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From green intentions to financial performance: assessing the influence of green HRM within Turkish SMEs

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Abstract

Purpose – This study aims to explore the effect of green human resource management (GHRM) on employees' pro-environmental behaviors. Furthermore, it explores the mediating role of employees' pro-environmental performance in the relationship between GHRM and firms' social performance. Finally, it tests a sequential mediation model that presents the indirect effects of GHRM practices on firms' financial performance via employees' task-related and proactive pro-environmental behaviors and firms' social performance.

Design/methodology/approach – Data were collected from 945 small- and medium-sized enterprises (SMEs) in Türkiye. Structural equation modeling was conducted using MPlus software.

Findings – The results confirmed that GHRM has a significant indirect effect on firms' financial performance via employees' task-related and proactive pro-environmental behaviors and firms' social performance.

Practical implications – The results imply that SMEs should invest in GHRM practices to appraise employees' task-related and proactive pro-environmental behaviors and align their approach to pro-environmental behaviors. SMEs should provide a workplace environment that encourages and motivates employees to engage in green activities and contribute to environmental management.

Originality/value – This study shows that employees' task-related and proactive pro-environmental behaviors are critical to GHRM and firms' social performance. Furthermore, the study brings new empirical evidence to the field of GHRM in the under-researched Turkish SMEs context.

Keywords Social exchange theory, Resource-based theory, Green human resource management, SMEs, Employees' pro-environmental behaviors, Türkiye, Firms' pro-environmental performance

Paper type Research paper

Introduction

Sustainability strategies are becoming critical for companies, driven by several key factors. Investor demand for environmental, social and governance (ESG) considerations has intensified, with ESG ratings increasingly shaping investment decisions on a global scale. Specifically, 27% of institutional investors in Europe placed importance on ESG ratings when deciding investment actions, followed by Canada at 25% and the USA at 17% (Statistica, 2024a), reinforcing the prevalence of sustainability metrics in driving allocation of capital. The other significant driver is the changing consumer preferences, with 82% of consumers willing to pay more for sustainable packaging (Statista, 2024b) and 72% of Gen Z respondents in the Asia–Pacific region are ready to pay a premium for sustainable products (Statista, 2024c), which indicates the significant commitment towards environmental responsibility. Another key driver is regulatory pressure, such as the European Green Deal, which gets

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signatory countries to commit to pushing companies to adopt sustainable practices in order to stay compatible and maintain positive trade relations. Moreover, Doherty *et al.* (2023) highlight that integrating sustainability into core business strategies can significantly improve profitability metrics, given that companies performing well on both revenue growth and ESG fronts outperformed their sector peers in total shareholder returns. As a result of these market forces and regulatory pressures come together, sustainability is no longer an add-on business initiative, but are vital to the long-term business strategy to remain competitive in the fast-moving global landscape. The indications for the future point to the ongoing importance of decarbonization (Loughlin, 2025), circular economy (Cai and Choi, 2020) and sustainability in supply chains (Setyadi *et al.*, 2025) which shape corporate priorities for sustainability for years to come.

Within sustainability strategies, green human resource management (GHRM) goes beyond traditional human resource practices by directly aligning HRM with environmental objectives, showcasing its tangible impact on both organizational sustainability and societal well-being. Global companies (such as Google, Coca-Cola, Nestle, Unilever, GE and Starbucks) have already made significant efforts towards pursuing GHRM (Gutiérrez-Broncano *et al.*, 2022), which is emerging as an essential tool for effectively implementing green strategies and enhancing firms' environmental performance (Chen and Wu, 2022; Munawar *et al.*, 2022; Pham *et al.*, 2020; Ren *et al.*, 2017). It is defined as a set of HRM activities aimed at enhancing both employees' and firms' environmental performance (Kramar, 2014, p. 1075). GHRM practices include motivating employees, promoting green behavior, developing green abilities and cultivating an ecological climate within the organization (Munawar *et al.*, 2022; Paulet *et al.*, 2021; Ye *et al.*, 2022).

Although the relationship between GHRM and employees' pro-environmental behaviors has emerged as a prominent topic in GHRM research (Chen and Wu, 2022; Molina-Azorin *et al.*, 2021), further studies are needed to provide robust empirical evidence for such linkage (Awan *et al.*, 2023; Chaudhary, 2020; Chen and Wu, 2022; Dumont *et al.*, 2017; Marrucci *et al.*, 2021; Pinzone *et al.*, 2019; Rubel *et al.*, 2021). Scholars suggest that GHRM studies should focus on understanding how GHRM influences employees' pro-environmental behaviors and practices (Chaudhary, 2020; Dumont *et al.*, 2017; Renwick *et al.*, 2016). More studies are needed to explore the mediating variables in such relationships (Chaudhary, 2020; Chen and Wu, 2022). Furthermore, researchers have called for new studies in different contexts, such as various industrial, organizational and cultural settings (Dessouky and Alquaiti, 2021; Kim *et al.*, 2019; Obeidat *et al.*, 2020; Pham *et al.*, 2020; Sabokro *et al.*, 2021). These include the emerging economies' context, where research focuses on different factors of GHRM (Haldorai *et al.*, 2022). Emerging economies are critical to sustainability and green initiatives because they confront considerable environmental concerns while pursuing economic growth. As these countries attempt to strike a balance between economic growth and environmental responsibility, implementing green initiatives becomes critical for long-term viability (Tariq *et al.*, 2024). GHRM can help businesses in these economies become more sustainable and competitive globally (Aftab and Veneziani, 2024; Rana and Arya, 2024)

This study focuses on Turkish SMEs and aims to bring new perspectives to the linkages between GHRM practices and employees' pro-environmental behaviors within the context of an emerging economy, which is regularly emphasized on by the scholars (see Hameed *et al.*, 2020; Molina-Azorin *et al.*, 2021; Mukherji and Bhatnagar, 2022; Pham *et al.*, 2020; Ye *et al.*, 2022). Studying emerging economies illuminates different theoretical and practical perspectives (Ceyhan and Barca, 2023), where macro policies within a country may impact the adoption of environmental practices, influenced by country-specific factors such as its commitment to green growth and sustainability (Bassi and Dias, 2019).

Focusing on the green transformation efforts of Turkish SMEs is important because SMEs account for over 99% of enterprises in Türkiye, which employ more than 78% of the country's workforce. SMEs contribute to approximately 65% of the national turnover and account for 60% of total exports. However, SMEs face various challenges that can restrain their ability to implement modern management techniques effectively, ultimately impacting their competitiveness. Green transformation which encompasses initiatives like GHRM is among these, posing unique challenges specific to SMEs. Furthermore, as Türkiye signed the Green Deal and pledged to reduce its greenhouse emissions by half by 2035, it is expected that institutional commitment to the environment will impact all businesses operating in Türkiye, influencing firms' sourcing decisions and production processes. Reducing the carbon footprint entails various challenges and barriers that are contingent upon the unique resources and capabilities of each firm. This problem is even greater for SMEs, given that they have limited resources and increased constraints, compared with larger firms (García-Quevedo *et al.*, 2020; O'Donohue and Torugsa, 2016; Uzkurt *et al.*, 2024). It is valuable to study how SMEs and their employees in emerging countries adopt green practices, especially as Türkiye moves towards a more environmentally sustainable economy. Given the numerous obstacles that SMEs encounter during such a transition, this research can offer crucial contributions to the field.

Building on the resource-based theory (RBT) and social exchange theory (SET), this study aims to present an integrated framework to highlight the mechanism between GHRM and a firm's financial performance by conducting structural equation modeling (SEM) with the variables GHRM, employees' pro-environmental behaviors, firms' social performance and firms' financial performance. In doing so, this study makes several contributions to the literature on GHRM and firm performance. First, it offers a further explanation of how GHRM contributes to firm's financial performance directly. Even though there is a great amount of evidence on the influence of HRM and financial performance, there is a scarcity of evidence about the link between GHRM and financial performance. Second, the study explains the mediating roles of firms' social performance and employees' pro-environmental behaviors in the relationship between GHRM and firms' financial performance (Ye *et al.*, 2022).

Another critical contribution of the study is examining the influence of GHRM on SMEs' performance through two separate concepts: employees' task-related and proactive pro-environmental behaviors and social performance (Bissing-Olson *et al.*, 2013). Task-related pro-environmental behavior refers to the extent to which individuals engage in environmentally friendly actions as part of their required work tasks or job responsibilities (Bissing-Olson *et al.*, 2013). This behavior involves completing work tasks in ways that minimize harm to the environment (Bissing-Olson *et al.*, 2013). It can include actions such as conserving resources, reducing waste, using sustainable materials and implementing environmentally friendly practices in the workplace (Sabbir and Taufique, 2022). On the other side, proactive pro-environmental behavior refers to the voluntary and self-initiated actions employees take to protect and preserve the environment beyond what is required or expected of them (Bissing-Olson *et al.*, 2013). It goes beyond required work tasks and reflects an individual's personal commitment to environmental sustainability (Bissing-Olson *et al.*, 2013). This behavior involves taking the initiative to engage in environmentally friendly actions and making conscious choices to reduce environmental impact. Examining the two dimensions of pro-environmental behaviors highlights the exact mechanism between GHRM and SME performance. By doing so, this study answers the call for research on GHRM's impact on SMEs' social and financial performance, considering both internal and external dimensions (Ye *et al.*, 2022).

