



# The impact of green human resource management practices on organisational sustainability through green knowledge sharing

**Authors:**

Aimun Khawaja<sup>1,2</sup>   
Khalida N. Janjua<sup>1</sup> 

**Affiliations:**

<sup>1</sup>Department of Business and Economics, Faculty of Economics and Management Science, Minhaj University, Lahore, Pakistan

<sup>2</sup>University of Education, Lahore, Pakistan

**Corresponding author:**

Aimun Khawaja,  
aimun.khawaja@gmail.com

**Dates:**

Received: 12 June 2024

Accepted: 26 Nov. 2024

Published: 22 Jan. 2025

**How to cite this article:**

Khawaja, A., & Janjua, K.N. (2025). The impact of green human resource management practices on organisational sustainability through green knowledge sharing. *SA Journal of Human Resource Management/SA Tydskrif vir Menslikehulpbronbestuur*, 23(0), a2702. <https://doi.org/10.4102/sajhrm.v23i0.2702>

**Copyright:**

© 2025. The Authors.  
Licensee: AOSIS. This work is licensed under the Creative Commons Attribution License.

**Orientation:** This study investigated the linkage between Green Human Resource Management Practices (GHRMP) and organisational sustainability (OS).

**Research purpose:** The purpose of this study was to investigate the impact of GHRMP on OS with the mediating effect of green knowledge sharing (GKS).

**Motivation for the study:** This research is pioneering in the Pakistani context, representing the significance of GHRMP in fostering OS.

**Research approach/design and method:** This research employed survey questionnaire, and, using purposive sampling, data were collected from 420 managerial-level employees working in the textile industry of Pakistan. Data analysis was done using structural equation modelling with the use of Smart Partial Least Squares 4.0 software.

**Main findings:** The study established a positive direct relationship between GHRMP and OS and also between GHRMP and GKS. This study also revealed that GKS has a significant mediation role in the relationship between GHRMP and OS.

**Practical/managerial implications:** Managers in the textile sector can prioritise hiring individuals who value and possess skills in OS. They can implement training programmes that focus on sustainability practices like waste reduction and energy conservation. Managers can integrate environmental criteria into performance evaluation which motivates employees to prioritise sustainability in their roles. Top management support for GHRMP builds competencies that enhance environmental performance. Organisations aiming for sustainability should implement GHRMP at both organisational and individual levels to foster eco-friendly actions across the workforce.

**Contribution/value-add:** The study provides useful recommendations for organisations on environmental issues especially in an emerging economy like Pakistan. It also innovatively examines the ways by which GHRMP can enhance OS in the textile sector of Punjab, Pakistan, where extensive industrialisation and environmental pollution are evident. Future research could discover additional dimensions of this concept with various mediators and moderators in different geographical contexts.

**Keywords:** organisational sustainability; green human resource management practices; green knowledge sharing; textile sector of Pakistan; sustainability; Sustainable Development Goals (SDGs); environment; sustainable human resource practices.

## Introduction

### Sustainability and sustainable development goals

The notion of sustainability gained traction in management research in the 1980s. A comprehensive literature review indicates that a complete understanding of sustainable Human Resource Management began to emerge from the year 2003, with a significant surge in research interest in this arena from the year 2019 to 2022. Sustainability is seen as a competitive tactic that embodies an organisation's values and goals.

Environmental pollution rose to dangerous levels in the air, water and land as industrialisation accelerated worldwide. This alarming situation prompted organisations to take necessary actions to safeguard the environment for a better future. Consequently, the United Nations documented the gravity of the issue which led to setting the UN Sustainable Development Goals

**Read online:**

Scan this QR code with your smart phone or mobile device to read online.

that are aimed to be achieved by 2030 (Zhao et al., 2021). Businesses make a significant contribution to sustainable development by incorporating sustainable practices into their organisational goals.

### Organisational sustainability

According to Glavas and Godwin (2012), the 'organisational rationale for sustainability' (ORS) is a concept that frequently exerts greater influence than individual beliefs. In the coming years, sustainability is expected to be an important topic for managerial positions within organisations. Organisational sustainability (OS) is the ability to satisfy current and future stakeholders; requirements without sacrificing the ability to satisfy those of direct and indirect stakeholders (Ehnert et al., 2016). Intrinsically, employees may adopt green behaviour because they view environmental preservation as a moral duty (Sharma, 2024).

Extrinsically, they may see environmental protection as beneficial for their organisations; for example, it enhances the status of the organisation and reduces costs. The manufacturing sector's practices are a major source of untreated industrial waste and unsustainable offices: workspaces that operate without considering their environmental, social and economic impacts, making it a critical focus for sustainability research. Empirically, it adds to the limited literature on the textile sector of developing economies as explained by Podsakoff et al. (2003). In a developing country a large sample size improves the generalisability of findings and also authenticates the social sustainability scale (Jia & Shang, 2024) specifically in Pakistani textile industries.

### Green human resource management practices

The term 'Green Human Resource Management' (GHRM) was coined by Renwick et al. in 2008 to describe how businesses' environmental practices align with Human Resource Management (HRM) practices, including employee involvement, training, performance management and recruitment.

This far-reaching approach perceives interweaved idea of practical human asset underscoring the requirement for a comprehensive comprehension of maintainability that integrates both natural and social aspects (Benevene and Buonomo 2020). Sustainability in business involves adopting a green human resource perspective, considering environmental, social and economic performance simultaneously. While there has been significant research on the environmental aspects of sustainability, HRM has received comparatively little attention with respect to this context.

### Green knowledge sharing

Green knowledge sharing is defined as the level of green knowledge (GK) disseminated by organisation members to enhance the organisation's environmental performance (Lin & Chen, 2017). Previous research recognises the

importance of knowledge management in organisations (Rubel et al., 2021). The sharing of green knowledge is important for the sustainable competitive advantage of the organisations (Gope et al., 2018; Norton et al., 2014; Song et al., 2019). Prior works such as Ren et al. (2017), Pham et al. (2019), and Rubel et al. (2021) have established that Green Human Resource Management Practices (GHRMP) have a direct link with green knowledge sharing (GKS).

