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Economic Research-Ekonomska Istraživanja

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rero20

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To cite this article: Xiaomei Sun, Ahmad El Askary, Muhammad Saeed Meo, Noor ul Ain Zafar & Babar Hussain (2022) Green transformational leadership and environmental performance in small and medium enterprises, Economic Research-Ekonomska Istraživanja, 35:1, 5273-5291, DOI: 10.1080/1331677X.2021.2025127

To link to this article: https://doi.org/10.1080/1331677X.2021.2025127

Published online: 17 Jan 2022.

ECONOMIC RESEARCH-EKONOMSKA ISTRAŽIVANJA
2022, VOL. 35, NO. 1, 5273–5291
https://doi.org/10.1080/1331677X.2021.2025127

Green transformational leadership and environmental performance in small and medium enterprises

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ABSTRACT

This study examines the nexus between green transformational leadership (GTL) and environmental performance (EP), considering the mediating role of green human resource management (GHRM) and green innovation (GI). Besides, we also find the moderating effects of environmental values (EV) between GTL and EP. This study collected data from 110 respondents using a survey questionnaire from small and medium enterprises and employed structural equation modeling. The findings confirm a positive and significant effect of GTL on EP. Furthermore, mediation analysis confirms that GHRM and GI positively mediate between GTL and EP. Moreover, it is also confirmed from structural equation modelling that EV play moderating role between GTL and EP. These results offer valuable recommendations for all stakeholders.

ARTICLE HISTORY
Received 15 October 2021
Accepted 30 December 2021

KEYWORDS
Green transformational leadership; environmental performance; environmental values; green innovation

JEL CODES
Q01; O15; O14

1. Introduction

Since the last few decades, many of our ecosystem's problems have worsened to the point that they could lead to an absolute environmental disaster. Because of this, it is becoming increasingly important to raise awareness of these issues and the measures that may be taken to prevent their adverse effects (Ozturk et al., 2021; Sharif et al., 2020). Some of the major challenges are pollution, global warming, ocean acidification, loss of biodiversity, Public health issues, Ozone layer depletion, deforestation, etc. (An et al., 2021). Currently, environmental issues are the most prominent problem to be tackled. These environmental issues are problematic for developing economies and the whole suffering from these problems (Sharif et al.,2021; Sun et al., 2021). In the same vein, developing countries such as Pakistan face substantial

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environmental threats and biodiversity losses due to global warming. As per the IQAir (2021) report, Lahore (Pakistan) is the second most polluted city globally.

Furthermore, deforestation, air pollution, water pollution, land degradation, and global warming are among the most serious environmental concerns facing Pakistan[1]. The industrial revolution was one of the major reasons for environmental degradation. Production became mechanized through hydraulic and steam power during the first industrial revolution. The Second used electric power and the assembly of products based on labor division to create mass production. The first two stages of the industrial revolution contributed a lot to environmental degradation. The third is automated manufacturing via the use of electronics and information technologies (Trauth-Goik, 2021). A new 'Fourth Industrial Revolution' is shaping, marked by a convergence of technology that blurs the boundaries between the physical, digital, and biological worlds. The 4th industrial revolution is considered as the environment-friendly industrial revolution. Now big or Small and Medium Enterprises (SMEs) businesses started caring about environmental degradation. Environmental activism has grown in popularity due to terrible pollution and global warming; thus, more companies are proactively prepared to produce green innovation (Chen, 2011). It has been increasingly common in the globe for customers to care about environmental concerns since they are becoming more aware of their impact (Chen et al., 2014; Ding et al., 2019); businesses should actively implement environment management to keep up with the current environmental trend and to improve their green image as well as their competitive advantages (Chen, 2007). Competitive advantage may be gained through green innovation as customers become increasingly concerned about the environment and green products become more commonplace in the market (Chen & Chang, 2012; Razzaq et al., 2021). Companies may use green innovation to differentiate themselves from their competitors, but it can also be used to address environmental requirements in the market (Ding et al., 2020). In the current environmental period, firms need to establish an environmental management philosophy to spur their green innovations (Chen et al., 2014; Razzaq et al., 2021a).

Transformational leaders may create an inspiring vision that can drive their followers to take the initiative to complete their tasks and achieve their objectives (Bass, 2000). Additionally, transformational leaders may encourage the development of innovative ideas within their businesses, and their actions can serve as role models 'creativity-enhancing forces'. When it comes to advancing innovation, transformational leadership is vital to success (Elkins & Keller, 2003; Rehman et al., 2020). Even though Transformational leadership can play a vital role in achieving environmental sustainability, this area of research is still less focused worldwide. Mittal and Dhar (2016) carried out a study in India and found that transformational leadership positively and significantly affects green creativity. Begum et al. (2021) carried out a study in china and found that green transformational leadership highly affects green innovation. According to Chen et al. (2014), green transformational leadership positively promotes Taiwan's mindfulness, self-efficacy, and performance. Zafar et al. (2017) carried out a study in Pakistan. The findings revealed that green transformational leadership has a significant and positive influence on green performance.

The globe is currently suffering from various environmental issues. According to a recent IQAir (2021) analysis, Lahore is the world's second most polluted city. As a result, it is critical to include Lahore city in policymaking. Many studies have been conducted to determine the effect of green transformational leadership on green innovation and other factors. The impact of green transformational leadership on environmental performance had received less emphasis in previous research. Furthermore, it pays less attention to the mediating effects of green human resource management and green innovation between green transformational leadership and environmental performance.

This study contributes to literature from various perspectives. Firstly, we carried out a current study in Pakistan and considered Lahore because it is the world's second-largest polluted city and other big cities, including Karachi and Rawalpindi. Second, this study examines the very first-time impact of green transformational leadership on environmental performance. Third, we also consider mediating role of green human resources management and green innovation between green transformational leadership and environmental performance using structural equation modeling. This study offers practical implications for the top management.

The remainder of the paper is organized as follows: Section 2 covers the literature review, section 3 discusses data and methods, section 4 elaborates on the study's findings, and section 5 explains the conclusion.

2. Literature review

2.1. Theoretical framework

We develop this model upon the Ability Motivation Opportunity (AMO) and Resource-Based View (RBV) theory. The relationship between firm performance and human capital is not a new concept; the present literature of HRM has its origin and approach (Takeuchi et al., 2007). The resource-based view (RBV) proposed that performance and competitive advantage are grounded upon how firms inspired their valuable strategic resources that are imperative, occasional, and problematic to replicate in the markets by the rivals (Nishii et al., 2008). According to the AMO theory, HPWS are a set of HR practices that are structured based on three main aspects: ability, motivation, and opportunity (AMO) (Appelbaum et al., 2000). When it comes to abilities, a number of methods are utilized to ensure that staff have the knowledge and skills necessary to execute a specific work, including recruiting and selection and training and development programs.