The remainder of the article is structured as follows. First, we provide the theoretical background that connects GHRM, employees' pro-environmental behaviors and firms' social and financial performances. The theoretical discussion builds on the hypotheses tested by using cross-sectional data from Turkish SMEs. This article then presents the methods adopted for this analysis. Next, the results are presented, followed by a discussion. Finally, the implications, future research directions and conclusions are discussed.

Theoretical background

This study ultimately aims to examine the influence of GHRM on firms' financial and social performance. To achieve this aim, this research leverages the RBT and SET, building an integrated framework to explore the connections between GHRM, employees' pro-environmental behaviors, social and financial performance of the firm.

RBT suggests that a firm's unique bundle of resources, including tangible and intangible assets, can enable it to achieve sustainable competitive advantage by creating value that is difficult for competitors to replicate (e.g. Barney, 1991). In the current study, drawing on RBT, GHRM practices and employees are proposed as crucial assets, akin to any other resources within a firm. Within this perspective, GHRM practices are to foster the development, motivation and the creation of employees' pro-environmental behaviors ultimately contributing to the firm's sustained competitive advantage and overall performance (Boxall and Steeneveld, 1999).

The study also builds on the SET perspective. According to the literature on environmental studies, employees' pro-environmental behavior is critical for firms to improve their environmental performance and sustainability (Paillé *et al.*, 2023). Drawing on the SET perspective, researchers suggest that organizations can improve employees' pro-environmental behavior through a social exchange process (Amrutha and Geetha, 2021; Cai *et al.*, 2020; Kim *et al.*, 2020). Blau's (1964) definition of social exchange includes unspoken terms such as discretionary benefits, whereas Aryee *et al.* (2012) assert that it entails a long-term exchange of services, providing a conceptual framework for studying employee attitudes and behaviors. In this respect, SET has been used to explain the critical association between employees' collaboration, cooperation and organizational learning and innovation (Hayton *et al.*, 2013). SET assumes that if employees receive tangible or intangible benefits for their performance on job-related or unrelated activities, they may respond by enhancing their performance (Aboramadan, 2022).

Using the SET framework, the literature demonstrates the crucial role of firms' support and commitment in shaping employees' pro-environmental behaviors (Bhatti *et al.*, 2022; Paillé *et al.*, 2023). Particularly, if a firm implements GHRM practices such as environmental training and education, environmental protection policies and initiatives, green staffing and green rewards and performance measurement systems, it can establish consistent communication and build trust among its members. Consequently, employees will demonstrate higher pro-environmental behavior and express a desire for their firm to achieve improved environmental and social outcomes (Umrani *et al.*, 2020).

The integration of the RBT and SET in this study allows for a comprehensive understanding of how GHRM practices influence a firm's financial performance. The RBT provides insights into how GHRM practices create core competencies, and the SET helps elucidate the social exchanges underlying the relationship between GHRM, employees' pro-environmental behaviors and firm's social and financial performance. By including the mediating role of pro-environmental behavior in this relation, this study acknowledges the role of environmentally conscious actions and practices in shaping GHRM-related core competencies within the organization. This integrated framework underscores the importance of integrating environmental sustainability into the organizational culture and strategy, driven by social exchanges among organizational actors. Drawing on the RBT and the SET, this study examines the impact of GHRM on firm performance. Specifically, the SET provides a foundation to devise the mediated relationship among GHRM, employees' pro-environmental behaviors, firms' social performance and firms' financial performance.

Hypothesis development

GHRM and financial performance

GHRM focuses on increasing employees' awareness and understanding of environmental issues to improve their firms' environmental performance (Paillé and Mejía-Morelos, 2014;

Ren and Hussain, 2022). GHRM incorporates environmental norms into HR practices, such as recruitment, training and development, performance management and rewards and promotions (Chaudhary, 2020; Guerci and Carollo, 2016; Munawar *et al.*, 2022; Saeed *et al.*, 2019; Ye *et al.*, 2022). Previous research has demonstrated that GHRM can positively affect various environmental outcomes, including green commitment, green behavior, organizational citizenship behavior for the environment, green climate and overall environmental performance (Awan *et al.*, 2023; Dessouky and Alquaiti, 2021; Pham *et al.*, 2020; Saeed *et al.*, 2019). However, there is a scarcity in exploring the influence of GHRM on firm's financial performance. Drawing on the RBT, we expect that as an internal resource, GHRM will help firms to generate a sustainable competitive advantage that eventually reflects on their financial performance. By increasing employees' awareness and knowledge of environmental issues, GHRM can promote a culture of environmental responsibility and innovation, leading to improvements in operational efficiency, cost savings through resource conservation, enhanced brand reputation and access to new markets or customers who prioritize sustainability. Additionally, as SMEs increasingly face pressure to adopt environmentally sustainable practices, those with effective GHRM strategies are better positioned to meet these demands while simultaneously gaining a competitive edge. Moreover, by aligning HR practices with environmental objectives, firms can attract and retain top talent, enhance employee morale and productivity and mitigate risks associated with environmental non-compliance or reputational damage.

Therefore, we propose the following hypotheses, positing that GHRM serves as an internal resource that can contribute to their financial performance.:

H1. GHRM positively predicts firms' financial performance.

Mediating role of social performance

As the aim of the study is to examine the influence of GHRM on a firm financial performance, one of the critical aims of the study is to highlight the paths of the influence of GHRM on financial performance. In the literature of GHRM, studies showed that practices such as performance evaluation and promotion, participation and empowerment, green climate, green staffing, green compensation, green education, training and development are essential for improving firms' environmental performance (Dumont *et al.*, 2017; Hameed *et al.*, 2020; Paillé *et al.*, 2023). However, the specific mechanisms through which GHRM influences firms' financial performance need further examination. Consequently, some scholars have called for further research to explain the relationship among GHRM and firms' financial performance by incorporating mediating variables (Hunt, 2017).

Drawing on RBT, in this study, the social performance of the firm is employed as a mediator variable to expose the relationship between GHRM and financial performance. GHRM practices can foster an environmentally friendly work culture and values (Ali *et al.*, 2022). This enhances the social performance of the firm by building reputation and support from customers and employees (Afum *et al.*, 2021). Through RBT, GHRM transforms reputation and support into a valuable and inimitable resource that leads to a competitive advantage. Consequently, GHRM may improve financial performance by the social performance of the firm.

Social performance of the firm indicates that the firm's relations with stakeholders and community improved social responsibility, awareness and employees' training and education for green behaviors (Afum *et al.*, 2020; Merlin and Chen, 2022; Rizki and Augustine, 2022). For instance, Rizki and Augustine (2022) explored the impact of green supply chain management on firms' social performance. Afum *et al.* (2020) focused on the effects of green manufacturing on firms' environmental performance from economic and social environmental perspectives. Furthermore, Merlin and Chen (2022) found that GHRM strongly influences both a firm's environmental reputation and attractiveness. Although Pham *et al.* (2020) called for further studies to explore the link between GHRM and firms' social performance, few studies have focused on the relationship between GHRM and firms' social performance (Merlin and Chen, 2022). Moreover, most of the available studies on GHRM and firms' performance have demonstrated a lack of interest in the social dimension of the firms, thus highlighting the need for examining the impact of GHRM (Amrutha and Geetha, 2020; Yadegaridehkordi *et al.*, 2023).

A positive social reputation and strong stakeholder relationships can lead to increased customer loyalty, enhanced brand value, access to new markets and reduced operational risks. Previous research has established a connection between a firm's social and financial performance (Mittal *et al.*, 2008; Orlitzky *et al.*, 2003; Wood, 1991; Wörsdörfer, 2015). When a firm has a good reputation regarding its social performance, it can attract customers and lead to a higher demand for its product (Mainardes *et al.*, 2011). Vaia *et al.* (2017) also demonstrated that high levels of social performance increase financial performance, as firms are more likely to receive higher investments from improved stakeholder relations.

These factors can directly impact the firm's financial performance, contributing to increased revenue and profitability. Consequently, firms can improve their financial performance. Based on the above discussion, we propose the following hypotheses:

H2. Firms' social performance mediates the relationship between GHRM and firms' financial performance.

Mediating roles of employees' pro-environmental behaviors

Another important goal of the study is to explore the roles of employees' pro-environmental behaviors in the relationship between GHRM and firms in both social and financial performance. Employees' pro-environmental behaviors refer to how employees behave, as well as how they perceive and perform their job duties concerning the environment. It is typically assessed using methods such as quality of work, productivity, judgment, personal characteristics, punctuality, job outcomes and behaviors (Boiral *et al.*, 2015; Ren and Hussain, 2022). Employee behavior is influenced by unique qualities such as skills, knowledge, experience and the working environment.

The literature suggests that employees' pro-environmental behaviors are influenced by GHRM practices and other various factors, such as corporate environmental strategies and employee perceptions, which in turn positively impact firms' social, environmental and financial performance. The impact of employees' pro-environmental behaviors over environmental and financial performance has been explored extensively, while their impact on social performance has been under-researched (Shaukat *et al.*, 2016; Zhang *et al.*, 2022) as an indicator of a firm's capability to create trust, safety and reputation among various stakeholders, such as employees, customers and society (Shaukat *et al.*, 2016). While companies use investments to improve financial and environmental performance, they have constrained resources, which leads them to ignore social performance (Zhang *et al.*, 2022). Furthermore, a long-term process is required for a firm to create social benefits (i.e. trust, the welfare of employees, loyalty of customers and safety of the workforce and community) rather than just financial and environmental benefits (Zhang *et al.*, 2022). Moreover, as companies are required to demonstrate their concern about their social performance, they need to create policies and strategies to improve their social performance. Companies that are already investing in environmental practices can utilize employees' pro-environmental behaviors as facilitators to enhance their social performance, as these behaviors indicate how environmental awareness is translated into practical behaviors. Furthermore, employees' behaviors can communicate companies' brand image, environmental concerns and reputations to customers, employees and other stakeholders (Zhang *et al.*, 2020).

