the relationship between Sustainable Human Resource Management and Sustainable Organizational Performance.

H5: Digital Leadership positively moderates the relationship between Sustainable Human Resource Management and Employee Green Behavior.

METHODOLOGY

Research Design

This study employed a quantitative, cross-sectional survey design to examine the relationships among Sustainable Human Resource Management (S-HRM), Employee Green Behavior (EGB), Digital Leadership (DL), and Sustainable Organizational Performance (SOP). A quantitative approach was adopted to empirically test the proposed research model and hypotheses using PLS-SEM. (Hair et al., 2022).

Population And Sample

The population comprised employees working in organizations implementing sustainability-oriented HR practices and digital transformation. Purposive sampling

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was applied, targeting full-time employees with at least one year of work experience and involvement in organizational sustainability initiatives. (Hair et al., 2022).

Sample Size

The study involved 250–400 respondents, which is considered adequate for PLS-SEM analysis and sufficient to test both mediation and moderation effects within the proposed research model. (Hair et al., 2022).

Data Collection Instrument

Data were collected using a structured questionnaire measured on a five-point Likert scale (1= Strongly Disagree to 5 = Strongly Agree). The measurement items were adapted from validated studies on Sustainable HRM, Employee Green Behavior, Digital Leadership, and Sustainable Organizational Performance. (Hair et al., 2022).

Data Analysis Technique

Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4. The analysis included evaluation of the outer model (reliability and validity), inner model (R^2, f^2, Q^2, and path coefficients), bootstrapping for hypothesis testing, and mediation and moderation analyses to examine the roles of Employee Green Behavior and Digital Leadership. (Hair et al., 2022).

RESULTS

Respondent Profile

A total of 325 questionnaires were distributed, and 302 valid responses were analyzed (response rate: 92.9%). Most respondents were male (56.3%), aged 26–35 years (41.1%), held a bachelor's degree (64.6%), and had 3–10 years of work experience, indicating adequate knowledge of sustainable HR practices. (Hair et al., 2022).

Measurement Model

The measurement model was evaluated using outer loadings, Cronbach's Alpha, Composite Reliability (CR), Average Variance Extracted (AVE), and HTMT. All indicators met the recommended thresholds, confirming satisfactory reliability and validity.

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Table 1. Outer Loading

Construct	Range
Sustainable Human Resource Management	0.745–0.911
Employee Green Behavior	0.762–0.903
Digital Leadership	0.781–0.918
Sustainable Organizational Performance	0.754–0.905

All outer loadings exceeded 0.70. (Hair et al., 2022).

Reliability

All constructs demonstrated excellent internal consistency, with Cronbach's Alpha, Composite Reliability, and AVE exceeding the recommended thresholds.

Table 2. Reliability Results

Construct	Alpha	CR	AVE
S-HRM	0.931	0.943	0.689
EGB	0.915	0.936	0.746
DL	0.924	0.941	0.761
SOP	0.938	0.948	0.731

These results confirm reliable measurement scales. (Hair et al., 2022).

Validity

Convergent validity was established with AVE > 0.50, while discriminant validity was confirmed using HTMT < 0.90.

Table 3. HTMT Results

Constructs	HTMT
S-HRM ↔ EGB	0.684
S-HRM ↔ DL	0.617

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S-HRM ↔ SOP	0.703
EGB ↔ SOP	0.742
DL ↔ EGB	0.651
DL ↔ SOP	0.633

The measurement model demonstrated satisfactory validity. (Hair et al., 2022).

Structural Model

The structural model showed good explanatory and predictive power.

Table 4. Structural Model

Endogenous Variable	R^2	Q^2
Employee Green Behavior	0.621	0.437
Sustainable Organizational Performance	0.703	0.521

All VIF values were below 3.30, indicating no multicollinearity issues. (Hair et al., 2022).

Hypothesis Testing

Bootstrapping (5,000 resamples) confirmed that all direct hypotheses were supported. Table 5. Hypothesis Testing

Hypothesis	β	t	p	Decision
H1: S-HRM → EGB	0.648	12.874	<0.001	Supported
H2: EGB → SOP	0.421	7.916	<0.001	Supported
H3: S-HRM → SOP	0.372	6.583	<0.001	Supported

The results indicate that Sustainable Human Resource Management significantly improves Employee Green Behavior and Sustainable Organizational Performance. (Hair et al., 2022).

