

GREEN HUMAN RESOURCE DEMAND IN VIETNAMESE SMES: A QUALITATIVE STUDY

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Received: 11 April 2026; Revised: 10 May 2026; Accepted: 16 May 2026

ABSTRACT

This research examines the need for environmentally sustainable human resources in SMEs in Vietnam. With tightening environmental legislation and growing export market demands, greening has become a real necessity for many businesses, not just a strategic option. However, there is still little information on how SMEs perceive and address the green skills challenge, particularly regarding the specific strategies they employ to adapt to these environmental demands and the barriers they face in acquiring necessary green skills. The study uses a qualitative research approach. External factors, such as regulatory compliance and buyer requirements in world markets, largely drive the demand for green human resources, according to the results. Most companies link green skills to energy efficiency, waste minimization, and cost containment rather than to long-term innovation or a competitive advantage. At the same time, financial constraints, limited managerial knowledge, and the lack of specialized training programs are major obstacles to worker development, which hinder companies from fully integrating green skills into their operations and realizing their potential for long-term innovation or competitive advantage. As a result, green human resources investments are prudent and responsive. This study explains the characteristics of demand for green skills in a developing economy and highlights the gap between political aspirations and organizational capacity. The results offer practical advice for SMEs and public policies to promote sustainable business development, such as implementing training programs for green skills and creating incentives for businesses that adopt environmentally friendly practices.

Keywords: SMEs, green human resources, Vietnam.

1. INTRODUCTION

Sustainability has become a core imperative for businesses worldwide, with firms facing increasing demands to align their operations with environmental standards to ensure competitiveness and legitimacy. In Vietnam, these pressures are stronger due to closer ties with global markets and the National Green Growth Strategy (2021–2030, with a vision to 2050), which focuses on using resources wisely, reducing emissions, and making green changes. Vietnam is currently experiencing a serious environmental crisis, particularly in the manufacturing sector. Many businesses, especially industrial plants, are facing enormous challenges from air pollution, wastewater, and solid waste. A large percentage of production facilities still use outdated technology, leading to substandard discharge of waste into the environment, which not only affects people's health but also negatively impacts ecosystems and natural resources. This environmental degradation creates urgent imperatives for sustainable business practices. In budget-constrained environments, GHRM training serves as a critical bridge. It empowers workers to optimize the use of existing, “outdated” machinery through cleaner production techniques, thereby reducing waste discharge even before capital-

intensive green technology upgrades are feasible. This tactical training shifts the focus from high-cost equipment replacement to immediate behavioral and process efficiencies.

As of December 31, 2023, micro and small firms comprise the predominant category of companies in Vietnam, with 97.3% classed as MSMEs; this encompasses 522,483 microenterprises (67.1%) and 206,428 small enterprises (26.5%). The quantity of medium-sized firms is 28,877 (3.7%) [1]. However, their resource limitations and often informal management procedures restrict proactive involvement in sustainability, thus impeding their capacity to execute effective environmental plans and practices that may improve their competitiveness and long-term sustainability.

Green human resource management (GHRM) emerges as a critical bridge, embedding environmental goals into core HR functions such as recruitment, training, performance appraisal, and rewards. By shaping employee behaviors and organizational culture, GHRM can enhance environmental performance. GHRM practices facilitate the application of green practices through different practices, such as recruitment and selection, wage management, performance management, and exit policies [2]. These practices are critical for the long-term viability of the company [3].

Most previous research on GHRM relies on quantitative approaches and focuses on large enterprises in developed settings, often linking statistics to performance without a thorough examination of the context in resource-limited environments. This study addresses this gap by synthesizing the existing evidence to address three key issues:

- (1) What drives the demand for green human resources in Vietnamese SMEs?
- (2) What expectations do firms hold regarding green skills?
- (3) What barriers hinder the effective implementation of GHRM?