### The textile sector of Pakistan

Pakistan exemplifies this situation, being the 5th most populated country with 220 million residents (Rana et al., 2020). The industrial sector, the largest contributor to Pakistan's Gross Domestic Product (GDP), is also a primary source of carbon emissions (approximately 21%) after agriculture. In spite of being the major sector contributing to GDP, there is a dearth of literature on OS in the textile sector of Pakistan (Hameed et al., 2020).

### Problem statement

#### Organisational sustainability problems in the textile sector of Pakistan

In less developed economies, organisations need to determine, supervise and advance management-associated actions (Pham et al., 2019). There is a dearth of literature on positive lateral relationship of GHRMP and OS textile sector of Pakistan; thus, more researches are required in this regard. However, researchers have pointed out that there is an implementation gap when it comes to environmental regulations in developing countries like Pakistan and other developing countries for a number of reasons, including insufficient capacity and scarcity of resources.

#### Green human resource management practices problems in the textile sector of Pakistan

Limited research has been conducted to identify the factors driving the adoption and implementation of green practices within the textile industries of Pakistan. This is the rationale for studying the effectiveness of knowledge sharing and transferability concerning the encouragement and implementation of GHRMP, the reasons for adopting and implementing sustainable or green practices in the textile sector of Pakistan and its resultant effect on OS (Nawaz Khan, 2023).

#### Green knowledge sharing problems in the textile sector of Pakistan

The novelty of this study is to examine the moderating effect of GKS on the relationship between GHRMP and OS. The current study has attempted to address the gaps found in the literature. That is why it is necessary to advance the concept of OS. Pakistan annually contributes 0.4% of the carbon emissions to world pollution (Shahzad et al., 2017). Employees, employers, creditors, suppliers, communities and societies have much concern about the environmental problems of Pakistan and the whole world (Malik et al., 2020).

### **Relationship between green knowledge sharing, green human resource management practices and organisational sustainability**

The lack of basic awareness of green practices among employees in Pakistan's textile sector is a major setback to GKS. The lack of resources also hinders the development of GHRMP training programmes, thus limiting the ability of employees to practise and discuss sustainability. This makes green objectives to be lacking support from top management because the latter may not take the sustainable efforts seriously. The sector also suffers from a relatively poor knowledge-sharing infrastructure that hinders efficient exchange of green practices among employees.

Previous literature on the effects of GHRMP on OS in the textile sector of Pakistan is scarce, and there is a need for more research in this regard (Amjad et al., 2024). One of the major problems being the resistance to change, where a majority of the employees continue to shun innovative ideas; thus limiting their participation in GHRMP and GKS. Also, there is no regulatory imitative in the absence of which organisations do not receive external push towards sustainability. Lastly, the absence of correct sustainability measures affects the measurement of the impact and overall motivation for the green goals. Addressing these issues is important for the overall improvement of sustainability in the textile sector (Khawaja & Janjua, 2024).

### **Research objectives**

1. To examine the prospects of GHRMP and its role in driving OS within the textile sector of Pakistan.
2. To study the relationship between GHRMP and OS in the textile sector of Pakistan.
3. To explore the role of GKS to increase OS in Pakistan's textile industry, with regard to raising environmental consciousness.

The present research holds significance for several reasons. Firstly, the findings have provided an explanation to the issue of ecological dilapidation faced by industries in Pakistan which could have been resolved through the effective implementation of GHRM practices. Secondly, this research has highlighted the mediating role of employees' GKS in achieving OS. Thirdly, this study has demonstrated a fruitful transition from customary HRMP to GHRMP in achieving OS. Fourthly, it has underscored the role of industries in promoting OS. The results of this research are generalisable to other geographical and economical contexts. This study backs significantly to theory, method and practice.

### **Literature review**

The literature review presents research propositions that highlight gaps and discrepancies in extant literature.

### **Organisational sustainability in Pakistan's textile sector**

Organisational sustainability is the involvement of resources to attain sustainable goals with the matching economic, environmental and social expenses. (Roosa & Mischen, 2022). Organisational commitment to sustainability is the competitiveness of an organisation (Gupta & Khanna 2024). It is therefore important for the textile industry to embrace sustainability as it is to the buyers and consumers of the textiles (Goswami, 2014). The present frameworks, in theory, are shaped largely by the Western model, which has created a significant contextual void for sectors in Pakistan (Aslam, 2023). The textile industry remains a core area of strategy and sustainability for research on environmental practice and technology within the processes (Dasgupta et al., 2015).

### **Green human resource management practices and organisational sustainability in Pakistan's textile sector**

The term 'green HRM' refers to the 'systematic, deliberate integration of traditional human resource management techniques with the company's environmental objectives' (Jabbour, 2013). The authors Aggarwal and Sharma (2015) highlighted the concept of 'Green and Green HRM' and analyse the significance, advantages and disadvantages of Green concept for OS.

Before the present study, Amjad et al. (2021) investigated the correlation between GHRM practices and employee performance in enhancing sustainable organisational performance in the textile sector. This research focused on investigating the effect of GHRMP on OS with mediating variables of environmental and employee performances. A quantitative survey of 165 managerial personnel in the textile organisations of Pakistan presents substantial findings regarding the impacts of GHRMP on sustainability. The study confirms the hypothesised mediation model and is based on stakeholder theory and the resource-based view (RBV). Green Human Resource Management Practices is a relatively new concept in developing countries, and more research is required to focus on sustainability and GHRMP's effectiveness in textile and manufacturing sectors of Pakistan. These findings are consistent with the findings of other researchers. The study offers valuable lessons for the industrial managers on how to choose GHRMP for OS.