In the same way, motivation is based on performance evaluation and financial and non-financial incentives used to motivate people to achieve their performance goals. Finally, the term 'opportunity' refers to a set of policies that encourage employee participation in various activities through increased involvement, information exchange, and personal liberty. Increasing the capacity of employee Green training is essential to surge cooperation with customers and suppliers (Ding et al., 2022; Yu et al., 2020). Leadership and employees, in our point of view, is an important factor likewise to any other resources of a firm, where the main purpose of GHRM practices is to progress, motivate and create opportunities to demonstrate longer job performances for

firms to resolute competitive advantage and elite performance (Boxall & Steeneveld, 1999). Thus, we claim that human resource indulges the basic standard of RBV for producing an auxiliary better performance and persistent advantage. A firm's multi-layered social system is rooted in human capital, which makes the firm's integral feature to use in an organization optimally compared to rivals in the market (Khan et al., 2021; Singh et al., 2020).

2.2. Hypothesis development

2.2.1. Green transformational leadership (GTL) and green human resource management (GHRM)

A firm's future and current course of action depend upon transformational leadership influence in active markets (Bass & Avolio, 1993). Employees will develop strong faith if leaders have a strong belief in their vision, produce an innovative vision, and communicate their vision vividly to the employees. Green transformational leadership is defined by Chen and Chang (2013) as the trait of a leader who encourages and motivates his colleagues to achieve environmental goals that go above and beyond what is expected of them from an environmental perspective. While, green performance may be defined as the performance of software and hardware that are included in the process of innovation which a company executes in green process and products that involve the modernization in technologies like the anticipation of pollution, saving energy, recycling of wastes and commercial environment administration (Chen et al., 2006). Zhu et al. (2005) advised that transformational leadership motivates an ideal level of inspiration, faith, solidity, assurance, and performance. According to some studies, knowledgeable-driven transformational leadership certainly inspired talent managing, performance administration, and proficiency of employees (Jia et al.,2018). Green aspects of green human resource management are related to the green aspect, which practices objectives to aid organizations to attain, produce, inspire and endure the green conduct of employees in the organization (Dumont et al., 2017). Whereby, we estimate that to achieve green performance and innovation, GTL plays a vital part in devising and practising policies that aid green human resource management (GHRM) to help the firm to act on its visions and strategies enabling to achieve green performance (Jia et al., 2018). GTL stresses upon employees' distinct requirements, which encourages them to produce and practice GHRM policies to influence their followers inspired and endowed. Consequently, we predict that GTL has a wide role in aiding positive GHRM practices, such as training and development, recruitment and selection, and performance-based incentive, which are based upon GTL to achieve the desired goals of firms (Zhu et al., 2005). Appelbaum et al. (2000), therefore, AMO theory postulates GTL empowers GHRM to improve employees' abilities and motivation and create opportunities relevant to environmental management actions (Haddock-Millar et al., 2016) concerning green innovation and environmental performance (Chan, 2005). Therefore, we predict that;

HI: Green transformational leadership (GTL) has a significant relationship with green human resource management (GHRM).

2.2.2. Green human resource management and environmental performance

Managing human resources (HRM) helps a business achieve its long-term objectives. The traditional job of HR is to communicate corporate executives' strategic vision to their employees and assist them in understanding the vision, which is traditionally the responsibility of HR professionals (Lado & Wilson, 1994). Evans (1986) claimed that the immediate implications of human resource management include success in implementing the strategic goal and the effectiveness of the company. The term green human resource management (GHRM) is used as an abbreviation for green human resource management. GHRM encompasses recruiting and retaining environmentally conscious workers, providing environmental training, and considering employees' environmentally conscious contributions in performance evaluations (Guest, 1997). Kim et al. (2019) carried out a study and found a relationship between green HRM and the environmental performance of the hotel industry. The study's findings show that GHRM plays a significant positive role in environmental performance. Roscoe et al. (2019) also examined the nexus between GHRM and environmental performance. The findings show that GHRM plays a major role in improving environmental performance. Rawashdeh (2018) found GHRM positively and significantly enhances the environment in the health sector of Jordan. Hence, based on literature, we specify the following hypothesis;

H2: There is a significant relationship between GHRM and environmental performance

2.2.3. Green transformational leadership (GTL) and green innovation

Production or development of environmentally friendly products and processes refer to as green innovation through the implementation of firm practices such as using eco-friendly principles, dropping emissions, use of less material in production and design, use of green raw materials, less use of electricity and water (Albort-Morant et al., 2016). Seeck and Diehl (2017) past studies evaluation on HRM innovation comparatively administrative and process innovation have less impact than product and technological innovation. Considering RBV (Barney, 2001) and AMO (Appelbaum et al., 2000), we envisage firms that value their employees; influence them will achieve green HRM through motivation and opportunities to channelizing their potential for green products and innovation (Shahzad et al., 2021; Singh et al., 2020).

H3: Green transformational leadership has a significant relationship with green innovation

2.2.4. Green innovation and environmental performance

Organizational initiatives towards fulfilling societal prospects vis-à-vis the natural environment in compliance with rules and regulations relevant to environmental performance (Chan, 2005). It includes the environmental effects of a firm's product, processes, resource consumption, and products fitting with the environment's legal implication (Dubey et al., 2015). As per preceding studies quality of environmental-friendly products, green products, and process innovation integrates business operations and product development based upon environmental performance (Dubey

et al., 2015; Rehman et al., 2021). Further, green product and green process innovation decrease the negative or damaging impact on the organisation's environment and contribute to increasing the organization's social and financial performance by reducing the cost of waste (Weng et al., 2015; Yan & Zhang, 2021). Therefore, by using RBV, we forecast that green product and green process innovation remain major resources that augment environmental performance and help make goodwill with main stakeholders. So, we estimate that:

H4: Green innovation has a significant impact on environmental performance.

2.2.5. Green transformational leadership (GTL) and environmental performance

Transformational leaders have an influence on organizational performance in a variety of ways, including employee behavior and attitude, employee engagement, and economic health (Barling et al., 2009), green performance (Ramus & Steger, 2000), and psychological performance. Çop et al. (2021) found that green transformational leadership positively affects green work engagement, ultimately affecting environmental performance. Hence, based on the literature, we formulated the following hypothesis.

H5: There is a positive effect of green transformational leadership (GTL) on environmental performance.