2. THEORETICAL BACKGROUND

2.1. Conceptual foundations of GHRM

The creation of environmentally supportive employee behaviors directly relates to GHRM practices. The primary driving factors of GHRM are green recruitment and selection, green training and development, green performance management, green engagement, and green compensation and rewards. Organizational leadership and performance management significantly and positively affect employee engagement [4]. Similarly, GHRM refers to the integration of environmental concerns into human resource practices. It extends traditional human resource management by incorporating sustainability into recruitment, training, performance evaluation, and reward systems [5]. Unlike traditional HRM (human resource management), which focuses on efficiency and productivity, GHRM aims to influence employee behavior toward environmental responsibility. Employees are considered key agents in achieving sustainability outcomes [6]. Recent studies highlight that GHRM contributes to environmental performance by shaping organizational culture and employee engagement [7]. This behavioral focus distinguishes GHRM, or Green Human Resource Management, from conventional human resource (HR) approaches.

GHRM encompasses a comprehensive set of practices that systematically integrate environmental management into HR functions. Key practices include the following:

2.1.1. Green Recruitment and Selection

Environmentally friendly recruitment processes should consider the organization's environmental management policies and practices, as well as its green values during the decision-making process related to employee selection [5]. Furthermore, although the

economy is moving toward a greener future, it has not yet widely recognized green competencies. Businesspeople often understand them as generic statements that indicate competence in reducing negative environmental impacts. Consequently, they are not always considered an objective factor in assessing the suitability of a candidate for a job in a company [8].

2.1.2. Green Training and Development

Training on increasing green management knowledge, with trainers using more soft materials rather than printed handouts to reduce paper use [9]. Environment-related training concerns the inclusion of environmental issues in either general training or specific training for green management purposes, and key to the effectiveness of training is developing an environmental knowledge base [5]. Green education and development practices are recognized as a real tool to tackle environmental challenges and are also a key element in promoting the acceptance of environmental protection in the workplace. The development of green skills has a positive and significant impact on environmental consciousness as an indicator of environmental sustainability [10].

2.1.3. Green Performance Management and Appraisal

In performance appraisal, the use of green practice should be one of the key performance areas. Green performance appraisal motivates employees to use green practices in the organization [9]. Green performance management involves communication of green schemes to all levels of staff through wide dialogue on green matters; managers setting green targets, including green outcomes in appraisals; incorporating green criteria in appraisals; and establishing penalties for non-compliance with environmental targets [11]. Green adaptation of performance management and evaluation systems intends to address criteria related to workforce contribution to the green objectives of the organization and use them during employee performance appraisals [12]. It means that employers can help their companies to adopt the principles of green business management by recruiting people with a green mindset and who will practice them in the workplace.

2.1.4. Green Compensation and Rewards

Compensation and reward systems should be directly linked to the use of green skills, with special bonuses given to employees for their efforts in reducing their carbon footprint. Rewards help improve employee commitment to environmental management programs. Green compensation involves tailoring packages to reward green skills acquisition, using monetary-based environmental management rewards, using non-monetary rewards, and linking participation in green initiatives to promotion or career gains [11]. However, reward systems and compensation schemes based on green competencies and achievements are rarely mentioned in the reviewed literature, although few examples exist [12].

2.1.5. Green Employee Relations

This includes staff independence to form and experiment with green ideas, unions negotiating green workplace agreements, incorporating green elements into health and safety processes, encouraging employees to use green forms of transport, and introducing green whistleblowing helplines [11].

An important concept is “green HR requests,” which refer to expectations placed on firms and employees regarding environmental performance. These requests may arise from regulation, customers, or internal policies. In SMEs, they are often informal and negotiated rather than formally structured.

Table 1. The main functional areas of green human resource management

Area of GHRM	Definition
Green analysis and description job	Including environmental issues in all job descriptions translates commitment to the environment into employees' obligations, on top of their usual activities.
Green recruitment	The activities of either internal or external recruitment show the company's preference for candidates committed to the environment.
Green selection	Selection of people who are committed and sensitive to environmental issues, with the potential to contribute to the environmental management of a company.
Green rewards	Implementation of a system of financial and non-financial rewards for employees with a distinct potential to contribute to environmental management.
Green training	Provides employees with required knowledge of the company's environmental policy, its practices, and necessary attitudes.
Green performance assessment	Appraising and registering employees' environmental performance throughout their career in a company and providing them with feedback about their performance to prevent undesirable attitudes or to reinforce exemplary behavior.