### **Green knowledge sharing and organisational sustainability in Pakistan's textile sector**

Knowledge sharing is defined as the exchange of facts, information, and know-how to solve problems and create new strategies, policies or practices. It plays a crucial role in fostering a culture of innovation and problem-solving within organisations (Rubel et al., 2021). Particularly in the context of sustainability, knowledge sharing is seen as a key element for influencing employees' sustainable performance and fostering a culture of environmental responsibility (Rubel et al., 2021). Employees, motivated by the desire to spread awareness and knowledge about environmental challenges, engage in GKS (Rubel et al., 2021).

The underlying premise has been that organisations that are well endowed, financially sound, and have comparative advantages are more likely to expand over time and improve stakeholders' well-being and sustained competitive advantages. For instance, Rubel et al. (2021) have pointed out that the economic dimension of sustainability encompasses the financial performance, long-term competitive advantage, and economic or financial value for the stakeholder.

### **The relationship between green knowledge sharing, green human resource management practices and organisational sustainability**

Prior studies have examined ways of increasing OS and identified GHRMP such as training, performance appraisal, and rewards as essential in environmental management. The study conducted by Amjad et al. (2021) has analysed the moderating effect of environmental and employee performance on the relationship between GHRMP and OS. Survey data collected from 165 managers in the textile industry of Pakistan provide evidence for the hypothesised mediated relationship between GHRMP and OS. Because GHRMP is still relatively new to developing countries, conducting more research is critical to responding to sustainability issues and evaluating the role of GHRMP in Pakistan's textile industry (Amjad et al., 2021).

### **Significant gaps in the literature**

There are some significant gaps in the current literature that should be addressed. In prior empirical research, definitions of GHRMP have been either limited or not grounded in academic theory because prior empirical research has generally focused on environmental training for industrial applications (Jabbour et al., 2015). On the other hand, many theoretical papers have pointed out other potential HRM practices for the support of green initiatives which include; recruitment, performance appraisal, pay or reward systems, employee involvement or commitment, and organisational training and learning (Renwick, 2016).

While recent studies on GHRM bundle practices have integrated major HRM roles such as hiring, training and compensation (Gupta & Khanna, 2024). Thus, OS constitutes a promising context for the GHRM scholarship and provides an opportunity for the strategic involvement of HR managers (Yuan, 2013). This occurs in relation to stakeholder management, and its application is less straightforward in an organisational context compared to other forms of 'green' activity such as recycling (Renwick, 2016).

### **Definitions of key concepts**

#### **Sustainability**

Sustainability has recently come to the centre of attention in the fields of health care and bioethics. It is not a new concept. It was first defined to the international community in 1987 when the World Commission on Environment & Development provided the now famous definition of

sustainability as the capacity to 'meet the needs of the present and the future generations without compromising the capacity of the latter to meet its own needs' (Brundtland, 1985). The report of the commission has identified three pillars of sustainability, namely Environment, Economy, and People based on the research work done by Weaver (2016).

#### **Organisational sustainability**

Organisational sustainability refers to the ability of an organisation to survive the adversities and continue with business as usual (Székely & Knirsch, 2005). Burritt and Schaltegger (2014) have argued that the concept of OS is a broad construct that includes a number of attributes particularly, those related to the contextual integration of the three pillars.

#### **Green human resource management practices**

Green human resource management practices denote the application of HRM practices in realising the efficient use of organisational resources in a bid to attain environmental conservation. Green Human Resource Management Practices refer to the concerns of people and managers in coming up with strategies and management of more organisational environmental forecasting (Shafaei et al., 2020).

#### **Green knowledge sharing**

One of the key components of knowledge management is sharing of knowledge through the process operative in the Socialization, Externalization, Combination and Internalisation (SECI) model (Nonaka et al., 1996). The identification of this knowledge as documented knowledge and implicit knowledge (Shah, 2009) gives a sound method of understanding the character and the difficulty of the knowledge flowing in organisations (Gope et al., 2018).

#### **Textile sector**

Pakistan's textile sector can be regarded as one of the most important industries within Pakistan because of its impacts on GDP, employment rates and exports. It includes all companies engaged in processing textile fibres into yarns, fabrics and other finished textile products including garments and apparel.

#### **Theoretical framework**

The independent variable is GHRMP, encompassing components such as green training, green recruitment, green reward and green empowerment. The dependent variable is OS. Acting as a mediator between these two variables is GKS. This research model aims to examine the impact of green HR practices on OS by nurturing GKS among employees.

#### **Theoretical underpinning**

The Ability, Motivation and Opportunity (AMO) theory by Appelbaum (2000) forms the theoretical framework for this research. As per literature, GHRMP fosters GKS among employees, thereby contributing to OS.

The theoretical framework shown in Figure 1 consists of three constructs:

1. green human resource management practices (GHRMP)
2. green knowledge sharing (GKS)
3. organisational sustainability (OS).

Based on the conceptual model and the literature discussed above, the following hypotheses are formulated:

**H1:** Green Human Resource Management Practices (GHRMP) has a positive relationship with Organisational Sustainability (OS).

**H2:** There is a strong positive correlation between Green Knowledge Sharing (GKS) and Organisational Sustainability (OS).

**H3:** Green Human Resource Management Practices (GHRMP) have a strong positive relationship with Green Knowledge Sharing (GKS).

**H4:** Green Knowledge Sharing (GKS) therefore serves as a mediator between Green Human Resource Management Practices (GHRMP) and Organisational Sustainability (OS).

### Sustainability and ability, motivation and opportunity theory

When researchers started to consider the performance as a feature of training and selection, which means ability, and motivation as critical to performance, a performance model was developed, thus laying the foundation for the AMO model (Marin-Garcia & Martinez Tomas, 2016). The previously mentioned role worked with the understanding that performance depends only on certain human traits, therefore excluding the possibility of external environmental factors affecting an employee's performance (Marin-Garcia & Martinez Tomas, 2016).

