

The Relationship Between Green Human Resource Management, Employee Green Behavior, Green Organizational Culture and Organizational Sustainability of SMEs in Bangkok and Surrounding Metropolitan Areas

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Abstract

This research aimed to 1) study the level of opinions regarding Green Human Resource Management (Green HRM) and Organizational Sustainability (ESG), and 2) investigate the structural equation model of the relationships among Green Human Resource Management, Green Organizational Culture, and Employee Green Behavior with organizational environmental sustainability. A mixed-methods research design was employed, beginning with a quantitative survey. The sample consisted of 400 small and medium-sized enterprise (SME) entrepreneurs. Data were collected via a website and analyzed using descriptive statistics (percentage, mean, standard deviation) and Structural Equation Modeling (SEM) with AMOS software. For the qualitative research, in-depth semi-structured interviews were conducted with 10 key informants. The analysis and conclusions were drawn by referencing real-world situations and utilizing data analysis components.

The model's goodness-of-fit, derived from the researcher's hypotheses and empirical data, was assessed against established acceptance criteria. All specified fit indices were found to be acceptable (passed), as follows the Chi-square P-value was 0.721, CMIN/df was 0.975, CFI was 1.000, GFI was 0.928, and RMSEA was 0.000. Furthermore, this model demonstrated a very good ability to explain the variance of the dependent variables. Specifically, the Organizational sustainability (ESG) variable had a high R-squared value of 0.92, followed by employee green behavior (EGB) with an R-squared of 0.81, and green organizational culture (GOC) with an R-squared of 0.75.

Keywords: 1) Green Human Resource Management 2) Green Organizational Culture 3) Employee Green Behavior 4) Organizational Sustainability (ESG) 5) Small and Medium-sized Enterprises

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Introduction

The global climate change crisis and increasing environmental awareness have pushed businesses toward sustainable, socially responsible operations (CSR). This shift is driven by growing customer demand for "Going Green" initiatives. In Thailand, the 13th National Economic and (Social Development Plan 2023-2027, 2025) outlines a crucial directive: fostering economic and social growth that is environmentally friendly, aligning with the United Nations' Sustainable Development Goals (SDGs). Sustainability has thus become a paramount business agenda, extending beyond profit to environmental, social, and governance considerations.

Human Resource Management (HRM) plays a pivotal role in helping organizations achieve environmental sustainability, and many businesses are adopting Green Human Resource Management (GHRM) as a core strategy. Mashala (2018, pp. 60–68) highlights GHRM as an essential model for environmental sustainability, while Kunkeaw et al. (2022, pp. 1233-1249) emphasize building HR systems that cultivate a "Green Heart" among employees. However, the implementation of GHRM still presents challenges, as it requires the integrated alignment of policies, management processes, and knowledge dimensions. Thailand's industrial sector, particularly SMEs, contributes significantly to the national GDP while generating considerable environmental externalities, accounts for a substantial share of the country's greenhouse gas emissions. Despite this footprint, SMEs often lack dedicated environmental departments and resource

for capital-intensive green technologies. In this context, Green HRM is not merely as a set of isolated practices but as a strategic capability within the broader Strategic Human Resource Management (SHRM) framework: embedding environmental considerations into recruitment, training, performance management, and reward systems, organizations can leverage their human capital as a primary mechanism for achieving sustainability goals without requiring prohibitive technological investments. This positions GHRM as a rare, difficult-to-imitate resource consistent with the Resource-Based View (RBV) and Ability-Motivation-Opportunity (AMO) framework explaining how HR systems shape employee behavior. Research in the Thai context is therefore of paramount importance, given the scarcity of local empirical studies and Thailand's distinct institutional characteristics.

Achieving green organizational goals requires integrating environmental concepts into all levels of operation, particularly human resource management (Wetprasit, 2021, pp. 57-79). Green Human Resource Management (GHRM) encompasses a broad spectrum of activities, from recruitment to rewards, designed to promote pro-environmental behaviors (Ahmad, 2015, pp. 1-13). The application of GHRM also plays a vital role in fostering a Green Organizational Culture (GOC) and directly influencing Employee Green Behavior (EGB) (Mostafa and Saleh, 2023, pp. 32). Furthermore, (Gao, et al. 2025, pp. 1-17) confirmed the linkage between GHRM, leadership, and organizational culture in shaping workplace pro-environmental behavior. The continuous development of

GHRM practices is thus a critical tool for balancing profitability, human development, and sustainability within the ESG framework (Nson, 2024, pp. 43-59).