2.2.6. Green transformational leadership and environmental performance: Mediating role of GHRM

Leadership emphasis on empathetic, envisaging and governing both personal and interpersonal floppy aspects in what manner people influence one and the other toward shared goals (Northouse, 2021) whereas, the HRM focused on enterprises processes besides systems to affect employees on a bigger scale (Lin et al., 2013). Therefore, we conclude that HRM and leadership are intricate in organizing people at work from various perspectives (Ahmed et al.,2021; Leroy et al., 2018). Though, leadership plays an important role as a precursor than moderating or mediator role as leadership encourages HRM practices that affect innovation and higher performance, which develop HRM-Innovative-Performance linkages. Top-level encouragement, support, endorse employees' environmental practices designing an ecological product that reduces pollution and resources (Renwick et al., 2013). Though, we forecast that GTL implies formulation of GHRM policies and practices (Meo et al.,2020) as GTL influences GHRM practices management, the performance of employees, employee efficiency, and to convey organization's policies and designs (Carton et al., 2014; Arici & Uysal, 2021). Therefore, we postulate that GTL affects the implementation of practices in GHRM to link pro-environmental image toward improving the company's status in front of significant stakeholders.

Hence, we suggest:

H6: Green HRM mediates Green transformational leadership and environmental performance.

2.2.7. Green transformational leadership and environmental performance: Mediating role of green innovation

GHRM contributes to developing awareness about the environment by employees, enhancing green creativity, and encouraging green organization presentation (Renwick et al., 2013). Rendering to past studies, green HRM inspired green innovation and green organization performance, but these research areas require an extensive and practical approach to analyze firms experience considering their main stakeholders' involvement in eco-friendly management practices (Tang et al., 2018). For effective environmental practices, firms should recruit employees with environmental beliefs and values and use appraisal, green training, development, and green compensation as core requisites to encourage employees for influential environmental performance (Rehman et al.,2021; Renwick et al., 2013). Green process and product innovation drastically offset the negative impact of the organization and increase the organization's performance via a cost reduction, times of waste, and other resources (Del Giudice et al., 2018). Using RBV (Barney, 2001) and AMO (Appelbaum et al., 2000) theory, it is forecast that green human resource management (GHRM) indirectly stimulates the environmental performance of the organization through the mediating role of green product innovation and green process innovation.

H7: Green innovation mediates the relationship between Green transformational leadership and environmental performance.

2.2.8. Green transformational leadership and environmental performance: Moderator role of environmental values

Individual green values and environmental duties have been neglected in the literature for moderators. According to some studies, Supplies Values Fit theory (SVFT) proposed green behaviour of an employee is optimistically influenced when individuals are entrenching with green values by green HRM practices. Our present study enlightens the new dimension of the growing research area by using green environmental value as the moderator (Gilal et al.,2019; Khan et al., 2020). Based on the resource research paper, leadership is an integral internal factor in advancing environmental management. Transformational leadership has a direct and exceptional influence on developing an innovative environment by boasting up members, which eventually affects the organisation's performance (Hameed et al., 2020; Zhu et al., 2005). When psychological supervisor characteristics matches and best fit the employees, it strengthens a relationship with the environment. Employees with environmental values will struggle to achieve the organisation's goal (Cheema et al., 2020). Therefore, we postulate that environmental values embedded through transformational leadership (GTL) play an essential role in developing a sense of responsibility amongst employees, which influences employees to implement green behaviour; to improve the company's environmental performance.

H8: Environmental values moderates the relationship between green transformational leadership and environmental performance.

Lastly, Figure 1 presents a relationship structure among all variables.

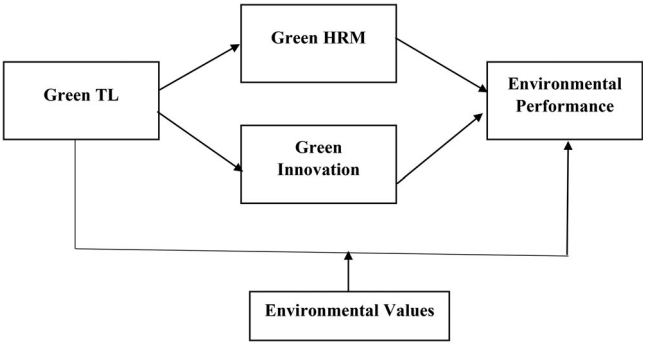

Figure 1. Research framework.
Source: research framework developed by authors.

3. Data and methodology

The data was gathered from small and medium-sized enterprises (SMEs) in Lahore, Karachi, and Rawalpindi. A self-administered questionnaire was employed for data collection from sample firms, and purposive sampling was used to ensure a representative sample. Employees who were actively involved in adopting green practices were surveyed for data. For data collection, surveyors were employed. Following the instructions supplied to surveyors, they briefed all respondents about the research's aim and then requested them to complete the questionnaire, which they duly completed. Filling out a questionnaire was their next step once they had agreed to do so. The surveys were completed by 200 employees from 20 of the selected companies. To summarize, a total of 110 valid responses were analyzed.

The demographic analysis presented in Table 1 shows that 70% of respondents have a bachelor's degree, 20% have a master's degree, 5% have a PhD, and 5% have additional professional degrees. The majority of respondents (about 50%) were between the ages of 40 and 50, with 30% between the ages of 30 and 40 and 20% above 50. While 90% of respondents were male, only 10% were female.

3.1. Questionnaire and pre-test

All of the tools used to measure the underlying constructs were derived from prior investigations. All of them were multi-item measures. A scale of green transformational leadership, green product innovation, green human resource practices, and environmental performance adopted from the (Singh et al., 2020). Environmental values and green innovation were adopted Hameed et al. (2020). The instrument's content validity was tested by distributing it to five experts, two of whom were human resource managers at the sample companies and three of whom were assistant professors with expertise in human resource management. Following their advice, a few small changes were made. In order to guarantee that the questionnaire was understandable, a pilot study was undertaken, and 45 respondents were given the questionnaire to provide feedback. No changes were needed to the questionnaires. Reliability analysis was also carried out to determine the internal consistency of the scales employed in the research.

Table 1. Demographic analysis of respondents.

Demographic of respondents		Percentage
Education	Bachelor's degree	70%
	Master's degree	20%
	PhD	5%
	Other professional education	5%
Age	>50	20%
	40 and 50	50%
	30 and 40	30%
Gender	Male	90%
	Female	10%

Source: authors own estimation.

The main reason for including Small and Medium Enterprises (SMEs) in our study is that SMEs play a significant role in economic growth. The SMEs contribute to creating jobs and global economic development in the worldwide business sector. SMEs account for approximately 90% of global business and employment. Small and medium-sized enterprises (SMEs) account for nearly 40% of national income in developing economies. According to World Bank estimates, around 600 million jobs will be required by 2030 to address the growing global workforce, allowing governments in many countries to prioritize SME development (World Bank, 2021). In recent years, small and medium-sized businesses have been entering the business market and expanding their operations by formalizing effective strategies to improve their performance in the international market.