### Green human resource management practices, organisational sustainability and the role of ability, motivation and opportunity theory

Out of all the models of HRMP, this study suggests that the AMO model (Appelbaum, 2000) is the most beneficial for HR to comprehend the connection between human resources and sustainability (Stankevičiūtė & Savanevičienė, 2018). Bailey and Bailey (1993) suggested that the performance of an employee requires three elements: the specific knowledge and competencies for the job, sufficient desire to raise the organisational commitment and, finally, the chance (offered

by the company) to get involved and be an active member through more self-direction or work cooperation. Therefore, the practices included in the AMO model are appropriate for the employees to embrace and engage with the sustainable objectives of the firm (Renwick, 2016), developing skills in the workers, enhancing their motivation and offering chances to be involved that enhance their obligation to and affinity with their organisation.

### Green knowledge sharing and the role of ability, motivation and opportunity theory

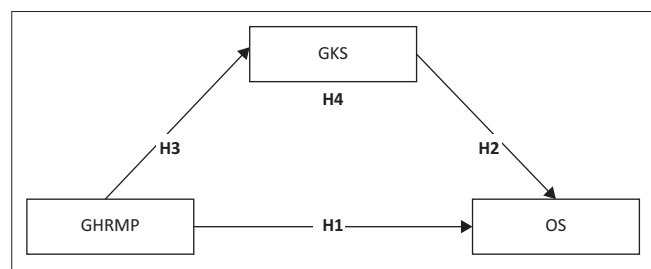
Ability, motivation and opportunity theory postulates that employees are likely to perform when they are capable of it (they have the ability); willing to do it (they have the drive and incentive to do it); and can do it given the resources available to them. Ability, motivation and opportunity framework mainly operates at individual level and has been applied extensively in the context of investigating the relationship between HRM and organisational performance (Bos-Nehles et al., 2013). An AMO framework and a systematic review (1998–2011) of GHRMP and environmental management raise the following research question: What is currently known about how GHRMP may help build human capital in an organisation?

### Research design

Research philosophy is referred to as the ideology that guides the process of data collection, analysis and the application of a phenomenon (Sekaran & Bougie, 2016). The research philosophy used in the current research is positivism. In this research study, the researcher has used the survey technique to gather data. The survey data for the study was collected from textile manufacturing enterprises located in Punjab (Pakistan). This study has employed a non-probability sampling technique. Non-probability purposive sampling technique is a method of providing best solutions to issues and helps the researcher in identifying situations which will enable him or her to implement decisions (Sun et al., 2022).

### Data collection

The data were collected from middle-level managers as well as operation managers of textile organisations in Lahore and Faisalabad cities of Pakistan. The basic information from textiles was collected using a structured questionnaire. The units of analysis include HR managers, leaders, and other employees within these industries. A total of 500 questionnaires were distributed to the respondents using purposive sampling techniques to ensure maximum participation. Ultimately, 420 respondents completed the questionnaires, constituting the final sample size for analysis. To facilitate data collection, the researcher personally distributed the questionnaires, as well as Google link has been shared across the Punjab region for collection of data.



GHRMP, Green Human Resource Management Practices; GKS, green knowledge sharing; OS, organisational sustainability.

**FIGURE 1:** Conceptual Framework.

## Tools for data collection

In this research, data were gathered through a survey questionnaire. It was developed based on previous research studies of Rubel et al. (2021), Balasubramanian and Balaji (2021), and Dumont et al. (2017). The questionnaire consists of a 5-point Likert scale where one can indicate their responses from strongly agree to strongly disagree. The questionnaire is shown in Appendix 1. In data analysis, the researcher has employed the current Smart Partial Least Squares (PLS) version, which is Smart PLS 4.0. Mediation and regression analysis were conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM).

## Analysis of data and results

### Validity and reliability

In a bid to increase the validity of the study, we conducted both the convergent and discriminant validity. The convergent validity was assessed using the average variance extracted (AVE), and the acceptable threshold value was 0.5 or higher as suggested by Hair et al. (2021). The reliability which is the extent of homogeneity of the same test was determined using several methods. The most common is Cronbach's alpha coefficient (Fashina et al., 2020).

In this study, the construct's composite reliability (CR) has been estimated. For all these measures, acceptable values are those greater than 0.70 (Omri et al., 2019). As indicated in Table 1, the study's findings indicate that validity and reliability criteria were achieved. In particular, AVE values were higher than 0.50, and all reliability estimates were higher than 0.650.

To test discriminant validity, we employed the 'Heterotrait-Monotrait (HTMT) ratio', which according to Henseler et al. (2015) should not exceed 0.90. The HTMT values as presented in Table 2 for the constructs suggest a reasonable discriminant validity. Using HTMT, where a threshold of 0.85 is acceptable, the value obtained for GHRMP and GKS is 0.720. This implies that GHRMP and GKS are different constructs of measures. Quite as expected, the HTMT value is less than 0.85 between the pair GHRMP and OS, meaning that these two constructs have discriminant validity. Using the same approach, the HTMT value between GKS and OS is 0.792, which is within the discretion of 0.85 showing that GKS and OS are indeed different constructs. Given that all HTMT values are below the figure of 0.85, the study established sufficient discriminant validity to affirm that every construct in the model is capturing a distinct attribute.

Figure 2 shows the structural model of this study that was analysed using Smart PLS 4.0. This model examines the hypothesised relationships between sustainable HRM practices and OS.

## Discussion and findings

The purpose of this paper is to understand and to analyse the applicability of GHRMP in relation to OS and with specific

focus on the textile industry of Pakistan. Thus, it complements the existing literature on GHRMP, GKS and OS, as it establishes the state of play of the implementation of communication strategies in support to GKS. The conclusions are similar to the results obtained by other scholars for instance Rubel et al. (2018) whereby GHRMP is crucial in enhancing green organisational outcomes, and Renwick et al. (2013) regarding engagement in sustainability. Moreover, the study also strongly indicates that GHRMP promotes GKS among the employees.

