










“Impact of dynamic capabilities and green HR on sustainable performance in SMEs”

AUTHORS	Md. Atikur Rahaman   Rupali Dilip Taru   Issa Ahammad  Uma Durgude   Imad Ali 
ARTICLE INFO	Md. Atikur Rahaman, Rupali Dilip Taru, Issa Ahammad, Uma Durgude and Imad Ali (2024). Impact of dynamic capabilities and green HR on sustainable performance in SMEs. <i>Problems and Perspectives in Management</i> , 22(4), 693-703. doi: 10.21511/ppm.22(4).2024.53
DOI	http://dx.doi.org/10.21511/ppm.22(4).2024.53
RELEASED ON	Monday, 30 December 2024
RECEIVED ON	Saturday, 12 October 2024
ACCEPTED ON	Tuesday, 10 December 2024
LICENSE	 This work is licensed under a Creative Commons Attribution 4.0 International License
JOURNAL	"Problems and Perspectives in Management"
ISSN PRINT	1727-7051
ISSN ONLINE	1810-5467
PUBLISHER	LLC “Consulting Publishing Company “Business Perspectives”
FOUNDER	LLC “Consulting Publishing Company “Business Perspectives”



NUMBER OF REFERENCES

45



NUMBER OF FIGURES

2



NUMBER OF TABLES

4

© The author(s) 2024. This publication is an open access article.



BUSINESS PERSPECTIVES



LLC "CPC "Business Perspectives"
Hryhorii Skovoroda lane, 10,
Sumy, 40022, Ukraine
www.businessperspectives.org

Received on: 12th of October, 2024
Accepted on: 10th of December, 2024
Published on: 30th of December, 2024

© Md. Atikur Rahaman, Rupali Dilip Taru, Issa Ahammad, Uma Durgude, Imad Ali, 2024

Md. Atikur Rahaman, Ph.D. Scholar,
Center for Entrepreneurship &
Innovation Research Society,
Bangladesh. (Corresponding author)

Rupali Dilip Taru, Ph.D., Assistant
Professor, Department of Management
Studies, Bharati Vidyapeeth (Deemed
to be University), India.

Issa Ahammad, MBA, Assistant
Professor, World School of Business,
World University of Bangladesh,
Bangladesh.

Uma Durgude, Assistant Professor,
Bharati Vidyapeeth Institute of
Management Studies and Research,
India.

Imad Ali, Ph.D., Professor, Operations
and Supply Chain Management,
GNIOT Institute of Management
Studies, India.



This is an Open Access article,
distributed under the terms of the
[Creative Commons Attribution 4.0
International license](https://creativecommons.org/licenses/by/4.0/), which permits
unrestricted re-use, distribution, and
reproduction in any medium, provided
the original work is properly cited.



Conflict of interest statement:
Author(s) reported no conflict of interest

Md. Atikur Rahaman (Bangladesh), Rupali Dilip Taru (India),
Issa Ahammad (Bangladesh), Uma Durgude (India), Imad Ali (India)

IMPACT OF DYNAMIC CAPABILITIES AND GREEN HR ON SUSTAINABLE PERFORMANCE IN SMES

Abstract

The purpose of this study is to explore how internal and external dynamic capabilities and green human resource (HR) practices enhance sustainable outcomes in SMEs. Data were collected using a survey methodology targeting employees of SMEs located in the northern region of Bangladesh and West Bengal, India. A total of 327 employees participated in the survey conducted between May and June 2024. A five-point Likert scale was employed to assess the responses, and regression analysis was used to test the study's hypotheses. The analysis was conducted at a 5% significance level, and the data were analyzed using the SPSS software package to ensure accuracy and reliability. The results indicate that internal and external dynamic capabilities, as well as green HR practices, play a significant role in shaping the sustainable performance of SMEs. External dynamic capabilities ($\beta = 0.498, p < 0.05^{**}$) have the highest effect on the sustainable performance of SMEs, and internal capability ($\beta = 0.384, p < 0.05^{**}$) has the second highest effect on SME performance. Additionally, a significant positive correlation ($r = 0.498$) was found between green HR practices and the overall performance of SMEs. This study contributes to the growing body of literature by providing empirical evidence on the critical factors driving sustainable performance in SMEs. It highlights the importance of integrating dynamic capabilities and environmentally conscious HR practices to achieve long-term sustainability in the SME sector, particularly in the context of developing countries like Bangladesh and India.

Keywords sustainability, SME performance, dynamic capabilities, SME, green human resource

JEL Classification L25, M54, O53

INTRODUCTION

Considering escalating environmental issues, legal requirements, and evolving consumer expectations, sustainability has emerged as a pivotal priority in corporate strategy across all sectors. Pursuing sustainable performance is both a necessity and an opportunity for small and medium-sized enterprises (SMEs). Sustainability presents both advantages and challenges for SMEs. These firms can meet regulatory requirements, create value, gain competitive advantages, and enhance long-term market resilience by integrating sustainability into their core operations. In response to increasing environmental concerns, governments and businesses prioritize sustainable manufacturing practices and incorporate sustainable processes into their operations. This shift is particularly significant for SMEs, which are vital to the global economy. Bombiak and Marciniuk-Kluska (2018) assert that green human resource management is essential for achieving sustainable performance, as human resources play a crucial role in fostering and advancing sustainability and environmentally-focused initiatives. The economies of many countries have significantly benefited from SMEs (Zan et al., 2024). Moreover, SMEs can focus on select sustain-

ability pillars and address sustainability concerns as needed. Sustainable performance integrates financial, social, and environmental metrics to improve a firm's operational efficiency while benefiting society and the environment (Rayhan et al., 2024). SMEs constitute the largest segment of global firms and play a critical role in the economy. However, there is a lack of research on their perceptions of sustainability (Dangelico & Pujari, 2010). Therefore, it is important to study SME sustainable performance.