Consequently, studying the relationships among GHRM, GOC, and EGB is of paramount importance for understanding the mechanisms through which organizations can effectively drive towards sustainability. This is especially pertinent for SMEs, which collectively play a significant role in both the national economy and the environment yet remain underrepresented in empirical GHRM research. Integrating these concepts will enable organizations to develop and implement environmental strategies tangibly, thereby achieving sustainable development goals at both national and global levels (Sigdel, 2023, pp. 1-15). Ultimately, investigating how GHRM influences ESG outcomes within Thailand's SME sector offers crucial insights for entrepreneurs and HR decision-makers seeking to reduce their organizations' environmental footprint while maintaining economic viability.

Literature Review

Green Human Resource Management

Green Human Resource Management (GHRM) is widely recognized as a cornerstone for driving organizations toward sustainability goals across environmental, social, and economic dimensions. (Gupta, et al. 2021, pp. 1-9) defines GHRM as the implementation of environmentally friendly policies and practices to foster employee commitment through three core processes: efficient human resource utilization, social resource preservation, and en-

vironmental sustainability maintenance. This aligns with Miah, Szabó-Szentgróti and Walter (2024, pp.1-27), whose decade-long research trend analysis indicates that operationalizing GHRM practices is crucial for promoting sustainable employee behaviors, directly contributing to the achievement of organizational sustainable development goals, despite current moderate implementation levels in most organizations.

Regarding GHRM components, Chowdhury, et al. (2025, pp. 1-17) synthesized five key practices: 1) Green Recruitment and Selection, 2) Green Performance Management, 3) Green Training and Development, 4) Green Reward and Compensation, and 5) Green Employee Relations. Their findings highlight green training and development as the most prominent dimension for enhancing environmental skills and awareness. Conversely, while green rewards are less studied, they are highly significant for generating "Green Motivation" to transform workplace behaviors.

In the context of Small and Medium Enterprises (SMEs), Papademetriou, et al. (2023, pp. 1-26) suggest that integrating GHRM into organizational strategy fosters "Green Organizational Citizenship Behavior" (Green OCB), driving agility and competitive advantage within the circular economy. Similarly, (Sigdel, 2023, pp. 1-15) confirmed in a study in Nepal that GHRM positively impacts organizational sustainability through mediators such as employee performance and environmental performance, helping build an ecologically conscious and socially responsible corporate culture.



In the Thai context, (Wetprasit, 2021, pp. 57-79) identified a significant structural relationship, stating that GHRM strategies directly influence "Green Innovation," which acts as a mediator promoting sustainable organizational performance. This is consistent with (Nson, 2024, pp. 43-59), who posits that green-conscious human resources are rare and difficult to imitate (Resource-Based View Theory), not only protecting natural resources but also creating social sustainability through eco-friendly employee behaviors

Green Organizational Culture

Green Organizational Culture (GOC) is a fundamental, critical starting point for driving organizational sustainability strategies. (Liu and Lin, 2020, pp. 1-7) describe GOC as cultivating shared values, beliefs, and symbols that motivate employee awareness and behaviors aligned with sustainability. This is particularly vital in human-centric operations such as food safety, where it strengthens Corporate Social Responsibility (CSR) implementation and builds long-term competitive advantage through a responsible corporate image.

Regarding its link to human resource management, studies by Abdelwahed and Ramish (2025, pp. 339-348) and (Gao, et al. 2025, pp. 1-17) found that GOC strongly mediates between GHRM and organizational performance. GHRM practices, such as green recruitment and training, help shape shared beliefs and values that become part of the work culture. This mechanism encourages employees to voluntarily engage in "Workplace Pro-environmental Behavior," reducing resource waste and enabling organizations to achieve sustainability

goals more effectively than relying solely on technology or regulations.

Furthermore, GOC is a foundation for developing innovative business models. Wagan and Sidra (2025, pp. 19-37) found that GOC, integrated with Green Entrepreneurial Orientation (GEO), effectively promotes the development of Green Business Models (GBM) aligned with Circular Economy principles. Creating an environmentally-valued culture is thus not merely about image-building but is a core strategy for restructuring businesses to achieve profitability alongside sustainability in a highly competitive globalized environment.

Employee Green Behavior

Employee Green Behavior (EGB) is a vital to organizational success in an era of intense competition and rapid technological change. These behaviors mitigate negative environmental impacts and create long-term competitive advantage (Mostafa and Saleh, 2023, pp.32). Katz, et al. (2022, pp. 1146–1157) concluded from a meta-analysis that EGB encompasses both task-related and proactive behaviors, resulting from the integration of individual characteristics and organizational support mechanisms. Key individual determinants include environmental awareness and organizational commitment (Kunkeaw et al., 2022, p. 1233-1249; Katz, et al., 2022, pp. 1146–1157).

