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ENHANCING ORGANIZATIONAL SUSTAINABILITY THROUGH GREEN HUMAN RESOURCE MANAGEMENT AND TRANSFORMATIONAL LEADERSHIP: THE MEDIATING ROLE OF WORK ENGAGEMENT

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ABSTRACT

This study examines the influence of Green Human Resource Management (GHRM) and Transformational Leadership on Organizational Sustainability, with Work Engagement as a mediating variable in the context of international resort hotels in Lagoi, Bintan, Indonesia. Grounded in Ability-Motivation-Opportunity Theory, Social Exchange Theory, and Resource-Based View, this research employed a quantitative approach using survey data collected from 150 employees and analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results reveal that GHRM and Transformational Leadership significantly and positively affect Work Engagement and Organizational Sustainability. Work Engagement was also found to have a significant positive effect on Organizational Sustainability. Furthermore, mediation analysis confirmed that Work Engagement partially mediates the relationships between GHRM and Organizational Sustainability as well as between Transformational Leadership and Organizational Sustainability. The findings highlight that sustainability performance in the hospitality sector can be strengthened not only through green HR practices and transformational leadership, but also through fostering employee psychological engagement. This study contributes to the sustainability and hospitality management literature by offering an integrated model linking organizational practices, leadership, and employee engagement to sustainability outcomes, while also providing practical implications for managers seeking to enhance long-term sustainability performance through people-centered strategies.

Keywords : Green Human Resource Management, Transformational Leadership, Organizational Sustainability, Work Engagement

INTRODUCTION

The global hospitality industry is increasingly challenged not only to deliver superior service quality but also to integrate sustainability into its operational and strategic agendas. As environmental concerns intensify and stakeholder expectations evolve, hotels are under growing pressure to balance economic performance with environmental stewardship and social responsibility, reflecting the broader concept of organizational sustainability (Piwowar-Sulej & Iqbal, 2023). In highly competitive tourism destinations, sustainability has become more than a compliance requirement; it has emerged as a strategic capability and a source of long-term competitive advantage.

As one of Indonesia's premier international tourism destinations, Lagoi, Bintan, Riau Islands hosts numerous globally branded hotels and resorts that operate under increasingly rigorous sustainability standards. In this context, competition among hospitality firms is no longer based solely on service excellence and facilities, but also on their ability to implement sustainable business practices encompassing environmental, social, and economic dimensions. The hospitality sector itself is particularly relevant in sustainability discourse due to its significant ecological footprint and resource-intensive operations, making organizational sustainability a strategic imperative rather than an optional initiative (W. G. Kim et al., 2020).

To achieve sustainable organizational outcomes, hotels require internal management systems that foster environmentally responsible employee behaviors. One emerging strategic approach is Green Human Resource Management (GHRM), which integrates environmental objectives into human resource functions such as green recruitment, training, performance appraisal, and reward systems. GHRM is considered a critical mechanism for cultivating employee behaviors aligned with sustainability objectives, including waste reduction, energy conservation, and operational efficiency (Farrukh et al., 2017; Shoaib et al., 2022). Empirical studies suggest that green HR practices positively influence sustainable performance through enhanced pro-environmental

behavior and employee engagement (El Baroudi et al., 2023).

Beyond HR practices, leadership has also been identified as a crucial driver of sustainability performance. In particular, Transformational Leadership is argued to inspire employees to transcend self-interest and commit to broader organizational and environmental goals through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration (Nguyen et al., 2022). Prior studies indicate that transformational leadership contributes significantly to environmental and sustainable performance by shaping responsible behaviors and fostering innovation-oriented cultures (Piwowar-Sulej & Iqbal, 2023). In hospitality settings, environmental-transformational leadership has also been associated with employees' organizational citizenship behavior toward the environment and stronger sustainability commitment (Jensen et al., 2020).

However, the effectiveness of GHRM and transformational leadership in promoting organizational sustainability may depend not only on organizational systems and leadership behaviors but also on employees' psychological conditions. One important mechanism in this regard is Work Engagement, defined as a positive, fulfilling work-related state characterized by vigor, dedication, and absorption (Memon et al., 2021). Engaged employees tend to exhibit greater commitment, proactive involvement, and discretionary efforts in implementing sustainability initiatives. Emerging literature suggests that work engagement serves as a psychological bridge linking strategic organizational practices with sustainability-related outcomes (Al-Omoush et al., 2022; Arora et al., 2020; Chaudhuri et al., 2024; Ogutu et al., 2023; Soderstrom & Weber, 2020).

