

Research Article

Sustainable Human Resource Management and Sustainable MSME Performance: The Mediating Role of Green Commitment among MSMEs in the Tigaras Tourism Area, Simalungun Regency

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Abstract. This study investigates whether Sustainable Human Resource Management (SHRM) contributes to sustainable performance among micro, small, and medium enterprises (MSMEs) operating in the Tigaras tourism area of Simalungun Regency, Indonesia, and examines Green Commitment as a potential explanatory mechanism. Tourism-based MSMEs face the dual challenge of sustaining economic viability while strengthening social and environmental responsibility. A quantitative survey was conducted using purposive sampling, involving 37 MSME actors who met the study criteria. Data were collected through a five-point Likert-scale questionnaire and analyzed using validity and reliability tests, classical assumption tests, Pearson correlation, multiple linear regression, t-tests, and an F-test. SHRM had a positive and significant effect on sustainable MSME performance ($B = 0.305$, $p = 0.012$), while Green Commitment also exerted a positive and significant effect ($B = 0.524$, $p = 0.009$). SHRM was positively associated with Green Commitment ($r = 0.477$, $p = 0.003$). Jointly, SHRM and Green Commitment explained 45.1% of the variance in sustainable performance (adjusted $R^2 = 0.418$; $F = 13.952$; $p < 0.001$). These findings indicate that Green Commitment is a theoretically plausible mechanism linking SHRM to sustainable performance; however, the indirect effect requires confirmation through bootstrap mediation analysis. The study highlights the importance of sustainability-oriented HR practices, employee involvement, resource efficiency, and environmentally responsible routines for tourism-based MSMEs.

Keywords: Green Commitment; MSMEs; Sustainable Human Resource Management; Sustainable MSME Performance; Sustainable Tourism.

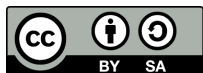
Received: January 17, 2026

Revised: March 29, 2026

Accepted: April 21, 2026

Published: June 30, 2026

Curr. Ver.: June 30, 2026



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1. Introduction

Sustainability has become a strategic concern for micro, small, and medium enterprises (MSMEs), particularly those operating in tourism destinations. Business performance can no longer be assessed solely through short-term revenue. The ability to maintain business continuity, create social value, use resources responsibly, and reduce environmental impacts has become increasingly important. In tourism areas, MSMEs interact directly with visitors, local communities, natural resources, and the environmental quality of the destination. Human resources therefore play a central role in translating sustainability principles into day-to-day business practices.

Sustainable Human Resource Management (SHRM) extends conventional human resource management by integrating economic, social, and environmental considerations into the management of people. It emphasizes long-term capability development, employee well-being, participation, learning, and work behaviors that support organizational sustainability [1]–[4]. For MSMEs, however, HR practices are often informal and owner-driven. This

informality can limit standardization, yet it may also enable sustainability values to be communicated and reinforced directly through everyday interactions between owners and workers.

This issue is especially relevant in the Tigaras tourism area of Simalungun Regency. Tourism generates opportunities for food businesses, retail, services, and other supporting activities, while simultaneously increasing the need for cleanliness, waste management, efficient resource use, service quality, and environmental preservation. Sustainable MSME performance in this study is therefore viewed through economic, social, and environmental dimensions consistent with the triple-bottom-line perspective [5].

Green Commitment may help explain how SHRM is translated into sustainable performance. It reflects the willingness of individuals or organizations to support environmental goals and to maintain environmentally responsible practices. In small tourism businesses, this commitment can be expressed through waste reduction, energy and water conservation, workplace cleanliness, responsible resource use, and participation in environmental initiatives. Prior green HRM research suggests that HR practices can shape pro-environmental attitudes and behaviors [6]–[9].

Despite the growing literature on sustainable and green HRM, empirical evidence remains concentrated in larger and more formal organizations. Less is known about the internal mechanism through which SHRM operates in small, tourism-based enterprises where HR systems are less formalized and owner influence is more immediate. This study addresses that gap by examining the pathway from SHRM to Green Commitment and sustainable MSME performance in Tigaras.