Source: Yong, Yusliza [13]

2.2. Theoretical perspectives

Several frameworks illuminate GHRM adoption in SMEs. The AMO framework emphasizes the necessity of providing employees with green skills (ability), incentives (motivation), and supportive structures (opportunity). The Resource-Based View and its natural-resource extension posit that green capabilities can become sources of competitive advantage if valuable, rare, inimitable, and organized effectively [14]. According to [15], the RBV argues that GHRM is a sustainable practice and a strategic resource. These practices build the reputation of the company by developing distinctive, valuable, and complex organizational skills. The specific focus on green recruitment, training, and remuneration in this study is in line with the RBV approach, as it shows how these practices enable the company to be more competitive, improve its reputation, and make employees happier at work.

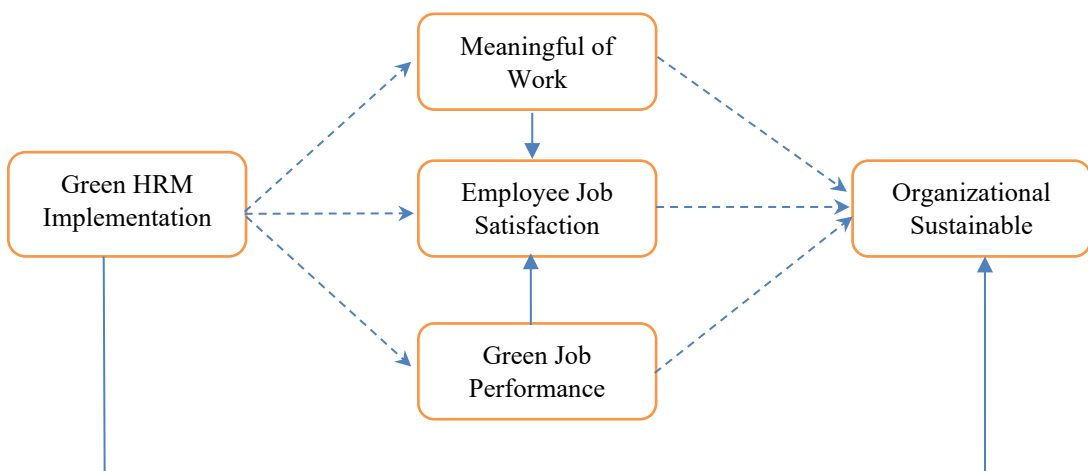


Figure 1. Proposed model of impact of GHRM implementation on organizational sustainability

Source: Vadithe, Rajput [16]

Institutional theory explains conformity to external pressures (regulations, norms, and coercive demands from global buyers) for legitimacy. Institutional pressures, specifically regulatory and normative pressures, positively impact the innovation of SMEs' green business models [17]. SME economic and organizational drivers producing behavioral dynamics in relation to the mimesis of planned actions and informal, serendipitous responses in reality. Moreover, SMEs initially adopt a normative planned approach but rapidly develop localized and serendipitous HR practices in response to talent management challenges [18].

Stakeholder theory underscores the role of customers, regulators, and supply chain partners, especially in export-oriented Vietnamese SMEs. These lenses together explain why SMEs may adopt GHRM reactively despite internal limitations.

2.3. Empirical evidence on GHRM in SMEs

Literature shows that effective human resources management has a positive impact on environmental and organizational performance, often through green innovation, employee involvement, and organizational culture. Companies implementing GHRM have significantly improved employee engagement, which in turn increases employee productivity, indicating that engaged employees are more productive. By implementing the Green Harbor Strategy, enterprises can promote green innovation, increase employee involvement, encourage environmentally friendly behavior, and ultimately improve productivity and long-term sustainability [19]. According to [20], SMEs face limited resources to implement environmental protection, yet GHRM provides an approach to align human resources practices with sustainability objectives.

However, implementation in SMEs is often partial due to lack of resources, which leads to compliance being the focus rather than strategic integration. The resource-limited and hierarchically constrained nature of SMEs means that the impact of HRM, whether formal or informal, intended or unintended, is even more transparent and revealing. Resource poverty and the labor-intensive nature of SMEs mean that they are inherently more dependent on the efforts, commitment, and discretion of their employees. Successful employee management can therefore be crucial to the survival and development of SMEs [21].