Despite growing interest in the relationships among GHRM, transformational leadership, employee engagement, and sustainability outcomes, empirical evidence integrating these constructs remains limited, particularly within the international resort context. Existing studies often examine these relationships separately or focus on manufacturing and general service sectors, leaving a contextual gap in hospitality—especially in resort destinations operating under global sustainability standards (Abdo & Edgar, 2025; Minh et al., 2026; Pratiwi et al., 2025; Vadithe et al., 2025; Wang & Huang, 2025). Moreover, current studies provide only partial insights into the mediating role of work engagement in explaining how green HR practices and transformational leadership translate into organizational sustainability in resort settings.

Therefore, this study seeks to address this gap by examining the influence of Green Human Resource Management and Transformational Leadership on Organizational Sustainability, with Work Engagement as a mediating variable, in international resorts located in Lagoi, Bintan. This study is expected to contribute theoretically by extending sustainability and hospitality management literature through an integrated behavioral and organizational framework, while also offering practical implications for hotel managers seeking to strengthen sustainability performance through people-centered strategies.

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Theoretical Background

This study is grounded in the Ability-Motivation-Opportunity (AMO) Theory, Social Exchange Theory (SET), and Resource-Based View (RBV). AMO theory explains that employees perform effectively when organizations enhance their abilities, motivation, and opportunities through HR practices. In this context, Green Human Resource Management (GHRM) and Transformational Leadership (TL) are organizational mechanisms that stimulate employee engagement and support organizational sustainability (Pratiwi et al., 2025; Segbenya et al., 2024; Sheikh et al., 2024).

SET further suggests that supportive HR practices and inspiring leadership create reciprocal positive responses from employees through higher work engagement. Meanwhile, RBV views GHRM, leadership, and engaged employees as strategic intangible resources contributing to sustainable competitive advantage (Gupta & Jangra, 2024).

2.2 Green Human Resource Management

Green Human Resource Management (GHRM) refers to the integration of environmental management principles into human resource policies and practices to foster organizational sustainability and pro-environmental employee behavior. It is conceptualized as a set of HRM activities—such as green recruitment, training, performance management, and employee involvement—that embed environmental values within organizational systems and influence employees' attitudes and behaviors toward sustainability (Mousa & Othman, 2020). GHRM emphasizes the strategic role of human resources in achieving sustainable performance by aligning workforce capabilities with environmental

objectives and promoting efficient resource utilization (Singh et al., 2020). Moreover, GHRM practices have been shown to significantly enhance employees' pro-environmental behaviors through mechanisms such as green work climate perceptions and organizational support (Rubel et al., 2021). In particular, green training plays a critical role in developing employees' environmental competencies, increasing their awareness, and motivating voluntary green behaviors and job satisfaction (Pinzone et al., 2019). Recent studies also highlight that GHRM acts as a mediating mechanism linking leadership and sustainable environmental performance by fostering employee engagement, commitment, and environmentally responsible actions within organizations (Haider et al., 2026). Therefore, GHRM is not merely an operational HR function but a strategic approach that enables organizations to achieve long-term sustainability through the active involvement and behavioral transformation of their human capital.

2.3 Transformational Leadership

Transformational leadership is a leadership approach that emphasizes inspiring, motivating, and intellectually stimulating employees to achieve higher levels of performance and organizational goals beyond their self-interest. It is characterized by four core dimensions—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—which collectively enable leaders to shape followers' values, attitudes, and behaviors(Ángeles López-Cabarcos et al., 2022). Through these behaviors, transformational leaders act as role models, articulate a compelling vision, encourage innovative thinking, and provide personalized support to employees, thereby fostering engagement and proactive work behaviors (Bakker et al., 2023). In organizational contexts, transformational leadership has been widely recognized as a critical driver of change, as it strengthens organizational culture and facilitates effective change management, particularly in dynamic and uncertain environments (Kaur Bagga et al., 2023). Moreover, transformational leadership plays a significant role in enhancing employee creativity and motivation, especially in sustainability-oriented settings, where leaders inspire employees to generate innovative and environmentally responsible ideas (Li et al., 2020). A growing body of literature also highlights its contribution to sustainable performance, indicating that transformational leadership positively influences environmental and organizational outcomes through its ability to align employee behaviors with long-term sustainability goals (Piwowar-Sulej & Iqbal, 2023). Therefore, transformational leadership is considered a strategic leadership style that not only drives organizational effectiveness but also supports innovation, adaptability, and sustainability in modern organizations.