3.2. Data analysis

This study used PLS-SEM for testing the proposed hypothesis in the present study. The reason to use Smart PLS 3 is that it is easy and compatible due to its modern assessment technique. Moreover, Smart PLS 3 is used and adopted in several business and hospitality sectors due to its modern assessment technique (Mehmood et al.,2021). According to the rule of thumb, the valuation of the model entails two steps comprising the inner (structural) and outer (measurement) model (Rasoolimanesh et al., 2018). The PLS-SEM has proven to be a convenient technique for testing and assessing structural modelling (Khan et al., 2021). Further, an effective model assessment is supposed to be a flexible technique (Mishra et al.,2019). Another reason to use PLS-SEM is that its requirements are less for the sample size in contrast with the normality of data and AMOS (Arain et al., 2020). Hence the reason to use PLS-SEM is to evade sample size and data normality issues. In addition to this, algorithmic and bootstrapping techniques are performed to evaluate loadings of factors to test construct validity and also internal consistency reliability (Ali et al., 2021). First, we have calculated the measurement assessment model, then through structural model assessment, estimations were calculated.

3.3. Measurement model assessment

The valuation of the measurement model was conducted, and convergent validity was assessed using loadings, competitive reliability and average variance. Seeing Table 2,

Table 2. Convergent validity.

Variables	Items	Loading	Alpha	CR	AVE
Green Transformation Leadership	GTL1	0.858	0.899	0.924	0.753
	GTL2	0.890			
	GTL3	0.896			
	GTL4	0.826			
Green Human Resource Management	GHRM1	0.404	0.901	0.912	0.523
	GHRM2	0.829			
	GHRM3	0.882			
	GHRM4	0.671			
	GHRM5	0.778			
	GHRM6	0.731			
	GHRM7	0.824			
	GHRM8	0.504			
	GHRM9	0.514			
	GHRM10	0.903			
Green Innovation	GI1	0.888	0.858	0.905	0.646
	GI2	0.921			
	GI3	0.895			
	GI4	0.823			
	GI5	0.866			
	GI6	0.091			
Environmental Performance	EP1	0.789			
	EP2	0.898			
	EP3	0.852			
	EP4	0.912			
	EP5	0.841	0.911	0.934	0.739
Environmental Value	EV1	0.889	0.918	0.942	0.803
	EV2	0.928			
	EV3	0.880			
	EV4	0.887			

Source: authors own estimation.

Figure 2, and Figure 3 factor loadings, all values exceeded the suggested value of 0.50 e. Moreover, composite reliability (Ali et al., 2021) also exceeds the suggested value of 0.60. In addition, average variance extract (AVE) all values are more than the suggested values of 0.50 for all under-study constructs (Hair et al., 2016). Items having the lowest factor loadings were deleted (<0.50). Similarly, the measurement from Table 3, findings of validated discriminated validity from Heterotrait-Monotrait Ratio (HTMT), can be analyzed as the values as discussed by Shehzadi et al. (2020) are not exceeding than the established bottom-line value of 0.85 which confirmed its discriminant validity.

3.4. Structural model assessment

Structural modeling was conducted concerning SMEs to estimate the hypothesis after determining the model's reliability and evaluating the measurement model. To analyze the path coefficients of model, t-values and standard errors are calculated and the significance of the relationship with collected data. The path coefficient values showed that the hypothesis was supported or not supported. For the estimation of moderation effects bootstrapping technique was applied in Smart-PLS 3 (Ringle et al., 2012). The findings presented in Table 4 show a significant and positive relationship between GRTL and GHRM ($\beta = 0.144$, $t = 5.586$), which support H1. Moreover, the findings also show a positive and significant relationship between GHRM and EP ($\beta = 0.098$, $t = 3.812$), which also suggests support of H2. We also find a positive

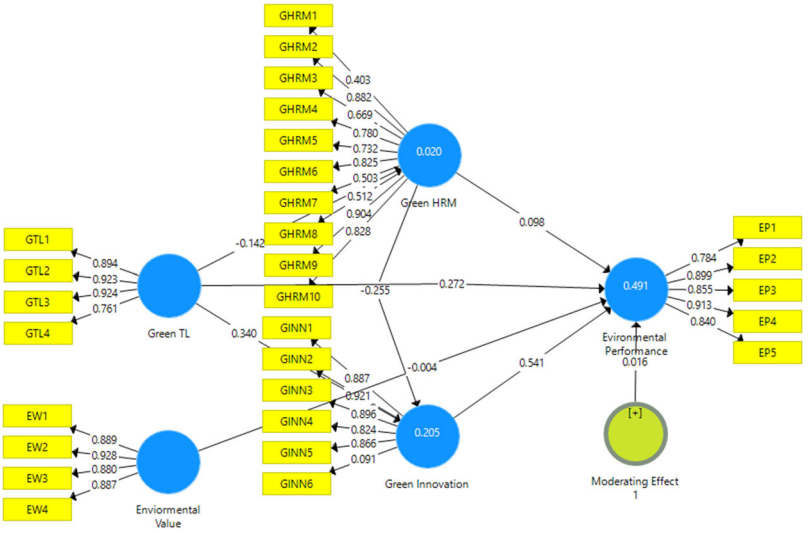

Figure 2. Measurement model assessment.
Source: authors own estimation.

relationship between GTL and GI (β = 0.341, t = 14.174) which also support the H3. The study's findings can be supported by Halbesleben et al. (2003). They find that organizational creativity highly depends on the leaders of the organization. Andriopoulos (2001) also confirms that leaders play a major role in improving the environment's performance. Mittal and Dhar (2016) also find that GTL plays a positive role in GI. We also find a positive and significant relationship between GI and EP (β = 0.541, t = 25.659), which support H4. Rehman et al. (2021) find that positive change in GI leads to positive change in EP. Qiu et al. (2020) confirm that GI improves the overall firm's performance. Mahto et al. (2020) find that GI can improve environmental performance. Moreover, GTL and EP also have a positive and significant association (β = 0.260, t = 3.048) which support H5. Zafar et al. (2017) validate the findings and demonstrate that environmental performance improves due to GTL. Chang et al. (2014) complement these findings by stating that environmental performance improves significantly due to GTL. The results also show a moderating effect of EV between GRTL and EP, supporting H8.