At the organizational level, research indicates that leadership and HRM are primary mechanisms for promoting EGB. Specifically, Green Transformational Leadership (GTL) serves to inspire and intellectually stimulate low-carbon behaviors Udin, Chanthes and Dananjoyo (2025, pp. 2331–2341) and Samp-

ene, Li and Agyeiwaa (2024, pp. 364–380). Additionally, GHRM systems directly influence Organizational Citizenship Behavior toward the Environment (OCBE), with Green Innovative Culture acting as a moderator that strengthens employees' efforts to protect nature (Mostafa and Saleh, 2023, p. 32).

The transition from policy to practice requires key mediators, particularly Green Employee Engagement and green innovation practices, which translate leadership vision and HR policies into tangible outcomes (Sampene, Li and Agyeiwaa, 2024, pp. 364–380; Udin, Chanthes and Dananjoyo, 2025, pp. 2331–2341). In the Thai context, promoting EGB often emphasizes Top Management Support combined with environmental training and employee participation, which not only reduces environmental impact but also ensures organizational sustainability under current globalization trends (Kunkeaw et al., 2022, pp. 1233-1249).

Organizational Sustainability

Organizational Sustainability, or the ESG (Environmental, Social, and Governance) framework, is a critical determinant of individual behavioral intentions and a primary mechanism for elevating operational standards. Burgos, et al. (2025, pp. 1455-1461) state that integrating ESG principles through CSR is not merely a cost burden but a strategic tool for international competitive advantage. It builds trust with foreign partners, reduces regulatory risks, and enhances corporate image for responsibility and transparency, directly impacting sustainable performance in global trade.

Regarding internal drivers, Lubliam

(2024, pp. 60-74) found a significant positive relationship between Green HRM and sustainable organizational performance across environmental, social, and economic dimensions. Communicating green policies and fostering individual awareness are key gears in responding to stakeholder needs and enhancing competitiveness alongside stable growth.

Transparency and disclosure are pillars of Governance in sustainability. Swinkels and Markwat (2024, pp. 118-139) found that reporting standards for Scope 1 and 2 carbon emissions have become more systematic. However, organizations still face challenges with Scope 3 data due to its high assessment complexity. Improving transparency in disclosures to international standards is essential to mitigate climate risk and enable the financial sector to accurately support the transition to a low-carbon economy, which is central to long-term organizational sustainability.

Based on the proposed conceptual model and previous studies, this research investigates the relationships among Green Human Resource Management, Green Organizational Culture, Employee Green Behavior, and Organizational Environmental Sustainability. The following hypotheses have been developed:



Figure 1 Research Conceptual Framework

Hypotheses

H1: Green Human Resource Management (GHRM) has a positive relationship with Organizational Sustainability or the (ESG) framework

H2: Green Human Resource Management (GHRM) has a positive relationship with Employee Green Behavior (EGB)

H3: Green Human Resource Management (GHRM) has a positive relationship with Green Organizational Culture (GOC)

H4: Employee Green Behavior (EGB) has a positive relationship with Organizational Sustainability or the (ESG) framework

H5: Green Organizational Culture (GOC) has a positive relationship with Organizational Sustainability or the (ESG) framework

H6: Green Organizational Culture (GOC) has a positive relationship with Employee Green Behavior (EGB)

Research Methodology

This study utilized a mixed-methods approach, integrating both quantitative and qualitative research methodologies as outlined below

1) Population and Sample

1.1 Population and Key Informants:

The target population comprised entrepreneurs, business executives, and relevant SMEs situated in Bangkok and its surrounding provinces. Key informants for the qualitative phase were selected from these qualifying entrepreneurs and corporate representatives. Based on data from the (Department of Business Development 2025; Business data warehouse statistics, 2025), the total population of relevant enterprises in the specified study area stood at approximately 463,901.

1.2 For the quantitative phase, a purposive sampling method was employed to select a sample of 400 respondents. The unit of analysis was at the individual level, targeting HR professionals, managers, and operational employees. This sample size was determined based on the recommendations of Hair, et al. (2019, pp. 11–29) for Structural Equation Modeling (SEM), suggesting a minimum of 10–20 cases per estimated parameter to ensure adequate statistical power and model stability. The selection criteria required that respondents must: (1) be currently employed in an SME located in Bangkok or its surrounding provinces, (2) work in an organization that has ex-

PLICITLY implemented environmental policies, green initiatives, or sustainability programs for at least one year, and (3) hold a position that provides direct exposure to or involvement in HR practices or environmental operations. While purposive sampling may limit statistical generalizability compared to probability sampling, it was deemed necessary to ensure that respondents possessed adequate knowledge and direct experience regarding GHRM practices, thereby enhancing the content validity of the survey responses for SEM analysis. For the qualitative component, a purposive sampling method was also employed to select 10 key informants. These informants were senior executives and HR managers from enterprises registered and operating within Bangkok or its surrounding provinces. The selection criteria focused on their in-depth knowledge and extensive experience (minimum five years) regarding Green Human Resource Management, Employee Green Behavior, Green Organizational Culture, and Corporate Sustainability. This approach ensured diversity of perspectives, consistent with Yin's (2003, p. 40) guidelines for qualitative research design, providing nuanced, contextual insight that complements the quantitative SEM findings.