2.4. GHRM in the Vietnamese SME context

In Vietnam, studies link GHRM to improved sustainable performance, mediated by green behavior and employee commitment, particularly in manufacturing, hospitality, and services. Drivers include national green growth policies and export market demands. Barriers mirror broader emerging-economy challenges: financial limitations, skill gaps, and short-term business orientations.

A study commissioned by the OECD identified a lack of managerial competency, inadequate awareness of HRM sustainability practices, and insufficient skills and abilities among managers and employees as potential obstacles to innovation and sustainable performance in Vietnam [22]. There are many problems with the environmental performance of Vietnamese manufacturing companies' employees. Although most workers understand the importance of protecting the environment, many still lack the knowledge and skills to take concrete steps. Without self-awareness and a clear understanding of their role in environmental protection, they only take measures to protect the environment when they are required to do so [23]. This, in turn, fosters an awareness of the environment that their daily activities largely overlook.

This synthesis highlights the continuing policy-practice gap in a fast-interacting economy. Vietnam has established important legal frameworks for green growth; however, there are no specific policies to educate SMEs about environmental issues or to encourage the adoption of sustainable practices, and no government agency is actively collaborating with

SMEs. At the same time, there is no incentive for SMEs to seek sustainability certification or simply to set up sustainable practices.

3. METHODOLOGY

The thematic synthesis followed a rigorous three-stage process: (1) Selection criteria: inclusion of peer-reviewed articles (2014–2026) focusing on GHRM in emerging markets and Vietnamese SME policy documents. (2) Coding procedure: initial open coding of text segments related to 'drivers' and 'barriers,' followed by axial coding to group related concepts. (3) Theme development: themes were iteratively refined and mapped against the AMO and RBV frameworks to ensure theoretical consistency.

4. RESULTS

4.1. Drivers of GHRM adoption

External institutional pressures dominate as the primary driver. These include national regulations under the Green Growth Strategy and coercive demands from international buyers (e.g., environmental standards in supply chains for garments, electronics, and agriculture). Institutional pressures, specifically regulatory and normative pressures, positively impact the innovation of SMEs' green business models [17]. Managerial awareness and owner values also influence decisions in owner-managed SMEs, though performance expectations center on immediate efficiency gains and cost savings rather than long-term strategic positioning.

Export market pressures also drive GHRM adoption. Our figures show that while SMEs focus on developing new products, the export capacity of Vietnamese SMEs is low, with exporters accounting for only a modest portion, roughly 6.1% on average over ten years. This limited export capacity means that SMEs seeking access to international markets must increasingly meet environmental standards required by global buyers.

4.2. Expectations from green human resources

Vietnamese SMEs predominantly view green human resources through a narrow, pragmatic lens, associating green skills primarily with short-term operational efficiency rather than strategic innovation or long-term competitive advantage. Firms expect employees to contribute directly to cost reduction via energy and resource saving, waste minimization, and improved productivity [7].

Recent qualitative evidence reinforces this efficiency-oriented expectation. In a study of Vietnamese enterprises (including many SMEs), managers reported that green skills are valued for practical applications such as energy management, waste handling, cleaner production techniques, and efficient operation of green technologies, delivering tangible benefits such as fuel savings and reduced operational expenses. Similarly, in Vietnam's small restaurant sector, GHRM practices are expected to support basic environmental compliance and resource efficiency, enhancing day-to-day operational performance rather than driving green innovation, thereby leading to improved customer satisfaction and potentially lower regulatory risks [24].

Emerging economy SMEs view green skills as compliance and cost management tools rather than catalysts for eco-innovation, product innovation, and market differentiation. Training programs emphasize awareness over creativity skills. Due to resource limits and short-term challenges, Vietnamese SME expectations remain reactive and efficiency-oriented. Vietnamese SMEs prioritize product development over environmental performance.