While there is increasing research on the GHRM and performance, further studies are required to explore the underlying mechanisms to connect GHRM to employees' and firm outcomes. Specifically, there is a need to explore new mediating variables to examine the impact of GHRM on both firm and employee performances (Amrutha and Geetha, 2020;

Yadegaridehkordi *et al.*, 2023). Based on SET, this study found evidence that when a firm adopts GHRM practices, it communicates to its employees a commitment to environmental sustainability and responsible business practices (Lu *et al.*, 2023; Muisyo *et al.*, 2022). For example, a firm may provide training and education on eco-friendly practices, encourage energy-saving initiatives or reward employees for green ideas. As a result of GHRM practices, employees are expected to become more interested in and involved in environmental efforts (Amrutha and Geetha, 2021; Hameed *et al.*, 2020; Robertson and Barling, 2013; Saeed *et al.*, 2019). Furthermore, employees can take actions such as reducing waste, using resources efficiently or even participating in voluntary environmental initiatives. Previous research has demonstrated that employees' pro-environmental behaviors are an essential predictor of a firm's overall environmental performance (Hameed *et al.*, 2020; Tu *et al.*, 2023). In this study, employees' pro-environmental behaviors are examined via two dimensions: task-related pro-environmental behavior and proactive pro-environmental behavior.

Employees' task-related pro-environmental behavior includes the execution of formal job duties in an environmentally responsible manner. Existing research on task-related pro-environmental behavior showed that these behaviors are critical for firms' environmental practices (Saeed *et al.*, 2019). Research also shows that task-related pro-environmental behavior are affected by several factors including organizational such as employer commitment and individual drivers such as attitude and values. For instance, employer's commitment to environmental protection can motivate employees to engage in extra-role environmental behaviors in exchange for fair treatment, emphasizing the role of organizational support in promoting pro-environmental actions (Saifulina *et al.*, 2023). Furthermore, research also shows that GHRM practices can influence employees' task-related behaviors, with organizational identification playing a mediating role and personal environmental values as moderators (Chaudhary, 2020). Against this background, we theorize that GHRM will directly contribute to firms' financial performance, while employees' task-related pro-environmental behaviors and social performance will sequentially mediate this relationship. Thus, we offer the following hypotheses:

H3a. Employees' task-related pro-environmental behaviors and social performance sequentially mediate the positive relationship between GHRM practices and financial performance.

In contrast to task-related pro-environmental behavior, employees' proactive pro-environmental behavior is characterized by voluntary actions driven by personal initiatives and a self-motivated commitment to environmental behavior. Proactive environmental behavior goes above and beyond employees' task-related behaviors and can include initiatives such as energy conservation efforts, waste reduction practices or participation in environmental advocacy (Elshaer *et al.*, 2021). Employees' proactive pro-environmental behavior can be influenced by personal factors such as attitudes and personal beliefs towards environmental issues (Chen *et al.*, 2011). However, research shows that workplace practices designed to promote pro-environmental behaviors also can affect not only in the task-related behaviors but also proactive pro-environmental behaviors outside of work (Unsworth *et al.*, 2013). Also, another recent research showed that proactive pro-environmental behavior is influenced by GHRM practices, leadership and personal values (Patwary *et al.*, 2024). Drawing on the existing research and building on the SET perspective, we expect that GHRM can influence both employees' task-related and proactive pro-environmental behaviors. Building on this foundation, we propose that GHRM practices have a direct impact on firms' financial performance. Additionally, this relationship is sequentially mediated by employees' proactive pro-environmental behaviors and social performance. Accordingly, we present the following hypotheses:

H3b. Employees' proactive pro-environmental behaviors and social performance sequentially mediate the positive relationship between GHRM practices and financial performance.

Figure 1 presents our theoretical framework.

Method

Participants in the study were employed from SMEs in Türkiye registered with the Small and Medium Enterprises Development Organization (SMEDO). At first, we called the executives at SMEDO and then provided written information on the purpose of the research to receive permission to contact the employees of SMEDO-registered SMEs. Based on the data provided by SMEDO for the year 2023, the recorded figure for the total count of SMEs in Türkiye amounted to 3,567,766 (KOSGEB, 2023). To determine the sample size, Cochran's (1977) formula was utilized. Accordingly, with a 99% confidence level and a margin of error of 5%, the required sample size would be approximately 666 individuals. Through a process of obtaining managerial authorization, a subset of 2,065 SMEs was selected at random using the simple random sampling method for the purpose of the study to achieve at least 666 SMEs personnel. Therefore, we sent employees from 2065 SMEDO-registered SMEs an email describing the survey's aim, emphasizing voluntary participation, requesting their contribution to an online survey and an email requesting their responses. A total of 945 employees filled out questionnaires, which resulted in a response rate of 45.7% from the total number of participants. We focused on established SMEs because they offer a stable organizational environment to examine the relationships between GHRM, firms' financial and social performance and employees' environmentally friendly behavior.

Participants were assured that their responses would be kept confidential and that they would be able to maintain their anonymity. In the questionnaire, participants provided information about GHRM practices, employees' pro-environmental behaviors, social performance, financial performance and relevant demographic information about themselves. Table 1 shows that most respondents (85.7%) were males ($n = 810$), among whom 31.1% were aged 42–49 ($n = 294$) and 27.4% were aged 34–41 ($n = 259$), 37.8% had a bachelor's degree ($n = 357$) and 48.9% had more than ten years of tenure ($n = 462$). In addition, most of the firm's ages (43.1%) where the participants work is between 1–10 years ($n = 407$). It should be noted that businesses with an operating period of less than 1 year ($n = 15$) were considered established SMEs in this study, as they were formed through a separation or spin-off from businesses with an operating period of 10 years or more. Moreover, the participants were employed in various sectors, including manufacturing ($n = 570$), information and communication technology ($n = 144$), retail and wholesale trade ($n = 127$) and construction ($n = 104$).

Measures

The backward translation approach Brislin (1980) was utilized to translate the surveys from English to Turkish. A bilingual linguist first translated the measures into Turkish. Without

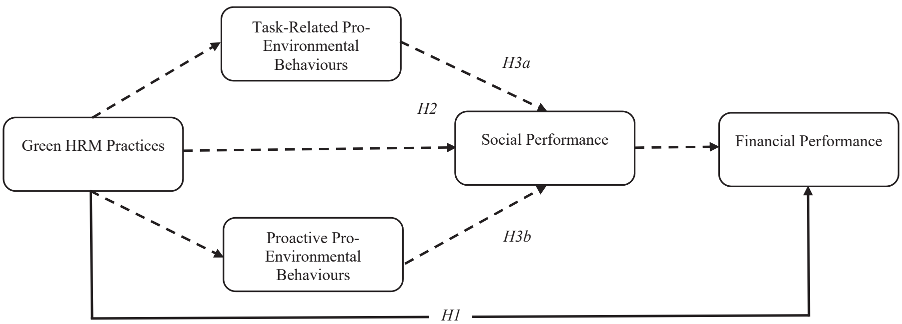

Figure 1. Conceptual model. **Source:** Authors' own work

Table 1. Demographic characteristics of respondents

Demographic	Description	Frequency	% of total *n*
Gender	Female	135	14.3
	Male	810	85.7
Age	18–25 years	36	3.8
	26–33 years	136	14.4
	34–41 years	259	27.4
	42–49 years	294	31.1
	50 years and above	220	23.3
	Primary School Degree	88	9.3
Education	High School Degree	265	28.0
	Associate's Degree	114	12.1
	Bachelor's Degree	357	37.8
	Master Degree	107	11.3
	PhD Degree	14	1.5
Tenure	Less than 1 year	69	7.3
	1–5 years	186	19.7
	6–10 years	228	24.1
	More than 10 years	462	48.9
Firm's age	Less than 1 year	15	1.6
	1–10 years	407	43.1
	11–20 years	262	27.7
	21–30 years	153	16.2
	31–40 years	60	6.3
	41 years and above	48	5.1
Total		945	100

Source(s): Authors' own work

access to the original measurements, a second bilingual speaker back-translated the same items into English. Finally, the two translators addressed the minor contradictions between the original and new English translations and the Turkish version was amended to incorporate any adjustments. Finally, a scholar double-checked the English original and the back-translated English version and found no mistakes. The aforementioned review process was conducted iteratively to attain a high level of precision and semantic congruity in the translation, as well as to guarantee the content validity of the scales.

GHRM Practices. GHRM practices were measured using a six-item scale developed by (Dumont *et al.*, 2017) on a five-point Likert scale ranging from not at all (1) to very much (5). An example item is: "*My company relates employees' workplace green behaviors to rewards and compensation.*" Cronbach's alpha for this scale was 0.95.