2.4 Work Engagement

Work engagement is conceptualized as a positive, fulfilling, and work-related psychological state characterized by three core dimensions: vigor, dedication, and absorption, reflecting employees' high levels of energy, strong involvement, and deep concentration in their work (Schaufeli, 2020). From a theoretical perspective, work engagement represents an active motivational state in which individuals invest their cognitive, emotional, and physical resources into their job roles, thereby enhancing performance and well-being (Monje-Amor et al., 2020). Empirical evidence indicates that engaged employees tend to exhibit higher levels of enthusiasm, persistence, and proactive behavior, which contribute to improved organizational outcomes such as productivity, commitment, and reduced turnover (Bakker et al., 2023). Furthermore, work engagement is strongly influenced by both personal and contextual factors, including psychological well-being and emotion regulation, which enhance individuals' ability to maintain positive work-related energy and focus (Greenier et al., 2021). Conversely, adverse conditions such as job insecurity can undermine work engagement, leading to negative behavioral outcomes such as absenteeism and reduced organizational citizenship behaviors (Karatepe et al., 2020). Therefore, work engagement serves as a critical psychological mechanism linking leadership practices and organizational resources with employee performance and sustainable organizational outcomes.

2.5 Green Human Resource Management and Organizational Sustainability

GHRM refers to integrating environmental concerns into HR practices such as recruitment, training, performance appraisal, and rewards. Prior studies indicate that GHRM enhances pro-environmental behavior, environmental performance, and long-term sustainability. Yang & Li, (2023) found that GHRM significantly improves environmental performance, Appiah Kissi et al., (2024) emphasized GHRM as a strategic driver of sustainability. Based on AMO theory, GHRM also promotes employee engagement by strengthening employees' green competencies, motivation, and involvement.

2.6 Transformational Leadership and Organizational Sustainability

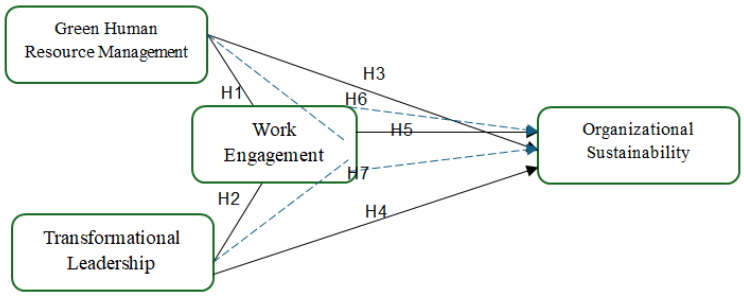
Transformational leadership refers to a leadership style that inspires employees through vision, motivation, intellectual stimulation, and individualized support. In sustainability research, transformational leaders play a critical role in embedding sustainability values into organizational culture and practices. Previous studies have confirmed that transformational leadership positively affects sustainability outcomes and employee green behaviors(Katou & Gianni, 2026; Zheng et al., 2025).

2.7 Work Engagement and Organizational Sustainability

Work engagement, characterized by vigor, dedication, and absorption, reflects a positive motivational state that contributes to employee performance and sustainability-oriented behavior. Engaged employees tend to demonstrate stronger commitment, innovation, and discretionary efforts that support sustainability initiatives. Prior studies also show that engagement strengthens pro-environmental behavior and sustainability performance.

2.8 Theoretical Framework

Figure 1. The study's theoretical framework



H1: Green Human Resource Management positively affects Work Engagement.
H2: Transformational Leadership positively affects Work Engagement.
H3: Green Human Resource Management positively affects Organizational Sustainability.
H4: Transformational Leadership positively affects Organizational Sustainability.
H5: Work Engagement positively affects Organizational Sustainability.
H6: Work Engagement mediates the relationship between Green Human Resource Management and Organizational Sustainability.
H7: Work Engagement mediates the relationship between Transformational Leadership and Organizational Sustainability.

