

Green Human Resources Management and Employee Engagement in Nepalese Commercial Banks



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Abstract

This study examines the impact of Green Human Resource Management practices on employee engagement in Nepalese commercial banks amid increasing global concern for climate change and sustainability. Although banks are not direct polluters, their operations, energy consumption, paper use, e-waste generation, and lending decisions significantly affect environmental sustainability. Following Nepal's commitment to the Sustainable Development Goals, financial institutions are increasingly expected to adopt environmentally responsible practices. However, limited empirical evidence exists regarding the implementation of GHRM in Nepal's banking sector.

Using a quantitative cross-sectional research design, primary data were collected from 363 employees, including managers, officers, and clerks, from selected commercial banks in Kathmandu district through purposive sampling. Data were analyzed using Structural Equation Modeling with SmartPLS software. Reliability and validity tests confirmed strong measurement consistency, with Cronbach's alpha values ranging from 0.781 to 0.945. Green training and development and green performance management emerged as the most reliable and influential dimensions affecting employee engagement.

The findings support that GHRM practices positively and significantly influence employee engagement in Nepalese commercial banks. The study highlights that integrating environmental concerns into HR policies strengthens workforce commitment and organizational sustainability performance. Practical implications suggest that banks should prioritize green training programs and environmental performance appraisal systems. The research also contributes academically by extending the Ability-Motivation-Opportunity Theory to the banking sector in South Asia. It provides one of the earliest empirical studies on GHRM within Nepalese commercial banking institutions.

Keywords: AMO Theory, Employee Engagement, Green Human Resource Management, Green Performance Management, Sustainable HRM.

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Introduction

In recent years, Green Human Resource Management (GHRM) has gained increasing attention as organizations align their practices with sustainability goals (Efranto et al., 2026). GHRM involves integrating environmentally friendly practices into traditional HR functions, such as recruitment, training, performance management, and employee engagement, to reduce the organization's environmental footprint and support sustainable development (Banerjee, 2025). This growing interest is linked to rising global concerns about climate change and environmental degradation, which have encouraged businesses to adopt sustainable practices (Shivanna, 2022). Employees play a central role in this process because their behaviors and engagement determine whether sustainability initiatives succeed (Pincus, 2023). At the same time, organizations face external pressures from consumers who increasingly prefer environmentally responsible brands, making sustainability a competitive factor in today's market (Ababneh, 2021).

Although many industries, such as manufacturing and energy, have widely implemented GHRM practices, the financial sector has received limited attention. However, banks also have significant sustainability responsibilities. They may not produce physical emissions like factories do, but they consume large amounts of energy, generate e-waste, and influence the environment through lending and investment decisions (Joshi et al., 2023). This creates a pressing need to explore how GHRM can enhance sustainable performance in commercial banks.

Despite its potential, GHRM in the banking sector remains underdeveloped. There is still no standardized framework for measuring sustainable performance, and empirical research linking green HR practices, such as green recruitment, training, and employee engagement, to organizational outcomes remains scarce (Shakil, 2021). The challenges, such as resistance to change, cost concerns, and regulatory barriers, further complicate GHRM implementation. This knowledge gap highlights the importance of investigating how banks can integrate green HRM effectively to improve both environmental and organizational performance.

Nepal, as a member of the United Nations, has committed to the Sustainable Development Goals (SDGs) since 2015. This has increased the pressure on Nepalese organizations, including commercial banks, to adopt sustainable business models. However, research on GHRM in Nepal's financial sector is still limited, making it essential to understand how these practices influence employee engagement and sustainability outcomes. The banking industry, though service-based, contributes to sustainability concerns through high energy use, heavy paper consumption, and environmentally impactful financing decisions (Chapagain & Dangol, 2024; Aracil et al., 2021). With digital transformation, banks also face new challenges such as energy-intensive data centers and e-waste management. Therefore, promoting green practices in HRM, such as paperless operations, green training, and eco-friendly workplace policies, is crucial to enhancing both environmental performance and corporate social responsibility (Siyambalapatiya et al., 2018).