Employee pro-environmental behaviors. We measured *employee's task-related pro-environmental behaviors* using three items adapted from (Bissing-Olson *et al.*, 2013) using a five-point scale ranging from 1 (never) to 5 (always). A sample item is: "I fulfill the responsibilities specified in my job description in environmentally friendly ways." Cronbach's alpha for this scale was 0.87. In the same manner, we measured *employee's proactive pro-environmental behaviors* using three items adapted from (Bissing-Olson *et al.*, 2013) using a five-point scale ranging from 1 (never) to 5 (always). A sample item is: "*I take initiative to act in environmentally friendly ways at work.*" Cronbach's alpha for this scale was 0.85.

Social performance. Social performance was measured using three adapted items from (Yildiz Çankaya and Sezen, 2019). An example item is: "*My firm improves awareness and protection of the claims and rights of people in the community served.*" Cronbach's alpha was 0.85. A five-point Likert scale was used, ranging from strongly disagree (1) to strongly agree (5).

Financial Performance. Financial performance was measured using three items adapted from the financial performance scale developed by Green and Inman (2005). An example item is: "*Average profit over the past three years.*" Its Cronbach's alpha was 0.83. A five-point Likert scale was used, ranging from "well below the industry average" (1) to "well above the industry average" (5).

Control variables. We controlled for firms age (1 = less than 1 year, 2 = 1–10 years, 3 = 11–20 years, 4 = 21–30 years, 5 = 31–40 years and 6 = 41 years and above). According to the findings presented in Table 2, there was no significant correlation observed between the age of firms and the research variables. Consequently, the firm's age was excluded from the analysis because such impotent control variables may lead to biased parameter estimations (Becker, 2005).

Data analysis

The estimation of descriptive statistics, assessment of normality and evaluation of reliability were performed using IBM SPSS version 29. Subsequently, for the examination of both measurement and structural models, Mplus version 7.31 was employed to rigorously analyze the data. Mplus is utilized for SEM because it is a superior choice compared to other statistical tools due to its ability to conduct tests on multiple mediation and generate precise estimations of the mediational effects attributed to each mediator (Stride *et al.*, 2015).

Descriptive statistics and correlations

Table 2 displays the mean (M), standard deviation (S.D.), skewness and kurtosis values and the bivariate correlation among the research variables. There is no issue with the data's normality since no variable approached skewness > |3| (Chou and Bentler, 1995) or kurtosis values > |10| (Kline, 2015). There was no indication of multicollinearity between the variables since none of the correlation coefficients is above 0.70.

Measurement model

We used Mplus 7.4 to conduct a series of confirmatory factor analyses (CFAs) to evaluate model fitness and demonstrate convergent and discriminant validities. First, we conducted a CFA for five-factor model (GHRM practices, task-related and proactive pro-environmental behaviors, social performance and financial performance). However, the first item of the GHRM practices construct's factor load is less than 0.50. We deleted this item from the data and, then we reproduced the CFA for five-factor model and compared the results to alternative models. As shown in Table 3, the results indicated that our proposed five-factor model, which included GHRM practices, task-related and proactive pro-environmental behaviors, social

Table 2. Correlation and descriptive statistics

Variable	Mean	S.D.	Skewness	Kurtosis	1	2	3	4	5
1. GHRMP	3.27	1.40	−0.21	−1.30	(0.84)				
2. EPPB	4.06	1.06	−1.02	0.29	0.59**	(0.79)			
3. ETPB	4.29	0.93	−1.37	1.44	0.52**	0.66**	(0.80)		
4. SP	3.80	1.15	−0.70	−0.34	0.57**	0.55**	0.53**	(0.80)	
5. FP	3.33	1.09	−0.17	−0.49	0.51**	0.38**	0.34**	0.59**	(0.71)

Note(s): n = 945, $^{**}p < 0.01$, GHRMP = Green HRM practices, EPPB = Employee proactive pro-environmental behaviors, ETPB = Employee task-related pro-environmental behaviors, SP=Social performance, FP=Financial performance, Values in parentheses on the diagonal are the square of AVE of each scale, S.D. = standard deviation
Source(s): Authors' own work

Table 3. Measurement model comparison

Models	χ^2	df	χ^2/df	RMSEA	CFI	TLI	SRMR	χ^2*diff*
Full measurement five-factor model	698.30	99	7.05	0.05	0.98	0.97	0.03	–
Four-Factor model[a]	1548.54	103	15.02	0.09	0.94	0.92	0.09	850.24***
Three-factor model[b]	1770.63	106	16.70	0.10	0.93	0.91	0.11	1072.33***
Two-Factor model[c]	2187.97	108	20.25	0.11	0.91	0.89	0.12	1489.67***
One-factor model[d]	3650.62	109	33.49	0.14	0.85	0.82	0.12	2952.32***

Note(s): $n = 945$; ***$p < 0.001$; χ^2 = chi-square discrepancy; df = degrees of freedom; TLI = Tucker–Lewis index; CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR: standardized root mean square residual; χ^2 diff.: difference in chi-square; All models compared to the full measurement four-factor model
[a]Social performance and employee proactive pro-environmental behaviors combined into a single factor
[b]Social performance and employee task-related and employee proactive pro-environmental behaviors" combined into a single factor
[c]"Green HRM practices and financial performance" and "social performance and employee task-related and employee proactive pro-environmental behaviors" combined into a single factor
[d]All variables combined into a single factor
Source(s): Authors' own work

performance and financial performance provided a more suitable fit to the data ($\chi 2 = 698.30$ df = 99, RMSEA = 0.05, SRMR = 0.03, CFI = 0.98, TLI = 0.97) when compared to the four-factor, three-factor, two-factor and single-factor models.

Table 4 depicts the standardized factor loadings (ranging from 0.52 to 0.94). The construct reliability was analyzed by computing the composite reliability (CR) scores. CR ranged from 0.75 to 0.92, which was greater than the recommended threshold value of 0.70 (Hair *et al.*, 2006). In addition, convergent validity was examined with CR and average variance extracted (AVE). As shown in Table 4, AVE scores for all latent factors were greater than 0.50, providing the cut-off value suggested by Fornell and Larcker (1981). Since the CR values of all latent variables are greater than 0.70 and the CR scores are higher than the AVE scores (Hair *et al.*, 2006), we infer that all four latent constructs have appropriate convergent validity. Furthermore, the square roots of the AVE scores for each construct were greater than the correlations between any pair of components, indicating discriminant validity (see Table 2) (Hair *et al.*, 2006).

Structural equation model and hypothesis testing

The hypothesized mediated structural model provided a satisfactory fit to the data ($\chi 2 = 1024.39$ df = 98, $p < 0.001$, RMSEA = 0.07, SRMR = 0.06, CFI = 0.96, TLI = 0.95). To verify our mediation assumptions, we analyzed indirect effects using 5,000 bootstrap samples (Preacher and Hayes, 2008). The findings of the SEM are provided in Table 5, offering evidence for our hypothesized model.

The results offer support for a positive and significant effect of GHRM practices on financial performance ($\beta = 0.13$, $p < 0.05$). Thus, H1 is supported. The results further support H2, which states GHRM practices indirectly effect financial performance through social performance ($\beta = 0.37$, $p < 0.001$). The indirect effect of GHRM practices on financial performance via employees' task-related pro-environmental behaviors and social performance is significant ($\beta = 0.09$, $p < 0.000$). Hence, H3a is supported. Moreover, the indirect effect of GHRM practices on financial performance via employees' proactive pro-environmental behaviors and social performance is significant ($\beta = 0.14$, $p < 0.05$). Thus, H3b is supported. This result shows that GHRM practices are a critical source for employees' pro-environmental behaviors and financial performance.

Table 4. Factor loadings of indicators

Construct	Indicators	Factor loading	AVE	CR
Green HRM practices (Source: Dumont *et al.*, 2017)	1. My company sets green goals for its employees	<0.50+	0.71	0.92
	2. My company provides employees with green training to promote green values	0.73^{***}		
	3. My company provides employees with green training to develop employees' knowledge and skills required for green management	0.89^{***}		
	4. My company considers employees' workplace green behavior in performance appraisals	0.91^{***}		
	5. My company relates employees' workplace green behaviors to rewards and compensation	0.88^{***}		
	6. My company considers employees' workplace green behaviors in promotion	0.81^{***}		
Employee task-related pro-environmental behavior (Source: adapted from Bissing-Olson *et al.*, 2013)	1. I adequately complete assigned duties in environmentally friendly ways	0.52^{***}	0.64	0.84
	2. I fulfill responsibilities specified in my job description in environmentally friendly ways	0.88^{***}		
	3. I perform tasks that are expected of me in environmentally friendly ways	0.94^{***}		
Employee proactive pro-environmental behavior (Source: adapted from Bissing-Olson *et al.*, 2013)	1. I do more for the environment at work than I was expected to	0.91^{***}	0.62	0.83
	2. I take a chance to get actively involved in environmental protection at work	0.74^{***}		
	3. I take initiative to act in environmentally friendly ways at work	0.71^{***}		
Social Performance (Source: adapted from Yildiz Çankaya and Sezen, 2019)	1. My firm improves awareness and protection of the claims and rights of people in the community served	0.68^{***}	0.64	0.84
	2. My firm improves the employee training and education	0.87^{***}		
	3. My firm improves the occupational health and safety of employees	0.84^{***}		
Financial Performance (Source: adapted from Green and Inman, 2005)	1. Average return on investment over the past three years	0.74^{***}	0.51	0.75
	2. Average profit over the past three years	0.70^{***}		
	3. Average return on sales over the past three years	0.69^{***}		

Note(s): $n = 945$, $^{***}p < 0.001$, $^{+}$Due to the factor loading being below 0.50, it was removed from the analysis
Source(s): Authors' own work

Discussion

In this study, we developed and tested a theoretical model that explored the influence of GHRM on firm performance. Particularly, SEM results highlighted the mediator roles of employees' task-related and proactive pro-environmental behaviors and firms' social performance on the impact of GHRM on firms' financial performance. All hypothesized relationships were supported. The following sections present the discussions of this study's findings.