2) Research Instruments

A questionnaire was developed to collect data for the quantitative phase. The questionnaire items were designed based on the conceptual framework and relevant literature, measuring variables related to factors influencing Green Human Resource Management, Employee Green Behavior, Green Organizational Culture and Corporate Sustainability in Terms

of Environment, Social, and Governance. The questionnaire underwent content validity testing by three subject-matter experts, resulting in an Index of Consistency (IOC) of 0.846, which is considered acceptable. Following a pilot test, the reliability of the entire questionnaire, as measured by Cronbach's Alpha coefficient, was determined to be 0.965.

Qualitative Research Instrument, A semi-structured interview guide was designed for the qualitative phase. The interview questions were open-ended, allowing for in-depth exploration of participants' experiences, perceptions, and insights regarding Green Human Resource Management.

3) Data Collection

Data for the quantitative research were collected systematically from companies in Bangkok and its surrounding areas through online questionnaires administered via Google Forms. For the qualitative research, data were collected through in-depth interviews.

4) Data Analysis Methods

Quantitative Analysis, Statistical software for the social sciences was used to analyze the data collected from the sample. The analysis began with descriptive statistics, including mean, median, variance, and standard deviation, followed by inferential statistics. Structural Equation Modeling (SEM) was employed using AMOS software to analyze the data and test the research hypotheses. This process involved both Confirmatory Factor Analysis (CFA) and Path Analysis (PA) (Raengsungnoen, 2011, pp. 70-75).

Qualitative Analysis, the qualitative data analysis involved the following steps: 1)



Data analysis through interpretation, which included generating inductive conclusions by formulating sentences or statements consistent with the theoretical framework or research problem. 2) Data analysis through content analysis, where the researchers considered the context and environment of the document data being analyzed. 3) Interpretation and presentation of the analyzed data, which represents the most critical stage of the analysis process.

Results

Quantitative Data Analysis

The quantitative phase survey of 400 respondents from enterprises in Bangkok and surrounding areas, with a diverse demographic profile. Females were the largest gender group (48.50%, $n=194$), followed by males (44.75%, $n=179$). Most respondents were 30 or younger (38.00%, $n=152$), or aged 31-40 (35.25%, $n=141$), held a Bachelor's degree (49.75%, $n=199$). Most participants were single (60.00%, $n=240$). Regarding professional characteristics, the sample represented a broad spectrum of organizational roles. Operational level positions (Level 1) formed the largest group (44.25%, $n=177$), followed by middle management (Level 3-4, 32.25%, $n=129$). Employees were the most common current job position (58.25%, $n=233$), alongside supervisors (21.25%, $n=85$) and department/division managers (15.25%, $n=61$). The duration of employment also varied, with the largest group having 1-5 years of experience (40.50%, $n=162$). This broad representation ensures a balanced perspective across both foundational and managerial levels.

To address the first research objective regarding the participants' perceptions of Green Human Resource Management (GHRM) and corporate sustainability, descriptive statistics were computed for all latent variables. The findings reveal that respondents expressed high levels of agreement across all evaluated constructs. Notably, GHRM yielded the highest mean score (Mean = 3.87, SD = 0.59), suggesting a strong consensus that SMEs within the study area are actively implementing environmentally responsible HR practices. This was closely followed by highly positive assessments of Employee Green Behavior (Mean = 3.86, SD = 0.61) and Green Organizational Culture (Mean = 3.84, SD = 0.58). Furthermore, Organizational Sustainability (ESG) also achieved a notably favorable rating (Mean = 3.82, SD = 0.61), underscoring the respondents' perceptions that their respective organizations are successfully advancing toward their environmental, social, and governance objectives.