1. LITERATURE REVIEW

Internal dynamic capabilities refer to the processes by which an organization integrates the resources and competencies of its members (Bowman & Ambrosini, 2003). These competencies are crucial for small and medium-sized enterprises (SMEs) to enhance their sustainability performance in two primary ways. Moreover, internal dynamic capabilities cultivate trust among employees, thereby assisting SMEs in implementing sustainability (Choi, 2006). The propensity of employees to participate in sustainability initiatives and dedicate time can be enhanced through internal integrative dynamic capabilities. Collier and Esteban (2007) assert that this increased engagement enables the organization to consistently achieve its sustainability goals. Moreover, the capacity of small and medium-sized enterprises (SMEs) to attain sustained performance is significantly contingent upon their internal competencies. Small and medium-sized firms largely depend on proficiently applying their internal competencies to adeptly navigate the problems of sustainability in dynamic and resource-limited contexts (O'Connor, 2008; Dangelico et al., 2017). Henceforth, an organization's procedures, resources, knowledge, and skills are encompassed within these capabilities, which, when effectively integrated, can yield significant improvements in sustainable outcomes (Fabrizio et al., 2022; Choi, 2006). Moreover, employees' engagement in sustainability projects is enhanced by internal capabilities, with greater involvement observed in SMEs that have robust internal systems to support these goals (Vu, 2020). This active engagement promotes the organization's sustainability objectives and fosters a culture of collective accountability and responsibility for social and environmental outcomes (Collier & Esteban, 2007).

Small and medium-sized enterprises (SMEs) increasingly rely on external expertise and internal resources to navigate the complexities of sustainability challenges while pursuing sus-

tainable performance. Thus, external dynamic capabilities – the resources, knowledge, and partnerships acquired externally – are crucial for enhancing SMEs' capacity to achieve long-term environmental, social, and economic sustainability (Adebanjo et al., 2018). The term "external dynamic capabilities" refers to processes that integrate the resources and competencies of external stakeholders, such as suppliers and customers (Bowman & Ambrosini, 2003). Conversely, SMEs may tackle sustainability more economically due to these dynamic skills since they are not required to "reinvent the wheel" or independently acquire all sustainability competence (Boons & Lüdeke-Freund, 2013). The sustainable performance of SMEs is highly influenced by external market pressures, particularly customer demand for socially and ecologically responsible products. Due to consumers' and enterprises' heightened focus on sustainability, SMEs must enhance their external skills to meet these demands (Reuter et al., 2010). After that, the external capabilities of SMEs are enhanced by institutional assistance through training programs, consultancy services, and incubators emphasizing sustainability, facilitating their adoption and implementation of sustainable practices (Wilson & Daniel, 2007; Chuang & Huang, 2018). Moreover, SMEs demonstrating robust environmental and social governance (ESG) performance are highly sought after by sustainability-oriented investors and stakeholders. The capacity of a small or medium-sized enterprise (SME) to attract external capital or investment is closely linked to its adherence to sustainability trends (Klewitz & Hansen, 2014). The findings of Nedzinskas et al. (2013) demonstrate that dynamic skills favorably affect other than financial dimensions of relative organizational performance, although no substantial impact on business performance has been detected.

Managing human resources approaches improves efficiency in organizations and reinforc-

es competitive advantage. In a time of increased consciousness about environmental stewardship and resource sustainability (Jahan, 2023; Sharif et al., 2022), green human resource management (GHRM) includes HR practices aimed at enterprises' ecological and environmental effects (Ahmed et al., 2021; Renwick et al., 2013). It is intricately linked to a company's environmental policy and the encouragement of eco-conscious practices among personnel (Imran et al., 2021; Dumont et al., 2017; Hossain, 2021). Green human resource management refers to implementing sustainable environmental practices in HR operations such as recruitment, training, performance evaluation, and employee engagement (Bombiak & Marciniuk-Kluska, 2018; Aldaas et al., 2022). It influences individuals' behaviors, attitudes, awareness, and motivation to promote a more sustainable environment (Arulrajah et al., 2015). The adoption of GHRM techniques advantages both firms and employees by improving employee morale and augmenting productivity (Roscoe et al., 2019). Moreover, attaining sustainable performance is enhanced by fostering a positive environmental ethos about human resources and maintaining a continual sense of accountability for the environmental impacts of their activities (Jabbour & Renwick, 2020). Furthermore, small and medium-sized enterprises (SMEs) are increasingly integrating green human resource management (GHRM) into their operations (Huo et al., 2022), while larger corporations possess the resources to implement sustainable practices (Subramanian & Suresh, 2022). GHRM is integral to sustainability plans due to the significance of SMEs in global economies and the considerable influence their sustainability performance may exert on environmental outcomes (Jerónimo et al., 2020; Ahmad, 2015). Researchers concentrated on GHRM as a modern framework due to its capacity to promote environmentally responsible behavior among employees (Joyce & Vijai, 2020). Moreover, while it is widely acknowledged that human resources are essential for attaining sustainable performance, previous studies have predominantly focused on various HRM approaches to bolster a green sustainability strategy (Labella-Fernández & Martínez-del-Río, 2019). Prior studies indicate that SMEs can markedly enhance their sustainability perfor-

mance through GHRM techniques. By incorporating GHRM into their operating framework, SMEs can reduce waste, improve energy efficiency, and adopt sustainable business practices, mitigating their environmental effect (Zaid et al., 2018).