The results obtained in Table 3 fully support the proposed hypotheses to reinforce that GHRMP serves as a significant element in the cultivation of GKS and OS. Green Human Resource Management Practices foster the GKS in a positive manner, underlining the role of the GKS as the means of promoting cooperation and ecological responsibility in textile industries. According to the literature, HRM increases employee's willingness to share knowledge (Renwick et al., 2013). The conclusion drawn from this study is that GHRMP promotes OS which results in knowledge of green practices within organisations among employees.

The study results show that GKS among the employees led to higher OS, which supports positive connection between knowledge sharing and performance, aligning with the previous research of Ritala et al. (2015). Furthermore, aligning with Rubel et al. (2023), GKS has been postulated to mediate relationship between GHRMP and OS. The findings also show that GKS partially mediates the relationship between GHRMP and OS. In summary, GHRMP affects OS both directly and indirectly (through GKS), with all pathways supported as significant.

## Recommendations

The following recommendations are proposed to the organisations in the textile sector, in light of the findings; the management of organisations in the textile sector should integrate GHRMP with the view of developing the culture of environmental responsibility at the workplaces. It recommends encouraging the sharing of green knowledge to allow employees to share and implement sustainable practices suitably.

**TABLE 1:** Internal consistency, convergent validity, composite reliability and average variance extracted.

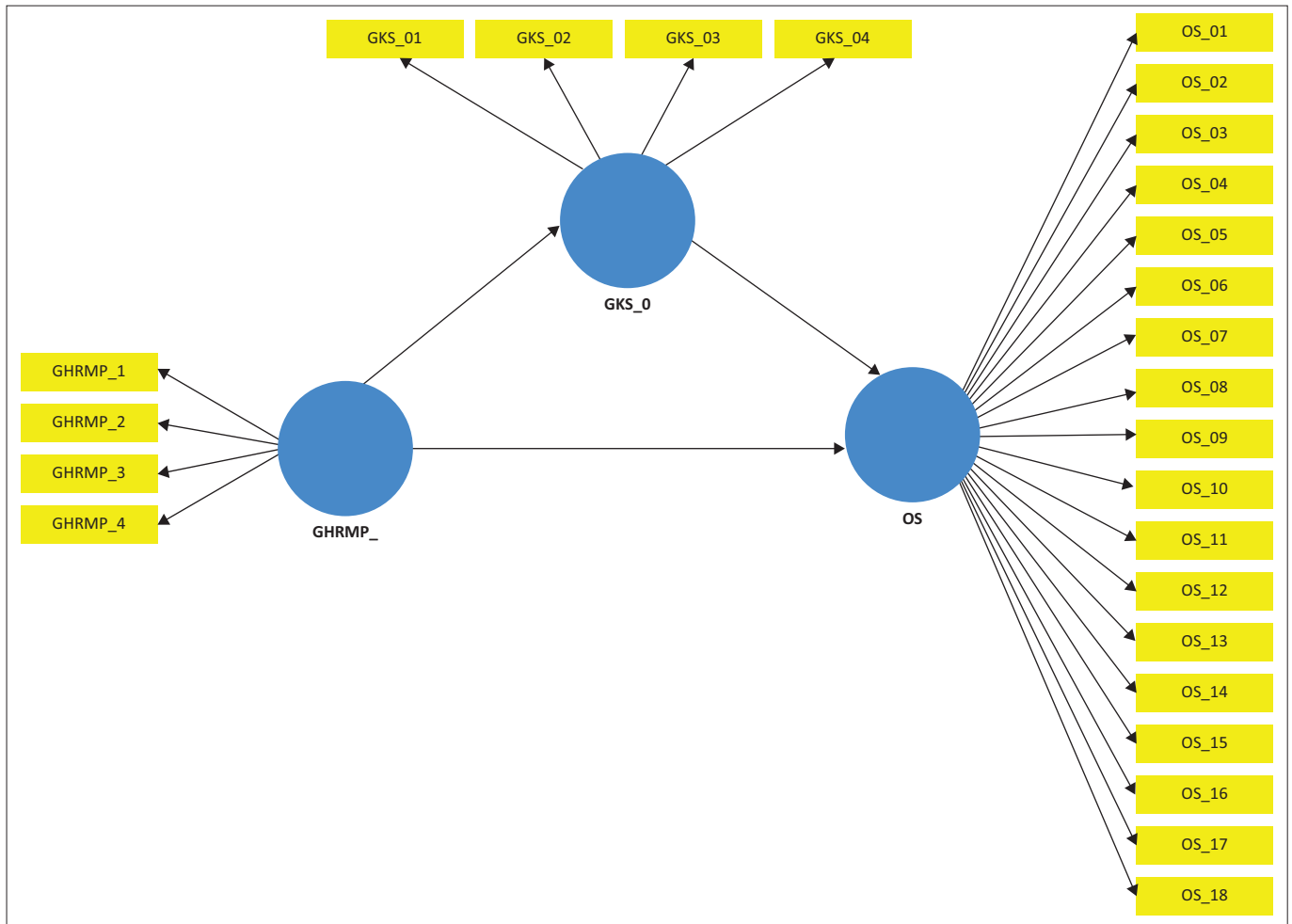
Construct	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	AVE
GHRMP	0.882	0.883	0.919	0.738
GKS	0.933	0.934	0.952	0.833
OS	0.971	0.973	0.973	0.670

AVE, Average variance extracted; GHRMP, Green Human Resource Management Practices; GKS, green knowledge sharing; OS, organisational sustainability.

**TABLE 2:** Discriminant validity: Heterotrait-Monotrait ratio of correlations.

Construct	GHRMP	GKS	OS
GHRMP	-	-	-
GKS	0.720	-	-
OS	0.817	0.792	-

GHRMP, Green Human Resource Management Practices; GKS, green knowledge sharing; OS, organisational sustainability.



GHRMP, Green Human Resource Management Practices; GKS, green knowledge sharing; OS, organisational sustainability.