The study contributes in three ways. First, it extends SHRM research to destination-based MSMEs in an Indonesian tourism context. Second, it evaluates Green Commitment as a potential mechanism connecting sustainability-oriented HR practices with multidimensional business performance. Third, it provides practical evidence for MSME owners and tourism stakeholders seeking low-cost HR interventions that combine economic resilience with social and environmental responsibility. Accordingly, the study examines: (H1) the effect of SHRM on sustainable MSME performance; (H2) the association between SHRM and Green Commitment; (H3) the effect of Green Commitment on sustainable MSME performance; and (H4) the proposed mediating role of Green Commitment.

2. Literature Review

Sustainable Human Resource Management

SHRM refers to an approach to managing people that incorporates economic, social, and environmental sustainability into HR policies and routines. Relevant practices include sustainability-oriented recruitment, green training, competence development, employee participation, performance evaluation, and rewards that reinforce environmentally responsible behavior [1], [3], [6]. From the Resource-Based View (RBV), such competencies and routines may constitute valuable and difficult-to-imitate resources that support sustained competitive advantage [10]. In MSMEs, these practices may be less formal than in large firms, but owner involvement can make sustainability expectations more visible and immediate.

Green Commitment

Green Commitment describes an enduring willingness to support environmental objectives and environmentally responsible practices. It goes beyond formal compliance by reflecting attachment to environmental values, willingness to maintain green behavior, and a sense of responsibility for sustainability. The Theory of Planned Behavior (TPB) proposes that attitudes, subjective norms, and perceived behavioral control shape behavioral intentions and actions [11]. In the workplace, environmental commitment may be manifested through voluntary actions such as conserving energy, reducing waste, and participating in environmental initiatives [7], [9].

Sustainable MSME Performance

Sustainable MSME performance is conceptualized as business achievement across economic, social, and environmental dimensions. Economic performance concerns continuity, efficiency, and financial outcomes; social performance concerns relationships with employees, customers, and communities; and environmental performance concerns resource efficiency and the reduction of adverse ecological impacts [5], [12]. This multidimensional view is particularly relevant in tourism destinations, where business success and destination quality are closely interconnected.

Hypotheses and Conceptual Model

Sustainability-oriented HR practices are expected to strengthen employee capabilities, involvement, and long-term work routines, thereby improving efficiency and service quality. They may also foster Green Commitment through training, owner support, behavioral reinforcement, and recognition. Stronger Green Commitment can subsequently encourage resource efficiency, responsible operating practices, and a positive business reputation. Based on these arguments, the following hypotheses are proposed:

- H1: SHRM has a positive effect on sustainable MSME performance.
- H2: SHRM is positively associated with Green Commitment.
- H3: Green Commitment has a positive effect on sustainable MSME performance.
- H4: Green Commitment mediates the relationship between SHRM and sustainable MSME performance.

The conceptual pathway is:

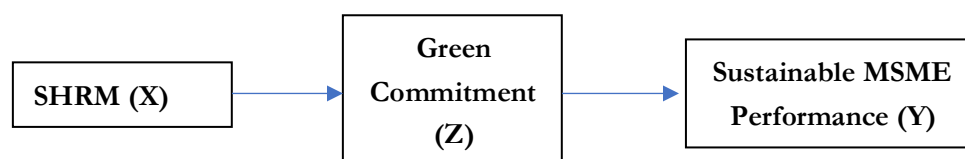


Figure 1. Conceptual Pathway.

3. Proposed Method

Research Design and Sample

The study employed a quantitative cross-sectional survey design in the Tigaras tourism area, Simalungun Regency, Indonesia, during January–March 2026. The source manuscript identified an initial population of 190 MSME-related actors/workers. Purposive sampling was used to select 37 MSME actors who met the study criteria. Eligible respondents were directly involved in business management and were sufficiently familiar with HR practices, business sustainability, and environmental practices in the Tigaras tourism setting. Because the sample is relatively small and non-probabilistic, the findings should be interpreted as context-specific evidence rather than population-wide estimates.

Variables and Measurement

Data were collected using a five-point Likert-scale questionnaire. SHRM was measured with 15 items, Green Commitment with 9 items, and sustainable MSME performance with 15 items. Table 1 summarizes the operationalization of the constructs.

Table 1. Operationalization of the research variables.