The literature review highlights the complex interplay among internal and external dynamic capabilities, green human resource practices, and the sustainable performance of SMEs. The integration of internal and external dynamic capabilities is crucial for promoting sustainable practices, while green HR initiatives, including environmentally aware recruitment, training, and development, are essential in instilling sustainability within organizational culture. The extensive review results underscore the vital necessity of synchronizing dynamic capabilities with green HR strategies to effectively improve long-term sustainable performance in SMEs. Therefore, this study endeavors to explore the influence of dynamic capabilities, both internal and external, alongside green human resource practices, on the sustainable performance of SMEs in Bangladesh.

The primary aim of this study is to analyze the critical factors influencing the long-term effectiveness of small and medium-sized enterprises (SMEs) in Bangladesh and India. Figure 1 shows a thorough research framework that guides this exploration. This framework can elucidate the principal elements influencing the long-term performance of SMEs and facilitate a comprehensive knowledge of the dynamics involved in their sustainability practices. This paper formulated the subsequent hypotheses following a meticulous literature review:

- H1: *There is a positive and significant relationship between internal dynamic capabilities and the sustainable performance of SMEs.*
- H2: *There is a positive and significant relationship between external dynamic capabilities and the sustainable performance of SMEs.*
- H3: *There is a positive and significant relationship between green HRM practices and the sustainable performance of SMEs.*

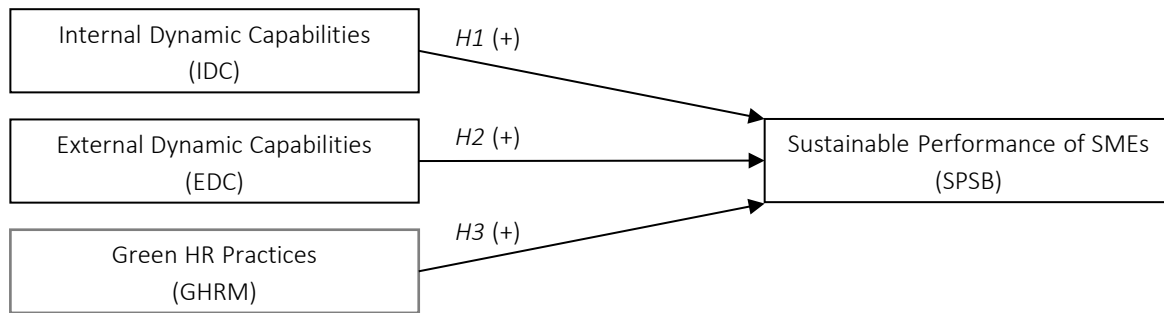


Figure 1. Study framework

2. METHODOLOGY

The study utilized a purposive sampling strategy, a fundamental kind of non-probability sampling in which units are chosen for a specified reason. This method is especially appropriate when the work seeks to investigate or generate novel insights into a poorly comprehended issue. This paper employed a cross-sectional methodology, utilizing a survey questionnaire to collect data from SME employees located in the northern region of Bangladesh and West Bengal, India. Before data collection, an invitation letter was dispatched to the HR department of each chosen SME to solicit approval and identify potential respondents. Data gathering occurred from February to May 2024. Quantitative data for evaluating the proposed model were obtained using mailed and online self-reported surveys. All items in the questionnaire were derived from prior research investigations. A total of 500 questionnaires were disseminated across the selected SME organizations, generating 327 replies, which corresponds to a 65% response rate. Following data cleansing and the elimination of significant outliers, 327 valid responses were available for the study.

The multi-item measurement instruments employed in this investigation were validated in prior research. The constructs were assessed utilizing a 5-point interval rating scale, from 1 (strongly disagree) to 5 (strongly agree). Many methodological and statistical techniques examine the scale development or adoption process. This study uses the “SAFE” methodology for generating or adopting scales. Essential elements examined encompass the construct’s definition, identifying pertinent theory, establishing a clear connection between the construct and theory, and assessing scale vali-

ation and reliability. A preliminary test was undertaken to exclude measures within each construct that inadequately accounted for variation in the pertinent construct. To guarantee the validity and reliability of the measures, advice and recommendations were solicited from field specialists before disseminating the questionnaires. The questionnaire format was developed by existing literature. After that, confirmatory factor analysis was conducted to evaluate the model’s reliability and validity. The hypotheses were subsequently evaluated with SPSS software.

The survey questionnaire was modified from previous studies, incorporating five items for internal dynamic capabilities and five items for external dynamic capabilities from Eikelenboom and de Jong (2019), together with five items for green HRM practices derived from Shoaib et al. (2022).

Table 1 presents a comprehensive demographic profile of employees in small and medium-sized enterprises (SMEs), highlighting workforce composition by age, gender, and education level. Comprehending these demographics is essential for evaluating the attributes and variety of the SME workforce, which can subsequently affect organizational dynamics, employee performance, and strategic decision-making.

The demographic analysis delineates the distribution of employees by age group, gender, and educational attainment, providing an in-depth perspective on workforce composition. The predominant age group among the respondents is 21 to 30 years, representing 37.9% of the entire sample ($n = 124$). This signifies that a considerable segment of the workforce is comparatively youthful. The second largest demographic comprises employees aged

31 to 40 years, accounting for 31.5% ($n = 103$) of the respondents. This indicates a significant representation of mid-career professionals within the workforce. Employees aged 41 to 50 constitute 28.4% ($n = 93$) of the sample, reflecting a very equitable age distribution throughout various employment phases. Merely 2.2% ($n = 7$) of respondents exceed the age of 50, indicating a significant underrepresentation of senior employees in this sample.