4.3. Barriers to implementation

Vietnamese SMEs encounter many obstacles to GHRM implementation. SMEs' lack of funds for green training, technology adoption, certification, or environmental duties is the biggest challenge. High upfront expenditures jeopardize pricing competitiveness in low-margin sectors [25, 26], making it hard for SMEs to invest in green projects that could boost their sustainability and long-term viability.

Lack of managerial and employee expertise is another major obstacle. Owner-managers and HR staff often lack GHRM design knowledge and use informal or ad-hoc measures, which hinder sustainable practices. Lower-skilled workers generally lack training programs and resources to improve their GHRM knowledge and practice, making it difficult to turn awareness into action.

Implementation of GHRM in Vietnamese SMEs faces persistent and multifaceted barriers. Financial constraints remain the most prominent obstacle, as SMEs often lack capital for green training, technology adoption, certification, or dedicated environmental roles. High upfront costs threaten price competitiveness in low-margin sectors [25, 26], making it difficult for SMEs to invest in necessary green initiatives that could enhance their sustainability and long-term viability.

A second critical barrier is limited managerial and employee knowledge. Owner-managers and HR personnel frequently possess insufficient understanding of GHRM design, relying on informal or ad-hoc measures, which hinder the effective implementation of sustainable practices within the organization. Translating awareness into actionable skills proves difficult, especially among lower-skilled workers, as they often lack access to training programs and resources that could enhance their understanding and application of GHRM practices.

Systematic literature reviews have identified the major barriers affecting the implementation of green human resource management in organizations. According to one comprehensive study, the barriers are shortages of knowledge and awareness leaders; training/technical support (15%); shortage of a comprehensive plan to implement green human resource management (14%); lack of organizational leadership support (14%); lack of green culture, including cross-culture (14%); employees' resistance (6%); unavailability of human resource system structure (4%); leaders'/managers' resistance (2%); lack of green human resource management infrastructure (2%); complexity and difficulty of adoption of green technology (2%); ambiguity of green value (2%); and lack of understanding of green policies (2%) [27]. Therefore, the finding shows that the major barriers affecting the implementation of GHRM in organizations are lack of knowledge and awareness, lack of training/technical support, lack of organizational leadership support, lack of a comprehensive plan to implement GHRM, and lack of green cultures. Similarly, [28] identified seventeen barriers and subsequently categorized them into five major barriers: (1) Economic barrier; (2) Political and regulatory barrier; (3) Technical barrier; (4) Management barrier; (5) Cultural and education barrier. However, the study still has limitations in the assessment. Some respondents' experiences and attitudes may have influenced the survey's critical barrier. While [29] carried 4 major barriers to the implementation of GHRM: (1) limited financial resources, (2) lack of incentives to engage in environmentally friendly activities, (3) managerial staff's low competencies in the field of sustainable HRM, (4) no or low effectiveness of GHRM tools, such as training and audits, and (5) economic value-centered culture.

Inadequate training infrastructure compounds these issues, with limited access to quality, affordable green skills programs [25]. The lack of systematic recognition and documentation of informally acquired competencies is not only an obstacle to the recognition of employees' competencies and further career development but also an obstacle for MSMEs seeking to adjust and transfer to greener forms of production and new environmental standards. The

transparency and visibility of competence and knowledge are not only critical for the development of enterprises' human capital but also for their contribution to a greener environment, society, and economy [30].

Short-term strategic priorities further constrain efforts: SMEs prioritize immediate survival over long-term sustainability investments. Additional barriers include resistance to change, weak legal enforcement, and insufficient tailored government incentives, particularly for smaller enterprises [26]. Various world studies also indicate resistance from the managerial staff, lack of sufficient leadership support or a successful GHRM implementation plan, barriers resulting from the complexity of green technologies (lack of appropriate infrastructure or technical support), cultural conditions (lack of clear green values), resistance from employees, low green awareness, lack of staff competencies in the area of implementing green practices, or mismatching HR structures [31].