Table 4 shows the mediation results, indicating that green HRM and green innovation significantly mediate green transformation and environmental performance. In this regard, green human resource management and green innovation play essential roles even with a direct relationship with ecological performance. Lastly, Table 5 reports the indirect relationship and support H6 and H7, confirming the mediation and moderation effects.

4. Discussion

This study examines the impact of green transformational leadership effect on environmental performance. Our analysis also strengthens the previous research in which transformational leadership influences HRM practices that invoke green innovation

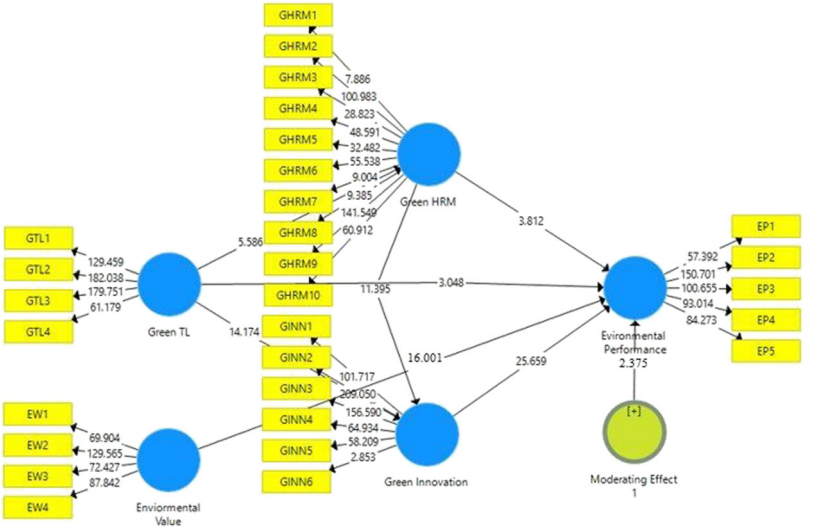

Figure 3. Structural model assessment.
Source: authors own estimation.

Table 3. Discriminant validity (HTMT ratio).

	GTL	GHRM	GI	EP	EV
GTL	1				
GHRM	0.433	1			
GI	0.543	0.128	1		
EP	0.154	0.579	0.323	1	
EV	0.532	0.535	0.453	0.359	1

Source: authors own estimation.

effects on environmental performance (Singh et al., 2020). This study further supports that initiating green innovation in the organization will provide the chance of first-mover, which will aid in gaining market share (Guan et al., 2020). The conclusions of our study provide the impact relevant to environmental values in green transformational leadership and green human resource management practices. The previous literature recognizes the impact of green innovation through the underpinning theory of AMO, which improved the environmental performance of SMEs (Singh et al., 2020). Our study also supports the AMO theory and RBV, wherein leadership and employees play a pivotal role in raising the competition amongst firms.

In this study, we added the environmental values as moderating effect on green HRM practices to further contribute to the scholarly work of (Singh et al., 2020) and to fortify the connection between green transformational leadership and green HRM practices, ultimately determining impact on environmental performance. This study showed that environmental values do not significantly relate to GHRM practices. The fact that attitudes and values, not necessarily influence environmental performance improvement has also been highlighted. People's behaviour and attitude change and vary, which may not significantly influence implementing pro-environmental behaviour. The study's findings align with Dietz et al. (2005). The study's conclusions exhibited no impact of environmental values in implanting green HRMS practices. However, it was found that the percentage of environmental variables is relatively low

Table 4. Path analysis.

Direct Relationship	Coefficient	Std. Error	t-Statistic	Prob.	Hypothesis Decision
GTL -> GHRM	0.144	0.025	5.586	0.000***	H1: Supported
GHRM -> EP	0.098	0.026	3.812	0.000***	H2: Supported
GTL -> GI	0.341	0.024	14.174	0.000***	H3: Supported
GI -> EP	0.541	0.021	25.659	0.000***	H4: Supported
GTL -> EP	0.260	0.089	3.048	0.002***	H5: Supported
Moderating Effect 1 -> EP	0.019	0.008	2.375	0.023**	H8: Supported

*** & **refers to level of significant at 1% and 5% respectively.
Source: authors own estimation.

Table 5. Path analysis.

Indirect Relationship	Coefficient	Std. Error	t-Statistic	Prob.	Hypothesis Decision
GTL -> GHRM -> EP	0.014	0.004	3.198	0.001***	H6: Supported
GTL -> GI -> EP	0.184	0.013	13.979	0.000***	H7: Supported

*** refers to the level of significance at 1%.
Source: authors own estimation.

due to low external weightage. However, Green human resource management practices develop a significant relationship with green innovation, which positively improves environmental performance as a mediator. This study also supports the significance of HRM practices as a mediator to influence green innovation (Jia et al., 2018). Therefore, our study verifies green innovation's optimistic and constructive effect on environmental performance.

4.1. Theoretical contribution

As explained earlier, the environmental performance has become a significant and impactful area for many researchers. Several types of research are being conducted to determine various variables affecting environmental performance. Firstly, our research studied the role of environmental values invoking environmental performance in organizations. Secondly, to link the gap, the present research contributes to the existing knowledge by testing the relationship between green transformational leadership and green human resource practices in the SMEs through moderating effect of environmental values. Secondly, the measurement approach investigating the impact of values would be an addition to the existing literature. Thirdly, the researcher also deduces that environmental values are not necessary to improve environmental performance by integrating them into HRM practices. Fourthly, the study validated that green innovation as a mediator is an essential variable to enhance ecological performance(Renwick et al., 2013). Therefore, the contemporary research concentrating on the impact of environmental values as a moderator for strengthening or modifying the relationship between GTL and GHRM deduced less contribution towards the improvement of environmental performance.

4.2. Practical implication

This research provides some significant recommendations to leaders and managers on fostering green innovation and utilising it for improved environmental

performance to outperform competitors in the market. In order to implement green HRM practices, firms should promote and encourage green leadership attributes, according to the findings of our study. To attract, develop, and retain workers who share the company's commitment to environmentally friendly business operations and products, the HR department must adopt green HR practices. Consequently, to remain relevant and competitive, we recommend that the firm's transformational leadership create an atmosphere in which people with green ability and motivation feel supported and are given chances to achieve their green potentialities.

4.3. Limitation and future directions

Firstly, the data was collected from SMEs working in big cities of Pakistan, so it is suggested that future researchers should target other cities of Pakistan covering broad geographical areas like Faisalabad, Bahawalpur, and Multan division. Secondly, the environmental values scale is adopted generally to measure the effect of environmental values on the HRM practice. It is suggested that researchers test the environmental values for employee level construct based on Best-Worst Scale (BWS) to validate the result of the hypothesis further. Thirdly, this research used environmental values as moderators; it is suggested that future research should consider pro-environmental behaviour or environmental knowledge as moderators.