METHODS

3.1 Research Design and Sample

This study employed a quantitative, explanatory research design using a cross-sectional survey approach to examine the relationships among Green Human Resource Management (GHRM), Transformational Leadership (TL), Work Engagement (WE), and Organizational Sustainability (OS). A structured questionnaire was administered to employees working in international resort organizations.

The target population consisted of employees occupying managerial, supervisory, and operational positions in international resorts. Using purposive sampling, respondents were selected based on the criteria of having at least one year of work experience and direct involvement in organizational sustainability practices (Aleksić et al., 2019; Hauff et al., 2024). A total of 150 valid responses were collected and used for analysis.

The sample size of 150 respondents is considered adequate for PLS-SEM analysis, as this technique is suitable for relatively small to medium samples and prediction-oriented research (Hair et al., 2020). Furthermore, the sample exceeded the minimum requirement based on the "10-times rule" and statistical power recommendations for structural equation modeling (Sarstedt et al., 2020). Data were collected through self-administered questionnaires using a five-point Likert scale ranging from 1 ("strongly disagree") to 5 ("strongly agree") (Kiruthika & Geetha, 2025; Navarro-García et al., 2024).

3.2 Measurement of Variables

All constructs were measured using established scales adapted from prior studies to ensure content validity. Green Human Resource Management was operationalized through dimensions such as green recruitment, green training, green performance management, and green rewards adapted from previous GHRM literature (Y. J. Kim et al., 2019; Pham et al., 2019; Santos et al., 2018).

Transformational Leadership was measured using dimensions including idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration adapted from established leadership scales. Work Engagement

was assessed through vigor, dedication, and absorption dimensions using established engagement scales.

Organizational Sustainability was measured through economic, social, and environmental sustainability dimensions following the triple-bottom-line approach. All constructs were modeled as reflective constructs.

3.3 Data Analysis Technique

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through **SmartPLS version 4.1.1.6**, which is appropriate for predictive research models involving mediation analysis and latent variables (Bari et al., 2025).

The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) through a two-stage approach consisting of measurement model (outer model) evaluation and structural model (inner model) evaluation. In the first stage, the measurement model was assessed to examine the reliability and validity of the constructs, including indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. In the second stage, the structural model was evaluated to test the hypothesized relationships among constructs, including path coefficients, coefficient of determination, effect sizes, and predictive relevance. Furthermore, bootstrapping with 5,000 resamples was applied to assess the significance of path coefficients, indirect effects, and mediation effects (Ferraro et al., 2026).

3.4 Assessment of Measurement Model

Convergent validity was assessed by examining several criteria, including outer loadings, Composite Reliability (CR), Cronbach's Alpha, and Average Variance Extracted (AVE). Indicator outer loadings were required to exceed 0.70 to demonstrate adequate item reliability, while both Composite Reliability and Cronbach's Alpha values were expected to be above 0.70 to confirm internal consistency reliability. In addition, AVE values greater than 0.50 were used to establish convergent validity, indicating that each construct explains more than half of the variance of its indicators (Hair et al., 2020) and (Koval & Hansen, 2019). Furthermore, discriminant validity was evaluated using the Fornell–Larcker Criterion and the Heterotrait-Monotrait Ratio (HTMT), with HTMT values below 0.85 indicating satisfactory discriminant validity. To ensure the absence of multicollinearity issues among predictor constructs, Variance Inflation Factor (VIF) values were also examined, where all values were expected to remain below the threshold of 3.3 (Sahin et al., 2026).