Table 1. Demographic information

Characteristics	Number	Percentage (%)
Age (in years)		
From 21 to 30 years	124	37.9%
From 31 to 40 years	103	31.5%
From 41 to 50 years	93	28.4%
More than 50 years	7	2.2%
Gender		
Male	278	85.0%
Female	49	15.0%
Education		
College Diploma	97	29.6%
Bachelor Degree	198	60.6%
Postgraduate Degree	32	9.8%

Note: $n = 327$.

Table 1 illustrates a pronounced gender imbalance, with male employees constituting 85.0% ($n = 278$) and female employees representing only 15.0% ($n = 49$). This disparity indicates a pronounced male predominance within the workforce of the examined SME businesses. Finally, the respondents possess diverse educational backgrounds. A predominant 60.6% ($n = 198$) have a bachelor's degree, indicating a well-educated workforce. Furthermore, 29.6% ($n = 97$) of respondents hold a college diploma, signifying that a considerable segment of the workforce has completed post-secondary education. A minor portion of the workforce, 9.8% ($n = 32$), possesses a postgraduate degree, indicating a restricted representation of those with advanced education.

Table 3. Correlation matrix

Variables	SPSB	IDC	EDC	GRHM
Sustainable Performance of SMEs (SPSB)	1.000			
Internal Dynamic Capabilities (IDC)	0.473**	1.000		
External Dynamic Capabilities (EDC)	0.294**	0.290**	1.000	
Green HR Practices (GHRM)	0.498**	0.399**	0.530**	1.000

Note: ** $p < 0.05$ ($n = 327$).

3. RESULTS AND DISCUSSION

The reliability of the data obtained from the questionnaire was assessed using Cronbach's alpha. An alpha coefficient of at least 0.70 signifies a sufficient level of reliability for this study. The measurement scales are displayed in Table 2.

Table 2. Reliability and validity analysis

Construct	Items	Loading	Cronbach (α) value
Internal Dynamic Capabilities (IDC)	IDC1	0.782	0.863
	IDC2	0.912	
	IDC3	0.707	
	IDC4	0.876	
External Dynamic Capabilities (EDC)	EDC1	0.758	0.736
	EDC2	0.737	
	EDC3	0.897	
	EDC4	0.848	
Green HR Practices (GHRM)	GHRM1	0.837	0.738
	GHRM2	0.864	
	GHRM3	0.707	
Sustainable Performance of SMEs (SPSB)	SPSB1	0.943	0.809
	SPSB2	0.913	
	SPSB3	0.862	
	SPSB4	0.772	

Table 3 displays the correlation matrix illustrating the associations between the dependent variable, sustainable performance of SMEs, and the three independent variables: internal dynamic capabilities, external dynamic capabilities, and green HR practices. Sustainable performance of SMEs exhibits a modest positive connection with internal dynamic capabilities, as evidenced by a correlation coefficient of 0.473, which is significant at the 0.05 level. This indicates that enhancements in internal dynamic capacities inside SMEs correlate with increased sustainable performance. The correlation between the sustainable performance of SMEs and external dynamic capabilities is reduced yet still positive, with a value of 0.294, which is significant at the 0.05 level. This suggests

that external dynamic capabilities correlate positively with sustained performance. However, the intensity of this association is less robust than that of internal capabilities. Green HR practices exhibit the most robust positive link with sustainable performance of SMEs, evidenced by a coefficient of 0.498, significant at the 0.05 level. This indicates that adopting green HR practices significantly enhances the sustainable performance of SMEs. The findings demonstrate that all three independent variables – internal dynamic capabilities, external dynamic capabilities, and green HR practices – positively correlate with sustainable performance, with green HR practices displaying the most robust association.

Table 4. Regression coefficient analysis

Variables	β value	t value	Sig.	Tolerance	VIF
IDC	0.384	6.947	0.000**	0.847	2.114
EDC	0.498	5.093	0.000**	0.983	1.743
GHRM	0.246	2.847	0.000**	0.456	2.005

Note: $R^2 = 0.389$ or 38.9%. Durbin Watson value = 2.074. Dependent variable: Sustainable Performance of SMEs (SPSB). * $p < 0.10$; ** $p < 0.05$ ($n = 327$).

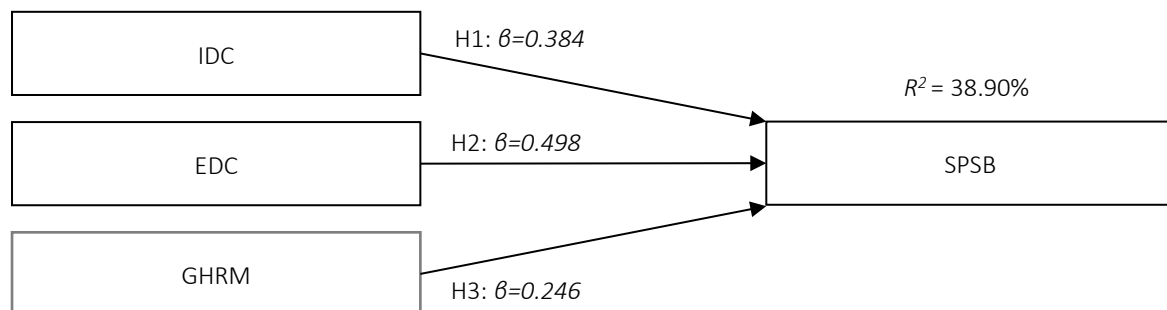
Table 4 displays the outcomes of a regression coefficient analysis evaluating the influence of multiple independent variables on the dependent variable, sustainable performance of SMEs. The independent variables comprise internal dynamic capabilities, external dynamic capabilities, and green HR practices. The β values signify the magnitude and orientation of the associations between the independent variables and sustainable performance of SMEs. Internal dynamic capabilities ($\beta = 0.384$, $t = 6.947$, $p < 0.05$) and external dynamic capabilities ($\beta = 0.498$, $t = 5.093$, $p < 0.05$) both ex-