A path analysis was conducted to examine the structural relationships among Green Human Resource Management (GHRM), Green Organizational Culture (GOC), Employee Green Behavior (EGB), and Organizational Sustainability (ESG). Data collected from 400 respondents were analyzed using AMOS, a Covariance-Based Structural Equation Modeling (CBSEM) software. The Maximum Likelihood (ML) estimation method was employed to assess the goodness-of-fit between the hypothesized theoretical model and the empirical covariance structure. The evaluation of the structural model indicated an excellent fit with the empirical data across all key statistical in-

dices. Specifically, the Chi-square test yielded a non-significant result ($p = 0.721$), surpassing the standard criterion of $p > 0.05$, thereby indicating no significant discrepancy between the implied and observed variance-covariance matrices. The relative Chi-square (CMIN/df) was 0.975, strictly falling within the recommended threshold of between 0 and 2. Furthermore, both the Comparative Fit Index (CFI = 1.000) and the Goodness-of-Fit Index (GFI = 0.928) demonstrated strong model adequacy, exceeding the acceptable thresholds for excellent fit. The Root Mean Square Error of Approximation (RMSEA) was 0.000, perfectly

satisfying the rigorous criterion of being less than or equal to 0.05. In addition to the strong model fit, the structural equations demonstrated substantial explanatory power. The hypothesized model accounted for a highly significant proportion of the variance in the dependent variables, explaining 92% of the variance in Organizational Sustainability (ESG) ($R^2 = 0.92$), 81% in Employee Green Behavior (EGB) ($R^2 = 0.81$), and 75% in Green Organizational Culture (GOC) ($R^2 = 0.75$). These findings robustly confirm the consistency and validity of the theoretical model against the empirical data.

Table 1 Goodness-of-fit of for each latent variable.

Latent Variable	Observed Variable	Standardized Regression Weight	R ²	CR	P
GHRM	GRS	0.911	0.830		
	GPM	0.885	0.783	14.998	***
	GTD	0.873	0.762	14.492	***
	GRC	0.88	0.774	15.243	***
	GER	0.876	0.767	14.668	***
ESG	EN	0.92	0.846		
	SC	0.89	0.792	15.06	***
	GV	0.904	0.817	15.765	***
EGB	EGB1	0.822	0.676		
	EGB2	0.806	0.650	19.552	***
	EGB3	0.835	0.697	20.681	***
	EGB4	0.808	0.653	19.614	***
	EGB5	0.767	0.588	18.131	***
GOC	GOC1	0.738	0.545		
	GOC2	0.782	0.612	16.492	***
	GOC3	0.766	0.587	16.09	***
	GOC4	0.798	0.637	16.902	***
	GOC5	0.813	0.661	17.271	***

Note: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$



From Table 1 shows the goodness-of-fit of the measurement model for the latent variables. When each latent variable is combined into a model, the overall results indicate that the measurement of the latent variables is statistically significant. This can be explained by each latent variable as follows:

1. Green Human Resource Management (GHRM)

Green Human Resource Management (GHRM) is represented by five observed variables: Green Recruitment and Selection (GRS), Green Performance Management (GPM), Green Training and Development (GTD), Green Reward and Compensation (GRC), and Green Employee Relations (GER), with standardized regression weights ranging from 0.873 to 0.911 and R^2 from 0.762 to 0.830. GRS had the highest weight (0.911, $R^2=0.830$), followed by GPM (0.885, $R^2=0.783$). The GHRM construct showed high internal consistency and convergent validity, with a Composite Reliability (CR) of 0.948 and Average Variance Extracted (AVE) of 0.783, both exceeding recommended thresholds.

2. Organizational Sustainability (ESG)

Organizational Sustainability (ESG) is represented by three observed variables: Environmental Sustainability (EN), Social Responsibility (SC), and Governance (GV). The standardized regression weights ranging from 0.890 to 0.920 and R^2 from 0.792 to 0.846. EN had the highest weight (0.920, $R^2=0.846$), followed by GV (0.904, $R^2=0.817$). The ESG construct showed excellent measurement quality, with a Composite Reliability (CR) of 0.931 and Average Variance Extracted (AVE) of 0.818, well above required thresholds.

3. Employee Green Behavior (EGB)

Employee Green Behavior (EGB) is represented by five observed variables. The standardized regression weights for these variables ranged from 0.767 to 0.835, and R^2 from 0.588 to 0.697. EGB3 had the highest weight (0.835, $R^2=0.697$), reflecting employees' voluntary participation in environmental activities such as 5S or energy reduction campaigns, followed by EGB1 (0.822, $R^2=0.676$), reflecting environmentally conscious daily work such as saving energy or sorting waste. The remaining observed variables also exhibited positive factor loadings, including EGB2 targeting resource consumption reduction, EGB4 focusing on environmental knowledge acquisition, and EGB5 promoting eco-friendly process improvements. Furthermore, the EGB construct demonstrated robust internal consistency and convergent validity, with a Composite Reliability (CR) of 0.904 and an Average Variance Extracted (AVE) of 0.653, both well exceeding the recommended thresholds.