Research on the application of GHRM in commercial banks remains in its early stages. Few studies have examined how GHRM influences employee engagement, which is a critical factor in ensuring the success of sustainability initiatives. The mediating role of employee engagement, in particular, remains underexplored. In addition, banks face barriers such as limited awareness, financial costs, and organizational resistance that hinder the effective adoption of GHRM. These gaps highlight the need for systematic research on GHRM in the banking sector, focusing on its relationship with employee engagement and its role in driving sustainable organizational performance. By addressing this problem, the study will contribute to academic knowledge and provide practical insights to help commercial banks integrate sustainability into their HR strategies more effectively. The objective of this study is to examine the influence of green human resource management practices on employee engagement in Nepalese commercial banks.

Review of Literature

Jabour (2013) views GHRM as the systematic alignment of human resource practices with organizational environmental objectives. Similarly, Renwick et al. (2008) describe it as the management of human resources

to support environmental management initiatives. Expanding on this, Opatha and Arulrajah (2014) highlight GHRM as a set of policies and practices that benefit individuals, society, the natural environment, and organizations by guiding employees toward green behavior. Masri and Jaaron (2017) emphasize the role of GHRM in reinforcing environmentally sustainable practices while enhancing employee commitment to sustainability.

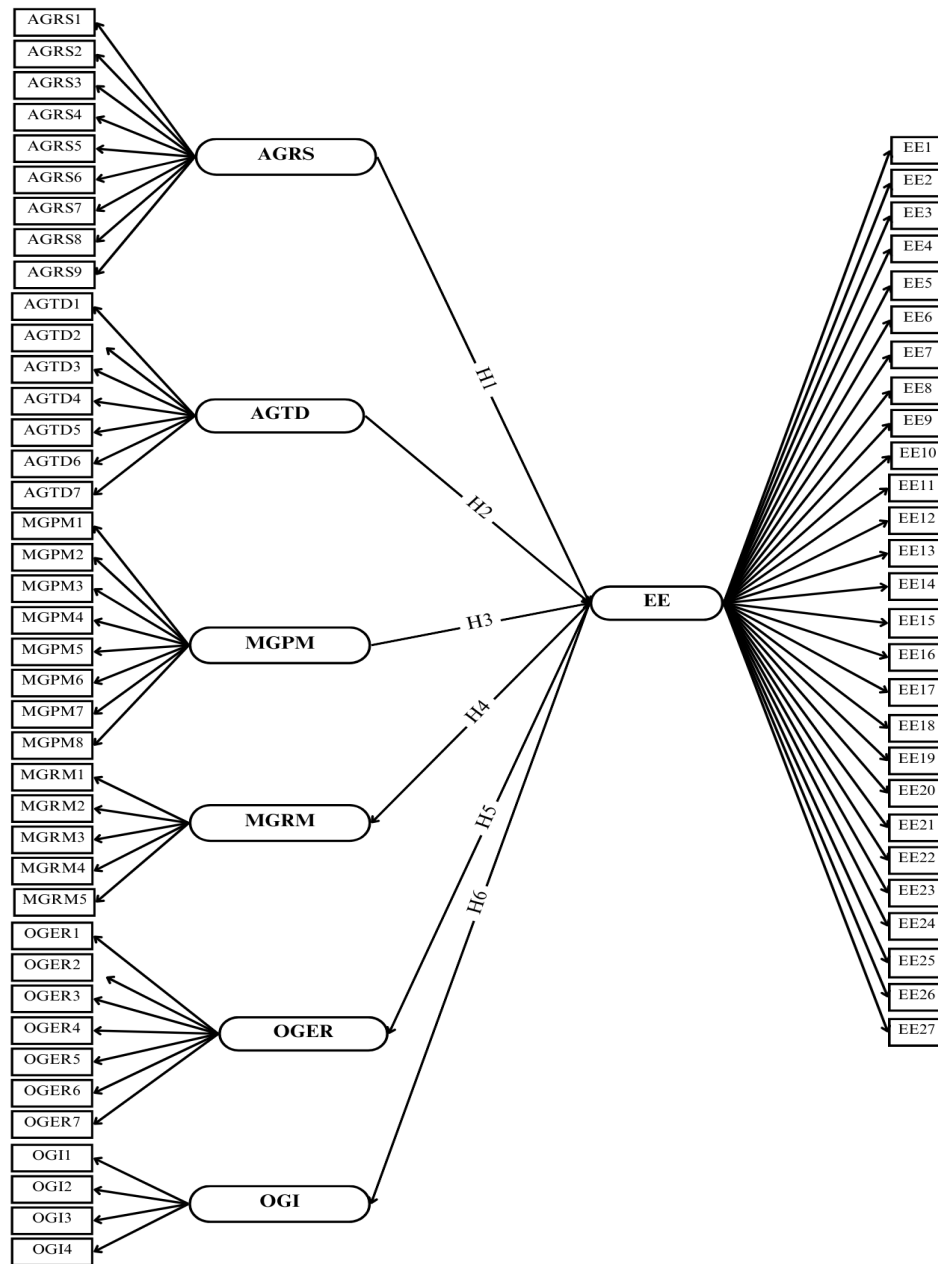
Employee engagement is widely regarded as a central factor in organizational sustainability and long-term success (Boccoli et al., 2023). Since Kahn's (1990) seminal work, engagement has been conceptualized as employees' physical, cognitive, and emotional investment in their roles, whereas disengagement reflects withdrawal from these dimensions. Engaged employees demonstrate attentiveness, energy, emotional connection, and willingness to "go the extra mile" (Macey & Schneider, 2008). Building on Kahn, later scholars such as Schaufeli et al. (2002) defined engagement as a positive, fulfilling state characterized by vigor, dedication, and absorption, while Ababneh et al. (2019) expanded this to include emotions, discretionary effort, and goal alignment. Saks (2006) further conceptualized engagement as a multidimensional construct with cognitive, emotional, and behavioral components, reinforcing its role as a distinct driver of role performance. Measurement instruments such as the UWES and JES have been widely applied, though studies often use employee and work engagement interchangeably (Kosaka & Sato, 2020).