hibit robust positive correlations with sustainable performance of SMEs. In contrast, green HR practices ($\beta = 0.246$, $t = 2.847$, $p < 0.05$) demonstrate a moderate positive effect. All independent variables exhibit statistical significance, with p -values beneath 0.05.

Multicollinearity was assessed by tolerance values and the variance inflation factor (VIF). Internal dynamic capabilities (Tolerance = 0.847, VIF = 2.114), external dynamic capabilities (Tolerance = 0.983, VIF = 1.743), and green HR practices (Tolerance = 0.456, VIF = 2.005) all remain within acceptable thresholds, indicating that multicollinearity is not a concern in this model. The model explains 38.9% of the variance in sustainable performance of SMEs ($R^2 = 0.389$), signifying a modest degree of explanatory efficacy. The Durbin-Watson value of 2.074 indicates the absence of significant autocorrelation in the residuals, affirming the model's trustworthiness.

Hypothesis 1, which asserts that internal dynamic capabilities positively and significantly influence the sustainable performance of SMEs, is validated at the 5% significance level ($\beta = 0.384$; $p < 0.05$). These results correspond with prior research that internal capabilities augment employee engagement in sustainability initiatives, and SMEs with strong internal systems that facilitate these goals typically exhibit elevated levels of employee participation in sustainability activities (Vu, 2020; Hossain & Asheq, 2019).

The regression analysis results at the 5% significance level ($\beta = 0.498$; $p < 0.05$) substantiate the



Note: IDC = internal dynamic capabilities; EDC = external dynamic capabilities; GHRM = green human resource management; SPSB = sustainable performance of SMEs.

Figure 2. Regression results

second hypothesis, which posits that external dynamic capabilities directly improve the sustainable performance of SMEs. This study indicates that employees are significantly driven by external variables. This finding corresponds with current research, which emphasizes the significance of external dynamic capacities (Al Asheq & Hossain, 2019; Ara, 2021). These skills are defined by resources, expertise, and strategic alliances acquired from external sources, which are essential for enhancing the SME's capacity to attain enduring environmental, social, and economic sustainability (Adebanjo et al., 2018; Hockerts & Wustenhagen, 2010).

In addition, the third hypothesis examines the correlation between green human resource management practices and the sustainable performance of small and medium-sized enterprises (Zayed et al., 2022). The regression analysis results validate a positive and statistically significant correlation between green HR practices and sustainable performance, with the hypothesis accepted at the 5% significance level ($\beta = 0.246$; $p < 0.05$). This conclusion underscores that green HR practices are a pivotal element influencing the sustainable performance of SMEs. The findings correspond with previous research indicating that SMEs can markedly enhance their sustainability performance by incorporating green HR techniques into their operational structures (Singh et al., 2020). Green HR promotes the integration of eco-friendly practices inside the organization, including waste reduction, enhancement of energy efficiency, and the implementation of sustainable business processes. These techniques assist SMEs in improving operational efficiency while minimizing environmental impact, hence aligning with overarching sustainability objectives (Zaid et al., 2018).

Moreover, green HR practices enhance employee involvement in sustainability initiatives, including energy conservation efforts, waste minimization programs, and corporate social responsibility (CSR) activities, which collectively advance the organization's sustainable objectives. In the realm of SMEs, where resources are frequently constrained, green HR practices are essential for integrating sustainability into

the organizational culture, aligning employee conduct with environmental goals, and fostering long-term sustainable growth (Awwad Al-Shammari et al., 2022; Islam, 2024). By cultivating a staff that is both cognizant of and actively engaged in sustainability objectives, SMEs can improve their environmental performance and competitiveness in a market that increasingly prioritizes sustainability. The growing global focus on sustainability has compelled SMEs to explore elements that can enhance their environmental practices while maintaining competitiveness and long-term profitability. This alteration signifies a broader recognition of the imperative to align corporate activities with environmental responsibilities, ensuring that sustainability is integral to their strategic objectives.

When leaders allocate substantial resources to green initiatives and employee development, SMEs may face financial risks. Nevertheless, the majority of individuals perceive these hazards as transient. Enhanced financial returns and higher stock market performance are achievable with sustained long-term sustainability efforts. Entrepreneurial firms typically prioritize seeking new opportunities to advance their offerings ahead of the competition. These enterprises may enhance their financial success by eliminating superfluous processes and optimizing their life cycle stages.

Furthermore, the sustainable performance of SMEs is profoundly impacted by environmentally friendly human resource practices. These approaches encompass green job analysis and descriptions, sustainable personnel recruiting, training, environmental incentives, green performance assessment, green teams, and the advancement of a green work-life balance. The study's findings underscore the importance of SMEs implementing a comprehensive strategy for sustainability, integrating internal resources and external elements to achieve sustainable outcomes. Further research is necessary to formulate tailored policies and legislation that address the unique requirements of Bangladeshi and Indian SMEs in their quest for sustainability, thereby enhancing their contributions to national and international sustainability objectives.