Note

1. https://www.zameen.com/blog/tips-solve-environmental-issues-pakistan.html

Acknowledgement

The authors acknowledge the support of Taif University Researchers Supporting Project number (TURSP-2020/82), Taif University, Taif, Saudi Arabia. Muhammad Saeed Meo also acknowledges that this paper has been supported by the RUDN University Strategic Leadership Program.

Disclosure statement

No potential conflict of interest was reported by the authors.

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References

Ahmed, U., Mozammel, S., & Zaman, F. (2021). HRM and green innovation of manufacturing firms in Australia. *Utopía y Praxis Latinoamericana*, *26*(2), 362–371.

Albort-Morant, G., Leal-Millán, A., & Cepeda-Carrión, G. (2016). The antecedents of green innovation performance: A model of learning and capabilities. *Journal of Business Research*, *69*(11), 4912–4917. https://doi.org/10.1016/j.jbusres.2016.04.052

Ali, S., Yusop, Z., Kaliappan, S. R., Chin, L., & Meo, M. S. (2021). Impact of trade openness, human capital, public expenditure and institutional performance on unemployment: Evidence from OIC countries. *International Journal of Manpower*. https://doi.org/10.1108/IJM-10-2020-0488

An, H., Razzaq, A., Nawaz, A., Noman, S. M., & Khan, S. A. R. (2021). Nexus between green logistic operations and triple bottom line: Evidence from infrastructure-led Chinese outward foreign direct investment in Belt and Road host countries. *Environmental Science and Pollution Research*, 1–24.

Andriopoulos, C. (2001). Determinants of organisational creativity: A literature review. *Management Decision*, *39*(10), 834–841. https://doi.org/10.1108/00251740110402328

Appelbaum, E., Bailey, T., Berg, P., Kalleberg, A. L., & Bailey, T. A. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Cornell University Press.

Arain, H., Han, L., Sharif, A., & Meo, M. S. (2020). Investigating the effect of inbound tourism on FDI: The importance of quantile estimations. *Tourism Economics*, *26*(4), 682–703. https://doi.org/10.1177/1354816619859695

Arici, H. E., & Uysal, M. (2021). Leadership, green innovation, and green creativity: A systematic review. *The Service Industries Journal*, 1–41. https://doi.org/10.1080/02642069.2021.1964482

Barling, J., Dupré, K. E., & Kelloway, E. K. (2009). Predicting workplace aggression and violence. *Annual review of psychology*, *60*, 671–692.

Barney, J. B. (2001). Is the resource-based "view" a useful perspective for strategic management research? Yes. *The Academy of Management Review*, *26*(1), 41–56. https://doi.org/10.2307/259393

Bass, B. M. (2000). The future of leadership in learning organizations. *Journal of Leadership Studies*, *7*(3), 18–40. https://doi.org/10.1177/107179190000700302

Bass, B. M., & Avolio, B. J. (1993). *Transformational leadership: A response to critiques.*

Begum, S., Ashfaq, M., Xia, E., & Awan, U. (2021). Does green transformational leadership lead to green innovation? The role of green thinking and creative process engagement. *Business Strategy and the Environment*, https://doi.org/10.1002/bse.2911

Boxall, P., & Steeneveld, M. (1999). Human resource strategy and competitive advantage: A longitudinal study of engineering consultancies. *Journal of Management Studies*, *36*(4), 443–463. https://doi.org/10.1111/1467-6486.00144

Carton, A. M., Murphy, C., & Clark, J. R. (2014). A (blurry) vision of the future: How leader rhetoric about ultimate goals influences performance. *Academy of Management Journal*, *57*(6), 1544–1570. https://doi.org/10.5465/amj.2012.0101

Chan, R. Y. (2005). Does the natural-resource-based view of the firm apply in an emerging economy? A survey of foreign invested enterprises in China. *Journal of Management Studies*, *42*(3), 625–672. https://doi.org/10.1111/j.1467-6486.2005.00511.x

Chang, Y. T., Park, H. S., Jeong, J. B., & Lee, J. W. (2014). Evaluating economic and environmental efficiency of global airlines: A SBM-DEA approach. *Transportation Research Part D: Transport and Environment*, *27*, 46–50.

Cheema, S., Afsar, B., & Javed, F. (2020). Employees' corporate social responsibility perceptions and organizational citizenship behaviors for the environment: The mediating roles of organizational identification and environmental orientation fit. *Corporate Social Responsibility and Environmental Management*, *27*(1), 9–21. https://doi.org/10.1002/csr.1769

Chen, Y. S. (2007). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of Business Ethics*, *77*(3), 271–286. https://doi.org/10.1007/s10551-006-9349-1

Chen, Y. S. (2011). Green organizational identity: Sources and consequence. *Management Decision*, *49*(3), 384–404. https://doi.org/10.1108/00251741111120761

Chen, Y. S., & Chang, C. H. (2012). Enhance green purchase intentions: The roles of green perceived value, green perceived risk, and green trust. *Management Decision*, *50*(3), 502–520. https://doi.org/10.1108/00251741211216250

Chen, Y. S., & Chang, C. H. (2013). The determinants of green product development performance: Green dynamic capabilities, green transformational leadership, and green creativity. *Journal of Business Ethics*, *116*(1), 107–119. https://doi.org/10.1007/s10551-012-1452-x

Chen, Y. S., Chang, C. H., & Lin, Y. H. (2014). Green Transformational leadership and green performance: The mediation effects of green mindfulness and green self-efficacy. *Sustainability*, *6*(10), 6604–6621. https://doi.org/10.3390/su6106604

Çop, S., Olorunsola, V. O., & Alola, U. V. (2021). Achieving environmental sustainability through green transformational leadership policy: Can green team resilience help? *Business Strategy and the Environment*, *30*(1), 671–682. https://doi.org/10.1002/bse.2646

Del Giudice, G., Rappuoli, R., & Didierlaurent, A. M. (2018, October). Correlates of adjuvanticity: A review on adjuvants in licensed vaccines. In *Seminars in immunology* (Vol. 39, pp. 14–21). Academic Press.

Dietz, T., Fitzgerald, A., & Shwom, R. (2005). Environmental values. *Annual Review of Environment Resources*, *30*, 335–372.