According to the test results, H1 was supported, and the study confirmed that GHRM practices can positively predict firm financial performance. Establishing the link between GHRM and financial performance was critical as the study was set to explore the mechanism

Table 5. Structural equation model results

Paths	Standardized estimates	*p*
GHRMP → FP	0.13	0.031
GHRMP →SP → FP	0.37	0.000
GHRMP → ETPB → SP → FP	0.09	0.000
GHRMP → EPPB → SP → FP	0.14	0.047

Note(s): n = 945, GHRMP = Green HRM practices, ETPB = Employee task-related pro-environmental behavior, EPPB = Employee proactive pro-environmental behavior, SP = social performance, FP = financial performance
Source(s): Authors' own work

of the link between GHRM and financial performance. Another important aim of the study was to examine the mediating role of the social performance of the firm in the link which was proposed in H2. According to SEM results, H2 was supported. The social performance of the firm includes a positive image for the firm in terms of social responsibility and pro-environmental awareness. As hypothesized in H2, GHRM practices contribute to the positive image, in turn, can affect consumer preferences for the firm. Firms with higher social performance may benefit from improving their cooperation with suppliers and channel members, thereby leading to improved financial performance.

Furthermore, the study also aimed to explain the mediating roles of employees' task-related and proactive environmental behaviors as proposed in H3a and H3b. The results showed that both hypotheses were supported. According to these results, GHRM practices stimulate and encourage employees' task-related and proactive pro-environmental behaviors. These findings are consistent with those of other studies in the field (Chaudhary, 2020; Hameed *et al.*, 2020; Paillé *et al.*, 2023; Renwick *et al.*, 2016; Ye *et al.*, 2022). The results of this study support that implementing GHRM practices (such as environmentally oriented staffing, performance evaluation, promotions, rewards for environmentally responsible behavior and cultivating employees' green knowledge and skills) enhances employees' pro-environmental behavior. According to SET (Cropanzano and Mitchell, 2005), employees who perceive GHRM practices positively and actively utilize their green knowledge and skills in the workplace are more likely to feel a sense of obligation to engage in both task-related and proactive pro-environmental behaviors in return for the firm's implementation of GHRM practices.

Drawing on SET, the results confirm that if firms apply GHRM practices, they can increase employee satisfaction and provide employees with a better work environment, which will eventually impact employee behaviors and contribute to firms' efforts toward the environment and community, leading to improved social performance and eventually better financial performance. As this study set out to examine the relationship between GHRM and firm performance, it was critical to identify such a relationship, as employees' pro-environmental behaviors are mediators in the mechanism we tested.

Previous research has also found evidence of the importance of GHRM in various contexts (Aboramadan, 2022; Amrutha and Geetha, 2021; Chaudhary, 2020; Dumont *et al.*, 2017; Ye *et al.*, 2022). This study provides empirical evidence that the adoption of GHRM practices in the management of SMEs (which includes developing and enhancing employees' skills, knowledge and abilities; investing in employees' motivation; fostering commitment and care; and involving employees in decision-making) significantly contributes to the overall business and financial benefits that small firms can obtain from implementing a proactive approach to environmental management. These findings support suggestions in the literature that GHRM not only improves environmental performance but also enhances financial performance (Renwick *et al.*, 2013). Additionally, this finding is critical to demonstrate the importance of GHRM practices in the Turkish SME context, as the Turkish economy is shifting toward a more environmentally friendly model by committing to the EU Green Deal and aiming to reduce Türkiye's greenhouse emissions by half in 2035. While the Turkish economy is shifting, companies must revise their processes to cut their carbon footprint, which requires tangible and intangible resources.

Our study shows that if SMEs adopt and implement GHRM practices, they can foster remarkable intangible resources to improve their environmental performance. This study found that employees' pro-environmental behavior mediates the relationship between GHRM practices and firms' social performance. Therefore, SMEs should consider designing their GHRM practices to improve their employees' behavior to enhance their performance and reputation. Overall, GHRM can be viewed as an essential part of the process for firms seeking to adopt more environmentally friendly practices.

Theoretical implications

This study makes several contributions to the literature of SET and RBT regarding GHRM and firm performance. First, it provides evidence for the social and financial benefits of adopting GHRM practices and extends the SET theory into the fields of GHRM, employees' pro-environmental behaviors and firm performance by exploring new mediating mechanisms (Merlin and Chen, 2022; Pham *et al.*, 2020). One of the key findings of the study is that employees' pro-environmental behavior serves as a mediator between GHRM and firms' social performance. This indicates that GHRM practices influence employees' pro-environmental behavior, which in turn affects how the firm performs socially. This insight is valuable as it bridges the gap between GHRM practices and employees' behavior, demonstrating a more direct link between GHRM and firms' social and financial performance.

Second, the paper demonstrates how employees' pro-environmental behavior mediates GHRM's impact on firms' social performance. Building on SET, this study provides further evidence of the link between GHRM and firms' performance regarding employees' pro-environmental behavior and firms' social performance. This study recognizes that social performance is equally relevant to a firm's success and that GHRM can play a pivotal role in enhancing it. In this regard, the research extended SET literature by incorporating social performance and individual behaviors.

Third, the study highlights the role of GHRM as a valuable internal resource that contributes to firms' competitive advantage. GHRM here can be considered as a strategic resource, which is developed by organizational actors. While developing it, social exchanges between these actors are also crucial. By extending the application of the SET into the domains of RBT, our study sheds light on the role of social exchanges facilitated by GHRM practices in shaping organizational outcomes. We offer insights into the complex dynamics of how core competencies are built within organizations in environmentally conscious settings. By doing so, the study not only extends the applicability of SET to the field of sustainability and business performance but also integrates two theoretical lenses. This integration of the SET and the RBT offers a comprehensive understanding of how organizational actors' behaviors and interactions influence the development and utilization of strategic resources, ultimately impacting firms' social and financial performance. This highlights the dynamic interplay between internal resources, social dynamics and organizational performance.

Finally, the study is set in the context of Turkish SMEs, which adds a valuable perspective to the research on GHRM and firm performance. SMEs often face unique challenges and opportunities compared to larger corporations, and their adoption of sustainable practices can have distinct implications. By focusing on this specific context, the study offers insights that are more tailored and relevant to a specific segment of the business landscape.

Practical implications

Environmental regulations and changing consumer preferences have challenged firms to improve their financial and social performance. An increasing number of companies integrate environmental and sustainability principles into their strategies—however, for their successful implementation, employees' pro-environmental behaviors are critical. This research brings several practical suggestions for companies that strive to improve their both environmental, financial and social performances. First, organizations should implement green recruitment and selection, which involves considering an applicant's values, beliefs and behavior related to environmental sustainability in the hiring process. For example, organizations can integrate scenario-based questions during the interview process to evaluate how prospective employees would respond to sustainability-related challenges. Organizations should hire employees who share their sustainability goals. Second, organizations should realize the strategic significance of GHRM practices toward developing employees' pro-environmental behavior to improve firms' social and financial performance. Organizations should reference structured and measurable GHRM initiatives to do it. Organizations, for example, can implement behavioral incentive programs (e.g. monthly recognitions of employees who are actively reducing their energy consumption, their waste, or who had worked on sustainability projects). They could also hold "Green Idea Challenges," where they invite employees to propose solutions to sustainability-related challenges and provide financial rewards to the ones with the best ideas to put into action. Moreover, it is also very important to invest in targeted courses on sustainability. Organizations should implement gamified programs to encourage learning, whereby they create a system in which employees earn points for completing actions relevant to sustainability (recycling, creating eco-conscious spaces, completing eco-training courses, etc.) while tracking their participation and providing rewards to engage employees or they could use certifications programs in sustainability which can provide genuine career rewards or tangible opportunities rather than generic introductory ones. Third, organizations should establish green performance management systems by including sustainability-related key performance indicators in annual assessments of employees. Logistics organizations, for instance, might have targets of cutting fuel use, while an office-based company might track paper and energy use department by department. Employees who meet or exceed these sustainability benchmarks might earn additional performance-based incentives. Fourth, organizations should integrate green compensation strategies into their incentive systems. These could include such things as eco-friendly commuting benefits (e.g. public transport subsidies, biking allowances, electric vehicle incentives, etc.) or offering additional paid time off for those employees who volunteer for environmental causes. Finally, organizations should implement their own green communication systems in place, like internal sustainability dashboards, so employees can see how well environmental goals are being met. Furthermore, sustainability councils made up of employees can be established to give employees an actual say in decisions and policies regarding environmental impact and promote a sense of ownership over corporate sustainability programs. Considering the potential of GHRM as a strategic core competency, these practices should be integrated into the organization's strategic planning process. When it is integrated into the organizations' strategic management processes, the positive impact of GHRM capabilities could be even increased. By incorporating GHRM considerations into recruitment, training, performance management and reward systems, organizations can ensure that environmental sustainability becomes ingrained in the organizational culture and values. Eventually, firms can improve employees' pro-environmental behavior and establish a more positive social performance, including a more substantial reputation for environmental responsibility and improved relationships with stakeholders.