**FIGURE 2:** Structural model assessment.

**TABLE 3:** Properties of the structural model.

Construct	$\beta$ -Value	Sample mean (M)	STDEV	T statistics ( O/STDEV )	P	Results
GHRMP® GKS	0.654	0.656	0.012	3.192	0.001	Supported
GHRMP® OS	0.466	0.468	0.014	3.590	0.000	Supported
GKS® OS	0.452	0.450	0.009	2.631	0.009	Supported

GHRMP, Green Human Resource Management Practices; GKS, green knowledge sharing; OS, organisational sustainability; STDEV, Standard deviation; M, Mean.

## Theoretical contributions

The present study aimed at exploring all the four dimensions of GHRMP within the textile industry framework only using the lens of AMO theoretical framework. Taking into account the results of this study, it is possible to conclude that the textile industry might achieve the highest level of OS if adopting GHRMP according to the AMO framework.

## Practical implications

This study adds to the body of knowledge that provides guidance for practising managers to determine the potential of GHRMP as means to promote sustainability in their organisations specifically the textile units. Furthermore, the study findings shall help the policymakers, the senior management and the HR practitioners to make

better decisions, specifically in regard to the recruitment, training and compensation of the talent pool so as to increase the capacities and the readiness to stay within the organisation.

## Limitations of the study

The following are the limitations of this research study. Firstly, its cross-sectional design restricts the possibilities of making causal relationships between the variables. Secondly, the use of self-reported data brings common method and social desirability biases into the analysis. Thirdly, the study conducted in textile sector of Pakistan limits the generalisation of results to other industries or other geographical locations. Lastly, those other variables that could have an impact on GHRMP, GKS and OS have not been considered in this study hence might reduce the richness of the relationship between the three variables.

## Future research

Future research could extend data collection for more general use and could use qualitative methods to enhance the findings. Alternatively, further research on other mediators or moderators might also help in improving the

understanding of how the GHRMP influence sustainability and this could be useful to the Pakistan HR professional or organisation operating in the emerging economy.

## Conclusion

This study explores the role of GKS mediated by GHRMP on sustainability in the textile sector of Pakistan. In this article, while adopting a quantitative research approach, it is revealed that GHRMP has a significant impact on GKS and thereby contributes to the improvement of OS. The findings support the hypothesis that GHRMP are positively related to GKS and OS, and reaffirm GKS as the mediating factor that connects green HR practices to sustainability objectives.

## Acknowledgements

### Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

### Authors' contributions

A.K. wrote and conceptualised the research article. K.N.J. acted as the supervisor for the study.

### Ethical considerations

Ethical clearance to conduct this study was obtained from the Minhaj University, Lahore (No. MNJ/REG/06/32).

### Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

### Data availability

The data that support the findings of this study are available from the corresponding author, A.K. upon reasonable request.

### Disclaimer

The views and opinions expressed in this article are those of the authors and are the product of professional research. It does not necessarily reflect the official policy or position of any affiliated institution, funder, agency, or that of the publisher. The authors are responsible for this article's results, findings and content.