3.5 Structural Model Assessment

The structural model was assessed by examining several key indicators, including path coefficients (β), t-values and p-values, coefficient of determination (R^2), effect size (f^2), and predictive relevance (Q^2). Path coefficients were evaluated to determine the strength and direction of the relationships among constructs, while t-values and p-values were used to test the statistical significance of the hypothesized relationships. The coefficient of determination (R^2) was analyzed to assess the explanatory power of the endogenous constructs, complemented by effect size (f^2) to evaluate the contribution of each exogenous construct to the model. Predictive relevance (Q^2) was also examined to assess the model's predictive capability. Furthermore, bootstrapping results were used to test the direct relationships among Green Human Resource Management (GHRM), Transformational Leadership, Work Engagement, and Organizational Sustainability. To examine mediation effects, indirect effects were assessed using bootstrapping procedures, as mediation analysis in PLS-SEM is considered superior for latent variable models (Hauff et al., 2024). The mediating role of Work Engagement was determined by evaluating the significance of indirect paths and identifying whether the mediation effect was full or partial.

RESULTS

4.1 Respondent Profile

Table 1. The Demographic Characteristics of respondents

Characteristic	Frequency	Percentage (%)
Gender		
Male (ML)	82	54.7
Female (FML)	68	45.3
Age		
20–25 years	48	32.0
26–30 years	62	41.3
31–35 years	25	16.7
>35 years	15	10.0
Work Experience		
1–3 years	70	46.7
3–5 years	45	30.0
5–10 years	25	16.7
>10 years	10	6.6
Education		
Diploma (D3)	28	18.7
Bachelor (S1)	96	64.0
Master (S2)	26	17.3
Position Level		
Staff	88	58.7
Supervisor	42	28.0
Manager	20	13.3
Involvement in Sustainability Practices	79	52.7
Operational implementation	41	27.3
Monitoring & evaluation	30	20.0
Policy support / planning	79	52.7

Table 1 presents the demographic profile of the respondents. The majority of respondents were male (54.7%) and aged between 26–30 years (41.3%), followed by those aged 20–25 years (32.0%). Most respondents held a bachelor's degree (64.0%) and had 1–3 years of work experience (46.7%), indicating that they were relatively early in their careers but had sufficient exposure to organizational practices.

In terms of position, the majority were staff-level employees (58.7%), followed by supervisors (28.0%) and managers (13.3%). Regarding their involvement in sustainability practices, most respondents were engaged in operational implementation (52.7%), while others were involved in monitoring and evaluation (27.3%) and policy support or planning (20.0%).

These characteristics indicate that the respondents were directly involved in sustainability-related activities and possessed adequate work experience, aligning with the purposive sampling criteria applied in this study.

4.2 Measurement Model Assessment

Figure 2 below displays the PLS Algorithm's graphical output for the research model.

The SmartPLS output indicates that the measurement model demonstrates strong convergent validity, as reflected by high outer loadings across all indicators, with values generally exceeding 0.85 for Green Human Resource Management (GHRM), Transformational Leadership (TL), Work Engagement (WE), and Organizational Sustainability (OS). In the structural model, GHRM shows a positive and moderate effect on Work Engagement ($\beta = 0.522$) and a smaller direct effect on Organizational Sustainability ($\beta = 0.259$).

Similarly, Transformational Leadership positively influences Work Engagement ($\beta = 0.573$) and Organizational Sustainability ($\beta = 0.283$). Work Engagement itself has a strong positive effect on Organizational Sustainability ($\beta = 0.509$), indicating its critical mediating role. The

coefficient of determination (R^2) values suggest that Work Engagement is explained by GHRM and Transformational Leadership at 61.6%, while Organizational Sustainability is explained at 72.0%, indicating substantial explanatory power. Overall, these results confirm that both GHRM and Transformational Leadership significantly enhance Organizational Sustainability both directly and indirectly through Work Engagement, highlighting the importance of employee engagement as a key mediating mechanism in achieving sustainable organizational outcomes.

Figure 2. Graphical Output of Research Model

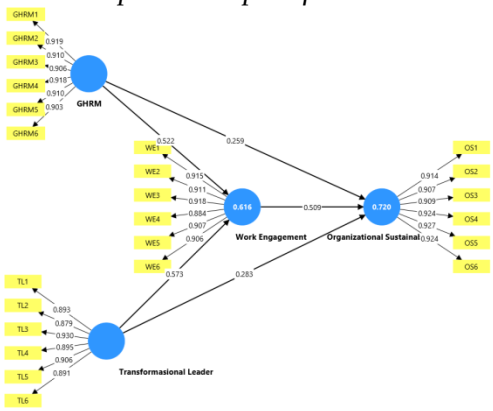


Table 2. Summary of Composite Reliability, Factor Loading, Average Variance Extracted (AVE) and Cronbach's Alpha