4. Green Organizational Culture (GOC)

The Green Organizational Culture (GOC) construct is represented by five observed variables, with standardized regression weights ranging from 0.738 to 0.813 and R^2 values between 0.545 and 0.661. Among these, GOC5 exhibited the highest factor loading at 0.813 ($R^2 = 0.661$), reflecting the thorough communication of environmental policies and goals. This was followed by GOC4 at 0.798 ($R^2 = 0.637$), demonstrating the consistent communication of environmental values aligned with employee practices. The remaining indicators also loaded positively, including GOC1

representing top management's commitment to environmental issues, GOC2 signifying the budget and resources allocated for environmental projects, and GOC3 indicating employee awareness of environmental conservation. Overall, the GOC construct met established measurement quality criteria, yielding a Composite Reliability (CR) of 0.886 and an Average Variance Extracted (AVE) of 0.608, thereby confirming its internal reliability and convergent validity.

The model testing results, analyzing the impact of antecedent on dependent variables, elucidate the relationships within the causal model. Hypotheses were tested using AMOS, examining both direct and indirect effects and the direction of relationships between variable pairs, based on standardized regression coefficients, with GHRM, GOC, and EGB serving as predictors, as illustrated in Figure 2.

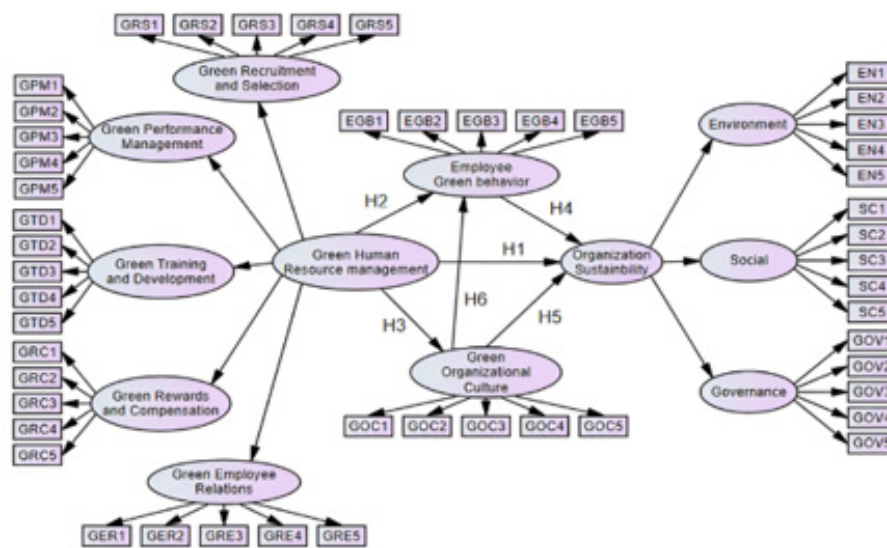


Figure 2 Path analysis results of the structural model

Direct and Indirect Effect

Table 2 Standardized coefficients of direct, indirect, and total effects between cause and effect variables.

Factor	EGB			GOC			ESG		
	DE	IE	TE	DE	IE	TE	DE	IE	TE
GHRM	0.36***	-	0.36***	0.87***	-	0.87***	0.32***	0.60***	0.92***
EGB	-	-	-	-	-	-	0.52***	-	0.52***
GOC	0.63***	-	0.63***	-	-	-	0.15	0.33**	0.48*
R ²	R ² = 0.81			R ² = 0.75			R ² = 0.92		

Note: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

Table 2 shows the effects between variables by type: Direct Effect (DE), Indirect Effect (IE), and Total Effect (TE). The model

demonstrates a good to very good ability to explain variance in the dependent variables, particularly ESG ($R^2 = 0.92$), followed by EGB



($R^2 = 0.81$) and GOC ($R^2 = 0.75$). These findings indicate that GHRM, EGB, and GOC play a significant role in driving environmental sustainability through both direct and indirect influence.

reflecting the model's consistency with relevant theories and its suitability for predicting sustainability-related behaviors, as illustrated in Figure 3.

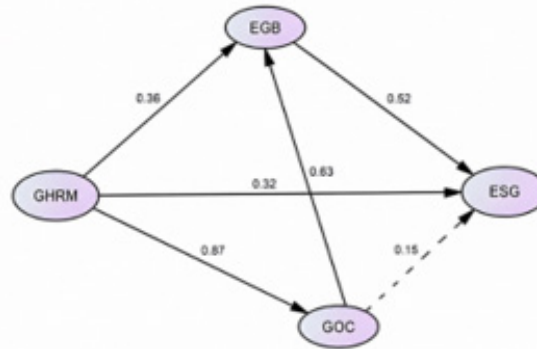


Figure 3 The structural equation model derived from the analysis

Based on the established structural model, the specific research hypotheses were further examined. The detailed results of this

hypothesis testing, including path coefficients and significance levels, are presented in Table 3.