Limitations and future research directions

This study has several limitations that need to be addressed, while also shedding light on avenues of future research. First, this study employed a single-study, cross-sectional research design, which is subject to some limitations, particularly causal inference. However, given the study's focus on SME employees in Türkiye, practical constraints in accessing a large, representative sample of SME employees across multiple time points made longitudinal or experimental data collection challenging, this approach was chosen. Nevertheless, future research might be able to build on these results by using multi wave studies or experimental designs to more completely establish the proposed relationships and to identify possible causal mechanisms. Second, this study was conducted in the context of Turkish SMEs. Thus, the results should be considered with caution before generalizing them to a different context. Third, the study tested a sequential mediation model with data from SMEs in general. However, future studies could test the same model using data from specific industries. Fourth, the study variable was incorporated into the model as a single construct. Thus, the study could not identify which GHRM practices are more critical than others or what kind of employee behavior contributes to firms' performance. Therefore, future research should consider using a multidimensional construct to examine the effect of GHRM on employee and firm performance. Lastly, this study's model only uses the SET framework to explain how GHRM practices improve firm performance and does not explain how this impact is critical for firm competitiveness. Thus, future studies should adopt multiple theories to examine this relationship and its importance in terms of competitiveness.

References

Aboramadan, M. (2022), "The effect of green HRM on employee green behaviors in higher education: the mediating mechanism of green work engagement", *International Journal of Organizational Analysis*, Vol. 30 No. 1, pp. 7-23, doi: 10.1108/ijoa-05-2020-2190.

Aftab, J. and Veneziani, M. (2024), "How does green human resource management contribute to saving the environment? Evidence of emerging market manufacturing firms", *Business Strategy and the Environment*, Vol. 33 No. 2, pp. 529-545, doi: 10.1002/bse.3508.

Afum, E., Osei-Ahenkan, V.Y., Agyabeng-Mensah, Y., Amponsah Owusu, J., Kusi, L.Y. and Ankomah, J. (2020), "Green manufacturing practices and sustainable performance among Ghanaian manufacturing SMEs: the explanatory link of green supply chain integration", *Management of Environmental Quality*, Vol. 31 No. 6, pp. 1457-1475, doi: 10.1108/meq-01-2020-0019.

Afum, E., Agyabeng-Mensah, Y., Opoku Mensah, A., Mensah-Williams, E., Baah, C. and Dacosta, E. (2021), "Internal environmental management and green human resource management: significant catalysts for improved corporate reputation and performance", *Benchmarking: An International Journal*, Vol. 28 No. 10, pp. 3074-3101, doi: 10.1108/bij-09-2020-0504.

Ali, M., Puah, C.-H., Ali, A., Raza, S.A. and Ayob, N. (2022), "Green intellectual capital, green HRM and green social identity toward sustainable environment: a new integrated framework for Islamic banks", *International Journal of Manpower*, Vol. 43 No. 3, pp. 614-638, doi: 10.1108/ijm-04-2020-0185.

Amrutha, V.N. and Geetha, S.N. (2020), "A systematic review on green human resource management: implications for social sustainability", *Journal of Cleaner Production*, Vol. 247, pp. 119-131, doi: 10.1016/j.jclepro.2019.119131.

Amrutha, V.N. and Geetha, S.N. (2021), "Linking organizational green training and voluntary workplace green behavior: mediating role of green supporting climate and employees' green satisfaction", *Journal of Cleaner Production*, Vol. 290, 125876, doi: 10.1016/j.jclepro.2021.125876.

Aryee, S., Walumbwa, F.O., Seidu, E.Y.M. and Otaye, L.E. (2012), "Impact of high-performance work systems on individual- and branch-level performance: test of a multilevel model of intermediate linkages", *Journal of Applied Psychology*, Vol. 97 No. 2, pp. 287-300, doi: 10.1037/a0025739.

Awan, F.H., Dunnan, L., Jamil, K. and Gul, R.F. (2023), "Stimulating environmental performance via green human resource management, green transformational leadership, and green innovation: a mediation-moderation model", *Environmental Science and Pollution Research*, Vol. 30 No. 2, pp. 2958-2976, doi: 10.1007/s11356-022-22424-y.

Barney, B. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120, doi: 10.1177/014920639101700108.

Bassi, F. and Dias, J.G. (2019), “The use of circular economy practices in SMEs across the EU”, *Resources, Conservation and Recycling*, Vol. 146, pp. 523-533, doi: 10.1016/j.resconrec.2019.03.019.

Becker, T.E. (2005), “Potential problems in the statistical control of variables in organizational research: a qualitative analysis with recommendations”, *Organizational Research Methods*, Vol. 8 No. 3, pp. 274-289, doi: 10.1177/1094428105278021.

Bhatti, S.H., Saleem, F., Murtaza, G. and Haq, T.U. (2022), “Exploring the impact of green human resource management on environmental performance: the roles of perceived organizational support and innovative environmental behavior”, *International Journal of Manpower*, Vol. 43 No. 3, pp. 742-762, doi: 10.1108/ijm-05-2020-0215.

Bissing-Olson, M.J., Iyer, A., Fielding, K.S. and Zacher, H. (2013), “Relationships between daily affect and pro-environmental behavior at work: the moderating role of pro-environmental attitude”, *Journal of Organizational Behavior*, Vol. 34 No. 2, pp. 156-175, doi: 10.1002/job.1788.

Blau, P. (1964), *Power and Exchange in Social Life*, John Wiley & Sons, New York, NY.

Boiral, O., Paillé, P. and Raineri, N. (2015), “The nature of employees’ pro-environmental behaviors”, in Robertson, J.L. and Barling, J. (Eds), *The Psychology of Green Organizations*, Oxford University Press, Oxford, pp. 12-32.

Boxall, P. and Steenveld, M. (1999), “Human resource strategy and competitive advantage: a longitudinal study of engineering consultancies”, *Journal of Management Studies*, Vol. 36 No. 4, pp. 443-463, doi: 10.1111/1467-6486.00144.

Brislin, R.W. (1980), “Translation and content analysis of oral and written material”, in Triandis, H.C. and Berry, J.W. (Eds), *Handbook of Cross-Cultural Psychology: Methodology*, Allyn & Bacon, Boston, MA, Vol. 2, pp. 389-444.

Cai, Y.J. and Choi, T.M. (2020), “A united nations’ sustainable development goals perspective for sustainable textile and apparel supply chain management”, *Transportation Research Part E: Logistics and Transportation Review*, Vol. 141, 102010, doi: 10.1016/j.tre.2020.102010.

Cai, W., Yang, C., Bossink, B.A. and Fu, J. (2020), “Linking leaders’ voluntary workplace green behavior and team green innovation: the mediation role of team green efficacy”, *Sustainability*, Vol. 12 No. 8, p. 3404, doi: 10.3390/su12083404.

Ceyhan, S. and Barca, M. (2023), “Agency perspective in Islamic political treatises: implications for contemporary management research”, *International Journal of Emerging Markets*, Vol. 18 No. 9, pp. 3022-3042, doi: 10.1108/ijoem-01-2021-0103.

Chaudhary, R. (2020), “Green human resource management and employee green behavior: an empirical analysis”, *Corporate Social Responsibility and Environmental Management*, Vol. 27 No. 2, pp. 630-641, doi: 10.1002/csr.1827.

Chen, T. and Wu, Z. (2022), “How to facilitate employees’ green behavior? The joint role of green human resource management practice and green transformational leadership”, *Frontiers in Psychology*, Vol. 13, 906869, doi: 10.3389/fpsyg.2022.906869.

Chen, X., Peterson, M.N., Hull, V., Lu, C., Lee, G.D., Hong, D. and Liu, J. (2011), “Effects of attitudinal and sociodemographic factors on pro-environmental behaviour in urban China”, *Environmental Conservation*, Vol. 38 No. 1, pp. 45-52, doi: 10.1017/s037689291000086x.

Chou, C. and Bentler, R.P. (1995), “Estimates and tests in structural equation modeling”, in Hoyle, R.H. (Ed.), *Structural Equation Modeling: Concepts, Issues and Applications*, Sage, Newbury Park, CA, pp. 37-55.

Cochran, W.G. (1977), *Sampling Techniques*, 3rd. ed., Wiley, New York.

Cropanzano, R. and Mitchell, M.S. (2005), “Social exchange theory: an interdisciplinary review”, *Journal of Management*, Vol. 31 No. 6, pp. 874-890, doi: 10.1177/0149206305279602.

Dessouky, N.F.E. and Alquaiti, H.O. (2021), “Green human resource management for sustainable organizations”, *Third International Sustainability and Resilience Conference: Climate Change*, Sakheer, Bahrain, IEEE, pp. 14-17, doi: 10.1109/IEEECONF53624.2021.9668150.

Doherty, R., Kampel, C., Koivuniemi, A., Pérez, L. and Rehm, W. (2023), "The triple play: growth, profit, and sustainability", McKinsey and Company, available at: https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/the-triple-play-growth-profit-and-sustainability? (accessed 1 March 2025).

Dumont, J., Shen, J. and 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*, Vol. 56 No. 4, pp. 613-627, doi: 10.1002/hrm.21792.