Ding, X., Appolloni, A., & Shahzad, M. (2022). Environmental administrative penalty, corporate environmental disclosures and the cost of debt. *Journal of Cleaner Production*, *332*, 129919. https://doi.org/10.1016/j.jclepro.2021.129919

Ding, X., Qu, Y., & Shahzad, M. (2019). The impact of environmental administrative penalties on the disclosure of environmental information. *Sustainability*, *11*(20), 5820. https://doi.org/10.3390/su11205820

Ding, X., Qu, Y., & Shahzad, M. (2020). Stock market's reaction to self-disclosure of environmental administrative penalties: An empirical study in China. *Polish Journal of Environmental Studies*, *29*(6), 4011–4029. https://doi.org/10.15244/pjoes/118584

Dubey, R., Gunasekaran, A., & Ali, S. S. (2015). Exploring the relationship between leadership, operational practices, institutional pressures and environmental performance: A framework for green supply chain. *International Journal of Production Economics*, *160*, 120–132. https://doi.org/10.1016/j.ijpe.2014.10.001

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

Elkins, T., & Keller, R. T. (2003). Leadership in research and development organizations: A literature review and conceptual framework. *The Leadership Quarterly*, *14*(4–5), 587–606. https://doi.org/10.1016/S1048-9843(03)00053-5

Evans, P. A. (1986). The strategic outcomes of human resource management. *Human Resource Management*, *25*(1), 149–167.

Gilal, F. G., Ashraf, Z., Gilal, N. G., Gilal, R. G., & Channa, N. A. (2019). Promoting environmental performance through green human resource management practices in higher education institutions: A moderated mediation model. *Corporate Social Responsibility and Environmental Management*, *26*(6), 1579–1590.

Guan, W. J., Liang, W. H., Zhao, Y., Liang, H. R., Chen, Z. S., Li, Y. M., Liu, X. Q., Chen, R. C., Tang, C. L., Wang, T., Ou, C. Q., Li, L., Chen, P. Y., Sang, L., Wang, W., Li, J. F., Li, C. C., Ou, L. M., Cheng, B., … He, J. X. (2020). Comorbidity and its impact on 1590 patients with COVID-19 in China: a nationwide analysis. *European Respiratory Journal*, *55*(5).

Guest, D. E. (1997). Human resource management and performance: A review and research agenda. *International Journal of Human Resource Management*, *8*(3), 263–276.

Haddock-Millar, J., Sanyal, C., & Müller-Camen, M. (2016). Green human resource management: A comparative qualitative case study of a United States multinational corporation. *The International Journal of Human Resource Management*, *27*(2), 192–211. https://doi.org/10.1080/09585192.2015.1052087

Hair Jr., J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). *Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I–method*. European Business Review.

Halbesleben, J. R., Novicevic, M. M., Harvey, M. G., & Buckley, M. R. (2003). Awareness of temporal complexity in leadership of creativity and innovation: A competency-based model. *The Leadership Quarterly*, *14*(4–5), 433–454. https://doi.org/10.1016/S1048-9843(03)00046-8

Hameed, Z., Khan, I. U., Islam, T., Sheikh, Z., & Naeem, R. M. (2020). Do green HRM practices influence employees' environmental performance? *International Journal of Manpower*, *41*(7), 1061–1079. https://doi.org/10.1108/IJM-08-2019-0407

IQAir. (2021). *Air quality and pollution city ranking*. World Air Quality. https://www.iqair.com/world-air-quality-ranking

Jia, J., Liu, H., Chin, T., & Hu, D. (2018). The continuous mediating effects of GHRM on employees' green passion via transformational leadership and green creativity. *Sustainability*, *10*(9), 3237. https://doi.org/10.3390/su10093237

Khan, A., Bibi, S., Lyu, J., Raza, A., Hayat, H., & Meo, M. S. (2020). Unraveling the nexuses of tourism, terrorism, and well-being: Evidence from Pakistan. *Journal of Hospitality & Tourism Research*, *44*(6), 974–1001. https://doi.org/10.1177/1096348020917742

Khan, S. A. R., Razzaq, A., Yu, Z., & Miller, S. (2021). S. Industry 4.0 and circular economy practices: A new era business strategies for environmental sustainability. *Business Strategy and the Environment*, *30*(8), 4001–4014. https://doi.org/10.1002/bse.2853

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

Lado, A. A., & Wilson, M. C. (1994). Human resource systems and sustained competitive advantage: A competency-based perspective. *Academy of Management Review*, *19*(4), 699–727.

Leroy, H., Segers, J., Van Dierendonck, D., & Den Hartog, D. (2018). Managing people in organizations: Integrating the study of HRM and leadership. *Human Resource Management Review*, *28*(3), 249–257.

Lin, R. J., Chen, R. H., & Ho, T. M. (2013). Market demand, green innovation, and firm performance: Evidence from hybrid vehicle industry. In *Diversity, Technology, and Innovation for Operational Competitiveness: Proceedings of the 2013 International Conference on Technology Innovation and Industrial Management* (pp. S6_194–209).

Mahto, R. V., Belousova, O., & Ahluwalia, S. (2020). Abundance–A new window on how disruptive innovation occurs. *Technological Forecasting and Social Change*, *155*, 119064. https://doi.org/10.1016/j.techfore.2017.09.008

Mehmood, U., Tariq, S., Ul-Haq, Z., & Meo, M. S. (2021). Does the modifying role of institutional quality remains homogeneous in GDP-CO 2 emission nexus? New evidence from ARDL approach. *Environmental Science and Pollution Research*, *28*(8), 10167–10174. https://doi.org/10.1007/s11356-020-11293-y

Meo, M. S., Kumar, B., Chughtai, S., Khan, V. J., Dost, M. K. B., & Nisar, Q. A. (2020). Impact of unemployment and governance on poverty in Pakistan: A fresh insight from nonlinear ARDL co-integration approach. *Global Business Review*, 0972150920920440.

Mishra, S., Sharif, A., Khuntia, S., Meo, M. S., & Khan, S. A. R. (2019). Does oil prices impede Islamic stock indices? Fresh insights from wavelet-based quantile-on-quantile approach. *Resources Policy*, *62*, 292–304. https://doi.org/10.1016/j.resourpol.2019.04.005

Mittal, S., & Dhar, R. L. (2016). Effect of green transformational leadership on green creativity: A study of tourist hotels. *Tourism Management*, *57*, 118–127. https://doi.org/10.1016/j.tourman.2016.05.007

Nishii, L. H., Lepak, D. P., & Schneider, B. (2008). Employee attributions of the "why" of HR practices: Their effects on employee attitudes and behaviors, and customer satisfaction. *Personnel Psychology*, *61*(3), 503–545. https://doi.org/10.1111/j.1744-6570.2008.00121.x

Northouse, P. G. (2021). *Leadership: Theory and practice*. Sage publications.