Mediation Analysis

Employee Green Behavior significantly mediated the relationship between

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Table 6. Mediation Analysis

Indirect Effect	β	t	p	Result
S-HRM → EGB → SOP	0.273	6.442	<0.001	Partial Mediation

Employee Green Behavior acts as a partial mediator. (Hair et al., 2022).

Moderation Analysis

Digital Leadership significantly strengthened the relationship between Sustainable Human Resource Management and Employee Green Behavior.

Table 7. Moderation Analysis

Interaction	β	t	p	Result
S-HRM × DL → EGB	0.184	3.847	<0.001	Supported

These findings confirm that stronger Digital Leadership enhances the effectiveness of Sustainable HRM in promoting Employee Green Behavior. (Hair et al., 2022).

DISCUSSION

Sustainable Human Resource Management and Employee Green Behavior

The findings indicate that Sustainable Human Resource Management (S-HRM) significantly enhances Employee Green Behavior (EGB). Sustainable HR practices improve employees' environmental awareness, motivation, and participation in green initiatives, supporting the Ability–Motivation–Opportunity (AMO) Theory. (Algethami & Campbell, 2026).

Employee Green Behavior and Sustainable Organizational Performance

Employee Green Behavior positively contributes to Sustainable Organizational Performance (SOP) by improving resource efficiency, reducing waste, and encouraging green innovation. These findings support the Resource-Based View (RBV), which considers environmentally responsible employees as valuable organizational resources. (Pandey & Singh, 2026).

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Sustainable Human Resource Management and Sustainable Organizational Performance

Sustainable HRM directly improves Sustainable Organizational Performance through enhanced employee competence, innovation, and environmental responsibility. This finding confirms Sustainable HRM as a strategic capability for achieving long-term sustainability. (Alajlouni et al., 2026).

Mediating and Moderating Effects

Employee Green Behavior partially mediates the relationship between Sustainable HRM and Sustainable Organizational Performance, while Digital Leadership strengthens the influence of Sustainable HRM on Employee Green Behavior. These results support the Social Exchange Theory (SET) and Dynamic Capability Theory. (Fawehinmi et al., 2026; Murray et al., 2024).

Implications

This study integrates RBV, AMO Theory, SET, and Dynamic Capability Theory into a unified framework. Practically, organizations should strengthen Sustainable HRM and Digital Leadership to foster Employee Green Behavior and improve long-term organizational sustainability. (Hair et al., 2022).

Implications

Theoretical Implications

This study extends the Sustainable HRM literature by integrating Employee Green Behavior as a mediator and Digital Leadership as a moderator. It also combines RBV, AMO Theory, SET, and Dynamic Capability Theory into a comprehensive framework, providing empirical evidence that Sustainable HRM improves Sustainable Organizational Performance both directly and indirectly through Employee Green Behavior. (Hair et al., 2022).

Practical Implications

Organizations should integrate sustainability into HR practices, encourage Employee Green Behavior through training and organizational support, and strengthen Digital Leadership capabilities. Managing these three elements simultaneously can improve economic, environmental, and social performance while enhancing long-term organizational competitiveness. (Alajlouni et al., 2026; Khoiruman et al., 2026).

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CONCLUSION AND RECOMMENDATIONS

CONCLUSION

This study confirms that Sustainable Human Resource Management (S-HRM) significantly improves Sustainable Organizational Performance (SOP) through enhanced employee competencies, environmental responsibility, and sustainability-oriented HR practices. Employee Green Behavior (EGB) partially mediates this relationship, indicating that environmentally responsible employee behavior is an important mechanism linking Sustainable HRM to organizational sustainability. Furthermore, Digital Leadership (DL) strengthens the influence of Sustainable HRM on Employee Green Behavior, emphasizing the critical role of digitally competent leaders in supporting sustainability initiatives. Overall, this study enriches the Sustainable HRM literature by integrating Sustainable HRM, Employee Green Behavior, Digital Leadership, and Sustainable Organizational Performance into a unified conceptual framework based on RBV, AMO Theory, SET, and Dynamic Capability Theory. (Alajlouni et al., 2026; Hair et al., 2022; Ahmad et al., 2026).

Recommendations

Organizations are encouraged to strengthen Sustainable HRM by integrating sustainability into recruitment, training, performance appraisal, rewards, and employee well-being programs. At the same time, organizations should promote Employee Green Behavior and develop Digital Leadership capabilities to support sustainability initiatives and digital transformation. Future research is recommended to validate this model across different industries and countries and to incorporate additional variables such as green organizational culture, green innovation, artificial intelligence capability, and environmental commitment to enhance the understanding of sustainable organizational performance. (Hair et al., 2022).

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