Elshaer, I.A., Sobaih, A.E.E., Aliedan, M. and Azzaz, A.M.S. (2021), "The effect of green human resource management on environmental performance in small tourism enterprises: mediating role of pro-environmental behaviors", *Sustainability*, Vol. 13 No. 4, p. 1956, doi: 10.3390/su13041956.

Fornell, C. and Larcker, D.F. (1981), "Evaluating structural equation models with unobservable variables and measurement error", *Journal of Marketing Research*, Vol. 48 No. 1, pp. 39-50, doi: 10.2307/3151312.

García-Quevedo, J., Jové-Llopis, E. and Martínez-Ros, E. (2020), "Barriers to the circular economy in European small and medium-sized firms", *Business Strategy and the Environment*, Vol. 29 No. 6, pp. 2450-2464, doi: 10.1002/bse.2513.

Green, K. and Inman, R. (2005), "Using a just-in-time selling strategy to strengthen supply chain linkages", *International Journal of Production Research*, Vol. 43 No. 16, pp. 3437-3453, doi: 10.1080/00207540500118035.

Guerci, M. and Carollo, L. (2016), "A paradox view on green human resource management: insights from the Italian context", *International Journal of Human Resource Management*, Vol. 27 No. 2, pp. 212-238, doi: 10.1080/09585192.2015.1033641.

Gutiérrez-Broncano, S., Opute, J., Jiménez-Estévez, P. and Rubio-Andrés, M. (2022), "Green human resource management: a new model of human resource management in the aftermath of the pandemic", in *Organizational Management in Post Pandemic Crisis*, Springer International Publishing, Cham, pp. 125-138.

Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. and Tatham, R.L. (2006), *Multivariate Data Analysis*, 6th ed., Pearson Prentice Hall, Upper Saddle River, NJ.

Haldorai, K., Kim, W.G. and Garcia, R.L.F. (2022), "Top management green commitment and green intellectual capital as enablers of hotel environmental performance: the mediating role of green human resource management", *Tourism Management*, Vol. 88, 104431, doi: 10.1016/j.tourman.2021.104431.

Hameed, Z., Khan, I.U., Islam, T., Sheikh, Z. and Naeem, R.M. (2020), "Do green HRM practices influence employees' environmental performance?", *International Journal of Manpower*, Vol. 41 No. 7, pp. 1061-1079, doi: 10.1108/ijm-08-2019-0407.

Hayton, J.C., Hornsby, J.S. and Bloodgood, J. (2013), "The contribution of HRM to corporate entrepreneurship: a review and agenda for future research", *Management*, Vol. 16 No. 4, pp. 381-410.

Hunt, S.D. (2017), "Strategic marketing, sustainability, the triple bottom line, and resource-advantage (RA) theory: securing the foundations of strategic marketing theory and research", *AMS Review*, Vol. 7 Nos 1-2, pp. 52-66, doi: 10.1007/s13162-017-0090-y.

Kim, Y.J., Kim, W.G., Choi, H.M. and Phetvaroon, K. (2019), "The effect of green human resource management on hotel employees' eco-friendly behavior and environmental performance", *International Journal of Hospitality Management*, Vol. 76, pp. 83-93, doi: 10.1016/j.ijhm.2018.04.007.

Kim, W.G., McGinley, S., Choi, H.M. and Agmapisarn, C. (2020), "Hotels' environmental leadership and employees' organizational citizenship behavior", *International Journal of Hospitality Management*, Vol. 87, 102375, doi: 10.1016/j.ijhm.2019.102375.

Kline, R.B. (2015), *Principles and Practice of Structural Equation Modeling*, 4th ed., The Guilford Press, New York, NY.

KOSGEB (2023), "Türkiye'deki kobi'lere ilişkin Bazı İstatistiki göstergeler", available at: https://www.kosgeb.gov.tr/site/tr/genel/detay/349/rapor-ve-istatistikler (accessed 19 Ağustos 2024).

Kramar, R. (2014), “Beyond strategic human resource management: is sustainable human resource management the next approach?”, *The International Journal of Human Resource Management*, Vol. 25 No. 8, pp. 1069-1089, doi: 10.1080/09585192.2013.816863.

Loughlin, B. (2025), “Sustainability trends 2025 shaping the future of business”, Institute of Sustainability Studies, available at: https://instituteofsustainabilitystudies.com/insights/lexicon/sustainability-trends-2025-shaping-the-future-of-business/ (accessed 1 March 2025).

Lu, H., Cai, S., Liu, Y. and Chen, H. (2023), “How GHRM impacts employee OCBE: the role of emotions and value discrepancy”, *International Journal of Manpower*, Vol. 44 No. 2, pp. 318-333, doi: 10.1108/ijm-02-2021-0094.

Mainardes, E.W., Ferreira, J.M. and Tontini, G. (2011), “Creating a competitive advantage in higher education institutions: proposal and test of a conceptual model”, *International Journal of Management in Education*, Vol. 5 Nos 2/3, pp. 145-168, doi: 10.1504/ijmie.2011.039482.

Marrucci, L., Daddi, T. and Iraldo, F. (2021), “The contribution of green human resource management to the circular economy and performance of environmental certified organisations”, *Journal of Cleaner Production*, Vol. 319, 128859, doi: 10.1016/j.jclepro.2021.128859.

Merlin, M.L. and Chen, Y. (2022), “Impact of green human resource management on organizational reputation and attractiveness: the mediated-moderated model”, *Frontiers in Environmental Science*, Vol. 10, 962531, doi: 10.3389/fenvs.2022.962531.

Mittal, R.K., Sinha, N. and Singh, A. (2008), “An analysis of linkage between economic value added and corporate social responsibility”, *Management Decision*, Vol. 46 No. 9, pp. 1437-1443, doi: 10.1108/00251740810912037.

Molina-Azorin, J.F., López-Gamero, M.D., Tarí, J.J., Pereira-Moliner, J. and Pertusa-Ortega, E.M. (2021), “Environmental management, human resource management and green human resource management: a literature review”, *Administrative Sciences*, Vol. 11 No. 2, p. 48, doi: 10.3390/admsci11020048.

Muisyo, P.K., Qin, S., Ho, T.H., Julius, M.M. and Barisoava Andriamandresy, T. (2022), “Implications of GHRM on organisational citizenship behaviour: the mediating role of enablers of green culture”, *International Journal of Manpower*, Vol. 43 No. 3, pp. 719-741, doi: 10.1108/ijm-05-2020-0245.

Mukherji, A. and Bhatnagar, J. (2022), “Conceptualizing and theorizing green human resource management: a narrative review”, *International Journal of Manpower*, Vol. 43 No. 3, pp. 862-888, doi: 10.1108/ijm-06-2021-0376.

Munawar, S., Yousaf, D.H.Q., Ahmed, M. and Rehman, D.S. (2022), “Effects of green human resource management on green innovation through green human capital, environmental knowledge, and managerial environmental concern”, *Journal of Hospitality and Tourism Management*, Vol. 52, pp. 141-150, doi: 10.1016/j.jhtm.2022.06.009.

O’donohue, W. and Torugsa, N. (2016), “The moderating effect of ‘green’ HRM on the association between proactive environmental management and financial performance in small firms”, *The International Journal of Human Resource Management*, Vol. 27 No. 2, pp. 239-261, doi: 10.1080/09585192.2015.1063078.

Obeidat, S.M., Al Bakri, A.A. and Elbanna, S. (2020), “Leveraging green’ human resource practices to enable environmental and organizational performance: evidence from the Qatari oil and gas industry”, *Journal of Business Ethics*, Vol. 164 No. 2, pp. 371-388, doi: 10.1007/s10551-018-4075-z.

Orlitzky, M., Schmidt, F. and Rynes, S. (2003), “Corporate social and financial performance: a meta-analysis”, *Organization Studies*, Vol. 24 No. 3, pp. 403-441, doi: 10.1177/0170840603024003910.

Paillé, P. and Mejía-morelos, J.H. (2014), “Antecedents of pro-environmental behaviours at work: the moderating influence of psychological contract breach”, *Journal of Environmental Psychology*, Vol. 38, pp. 124-131, doi: 10.1016/j.jenvp.2014.01.004.

Paillé, P., Sanchez-Famoso, V., Valéau, P., Ren, S. and Mejia-Morelos, J.H. (2023), “Green HRM through social exchange revisited: when negotiated exchanges shape cooperation”, *The*

International Journal of Human Resource Management, Vol. 34 No. 17, pp. 3277-3307, doi: 10.1080/09585192.2022.2117992.

Patwary, A.K., Rasoolimanesh, S.M., Hanafiah, M.H., Aziz, R.C., Mohamed, A.E., Ashraf, M.U. and Azam, N.R.A.N. (2024), "Empowering pro-environmental potential among hotel employees: insights from self-determination theory", *Journal of Hospitality and Tourism Insights*, Vol. 7 No. 2, pp. 1070-1090, doi: 10.1108/jhti-10-2023-0713.

Paulet, R., Holland, P. and Morgan, D. (2021), "A meta-review of 10 years of green human resource management: is green HRM headed towards a roadblock or a revitalization", *Asia Pacific Journal of Human Resources*, Vol. 59 No. 2, pp. 159-183, doi: 10.1111/1744-7941.12285.

Pham, N.T., Hoang, H.T. and Phan, Q.P.T. (2020), "Green human resource management: a comprehensive review and future research agenda", *International Journal of Manpower*, Vol. 41 No. 7, pp. 845-878, doi: 10.1108/ijm-07-2019-0350.