Variable	Dimensions / Focus	Items	Scale
SHRM (X)	Sustainable recruitment; green training; competence development; participation; sustainability-oriented performance and rewards	15	Likert 1–5
Green Commitment (Z)	Affective, continuance, and normative environmental commitment	9	Likert 1–5
Sustainable MSME Performance (Y)	Economic/operational, social/stakeholder, and environmental performance	15	Likert 1–5

Data Analysis

The analysis was conducted in SPSS using descriptive statistics, Pearson item-validity tests, Cronbach's alpha reliability analysis, normality, multicollinearity and heteroscedasticity diagnostics, Pearson correlation, multiple linear regression, t-tests, and an F-test at $\alpha = 0.05$. The primary regression model was $Y = a + b_1X + b_2Z + e$, where Y denotes sustainable MSME performance, X denotes SHRM, and Z denotes Green Commitment. A statistically defensible mediation claim additionally requires estimation of the indirect effect ($a \times b$) and its 95% bootstrap confidence interval. Because the source analysis does not contain the bootstrap indirect-effect output, this paper treats mediation as a theoretically supported

mechanism requiring confirmatory bootstrap analysis rather than claiming that H4 has already been statistically established.

4. Results and Discussion

Respondent Profile and Measurement Quality

The study involved 37 respondents, comprising 20 men and 17 women. The largest age group was 41–50 years (19 respondents; 51.4%), followed by 20–30 years (10 respondents; 27.0%) and 31–40 years (8 respondents; 21.6%). These characteristics indicate that the sample was dominated by mature MSME actors with direct exposure to business operations in the tourism area.

Table 2. Reliability Test Results.

Variable	Items	Cronbach's Alpha	Decision
SHRM	15	0.895	Reliable
Green Commitment	9	0.864	Reliable
Sustainable MSME Performance	15	0.868	Reliable

All questionnaire items were reported as valid because the item correlations exceeded the critical r value of 0.324 at $p < 0.05$. Cronbach's alpha values were above 0.70 for all constructs, indicating satisfactory internal consistency. The normality test produced an Asymp. Sig. value of 0.200 (> 0.05). Tolerance values for SHRM and Green Commitment were 0.772, with VIF values of 1.295, suggesting no problematic multicollinearity.

Correlation and Regression Results

Table 3. Correlation Matrix Summary.

Relationship	Pearson r	p-value	Interpretation
SHRM – Green Commitment	0.477	0.003	Positive, significant
SHRM – Sustainable Performance	0.572	< 0.001	Positive, significant
Green Commitment – Sustainable Performance	0.581	< 0.001	Positive, significant

The bivariate results show positive and statistically significant relationships among the three constructs. Green Commitment had a slightly stronger correlation with sustainable performance ($r = 0.581$) than SHRM ($r = 0.572$), while the relationship between SHRM and Green Commitment was moderate ($r = 0.477$). This pattern is consistent with the proposition that sustainability-oriented HR practices and environmental commitment are both relevant to sustainable business outcomes.

Table 4. Multiple Regression Coefficients for Sustainable MSME Performance.

Predictor	B	Std. Error	Beta	t	p
Constant	24.337	6.922	–	3.516	0.001
SHRM	0.305	0.116	0.382	2.641	0.012
Green Commitment	0.524	0.190	0.399	2.761	0.009

The estimated equation was $Y = 24.337 + 0.305X + 0.524Z$. SHRM had a positive and significant coefficient ($B = 0.305$, $p = 0.012$), supporting H1. Green Commitment also had a positive and significant coefficient ($B = 0.524$, $p = 0.009$), supporting H3. The standardized coefficients were similar ($\beta = 0.382$ for SHRM and $\beta = 0.399$ for Green Commitment), suggesting that both predictors make meaningful contributions to sustainable MSME performance.

Table 5. Model Summary and Simultaneous Test.

R	R ²	Adjusted R ²	F	p
0.671	0.451	0.418	13.952	< 0.001

The regression model explained 45.1% of the variance in sustainable MSME performance ($R^2 = 0.451$; adjusted $R^2 = 0.418$). The overall model was statistically significant ($F = 13.952$, $p < 0.001$). The remaining variance may reflect factors outside the model, such as leadership, business culture, market conditions, digital capability, access to finance, and other contextual influences.