CONCLUSION

This study seeks to examine the influence of dynamic capabilities, both internal and external, along with green human resource practices on the sustainable performance of SMEs in Bangladesh. This empirical study examines the primary factors influencing the sustainable performance of Bangladeshi and Indian SMEs, highlighting several critical variables that bolster their sustainability endeavors. The paper indicates that both internal and external dynamic skills, along with green HRM, are essential in shaping the sustainability strategies of SMEs in Bangladesh and India. Conversely, the regression analysis indicates that these three factors accounted for 38.9% of the sustainable performance of SMEs in Bangladesh and India. The performance and competitive advantage of these enterprises are significantly influenced by these characteristics, which also affect the adoption of sustainable practices. The findings indicate that fostering long-term sustainable performance necessitates the previously listed aspects. In response to the increasing importance of environmental issues for corporate success, small and medium-sized enterprises in both developed and developing nations have intensified their efforts to understand the critical factors influencing sustainable business performance.

Policymakers may leverage the study's actionable insights by pinpointing the essential factors influencing sustainable performance in SMEs. It underscores the imperative for governmental policies and initiatives that promote and enable small and medium-sized enterprises to adopt sustainable business practices. The government can aid SMEs in Bangladesh and India in surmounting challenges to sustainable practices by formulating specific policies, providing financial incentives, and delivering technical help. This study underscores the importance of integrating sustainability into core business operations for managers of small and medium-sized firms. Evidence indicates that implementing green human resource management strategies, developing adaptable skills, and aligning with ecological objectives enhance competitive advantage and promote sustainability. Utilizing these insights, managers can formulate long-term strategies that enhance resource efficiency, foster creativity, and promote environmental stewardship, thus safeguarding the resilience and financial viability of their enterprises. A green entrepreneurial mindset profoundly influences social, financial, and environmental results. Companies can utilize their adaptive capabilities to capitalize on market possibilities by embracing a sustainable entrepreneurial mindset. Organizations must present instances of exemplary teams committed to sustained skill enhancement via training and interdepartmental learning while also instructing their staff on the principles of a green entrepreneurial mindset. Given that this is the sole method for firms to endure and expand sustainably, particularly in developing nations such as Bangladesh and India, business leaders are encouraged to engage in long-term strategic planning for green innovation. SME owners must have the skills necessary to identify and capitalize on business opportunities to guide their teams in reaching sustainable objectives. Firms must prioritize and advocate for green leadership attributes to integrate green HRM practices.

AUTHOR CONTRIBUTIONS

Conceptualization: Md. Atikur Rahaman, Rupali Dilip Taru.

Data curation: Md. Atikur Rahaman, Rupali Dilip Taru.

Formal analysis: Issa Ahammad, Uma Durgude, Imad Ali.

Funding acquisition: Issa Ahammad, Uma Durgude, Imad Ali.

Investigation: Md. Atikur Rahaman, Rupali Dilip Taru.

Methodology: Md. Atikur Rahaman, Rupali Dilip Taru.

Project administration: Issa Ahammad, Uma Durgude, Imad Ali.

Resources: Issa Ahammad, Uma Durgude.

Software: Rupali Dilip Taru.

Supervision: Md. Atikur Rahaman, Rupali Dilip Taru, Issa Ahammad.

Validation: Issa Ahammad, Uma Durgude, Imad Ali.

Visualization: Issa Ahammad, Uma Durgude, Imad Ali.

Writing – original draft: Md. Atikur Rahaman, Rupali Dilip Taru.

Writing – review & editing: Md. Atikur Rahaman, Rupali Dilip Taru, Issa Ahammad, Uma Durgude, Imad Ali.