Variabel/Item	*Cronbach's Alpha*	*Composite Reliability*	*Factor Loading*	AVE
Green Human Resource Management (GHRM)	0.959	0.959		0.830
The organization considers environmental aspects in recruitment			0.919	
The organization provides environmental training			0.910	
Performance evaluated based on environmental contribution			0.906	
Organization implements sustainability-based policies			0.918	
Rewards for green behavior				
Encouragement to participate in sustainability programs				
Transformational Leadership (TL)	0.962	0.963		0.842
Leader sets a good example			0.893	
Leader inspires employees			0.879	
Leader encourages creativity			0.930	
Leader supports innovation			0.895	
Leader motivates employees			0.906	
Leader supports development			0.891	
Work Engagement (WE)	0.953	0.953		0.809
I feel energetic while working			0.915	
My energy increases when working			0.911	
I find my work meaningful			0.918	
I am enthusiastic about my work			0.884	
I am immersed in my work			0.907	
I feel deeply involved in my job			0.906	
Organizational Sustainability (OS)	0.957	0.957		0.823
Organization reduces environmental impact			0.914	
Organization uses resources efficiently			0.907	
Organization cares about employee well-being			0.909	
Organization contributes to society			0.924	
Organization applies sustainable practices			0.927	

Organization balances profit and sustainability	0.924

Table 3. Summary of Fornell-Larcker, Heterotrait-Monotrait Ratio (HTMT)

	Fornell-Larcker				**Heterotrait-Monotrait Ratio (HTMT)**			
	GHRM	Organizational Sustainability	Transformational Leadership	Work Engagement	GHRM	Organizational Sustainability	Transformational Leadership	Work Engagement
GHRM	**0.911**							
Organizational Sustainability	0.54	**0.918**			0.562			
Transformational Leadership	0.027	0.588	**0.899**		0.05	0.614		
Work Engagement	0.537	0.814	0.587	**0.907**	0.56	0.847	0.614	

4.3 Structural Model Assessment

The SmartPLS results at table 4 demonstrate that the structural model exhibits strong explanatory power, predictive relevance, and acceptable model fit. The coefficient of determination (R^2) indicates that Organizational Sustainability is substantially explained by its predictors with a value of 0.720, while Work Engagement shows a moderate explanatory level with an R^2 of 0.616. The effect size (f^2) analysis reveals that Green Human Resource Management (GHRM) and Transformational Leadership have a large effect on Work Engagement (f^2 = 0.709 and 0.856, respectively), while their effects on Organizational Sustainability are moderate (f^2 = 0.140 and 0.154). Additionally, Work Engagement demonstrates a strong effect on Organizational Sustainability (f^2 = 0.354), confirming its important mediating role. The collinearity assessment shows that all VIF values range between 1.001 and 2.607, which are below the critical threshold of 5, indicating no multicollinearity issues. Furthermore, the predictive relevance values (Q^2 predict) for Transformational Leadership (0.613) and Work Engagement (0.609) suggest strong predictive capability of the model. Finally, from table 5 shows the model fit indices indicate a good fit, with SRMR = 0.034 (below 0.08) and NFI = 0.93 (above 0.90), confirming that the model is well-specified and suitable for explaining the relationships among the studied variables.

Table 4: Coefficient (R^2), Effect Size ($f^{\wedge 2}$), Q^2predict, Collinearity (VIF)

	Effect Size (f^2)		**Collinearity (VIF)**		**Determination Coefficient (R^2)**	**Q^2 Predict**
	Work Engagement	Organizational Sustainability	Work Engagement	Organizational Sustainability		
GHRM	0.709	0.14	1.001	1.71	0.720	0.613
Organizational Sustainability						
Transformational Leadership	0.856	0.154	1.001	1.857		
Work Engagement		0.354		2.607	0.616	0.609

Table 5. Summary of model fit SEMR/NFI

	Saturated model	Threshold
SRMR	0.034	< 0.08
NFI	0.93	> 0.90

4.4 Hypothesis Testing

The hypothesis testing results indicate that all proposed hypotheses are statistically significant and supported. Specifically, Green Human Resource Management (GHRM) has a positive and significant effect on Work Engagement (H1: β = 0.522, t = 9.415, $p < 0.001$) and Organizational Sustainability (H3: β = 0.259, t = 4.929, $p < 0.001$). Transformational Leadership also demonstrates a strong positive influence on Work Engagement (H2: β = 0.573, t = 11.826, $p < 0.001$) and Organizational Sustainability (H4: β = 0.283, t = 4.531, $p < 0.001$). Furthermore, Work Engagement significantly affects Organizational

Sustainability (H5: β = 0.509, t = 7.755, p < 0.001), highlighting its critical role in enhancing sustainable organizational outcomes.