From a theoretical lens, the Ability-Motivation-Opportunity theory (Appelbaum et al., 2001) provides a useful framework for linking Green Human Resource Management with employee engagement. According to this theory, HR practices enhance organizational performance by strengthening employees' abilities, motivations, and opportunities to contribute (Rynes et al., 2005; Katou & Budhwar, 2010). In the GHRM context, green recruitment and training build employees' environmental abilities. In contrast, green rewards and performance evaluations enhance motivation, and practices such as green induction and participative decision-making provide opportunities for involvement (Renwick et al., 2012).

Alshaabani et al. (2021) found that rewards, training, and performance management significantly enhance green work engagement, though green recruitment was not a strong predictor. Younas et al. (2023) emphasized the importance of green training, leadership support, communication, and environmentally responsible behavior beyond the workplace. Employee engagement emerged as a crucial mediator, as demonstrated by Gupta and Jangra (2024), who showed that GHRM enhances job performance through engagement. Other studies highlighted specific practices, such as job rotation to develop future green managers (Kossyva et al., 2023), raising awareness and providing green training in the garment sector (Aktar & Islam, 2019), and integrating environmental concerns into HR functions to shape sustainable behaviors (Adriana et al., 2020). Moreover, Gomes et al. (2023) linked GHRM practices with affective commitment, while Ababneh (2021) argued for a holistic approach that combines HR practices with individual predispositions to strengthen engagement in green initiatives.