## References

- Abro, R., Sangkala, M., Meddour, H., Anwer, A., Aziz, A., & Shahrizal, B. (2023). *Impact of moderating role of green cultures over green environmental effects*.
- Aggarwal, S., & Sharma, B. (2015). Green HRM: Need of the hour. *International Journal of Management and Social Science Research Review*, 1(8), 63–70.
- Amjad, F., Abbas, W., Zia-Ur-Rehman, M., Baig, S.A., Hashim, M., Khan, A., & Rehman, H.U. (2021). Effect of green human resource management practices on organizational sustainability: The mediating role of environmental and employee performance. *Environmental Science and Pollution Research*, 28, 28191–28206. <https://doi.org/10.1007/s11356-020-11307-9>
- Amjad, F., Baig, S.A., Basit, A., & Usman, M. (2024). A pathway toward sustainable development of export sector in Pakistan: Sustainable HRM practices, green business innovation, green human capital, and perceived organizational support. *The Journal of the Textile Institute*, 1–16. <https://doi.org/10.1080/00405000.2024.2418149>
- Appelbaum, E. (2000). *Manufacturing advantage: Why high-performance work systems pay off*. Cornell University Press.
- Aslam, A., & Ghouse, G. (2023). Targeting the new sustainable inclusive green growth: A review. *Cleaner and Responsible Consumption*, 11, 100140. <https://doi.org/10.1016/j.clrc.2023.100140>
- Bailey, M.B., & Bailey, R.E. (1993). 'Misbehavior': A case history. *American Psychologist*, 48(11), 1157–1158. <https://doi.org/10.1037//0003-066x.48.11.1157>
- Balasubramanian, N., & Balaji, M. (2021). Organisational sustainability scale-measuring employees' perception on sustainability of organisation. *Measuring Business Excellence*, 26(3), 245–262. <https://doi.org/10.1108/mbe-06-2020-0093>
- Benevene, P., & Buonomo, I. (2020). Green human resource management: An evidence-based systematic literature review. *Sustainability*, 12(15), 5974. <https://doi.org/10.3390/su12155974>
- Bos-Nehles, A.C., Van Riemsdijk, M.J., & Kees Looise, J. (2013). Employee perceptions of line management performance: Applying the AMO theory to explain the effectiveness of line managers' HRM implementation. *Human Resource Management*, 52(6), 861–877. <https://doi.org/10.1002/hrm.21578>
- Brundtland, G.H. (1985). World commission on environment and development. *Environmental Policy and Law*, 14(1), 26–30.
- Burritt, R., & Schaltegger, S. (2014). Accounting towards sustainability in production and supply chains. *The British Accounting Review*, 46(4), 327–343.
- Dasgupta, P., Duraipappah, A., Managi, S., Barbier, E., Collins, R., Fraumeni, B., Gundimeda, H., Liu, G., & Mumford, K.J. (2015). How to measure sustainable progress. *Science*, 350(6262), 748–748. <https://doi.org/10.1126/science.350.6262.748>
- 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>
- Ehnert, I., Parsa, S., Roper, I., Wagner, M., & Muller-Camen, M. (2016). Reporting on sustainability and HRM: A comparative study of sustainability reporting practices by the world's largest companies. *The International Journal of Human Resource Management*, 27(1), 88–108.
- Fashina, A.A., Abdilahi, S.M., Fakunle, F.F., & Ahmed, M.H. (2020). Exploring the extent to which SMEs can realize a better organizational performance when various project management practices are linked together. *PM World Journal*, 9(7), 1–22.
- Glavas, A., & Godwin, L.N. (2012). Is the perception of 'goodness' good enough? Exploring the relationship between perceived corporate social responsibility and employee organizational identification. *Journal of Business Ethics*, 114(1), 15–27. <https://doi.org/10.1007/s10551-012-1323-5>
- Gope, S., Elia, G., & Passiante, G. (2018). The effect of HRM practices on knowledge management capacity: A comparative study in Indian IT industry. *Journal of Knowledge Management*, 22(3), 649–677. <https://doi.org/10.1108/jkm-10-2017-0453>
- Goswami, K., & Lodhia, S. (2014). Sustainability disclosure patterns of South Australian local councils: A case study. *Public Money & Management*, 34(4), 273–280. <https://doi.org/10.1080/09540962.2014.920200>
- Gupta, A., & Khanna, A. (2024). A holistic approach to sustainable manufacturing: Rework, green technology, and carbon policies. *Expert Systems with Applications*, 244, 122943. <https://doi.org/10.1016/j.eswa.2023.122943>
- Hair, J.F., Astrachan, C.B., Moisesescu, O.I., Radomir, L., Sarstedt, M., Vaithilingam, S., & Ringle, C.M. (2021). Executing and interpreting applications of PLS-SEM: Updates for family business researchers. *Journal of Family Business Strategy*, 12(3), 100392. <https://doi.org/10.1016/j.jfbs.2020.100392>
- 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>
- Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Jabbour, A.B., Vazquez, D.A., Jabbour, C.J., & Latan, H. (2015). External GSCM and environmental performance of Brazilian companies. *Academy of Management Proceedings*, 2015(1), 17782. <https://doi.org/10.5465/ambpp.2015.17782abstract>
- Jabbour, L. (2013). Market thickness, sunk costs, productivity, and the outsourcing decision: An empirical analysis of manufacturing firms in France. *Canadian Journal of Economics/Revue canadienne d'économique*, 46(1), 103–134. <https://doi.org/10.1111/caje.12007>
- Jia, S., & Shang, H. (2024). Utilizing green financing in developing green HRM resources for carbon neutrality: Presenting multidimensional perspectives of China. *Environmental Science and Pollution Research*, 31(6), 8798–8811. <https://doi.org/10.1007/s11356-023-31560-y>
- Khawaja, A., & Janjua, K.N. (2024). The effect of sustainable HRM practices on organizational sustainability in textile industry of Pakistan. *Bulletin of Business and Economics (BBE)*, 13(3), 422–428. <https://doi.org/10.61506/01.00515>
- Lin, Y.H., & Chen, Y.S. (2017). Determinants of green competitive advantage: The roles of green knowledge sharing, green dynamic capabilities, and green service innovation. *Quality & Quantity*, 51, 1663–1685. <https://doi.org/10.1007/s11355-016-0358-6>
- Malik, A., Froese, F.J., & Sharma, P. (2020). Role of HRM in knowledge integration: Towards a conceptual framework. *Journal of Business Research*, 109, 524–535. <https://doi.org/10.1016/j.jbusres.2019.01.029>