SHRM and Green Commitment

SHRM was positively associated with Green Commitment ($r = 0.477$, $p = 0.003$), providing bivariate support for H2. The result is consistent with the argument that sustainability-oriented HR practices can foster pro-environmental attitudes and commitment [3], [6], [8]. In the MSME context, this relationship is likely to operate through direct owner behavior, informal training, task allocation, role modeling, and recognition. These

mechanisms may be particularly influential in small firms because owners and employees interact closely and formal HR systems are limited.

Green Commitment and Sustainable MSME Performance

Green Commitment significantly predicted sustainable MSME performance ($B = 0.524$, $p = 0.009$). This finding suggests that environmental commitment is not merely symbolic; it may be translated into operating routines that improve resource efficiency, cleanliness, service quality, and business reputation. In tourism destinations, such practices may also protect environmental quality, which forms part of the visitor experience and therefore has potential economic as well as ecological value.

Evaluation of the Mediation Mechanism

The observed pattern is compatible with the proposed SHRM $\rightarrow$ Green Commitment $\rightarrow$ sustainable MSME performance mechanism: SHRM is significantly related to Green Commitment, and Green Commitment significantly predicts performance while SHRM is included in the regression model. Nevertheless, these results alone do not establish a statistically significant indirect effect. The source dataset does not provide the indirect-effect estimate, BootLLCI, or BootULCI. Consequently, H4 should be regarded as theoretically plausible but not statistically confirmed in the present analysis. A follow-up analysis using PROCESS Model 4 or an equivalent bootstrap procedure is recommended; mediation would be supported if the 95% confidence interval for the indirect effect excludes zero. This cautious interpretation improves methodological transparency and avoids equating significant component paths with a formal mediation test.

Comparison with Prior Studies

The findings are broadly consistent with research that positions green and sustainable HRM as an antecedent of pro-environmental behavior and sustainability-related performance [3], [6], [8], [9]. The distinctive contribution of this study lies in its small tourism-enterprise setting. Unlike large organizations with formal HR departments, Tigaras MSMEs typically rely on owner-led and informal HR practices. The results therefore suggest that sustainability-oriented HR principles may remain relevant even when implemented through simple routines rather than sophisticated HR systems. At the same time, the small purposive sample limits generalizability, and the effect of owner leadership may be stronger here than in larger firms. This contextual difference should be considered when comparing the present results with evidence from formal organizations.

5. Conclusions

This study provides evidence that SHRM and Green Commitment are positively associated with sustainable performance among MSMEs in the Tigaras tourism area. SHRM significantly predicted sustainable MSME performance, Green Commitment also had a significant positive effect, and SHRM was positively associated with Green Commitment. Together, SHRM and Green Commitment accounted for 45.1% of the observed variance in sustainable performance. These results indicate that sustainable business outcomes in tourism-based MSMEs depend not only on how people are managed, but also on the extent to which environmental responsibility is internalized in everyday business behavior.

For practice, MSME owners should embed sustainability into simple HR routines, including training on cleanliness and waste reduction, efficient use of energy and water, employee involvement in environmental initiatives, and recognition of responsible behavior. Local government and tourism stakeholders can strengthen these efforts through capacity-building programs that integrate economic resilience, social responsibility, and environmental stewardship. The study is limited by its purposive sample of 37 respondents, cross-sectional design, and the absence of bootstrap indirect-effect estimates. Future research should involve larger and more diverse samples, compare multiple tourism destinations, adopt longitudinal designs, and formally test the Green Commitment mediation pathway using bootstrap confidence intervals.

Author Contributions

Conceptualization, E.O.P.D., Y.L., and R.T.S.; methodology, E.O.P.D.; formal analysis, E.O.P.D.; investigation, E.O.P.D.; resources, E.O.P.D.; data curation, E.O.P.D.; writing—original draft preparation, E.O.P.D.; writing—review and editing, E.O.P.D., Y.L., and R.T.S.;

supervision, Y.L. and R.T.S. All authors have read and agreed to the published version of the manuscript. Author roles should be verified by all authors before submission.

Funding

This research received no external funding. Please verify this statement before submission.

Data Availability Statement

The data supporting the findings of this study are available from the corresponding author upon reasonable request, subject to research ethics and respondent confidentiality. Please verify this statement before submission.

Acknowledgments

The authors gratefully acknowledge the MSME actors in the Tigaras tourism area who participated in this study. Any additional institutional, administrative, or technical support should be added before submission.

Conflicts of Interest

The authors declare no conflict of interest.

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