Research Methodology

This study investigates the impact of GHRM practices on employee engagement in selected Nepalese commercial banks located in Kathmandu district. A quantitative, cross-sectional survey design was adopted, and primary data were collected from 363 employees, including managers, officers, and clerks, in selected commercial banks using a structured five-point Likert scale questionnaire. Purposive sampling was used, and the sample size was determined using Yamane's formula to ensure statistical reliability. Data analysis was conducted using SmartPLS, using structural equation modeling to test the measurement and structural models. Descriptive statistics summarized the patterns, while confirmatory factor analysis assessed the reliability and validity of constructs. The hypothesized relationships between GHRM practices and employee engagement were then examined through path analysis within the SEM framework at a 5% significance level.



Source: Ababneh (2021); Alshaabani et al. (2021)

Figure 1 : Conceptual Framework

Studies on green human resource management by Ababneh (2021) and Alshaabani et al. (2021) identify several practices that influence employee engagement (EE). These include AGRS (Attracting Green Recruitment and Selection), AGTD (Applying Green Training and Development), MGPM (Managing Green Performance Management), MGRM (Managing Green Reward Management), OGER (Organizational Green Employee Relations), and OGI (Organizational Green Involvement).

Results

Table 1 presents the results of reliability and convergent validity for the study constructs. The reliability of the constructs was assessed using Cronbach’s alpha and Composite Reliability, while Average Variance Extracted (AVE) was used to evaluate convergent validity.

Table 1 : Reliability and Convergent Validity

Items	Cronbach's alpha	Composite reliability	Average variance extracted
AGTD	0.88	0.781	0.592
ARGS	0.884	0.974	0.555
EE	0.957	0.967	0.661
MGRM	0.924	0.939	0.814
OGI	0.86	0.871	0.703

The results indicate that all constructs demonstrate acceptable levels of reliability and validity. The Cronbach's alpha values range from 0.86 to 0.957, exceeding the recommended threshold of 0.70, indicating strong internal consistency among the measurement items. Similarly, the Composite Reliability values range from 0.781 to 0.974, which are above the acceptable level of 0.70, confirming the reliability of the constructs. In addition, the AVE values range from 0.555 to 0.814, exceeding the recommended minimum of 0.50, confirming adequate convergent validity.

Table 2 presents the results of the discriminant validity assessment using the Fornell–Larcker criterion. Discriminant validity is established when the square root of the AVE for each construct is greater than its correlations with other constructs in the model.

Table 2 : Discriminant Validity (Fornell–Larcker Criterion)

	AGTD	ARGS	EE	MGRM	OGI
AGTD	0.769				
ARGS	0.072	0.745			
EE	0.1	0.053	0.813		
MGRM	0.144	-0.043	-0.068	0.902	
OGI	0.259	-0.091	-0.119	0.408	0.838

As shown in Table 2, the diagonal values representing the square root of AVE for AGTD (0.769), ARGS (0.745), EE (0.813), MGRM (0.902), and OGI (0.838) are higher than the corresponding inter-construct correlation values in the same rows and columns. This indicates that each construct accounts for more variance in its indicators than in other constructs in the model.

Figure 2 illustrates the structural model of green human resource management practices and their influence on employee engagement. The model includes four independent constructs: ARGS, MGRM, and OGI, which are linked to the dependent construct EE (Employee Engagement). Each construct is measured through several observed indicators shown as rectangles connected to the latent variables. The arrows from the independent constructs to EE represent the hypothesized relationships tested in the structural model.

The values displayed on the arrows between constructs represent the p-values obtained from the structural model analysis. According to the figure, the path AGTD → EE has a p-value of 0.203, ARGS → EE has a p-value of 0.785, and MGRM → EE has a p-value of 0.704, indicating that these relationships are not statistically significant. In contrast, the path OGI → EE shows a p-value of 0.013, indicating a statistically significant relationship at the 0.05 level. The value 0.034 shown within the EE construct represents R, indicating that approximately 3.4% of the variance in Employee Engagement is explained by the GHRM practices included in the model.