Table 3 Hypothesis Testing Results.

Hypothesis	Coefficient	p-value	Test Result
H1: GHRM--> ESG	0.317	***	Significant
H2: GHRM--> EGB	0.362	***	Significant
H3: GHRM--> GOC	0.866	***	Significant
H4: EGB--> ESG	0.516	**	Significant
H5: GOC--> ESG	0.150	0.245	No Significant
H6: GOC--> EGB	0.630	***	Significant

Note: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$

The study concludes that Green Human Resource Management (GHRM) is the primary driver of Organizational Sustainability (ESG). By implementing green HR policies, organizations successfully cultivate a Green Organizational Culture and inspire Employee Green Behavior. Ultimately, the findings highlight that sustainability is achieved through a holistic chain: effective management practices must shape the enterprises culture, which in turn empowers employees to act in ways that

ensure long-term organizational sustainability.

Qualitative Data Analysis

The qualitative phase, which involved comprehensive interviews with 10 key informants, yielded a nuanced understanding of how Green Human Resource Management (GHRM) is integrated and its subsequent impact on organizational sustainability (ESG). Although GHRM policies, particularly in recruitment and training, established a foundational level of environmental awareness, informants noted that

a truly sustainable organization relies heavily on strategic leadership and a collective green consciousness. This drive for environmental initiatives frequently stems from top management's commitment to corporate social responsibility. As one key informant emphasized: "Our leadership realized that sustainability is no longer optional; it must be embedded in how we recruit, train, and motivate our people to ensure we remain relevant and responsible in a changing global landscape."

Furthermore, cultivating a Green Organizational Culture (GOC) was identified as a critical, albeit complex, endeavor. While management and staff broadly agree on the importance of environmental responsibility, informants cautioned that culture alone is insufficient without tangible operational changes and systemic support. The effectiveness of GHRM practices was closely linked to visible Employee Green Behavior (EGB), such as energy conservation and resource optimization. An HR Manager highlighted that a green mindset fosters proactive engagement: "When employees see the direct impact of their actions, like reduced waste or improved efficiency, it reinforces their commitment to the organization's sustainability goals." Nevertheless, significant challenges remain, most notably the lack of concrete reward systems and the high costs associated with green technology investments.

In conclusion, these qualitative insights collectively demonstrate that achieving organizational sustainability (ESG) transcends mere policy implementation; it is deeply rooted in the strategic alignment of GHRM practices

with a strong organizational culture and the tangible environmental value perceived by all stakeholders. This synergy ensures that green behaviors are not just supplementary activities but are integrated into the very fabric of the organization's long-term growth and success.

Discussion

This research provides insights into the relationships among Green Human Resource Management, Green Organizational Culture, Employee Green Behavior, and organizational sustainability. This aligns with various concepts and related studies on driving sustainability within organizations, particularly in the context of implementing green practices in the business sector. The findings can be discussed as follows:

1. Influence of Green Human Resource Management (GHRM), the quantitative research findings confirm that GHRM has a significant direct positive influence on organizational sustainability (ESG) (H1), employee green behavior (EGB) (H2), and green organizational culture (GOC) (H3). This outcome aligns with the research by (Nson, 2024, pp. 43-59), which found GHRM to be a crucial mechanism for fostering environmentally friendly behavior among employees, thereby contributing to the protection and preservation of natural resources. It also corresponds with (Sigdel, 2023, pp. 1-15) study, which indicated a significant positive relationship between Green Human Resource Management (GHRM) and organizational sustainability (ESG). Furthermore, this is consistent with (Chowdhury, et al. 2025, pp. 1-17) and (Papademetriou, et al.



2023, pp. 1-26), who stated that Green Human Resource Management (GHRM) practices, such as environmentally conscious recruitment, green training, and performance evaluations, are vital for promoting employee sustainability behavior and achieving organizational sustainable development goals. Qualitative interviews supported this, with key informants noting that GHRM recruitment and training effectively raise awareness and foster green behavior. However, underdeveloped reward systems remain a crucial area for improvement to enhance employee motivation. Importantly, these findings highlight that GHRM must function as a coherent, internally aligned human resource system rather than a collection of isolated practices. The synergy among green recruitment, training, performance management, rewards, and employee relations creates a reinforcing bundle that drives sustainability outcomes. This firmly aligns with the configurational approach to Strategic HRM, emphasizing that human resource effectiveness relies on internal consistency and strategic alignment with organizational goals.