In conclusion, there will always be obstacles to the implementation of the GHRM concept. This challenge is due to organizations' varying adaptability and innovation and their cultures' individuality and diversity. Nevertheless, all efforts should be made to minimize these obstacles for the benefit of society and the natural environment [31]. These factors collectively lead to inconsistent or symbolic adoption. In the realm of SMEs, the adoption of environmentally sustainable GHRM practices will encounter resistance from the status quo, particularly from those entrenched in established habits and comfort zones. This will be a difficulty for the firm, as altering employee behavior within a brief timeframe will be arduous. The subsequent difficulty is that not all employees possess the same drive to engage in GHRM procedures. The HR manager must persuade the board of directors regarding the GHRM program, as its implementation process and outcomes are often intricate and extensive, necessitating considerable time to evaluate the program's effectiveness and efficiency [32].

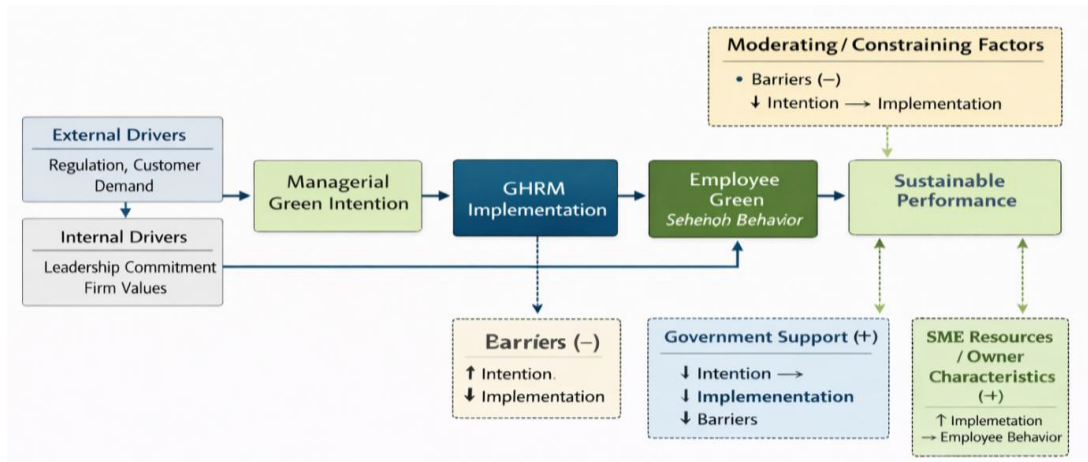


Figure 2. Proposed model of GHRM implementation in Vietnamese SMEs

Source: Developed by Author (2026)

This proposed model (Figure 2) explains the implementation of GHRM in Vietnamese SMEs as a gradual process, not a direct response to pressure. External drivers such as regulation and customer demand, as well as internal drivers such as management's commitment and the firm's values, shape the green intentions of managers. The individual owner largely drives SME decisions, making this intention a key trigger. But intent does not automatically translate into action. Barriers include limited resources, insufficient knowledge, and resistance to change, which limit the translation of intentions into implementation of the Global Health Regulations. Government support plays a facilitating role by reducing these barriers and encouraging the uptake. Once implemented, GHRM practices influence the green

behavior of staff, leading to sustainable performance outcomes. The strength of this final link depends on the resources and characteristics of SMEs and their owners, which reflects the central role of leadership and capacity in small enterprises.

4.4. Discussion

GHRM implementation in Vietnamese SMEs appears to be compliance-driven rather than strategic. Limited organizational resources inhibit implementation of environmentally friendly HR practices, notwithstanding institutional incentives. Reactive and efficiency-focused approaches replace transformative sustainability plans in many SMEs. The thematic synthesis reveals that GHRM adoption in Vietnamese SMEs is overwhelmingly reactively driven by external institutional pressures but severely constrained by internal resource and capability deficits. This pattern matches institutional theory (coercive isomorphism) and highlights the limitations of the resource-based view (RBV) in situations where resources are limited. The AMO framework illuminates the gap: basic ability-building occurs through training, but motivation and opportunity structures remain weak, which hinders the effective application of skills in the workplace [24, 26]. While the AMO framework suggests that ability, motivation, and opportunity are equally important, the study questions this balance in the context of SMEs. Our findings show that for Vietnamese SMEs, capacity (through initial training) is often present, but opportunity is severely limited by structural financial barriers. This suggests that in resource-deprived economies, O (opportunity) is a condition rather than a complement to “A” and “M.”