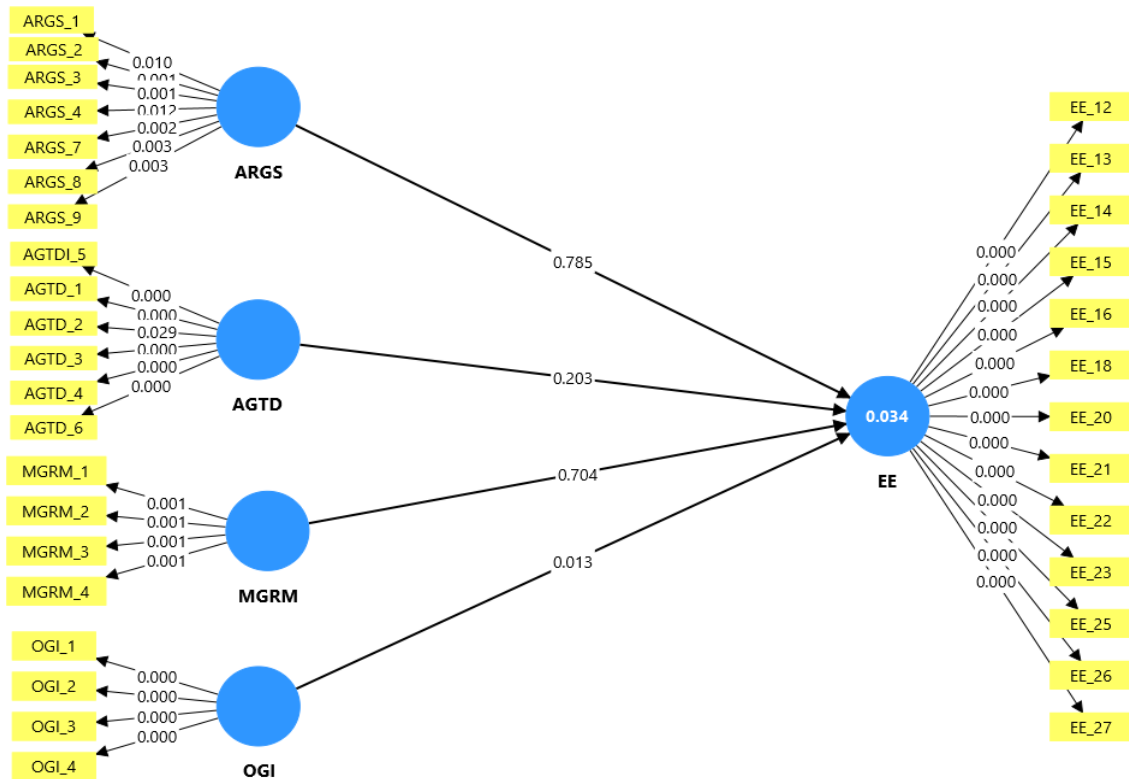


Table 3 presents the results of the structural model analysis, which examines the hypothesized relationships between the green human resource management practices and employee engagement. The results indicate that AGTD → EE has a path coefficient (β) of 0.139, with a t-value of 1.274 and a p-value of 0.203, indicating that the relationship is not statistically significant; therefore, H1 is not supported. Similarly, ARGS → EE shows a β of 0.029, a t-value of 0.273, and a p-value of 0.785, suggesting no significant effect; thus, H2 is not supported.

Table 3 : Structural Model Results

Hypothesis	Path	β	t-value	p-value	Decision
H1	AGTD -> EE	0.139	1.274	0.203	Not Supported
H2	ARGS -> EE	0.029	0.273	0.785	Not Supported
H3	MGRM -> EE	-0.03	0.38	0.704	Not Supported
H4	OGI -> EE	-0.14	2.475	0.013	Supported

The relationship MGRM → EE also shows a non-significant effect with $\beta = -0.03$, t-value = 0.38, and p-value = 0.704, indicating that H3 is not supported. However, the relationship OGI → EE shows a statistically significant effect ($\beta = -0.14$, t = 2.475, p = 0.013), which is below the significance threshold of 0.05. Therefore, H4 is supported, suggesting that Organizational Green Involvement significantly influences Employee Engagement in the model.