The mediation analysis confirms that Work Engagement significantly mediates the relationship between GHRM and Organizational Sustainability (H6: β = 0.265, t = 5.897, p < 0.001), as well as between Transformational Leadership and Organizational Sustainability (H7: β = 0.291, t = 6.353, p < 0.001). Overall, these findings suggest that both GHRM and Transformational Leadership contribute to Organizational Sustainability both directly and indirectly through Work Engagement, emphasizing the importance of employee engagement as a key mechanism in achieving organizational sustainability.

Table 6. Results of Hypothesis Testing

Hipotesis	Original sample (O)	T statistics	P values	Information
H1: GRHM → Work Engagement	0.522	9.415	0.000	Confirmed
H2: Transformational Leadership → Work Engagement	0.573	11.826	0.000	Confirmed
H3: GRHM → Organizational Sustainability	0.259	4.929	0.000	Confirmed
H4: Transformational Leadership → Organizational Sustainability	0.283	4.531	0.000	Confirmed
H5: Work Engagement → Organizational Sustainability	0.509	7.755	0.000	Confirmed
H6: GRHM → Work Engagement → Organizational Sustainability	0.265	5.897	0.000	Confirmed
H7: Transformational Leadership → Work Engagement → Organizational Sustainability	0.291	6.353	0.000	Confirmed

CONCLUSION AND IMPLICATION

This study confirms that Green Human Resource Management (GHRM) and Transformational Leadership significantly enhance Work Engagement and Organizational Sustainability in international resort settings. The findings indicate that transformational leadership demonstrates the strongest influence on employee engagement, while both managerial approaches contribute directly and indirectly to sustainability performance through Work Engagement as a mediating mechanism. These findings support previous studies emphasizing the importance of green HR practices and leadership in improving sustainability-oriented organizational performance (Anwar et al., 2020; Haldorai et al., 2022).

The study further highlights the important role of employee engagement in translating sustainability-oriented HR practices and leadership into organizational sustainability outcomes. Engaged employees tend to demonstrate stronger involvement, dedication, and proactive sustainability behaviors that support organizational environmental objectives (Karatepe et al., 2020; Tian et al., 2023). The significant mediating effects identified in this study indicate that sustainability initiatives become more effective when organizations strengthen employees' psychological attachment, motivation, and participation in sustainability-related activities.

Theoretically, this study contributes to sustainability and HRM literature by integrating GHRM, Transformational Leadership, Work Engagement, and Organizational Sustainability within a single framework in the hospitality sector. The findings extend AMO Theory and Social Exchange Theory by demonstrating that organizational sustainability is influenced not only by formal HR systems and leadership practices but also by employee psychological mechanisms. In addition, the findings support the Resource-Based View perspective that strategic organizational capabilities and human-centered resources contribute to sustainable competitive advantage and sustainability performance (Chaudhuri et al., 2024; Haldorai et al., 2022).

Practically, the findings suggest that resort and hotel managers should strengthen green HR practices through sustainability-oriented recruitment, training, performance evaluation, and reward systems. Organizations should also promote transformational leadership behaviors that encourage employee empowerment, initiative, and engagement (Monje-Amor et al., 2020). Furthermore, employee engagement should be treated as a strategic asset for achieving long-term sustainability performance and strengthening organizational commitment toward environmental sustainability goals.

Despite these contributions, this study is limited to international resorts located in Lagoi, Bintan. Future research is encouraged to examine other hospitality sectors and broader geographical contexts to improve the generalizability of the

findings. Future studies may also explore additional mediating or moderating variables related to organizational culture, green innovation, or digital sustainability capabilities.

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