2. Influence of Employee Green Behavior (EGB), The research revealed that Employee Green Behavior (EGB) has a direct positive influence on ESG outcomes. This demonstrates how daily employee actions, such as energy conservation, resource reduction, and engagement in green activities, significantly enhance both environmental and economic performance. This finding is consistent with (Gupta, 2021, pp. 1-9) research emphasizing EGB's role in reducing costs, increasing efficiency, and building organizational image. Moreover, (Wet-

prasit, 2021, pp. 57-79) also found environmentally friendly HR policies a key driver of added value and sustainable development goals.

3. Influence of Green Organizational Culture (GOC), The research found that GOC does not exert a significant direct influence on ESG. Instead, GOC significantly drives EGB, which subsequently impacts ESG. Consequently, EGB serves as a critical mediator. This aligns with the qualitative findings where informants noted that culture alone is insufficient without concrete operational changes and systemic support. It reinforces the perspective that culture requires tangible mechanisms, such as GHRM practices and specific employee actions, to successfully translate into sustainability outcomes. These findings are further supported by (Gao, et al. 2025, pp. 1-17), who identified GOC as a catalyst for environmental consciousness. The lack of a direct relationship between GOC and ESG likely stems from the abstract nature of culture, which requires mediation through observable behaviors (EGB) to achieve a measurable impact. This dynamic reinforces the role of EGB as both a reflection of green culture and a primary driver of enduring sustainability.

Conclusion

This research successfully validates a causal model linking Green Human Resource Management (GHRM), Employee Green Behavior (EGB), Green Organizational Culture (GOC), and Organizational Sustainability (ESG) among SMEs in the Bangkok metropolitan area. The findings demonstrate that GHRM significantly drives organizational sustainability, functioning as a foundational driver of cultural and behav-

ioral greening rather than merely a supportive HR role. Furthermore, the study clarifies that while EGB directly enhances sustainability performance, GOC acts as a vital mediator that fosters employee green behaviors rather than directly impacting ESG outcomes. Ultimately, achieving comprehensive sustainability depends on strategically integrating GHRM practices with a supportive green culture to mobilize individual actions toward environmental and social goals.

Theoretically, this study extends existing literature by establishing strategic human resource practices as a primary antecedent to ESG performance. It provides nuanced insight into how abstract cultural values translate into tangible sustainability outcomes exclusively by catalyzing employee behaviors. Finally, this research offers rare and extensive empirical validation for the SME sector in emerging economies, bridging a critical gap in understanding how resource limited firms in developing nations can effectively leverage human capital and internal culture to achieve sustained ESG goals.

To enhance perceived and practiced sustainability, SME stakeholders should strategically implement integrated human resource and cultural initiatives. First, leaders must prioritize green recruitment by assessing candidates' environmental awareness during the hiring process. As the strongest indicator of effective GHRM (CFA loading = 0.911), this builds a foundational green workforce and minimizes future transformation costs. This step must be supported by a fully integrated GHRM system that aligns training, performance appraisals,

and rewards directly with enduring ESG objectives, particularly through the establishment of measurable environmental KPIs. Furthermore, because Green Organizational Culture (GOC) is essential for driving Employee Green Behavior (EGB), top management must demonstrate a visible commitment to sustainability by clearly communicating environmental values and allocating resources to green initiatives. Finally, organizations must empower these behaviors by providing systemic support, such as waste segregation facilities, energy efficient equipment, and ongoing awareness campaigns, to firmly embed green practices into daily organizational routines.

Limitations and Recommendations

Limitations

This study has several limitations. First, the cross-sectional design precludes causal inferences; relationships identified represent associations rather than cause-and-effect. Second, purposive sampling limits statistical generalizability to the broader SME population, though it ensured respondent relevance. Third, self-reported perceptions may introduce common method bias despite procedural and statistical remedies. Fourth, Organizational Sustainability (ESG) was assessed through perceptions rather than objective indicators (e.g., carbon emissions, ESG ratings), which may not fully capture organizational sustainability. Fifth, the study was geographically limited to Bangkok and surrounding areas, which may not represent SMEs in other regions of Thailand. Finally, the exceptionally high R^2 for ESG (0.92) warrants cautious interpretation, as it may part-



ly reflect shared method variance or sample characteristics.

Recommendations for Future Research

Future research could consider examining additional mediating or moderating factors that may influence the relationships between the variables studied. This would lead to a more comprehensive understanding of the complex mechanisms underlying these relationships.

This study focused on enterprises in Bangkok and its surrounding areas. Future re-

search could expand its scope to other types of industries or different geographical contexts. This would allow for results that can be generalized more broadly.

Future research could involve longitudinal studies to track and evaluate the long-term impacts of Green Human Resource Management, Green Organizational Culture, and Employees' Green Behavior on organizational sustainability.

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