Table 4 : Coefficient of Determination and Effect Size

Endogenous Construct	R ²	Interpretation
Employee Engagement	0.034	
Path	f ²	Effect
AGTD -> EE	0.018	
ARGS -> EE	0.001	
MGRM -> EE	0.001	
OGI -> EE	0.016	Medium

Table 4 presents the R^2 and effect size (f^2) for the structural model. The R^2 value for employee engagement is 0.034, indicating that the independent variables AGTD, ARGS, MGRM, and OGI collectively explain 3.4% of the variance in employee engagement. This value suggests a weak explanatory power of the model.

The f^2 values indicate the individual contribution of each predictor to the endogenous construct. The path AGTD \rightarrow EE has an f^2 value of 0.018, which indicates a small effect size. Similarly, ARGS \rightarrow EE and MGRM \rightarrow EE both show f^2 values of 0.001, suggesting negligible effects on Employee Engagement. The path OGI \rightarrow EE has an f^2 value of 0.016, indicating a small effect size. According to commonly accepted guidelines (0.02 = small, 0.15 = medium, 0.35 = large), the results indicate that all predictors have negligible to very small effects on employee engagement. However, OGI shows the relatively strongest influence among the variables.

Discussion

The study partially supports earlier theoretical perspectives on GHRM proposed by Jabbour (2013), Renwick et al. (2008), and Opatha and Arulrajah (2014), particularly in their emphasis on employee involvement in environmental initiatives. The significant effect of Organizational Green Involvement (OGI) aligns with engagement theory (Kahn, 1990; Schaufeli et al., 2002), which highlights participation as a key driver of employee engagement. The findings diverge from much of the empirical literature, including Alshaabani et al. (2021) and Gupta and Jangra (2024), in that they show that green training, rewards, and performance management do not significantly influence employee engagement. Additionally, the model's low explanatory power suggests that GHRM practices alone are insufficient predictors of engagement, supporting Ababneh's (2021) arguments for a more integrated approach.

Importantly, the negative yet significant relationship between OGI and engagement contrasts with prior positive assumptions (Masri & Jaaron, 2017), indicating that poorly implemented or burdensome green initiatives may reduce engagement. From the perspective of the Ability-Motivation-Opportunity Theory (Appelbaum et al., 2001), the findings suggest an imbalance in which opportunity exists without sufficient support from the ability and motivation components.

Conclusion

This study finds that the influence of GHRM practices on employee engagement in Nepalese commercial banks is limited and highly context-dependent. Among the examined practices, only organizational green involvement shows a statistically significant effect, emphasizing the importance of employee participation in environmental initiatives. However, the negative direction of this relationship suggests that such involvement may reduce engagement if it is perceived as an additional burden or is not adequately supported. In contrast, green training, rewards, and performance management do not have a significant impact on employee engagement, indicating that the mere implementation of formal green HR practices is insufficient to drive engagement. The model's low explanatory power further suggests that other organizational and individual factors play a more substantial role in influencing employee engagement.

The study concludes that the effectiveness of GHRM practices depends largely on how they are implemented and perceived by employees. For Nepalese commercial banks, a more integrated and supportive approach is necessary to ensure that green initiatives positively contribute to employee engagement.

Limitations and Directions for the Study

This study has several limitations. It uses a cross-sectional design, which limits causal inferences, and focuses only on Nepalese commercial banks, thereby restricting generalizability. The low explanatory power suggests other factors, such as leadership or organizational culture, were not included. Reliance on self-reported data may introduce bias, and only a limited set of GHRM practices was examined.

Future research should adopt longitudinal or multi-source designs, include additional contextual and

organizational factors, explore broader GHRM dimensions, and investigate mediating or moderating variables better to understand the relationship between GHRM and employee engagement.

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Conflict of Interest

The author declares no conflict of interest while preparing this article.

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