Ozturk, I., Aslan, A., & Altinoz, B. (2021). Investigating the nexus between CO2 emissions, economic growth, energy consumption and pilgrimage tourism in Saudi Arabia. *Economic Research-Ekonomska Istraživanja*, 1–16. https://doi.org/10.1080/1331677X.2021.1985577

Qiu, J., Shen, B., Zhao, M., Wang, Z., Xie, B., & Xu, Y. (2020). A nationwide survey of psychological distress among Chinese people in the COVID-19 epidemic: implications and policy recommendations. *General Psychiatry*, *33*(2).

Ramus, C. A., & Steger, U. (2000). The roles of supervisory support behaviors and environmental policy in employee "Ecoinitiatives" at leading-edge European companies. *Academy of Management Journal*, *43*(4), 605–626.

Rasoolimanesh, S. M., Ali, F., & Jaafar, M. (2018). Modeling residents' perceptions of tourism development: Linear versus non-linear models. *Journal of Destination Marketing & Management*, *10*, 1–9. https://doi.org/10.1016/j.jdmm.2018.05.007

Rawashdeh, A. (2018). The impact of green human resource management on organizational environmental performance in Jordanian health service organizations. *Management Science Letters*, *8*(10), 1049–1058. https://doi.org/10.5267/j.msl.2018.7.006

Razzaq, A., Ajaz, T., Li, J. C., Irfan, M., & Suksatan, W. (2021a). Investigating the asymmetric linkages between infrastructure development, green innovation, and consumption-based material footprint: Novel empirical estimations from highly resource-consuming economies. *Resources Policy*, *74*, 102302. https://doi.org/10.1016/j.resourpol.2021.102302

Razzaq, A., Wang, Y., Chupradit, S., Suksatan, W., & Shahzad, F. (2021). Asymmetric interlinkages between green technology innovation and consumption-based carbon emissions in BRICS countries using quantile-on-quantile framework. *Technology in Society*, *66*, 101656. https://doi.org/10.1016/j.techsoc.2021.101656

Rehman, S. U., Kraus, S., Shah, S. A., Khanin, D., & Mahto, R. V. (2021). Analyzing the relationship between green innovation and environmental performance in large manufacturing firms. *Technological Forecasting and Social Change*, *163*, 120481. https://doi.org/10.1016/j.techfore.2020.120481

Rehman, S. U., Shahzad, M., Farooq, M. S., & Javaid, M. U. (2020). Impact of leadership behavior of a project manager on his/her subordinate's job-attitudes and job-outcomes. *Asia Pacific Management Review*, *25*(1), 38–47. https://doi.org/10.1016/j.apmrv.2019.06.004

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

Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's comments: a critical look at the use of PLS-SEM in "MIS Quarterly". *MIS quarterly*, iii–xiv.

Roscoe, S., Subramanian, N., Jabbour, 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

Seeck, H., & Diehl, M. R. (2017). A literature review on HRM and innovation–taking stock and future directions. *The International Journal of Human Resource Management*, *28*(6), 913–944. https://doi.org/10.1080/09585192.2016.1143862

Shahzad, M., Qu, Y., Zafar, A. U., & Appolloni, A. (2021). Does the interaction between the knowledge management process and sustainable development practices boost corporate green innovation? *Business Strategy and the Environment*, *30*(8), 4206–4217. https://doi.org/10.1002/bse.2865

Sharif, A., Baris-Tuzemen, O., Uzuner, G., Ozturk, I., & Sinha, A. (2020). Revisiting the role of renewable and non-renewable energy consumption on Turkey's ecological footprint: Evidence from Quantile ARDL approach. *Sustainable Cities and Society*, *57*, 102138. https://doi.org/10.1016/j.scs.2020.102138

Sharif, A., Meo, M. S., Chowdhury, M. A. F., & Sohag, K. (2021). Role of solar energy in reducing ecological footprints: An empirical analysis. *Journal of Cleaner Production*, *292*, 126028. https://doi.org/10.1016/j.jclepro.2021.126028

Shehzadi, S., Nisar, Q. A., Hussain, M. S., Basheer, M. F., Hameed, W. U., & Chaudhry, N. I. (2020). *The role of digital learning toward students' satisfaction and university brand image at educational institutes of Pakistan: a post-effect of COVID-19*. Asian Education and Development Studies.

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*, 119762. https://doi.org/10.1016/j.techfore.2019.119762

Sun, Y., Duru, O. A., Razzaq, A., & Dinca, M. S. (2021). The asymmetric effect eco-innovation and tourism towards carbon neutrality target in Turkey. *Journal of Environmental Management*, *299*, 113653.

Takeuchi, R., Lepak, D. P., Wang, H., & Takeuchi, K. (2007). An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations. *Journal of Applied Psychology*, *92*(4), 1069–1083. https://doi.org/10.1037/0021-9010.92.4.1069

Tang, G., Chen, Y., Jiang, Y., Paille, P., & Jia, J. (2018). Green human resource management practices: Scale development and validity. *Asia Pacific Journal of Human Resources*, *56*(1), 31–55. https://doi.org/10.1111/1744-7941.12147

Trauth-Goik, A. (2021). Repudiating the fourth industrial revolution discourse: A new episteme of technological Progress. *World Futures*, *77*(1), 55–78. https://doi.org/10.1080/02604027.2020.1788357

Weng, H. H. R., Chen, J. S., & Chen, P. C. (2015). Effects of green innovation on environmental and corporate performance: A stakeholder perspective. *Sustainability*, *7*(5), 4997–5026. https://doi.org/10.3390/su7054997

World Bank. (2021). *Small and Medium Enterprises (SMEs) Finance*. https://www.worldbank.org/en/topic/smefinance.

Yan, X., & Zhang, Y. (2021). The effects of green innovation and environmental management on the environmental performance and value of a firm: An empirical study of energy-intensive listed companies in China. *Environmental Science and Pollution Research*, 1–10.

Yu, W., Chavez, R., Feng, M., Wong, C. Y., & Fynes, B. (2020). Green human resource management and environmental cooperation: An ability-motivation-opportunity and contingency perspective. *International Journal of Production Economics*, *219*, 224–235. https://doi.org/10.1016/j.ijpe.2019.06.013

Zafar, A., Nisar, Q. A., Shoukat, M., & Ikram, M. (2017). Green transformational leadership and green performance: The mediating role of green mindfulness and green self-efficacy. *International Journal of Management Excellence*, *9*(2), 1059–1066.

Zhu, W., Chew, I. K., & Spangler, W. D. (2005). CEO transformational leadership and organizational outcomes: The mediating role of human–capital-enhancing human resource management. *The Leadership Quarterly*, *16*(1), 39–52. https://doi.org/10.1016/j.leaqua.2004.06.001