Research on the mechanisms through which GHRM influences employee behavior reveals important insights. The stronger a person is connected to their organization, through aligned values and identification, the more likely it is that employees will be committed to achieving organizational goals and objectives. Therefore, employee behavior refers to how individuals interact with their environment. Employees make explicit judgments about their organization's social responsibility policies and behavior, and it is this assessment that determines whether employees' psychological needs are met [6, 33]. As a result, when employees' green values are compatible with the organization, it is expected that employees will be more likely to exhibit environmentally friendly workplace behavior. Conversely, if the employee's value is not in accordance with the employee's value or the organization does not provide an environment that is in accordance with the employee's needs, the employee is less likely to show green behavior in the workplace [34].

Organizational climate has a statistically significant effect on employee behavior. Employees' perception of the work climate reflects their value-based schemas, which they use to interpret workplace information, including espoused values and behavior norms [33]. Moreover, a green organizational culture positively motivates green values within employees. A greenardorganizational culture, green transformational leadership, and green values among employees have a major impact on their pro-environmental behavior. Performance management and evaluation, employee empowerment and participation, recruitment and selection, and green transformation management have a positive impact on the green culture of the organization, which in turn motivates employees to be green [35].

4.5. Analytical Synthesis and Implications

Synthesizing the three dimensions highlights a self-reinforcing cycle: external pressures generate demand, yet narrow efficiency-focused expectations and formidable barriers limit genuine capability development. This extends GHRM literature by showing how contextual constraints in emerging-economy SMEs moderate behavioral and cultural mechanisms [6, 7, 24].

4.5.1. Practical implications

To address the institutional void, the government should establish a dedicated GHRM advisory unit within the Ministry of Planning and Investment (MPI) or the General Statistics Office (GSO). This unit would act as a bridge, providing SMEs with tailored toolkits, technical support for green certifications, and a centralized database for green skill training programs.

As the majority of Asian SMEs are among the most polluting, there is a critical need to encourage companies to adopt green practices and promote green skills [30]. Technical and vocational education and training programs (TECT) offer a fantastic opportunity to internalize these skills through innovative modules on hands-on learning.

Managers should be able to offer GHRM-related value-added practices toward employees not only to increase job commitment and job satisfaction but also to shape the SMEs' sustainability in the long run. Organizations will face resistance from the status quo, particularly from individuals who have established habits, comfort zones, and settled views, when they implement GHRM practices that are more environmentally friendly [32].

4.5.2. Limitations and future research

This study relies on thematic synthesis rather than primary empirical data. Consequently, the findings reflect patterns identified across existing studies rather than direct organizational experiences. Future research should employ interviews, longitudinal case studies, or mixed-method designs to examine how green HR requests are interpreted and negotiated within SMEs over time.

This study is based on published literature as a thematic synthesis. Primary in-depth interviews or case studies would provide more in-depth information. Research on comparative or mixed methods across ASEAN would add value. Given the high geographical diversity of Asia, comparative studies are needed to analyze how cultural values, regional differences, regulatory pressures, and institutional contexts shape the performance-related linkages of the GHRM. A new area of study is investigating how to make GHRM more cost-effective for SMEs after COVID-19. Additionally, future research could further explore how GHRM promotes accurate environmental and social reporting, compliance, and the appropriate metrics to quantify these aspects [36].

5. CONCLUSION

This study indicates that green HR applications in Vietnamese SMEs are largely shaped by institutional and market pressure. However, implementation remains limited due to limited resources, weak management capacity, and short-term operational priorities. As a result, the adoption of GHRM is often partial, reactive, and compliant.

The study reveals that while Vietnam has established important legal frameworks for green growth, there remains a significant gap between policy intentions and SME implementation capacity. The lack of specific policies for SMEs to become environmentally aware, the absence of government agencies working exclusively with SMEs on sustainability matters, and the absence of incentives for SMEs achieving sustainability certificates all contribute to this implementation gap [37]. Addressing these challenges requires coordinated efforts from policymakers, industry associations, and international buyers to create an enabling environment for GHRM adoption in Vietnam's SME sector.

Acknowledgement: The authors would like to thank my colleagues for encouraging me to do this research.

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