REFERENCES

- Adebanjo, D., Teh, P. L., & Ahmed, P. K. (2018). The impact of supply chain relationships and integration on innovative capabilities and manufacturing performance: The perspective of rapidly developing countries. *International Journal of Production Research*, 56(4), 1708-1721. <https://doi.org/10.1080/00207543.2017.1366083>
- Ahmad, S. (2015). Green human resource management: Policies and practices. *Cogent Business & Management*, 2(1), Article 1030817. <https://doi.org/10.1080/23311975.2015.1030817>
- Ahmed, M., Guo, Q., Qureshi, M. A., Raza, S. A., Khan, K. A., & Salam, J. (2021). Do green HR practices enhance green motivation and proactive environmental management maturity in hotel industry? *International Journal of Hospitality Management*, 94, Article 102852. <https://doi.org/10.1016/j.ijhm.2020.102852>
- Al Asheq, A., & Hossain, M. U. (2019). SME performance: Impact of market, customer and brand orientation. *Academy of Marketing Studies Journal*, 23(1), 1-9. Retrieved from <https://www.abacademies.org/articles/sme-performance-impact-of-market-customer-and-brand-orientation-7824.html>
- Aldaas, R., Mohamed, R., Hareeza Ali, M., & Ismail, N. A. (2022). Green supply chain management and SMEs environmental performance: Green HRM practices as antecedent from service sector of emerging economy. *International Journal of Emergency Services*, 11(3), 422-444. <https://doi.org/10.1108/IJES-12-2021-0085>
- Ara, J. (2021). A study on funding and financial strategy followed by women entrepreneurs: A new way to entrepreneurial growth of Bangladesh. *Bangladesh Journal of Multidisciplinary Scientific Research*, 4(1), 1-13. <https://doi.org/10.46281/bjmsr.v4i1.1261>
- Arulrajah, A. A., Opatha, H. H. D. N. P., & Nawaratne, N. N. J. (2015). Green human resource management practices: A review. *Journal of Human Resource Management*, 5(1), 1-16. <https://doi.org/10.4038/sljhrm.v5i1.5624>
- Awwad Al-Shammari, A. S., Alshammrei, S., Nawaz, N., & Tayyab, M. (2022). Green human resource management and sustainable performance with the mediating role of green innovation: A perspective of new technological era. *Frontiers in Environmental Science*, 10, Article 901235. <http://dx.doi.org/10.3389/fenvs.2022.901235>
- Bombiak, E., & Marciniuk-Kluska, A. (2018). Green human resource management as a tool for the sustainable development of enterprises: Polish young company experience. *Sustainability*, 10(6), Article 1739. <https://doi.org/10.3390/su10061739>
- Boons, F., & Lüdeke-Freund, F. (2013). Business models for sustainable innovation: State-of-the-art and steps towards a research agenda. *Journal of Cleaner Production*, 45, 9-19. <https://doi.org/10.1016/j.jclepro.2012.07.007>
- Bowman, C., & Ambrosini, V. (2003). How the resource-based and the dynamic capability views of the firm inform corporate-level strategy. *British Journal of Management*, 14(4), 289-303. <https://doi.org/10.1111/j.1467-8551.2003.00380.x>
- Choi, J. N. (2006). Multilevel and cross-level effects of workplace attitudes and group member relations on interpersonal helping behavior. *Human Performance*, 19(4), 383-402. https://doi.org/10.1207/s15327043hup1904_4
- Chuang, S. P., & Huang, S. J. (2018). The effect of environmental corporate social responsibility on environmental performance and business competitiveness: The mediation of green information technology capital. *Journal of Business Ethics*, 150, 991-1009. <https://doi.org/10.1007/s10551-016-3167-x>
- Collier, J., & Esteban, R. (2007). Corporate social responsibility and employee commitment. *Business Ethics: A European Review*, 16(1), 19-33. <https://doi.org/10.1111/j.1467-8608.2006.00466.x>
- Dangelico, R. M., Pujari, D., & Pontrandolfo, P. (2017). Green product innovation in manufacturing firms: A sustainability-oriented dynamic capability perspective. *Business Strategy and the Environment*, 26(4), 490-506. <https://doi.org/10.1002/bse.1932>
- Dumont, J., Shen, J., & Deng, X. (2017). Effects of green HRM practices on employee workplace green behavior: The role of psychological green climate and employee green values. *Human Resource Management*, 56(4), 613-627. <https://doi.org/10.1002/hrm.21792>
- Eikelenboom, M., & de Jong, G. (2019). The impact of dynamic capabilities on the sustainability performance of SMEs. *Journal of Cleaner Production*, 235, 1360-1370. <https://doi.org/10.1016/j.jclepro.2019.07.013>
- Fabrizio, C. M., Kaczam, F., de Moura, G. L., da Silva, L. S. C. V., da Silva, W. V., & da Veiga, C. P. (2022). Competitive advantage and dynamic capability in small