Pinzone, M., Guerci, M., Lettieri, E. and Huisingh, D. (2019), "Effects of 'green' training on pro-environmental behaviors and job satisfaction: evidence from the Italian healthcare sector", *Journal of Cleaner Production*, Vol. 226, pp. 221-232, doi: 10.1016/j.jclepro.2019.04.048.

Preacher, K.J. and Hayes, A.F. (2008), "Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models", *Behavior Research Methods*, Vol. 40 No. 3, pp. 879-891, doi: 10.3758/brm.40.3.879.

Rana, G. and Arya, V. (2024), "Green human resource management and environmental performance: mediating role of green innovation–a study from an emerging country", *Foresight*, Vol. 26 No. 1, pp. 35-58, doi: 10.1108/fs-04-2021-0094.

Ren, Z. and Hussain, R.Y. (2022), "A mediated–moderated model for green human resource management: an employee perspective", *Frontiers in Environmental Science*, Vol. 10, 973692, doi: 10.3389/fenvs.2022.973692.

Ren, S., Tang, G. and Jackson, S.E. (2017), "Green human resource management research in emergence: a review and future directions", *Asia Pacific Journal of Management*, Vol. 35 No. 3, pp. 769-803, doi: 10.1007/s10490-017-9532-1.

Renwick, D.W.S., Redman, T. and Maguire, S. (2013), "Green human resource management: a review and research agenda", *International Journal of Management Review*, Vol. 15 No. 1, pp. 1-14, doi: 10.1111/j.1468-2370.2011.00328.x.

Renwick, D.W.S., Jabbour, C.J.C., Muller-Camen, M., Redman, T. and Wilkinson, A. (2016), "Contemporary developments in green (environmental) HRM scholarship", *The International Journal of Human Resource Management*, Vol. 27 No. 2, pp. 114-128, doi: 10.1080/09585192.2015.1105844.

Rizki, A.F. and Augustine, Y. (2022), "Green supply chain management practices: direct effects sustainability performance", *Technium Social Sciences Journal*, Vol. 28, pp. 389-407, doi: 10.47577/tssj.v28i1.5795.

Robertson, J.L. and Barling, J. (2013), "Greening organizations through leaders' influence on employees' pro-environmental behaviors", *Journal of Organizational Behavior*, Vol. 34 No. 2, pp. 176-194, doi: 10.1002/job.1820.

Rubel, M.R.B., Kee, D.M.H. and Rimi, N.N. (2021), "Green human resource management and supervisor pro-environmental behavior: the role of green work climate perceptions", *Journal of Cleaner Production*, Vol. 313, 127669, doi: 10.1016/j.jclepro.2021.127669.

Sabbir, M.M. and Taufique, K.M.R. (2022), "Sustainable employee green behavior in the workplace: integrating cognitive and non-cognitive factors in corporate environmental policy", *Business Strategy and the Environment*, Vol. 31 No. 1, pp. 110-128, doi: 10.1002/bse.2877.

Sabokro, M., Masud, M.M. and Kayedian, A. (2021), "The effect of green human resources management on corporate social responsibility, green psychological climate and employees' green behavior", *Journal of Cleaner Production*, Vol. 313, 127963, doi: 10.1016/j.jclepro.2021.127963.

Saeed, B.B., Afsar, B., Hafeez, S., Khan, I., Tahir, M. and Afridi, M.A. (2019), "Promoting employee's proenvironmental behavior through green human resource management practices", *Corporate*

Social Responsibility and Environmental Management, Vol. 26 No. 2, pp. 424-438, doi: 10.1002/csr.1694.

Saifulina, N., Carballo-Penela, A. and Ruzo-Sanmartín, E. (2023), "Effects of personal environmental awareness and environmental concern on employees' voluntary pro-environmental behavior: a mediation analysis in emerging countries", *Baltic Journal of Management*, Vol. 18 No. 1, pp. 1-18, doi: 10.1108/bjm-05-2022-0195.

Setyadi, A., Soekotjo, S., Lestari, S.D., Pawirosumarto, S. and Damaris, A. (2025), "Trends and opportunities in sustainable manufacturing: a systematic review of key dimensions from 2019 to 2024", *Sustainability*, Vol. 17 No. 2, p. 789, doi: 10.3390/su17020789.

Shaukat, A., Qiu, Y. and Trojanowski, G. (2016), "Board attributes, corporate social responsibility strategyand corporate environmental and social performance", *Journal of Business Ethics*, Vol. 135 No. 3, pp. 569-585, doi: 10.1007/s10551-014-2460-9.

Statista (2024a), "Environmental, social, and corporate governance (ESG) drivers impacting investment decisions worldwide in 2023, by region", Statistica.com, available at: https://www.statista.com/statistics/1454565/esg-drivers-impacting-investment-decisions-worldwide/ (accessed 1 March 2025).

Statista (2024b), "Consumers willingness to pay more for sustainable packaging worldwide from 2021 to 2023", Statistica.com, available at: https://www.statista.com/statistics/1467292/willingness-to-pay-for-sustainable-packaging-worldwide/ (accessed 1 March 2025).

Statista (2024c), "Share of consumers willing to pay more for sustainable products in the Asia-Pacific region in 2023, by generation", Statistica.com, available at: https://www.statista.com/statistics/1477446/apac-willingness-to-pay-more-for-sustainable-products-by-generation/ (accessed 1 March 2025).

Stride, C., Gardner, S., Catley, N. and Thomas, F. (2015), "Mplus code for mediation, moderation, and moderated mediation models (online resources)", available at: http://www.offbeat.group.shef.ac.uk/FIO/mplusmedmod.htm (accessed 12 October 2024).

Tariq, M., Xu, Y., Ullah, K. and Dong, B. (2024), "Toward low-carbon emissions and green growth for sustainable development in emerging economies: do green trade openness, eco-innovation, and carbon price matter?", *Sustainable Development*, Vol. 32 No. 1, pp. 959-978, doi: 10.1002/sd.2711.

Tu, Y., Li, Y. and Zuo, W. (2023), "Arousing employee pro-environmental behavior: a synergy effect of environmentally specific transformational leadership and green human resource management", *Human Resource Management*, Vol. 62 No. 2, pp. 159-179, doi: 10.1002/hrm.22138.

Umrani, W., Channa, N., Yousaf, A., Ahmed, U., Pahi, M. and Ramayah, T. (2020), "Greening the workforce to achieve environmental performance in hotel industry: a serial mediation model", *Journal of Hospitality and Tourism Management*, Vol. 44, pp. 50-60, doi: 10.1016/j.jhtm.2020.05.007.

Unsworth, K.L., Dmitrieva, A. and Adriasola, E. (2013), "Changing behaviour: increasing the effectiveness of workplace interventions in creating pro-environmental behaviour change", *Journal of Organizational Behavior*, Vol. 34 No. 2, pp. 211-229, doi: 10.1002/job.1837.

Uzkurt, C., Ekmekcioglu, E.B., Ceyhan, S. and Hatiboglu, M.B. (2024), "Digital technology use of SMEs during the COVID-19 pandemic in Turkey: mobile applications' role on motivation and job performance", *Kybernetes*, Vol. 53 No. 4, pp. 1354-1373, doi: 10.1108/k-08-2022-1189.

Vaia, G., Bisogno, M. and Tommasetti, A. (2017), "Investigating the relationship between the social and economic-financial performance", *Applied Finance and Accounting*, Vol. 3 No. 1, pp. 55-64, doi: 10.11114/afa.v3i1.2126.

Wood, D.J. (1991), "Social issues in management: theory and research in corporate social performance", *Journal of Management*, Vol. 17 No. 2, pp. 383-406, doi: 10.1177/014920639101700206.

Wörsdörfer, M. (2015), "Equator principles: bridging the gap between economics and ethics?", *Business and Society Review*, Vol. 120 No. 2, pp. 205-243, doi: 10.1111/basr.12054.

Yadegaridehkordi, E., Foroughi, B., Iranmanesh, M., Nilashi, M. and Ghobakhloo, M. (2023), "Determinants of environmental, financial, and social sustainable performance of manufacturing SMEs in Malaysia", *Sustainable Production and Consumption*, Vol. 35, pp. 129-140, doi: 10.1016/j.spc.2022.10.026.

Ye, J., Zhang, X., Zhou, L., Wang, D. and Tian, F. (2022), "Psychological mechanism linking green human resource management to green behavior", *International Journal of Manpower*, Vol. 43 No. 3, pp. 844-861, doi: 10.1108/ijm-11-2020-0508.

Yildiz Çankaya, S. and Sezen, B. (2019), "Effects of green supply chain management practices on sustainability performance", *Journal of Manufacturing Technology Management*, Vol. 30 No. 1, pp. 98-121, doi: 10.1108/jmtm-03-2018-0099.

Zhang, L., Wu, J., Chen, H. and Nguyen, B. (2020), "Does one bad apple ruin a firm's green brand image? Examining frontline service employees' environmentally irresponsible behaviors", *European Journal of Marketing*, Vol. 54 No. 10, pp. 2501-2521, doi: 10.1108/ejm-11-2019-0844.

Zhang, J., Qi, L., Wang, C. and Lyu, X. (2022), "The impact of servitization on the environmental and social performance in manufacturing firms", *Journal of Manufacturing Technology Management*, Vol. 33 No. 3, pp. 425-447, doi: 10.1108/jmtm-11-2020-0451.

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