- and medium-sized enterprises: A systematic literature review and future research directions. *Review of Managerial Science*, 16(3), 617-648. <https://doi.org/10.1007/s11846-021-00459-8>
19. Hockerts, K., & Wüstenhagen, R. (2010). Greening Goliaths versus emerging Davids – Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. *Journal of Business Venturing*, 25(5), 481-492. <https://doi.org/10.1016/j.jbusvent.2009.07.005>
 20. Hossain, F. (2021). A study of women manager's success factors in multinational organization – From Bangladesh perspective. *Bangladesh Journal of Multidisciplinary Scientific Research*, 3(2), 28-40. <https://doi.org/10.46281/bjmsr.v3i2.1196>
 21. Hossain, M. U., & Asheq, A. A. (2019). The role of entrepreneurial orientation to SME performance in Bangladesh. *International Journal of Entrepreneurship*, 23(1), 1-6. Retrieved from <https://ideas.repec.org/a/ris/ijentr/0090.html>
 22. Huo, X., Azhar, A., Rehman, N., & Majeed, N. (2022). The role of green human resource management practices in driving green performance in the context of manufacturing SMEs. *Sustainability*, 14(24), Article 16776. <https://doi.org/10.3390/su142416776>
 23. Imran, R., Alraja, M. N., & Khasab, B. (2021). Sustainable performance and green innovation: Green human resources management and big data as antecedents. *IEEE Transactions on Engineering Management*, 70(12), 4191-4206. Retrieved from <https://ieeexplore.ieee.org/document/9562550>
 24. Islam, M. (2024). Organizational Effectiveness For Accounting In-Formation System Practice: A Study On Some Select-Ed Ready-Made Garments Factories Of Chattogram In Bangladesh. *Bangladesh Journal of Multidisciplinary Scientific Research*, 9(4), 49-58. <https://doi.org/10.46281/bjmsr.v9i4.2247>
 25. Jabbour, C. J., & Renwick, D. (2020). Guest editorial: Organizations as catalysts of sustainable development: greening the workforce for responsible management in the 21st century. *International Journal of Manpower*, 41(7), 833-844. <https://doi.org/10.1108/IJM-10-2020-558>
 26. Jahan, S. (2023). A study on electronic human resource management (E-HRM) practices in apex footwear limited. *Bangladesh Journal of Multidisciplinary Scientific Research*, 8(1), 27-33. <https://doi.org/10.46281/bjmsr.v8i1.2162>
 27. Jerónimo, H. M., Henriques, P. L., de Lacerda, T. C., da Silva, F. P., & Vieira, P. R. (2020). Going green and sustainable: The influence of green HR practices on the organizational rationale for sustainability. *Journal of Business Research*, 112, 413-421. <https://doi.org/10.1016/j.jbusres.2019.11.036>
 28. Joyce, M. D., & Vijai, C. (2020). A theoretical study on green human resource management (GHRM): An innovative practice for organizational sustainability. *European Journal of Molecular & Clinical Medicine*, 7(11). Retrieved from https://www.researchgate.net/publication/348351671_A_Theoretical_Study_on_Green_Human_Resource_Management_Ghrm_An_Innovative_Practice_for_Organizational_Sustainability
 29. Klewitz, J., & Hansen, E. G. (2014). Sustainability-oriented innovation of SMEs: A systematic review. *Journal of Cleaner Production*, 65, 57-75. <https://doi.org/10.1016/j.jclepro.2013.07.017>
 30. Labella-Fernández, A., & Martínez-del-Río, J. (2022). Green human resource management. In *Responsible Consumption and Production* (pp. 312-323). Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-95726-5_113
 31. Nedzinskas, Š., Pundzienė, A., Buožiūtė-Rafanavičienė, S., & Pilkienė, M. (2013). The impact of dynamic capabilities on SME performance in a volatile environment as moderated by organizational inertia. *Baltic Journal of Management*, 8(4), 376-396. <http://dx.doi.org/10.1108/BJM-01-2013-0003>
 32. O'Connor, G. C. (2008). Major innovation as a dynamic capability: A systems approach. *Journal of Product Innovation Management*, 25(4), 313-330. <https://doi.org/10.1111/j.1540-5885.2008.00304.x>
 33. Rayhan, M. J., Rahman, S. M., Mamun, A. A., Saif, A. N. M., Islam, K. M. A., Alom, M. M., & Hafiz, N. (2024). FinTech solutions for sustainable agricultural value chains: A perspective from small-holder farmers. *Business Strategy & Development*, 7(2), Article e358. <https://doi.org/10.1002/bsd2.358>
 34. Renwick, D. W., Redman, T., & Maguire, S. (2013). Green human resource management: A review and research agenda. *International journal of management reviews*, 15(1), 1-14. <https://doi.org/10.1111/j.1468-2370.2011.00328.x>
 35. Reuter, C., Foerstl, K. A. I., Hartmann, E. V. I., & Blome, C. (2010). Sustainable global supplier management: The role of dynamic capabilities in achieving competitive advantage. *Journal of Supply Chain Management*, 46(2), 45-63. <https://doi.org/10.1111/j.1745-493X.2010.03189.x>
 36. Roscoe, S., Subramanian, N., Jabbar, C. J., & Chong, T. (2019). Green human resource management and the enablers of green organisational culture: Enhancing a firm's environmental performance for sustainable development. *Business Strategy and the Environment*, 28(5), 737-749. <https://doi.org/10.1002/bse.2277>
 37. Sharif, M. A., Rahman, M. A., & Mallik, M. R. (2022). Investigating the effect of Covid-19 on human resource management and non-financial job satisfaction: Empirical evidence from the RMG sector of Bangladesh. *Bangladesh Journal of Multidisciplinary Scientific Research*, 5(1), 14-20. <https://doi.org/10.46281/bjmsr.v5i1.1774>
 38. Shoaib, M., Nawal, A., Zámečník, R., Korsakienė, R., & Rehman, A. U. (2022). Go green! Measuring the factors that influence sustainable performance. *Journal of Cleaner Production*, 366, Article

132959. <https://doi.org/10.1016/j.jclepro.2022.132959>
39. Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological Forecasting and Social Change*, 150, Article 119762. <https://doi.org/10.1016/j.techfore.2019.119762>
40. Subramanian, N., & Suresh, M. (2022). The contribution of organizational learning and green human resource management practices to the circular economy: A relational analysis – Evidence from manufacturing SMEs (part II). *The Learning Organization*, 29(5), 443-462. <https://doi.org/10.1108/TLO-06-2022-0068>
41. Vu, H. M. (2020). A review of dynamic capabilities, innovation capabilities, entrepreneurial capabilities and their consequences. *The Journal of Asian Finance, Economics and Business*, 7(8), 485-494. <https://doi.org/10.13106/jafeb.2020.vol7.no8.485>
42. Wilson, H., & Daniel, E. (2007). The multi-channel challenge: A dynamic capability approach. *Industrial Marketing Management*, 36(1), 10-20. <https://doi.org/10.1016/j.indmarman.2006.06.015>
43. Zaid, A. A., Bon, A. T., & Jaaron, A. A. (2018). Green human resource management bundle practices and manufacturing organizations for performance optimization: A conceptual model. *International Journal of Engineering & Technology*, 7(3.20), 87-91. <https://doi.org/10.14419/ijet.v7i3.20.18986>
44. Zan, F., Leong, Y. C., Ismail, N. A., Chu, M., Saif, A. N. M., & Islam, K. M. A. (2024). Knowledge sharing and innovation performance: The mediating role of open innovation. *Global Business and Organizational Excellence*, 43(3), 32-45. <https://doi.org/10.1002/joe.22235>
45. Zayed, N. M., Mohamed, I. S., Islam, K. M. A., Perevozova, I., Nitsenko, V., & Morozova, O. (2022). Factors influencing the financial situation and management of small and medium enterprises. *Journal of Risk and Financial Management*, 15(12), Article 554. <https://doi.org/10.3390/jrfm15120554>