- Malik, A., Froese, F.J., & Sharma, P. (2020). Role of HRM in knowledge integration: Towards a conceptual framework. *Journal of Business Research*, 109, 524–535. <https://doi.org/10.1016/j.jbusres.2019.01.029>
- Marin-Garcia, J.A., & Martínez Tomas, J. (2016). Deconstructing AMO framework: A systematic review. *Intangible Capital*, 12(4), 1040. <https://doi.org/10.3926/ic.838>
- Nawaz Khan, A. (2023). Is green leadership associated with employees' green behavior? Role of green human resource management. *Journal of Environmental Planning and Management*, 66(9), 1962–1982. <https://doi.org/10.1080/09640568.2022.2049595>
- Nonaka, L., Takeuchi, H., & Umamoto, K. (1996). A theory of organizational knowledge creation. *International Journal of Technology Management*, 11(7–8), 833–845.
- Norton, T.A., Zacher, H., & Ashkanasy, N.M. (2014). Organisational sustainability policies and employee green behaviour: The mediating role of work climate perceptions. *Journal of Environmental Psychology*, 38, 49–54. <https://doi.org/10.1016/j.jenvp.2013.12.008>
- Omri, A., Euch, J., Hasaballah, A.H., & Al-Tit, A. (2019). Determinants of environmental sustainability: Evidence from Saudi Arabia. *Science of the Total Environment*, 657, 1592–1601. <https://doi.org/10.1016/j.scitotenv.2018.12.111>
- Pham, N.T., Tučková, Z., & Chiappetta Jabbour, C.J. (2019). Greening the hospitality industry: How do green human resource management practices influence organizational citizenship behavior in hotels? A mixed-methods study. *Tourism Management*, 72, 386–399. <https://doi.org/10.1016/j.tourman.2018.12.008>
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y., & Podsakoff, N.P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Rana, W., Mukhtar, S., & Mukhtar, S. (2020). Mental health of medical workers in Pakistan during the pandemic COVID-19 outbreak. *Asian Journal of Psychiatry*, 51, 102080. <https://doi.org/10.1016/j.ajp.2020.102080>
- Ren, S., Tang, G., & Jackson, S.E. (2017). Green human resource management research in emergence: A review and future directions. *Asia Pacific Journal of Management*, 35(3), 769–803. <https://doi.org/10.1007/s10490-017-9532-1>
- Renwick, D.W., Jabbour, C.J., Muller-Camen, M., Redman, T., & Wilkinson, A. (2016). Contemporary developments in Green (environmental) HRM scholarship. *The International Journal of Human Resource Management*, 27(2), 114–128
- 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>
- Ritala, P., Olander, H., Michailova, S., & Husted, K. (2015). Knowledge sharing, knowledge leaking and relative innovation performance: An empirical study. *Technovation*, 35, 22–31. <https://doi.org/10.1016/j.technovation.2014.07.011>
- Roosa, T., & Mischen, P. (2022). Measuring the impact of organizational characteristics on the sustainability performance of US institutions of higher education. *International Journal of Sustainability in Higher Education*, 23(7), 1543–1559. <https://doi.org/10.1108/IJSHE-08-2021-0355>
- Rubel, M.R., Kee, D.M., & Rimi, N.N. (2021). Green human resource management and supervisor pro-environmental behavior: The role of green work climate perceptions. *Journal of Cleaner Production*, 313, 127669. <https://doi.org/10.1016/j.jclepro.2021.127669>
- Rubel, M.R.B., Kee, D.M.H., Yusliza, M.Y., & Rimi, N.N. (2023). Socially responsible HRM and hotel employees' environmental performance: The mediating roles of green knowledge sharing and environmental commitment. *International Journal of Contemporary Hospitality Management*, 35(7), 2645–2664. <https://doi.org/10.1108/IJCHM-01-2022-0098>
- Rubel, M.R.B., Rimi, N.N., Yusliza, M.Y., & Kee, D.M.H. (2018). High commitment human resource management practices and employee service behaviour: Trust in management as mediator. *IIMB Management Review*, 30(4), 316–329. <https://doi.org/10.1016/j.iimb.2018.05.006>
- Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Shafaei, A., Nejati, M., & Yusoff, Y.M. (2020). Green human resource management: A two-study investigation of antecedents and outcomes. *International Journal of Manpower*, 41(7), 1041–1060. <https://doi.org/10.1108/IJM-08-2019-0406>
- Shah, M. (2019). Green human resource management: Development of a valid measurement scale. *Business Strategy and the Environment*, 28(5), 771–785. <https://doi.org/10.1002/bse.2279>
- Shahzad, S.J.H., Kumar, R.R., Zakaria, M., & Hurr, M. (2017). Carbon emission, energy consumption, trade openness and financial development in Pakistan: A revisit. *Renewable and Sustainable Energy Reviews*, 70, 185–192. <https://doi.org/10.1016/j.rser.2016.11.042>
- Sharma, P. (2024). Combining green human resources management and organisational culture to promote environmental sustainability. *PRERANA: Journal of Management Thought & Practice*, 16(2), 101016.
- Song, Z., Gu, Q., & Wang, B. (2019). Creativity-oriented HRM and organizational creativity in China: A complementary perspective of innovativeness. *International Journal of Manpower*, 40(5), 834–849. <https://doi.org/10.1108/IJM-05-2016-0108>
- Stankevičiūtė, Ž., & Savanevičienė, A. (2018). Raising the curtain in people management by exploring how sustainable HRM translates to practice: The case of Lithuanian organizations. *Sustainability*, 10(12), 4356. <https://doi.org/10.3390/su10124356>
- Sun, X., El Askary, A., Meo, M.S., Zafar, N.U.A., & Hussain, B. (2022). Green transformational leadership and environmental performance in small and medium enterprises. *Economic Research-Ekonomska Istraživanja*, 35(1), 5273–5291. <https://doi.org/10.1080/1331677x.2021.2025127>
- Székely, F., & Knirsch, M. (2005). Responsible leadership and corporate social responsibility: Metrics for sustainable performance. *European Management Journal*, 23(6), 628–647. <https://doi.org/10.1016/j.emj.2005.10.009>
- Weaver, D.F. (2016). Sustainability. In H.A.M.J. Ten Have (Ed.), *Encyclopedia of global bioethics* (pp. 2767–2783). Springer.
- Yuan, Y.Y. (2013). Adding environmental sustainability to the management of event tourism. *International Journal of Culture, Tourism and Hospitality Research*, 7(2), 175–183. <https://doi.org/10.1108/IJCTHR-04-2013-0024>
- Zhao, C., Cooke, F.L., & Wang, Z. (2021). Human resource management in China: What are the key issues confronting organizations and how can research help? *Asia Pacific Journal of Human Resources*, 59(3), 357–373. <https://doi.org/10.1111/1744-7941.12295>

Appendix starts on the next page →

# Appendix 1

## QUESTIONNAIRE

### MINHAJ UNIVERSITY, LAHORE

### SCHOOL OF BUSINESS & MANAGEMENT SCIENCES

### EMPLOYEE SURVEY

**Dear Participant:** This scientific research is being carried out as my research work at Minhaj University, Lahore, Pakistan. The main aim is to support organisations' decision makers through first-hand and research-led information that how green Human Resource Management practices impact on organisational sustainability. You are the one who can provide valuable information about your work experiences. This is entirely an academic research and any information that you share will be used anonymously and with professional confidentiality. However, if you would like, the general findings of this research will be available to you. Your neutral (unbiased) response will be highly appreciated and will make this research valuable for organisations/institutions operating in Pakistan. I shall be very grateful to you for your time and cooperation.

You are requested to return the filled questionnaire at your earliest convenience.

**INSTRUCTIONS:** Please answer the following questions:

**Name :** \_\_\_\_\_

**Contact Number:** \_\_\_\_\_

**Organisation:** \_\_\_\_\_

**Designation:** \_\_\_\_\_

**Gender:**  Male  Female

**Marital Status:**  Married  Unmarried

**Age:** 18–25 Years

26–30 Years

31–35 Years

36–40 Years

41 and above

**Level of Education:**  Matric/Inter  Bachelors  Masters/M.Phil.  Doctorate

**Experience:**

1–5 Years

6–10 Years

11–15 Years

16–20 Years

21 and above

**Job Type:**  Junior Level  Senior Level  Managerial Level

Director  CEOs

**Firm Size:**

Small  Medium  Large

**Age of the firm:**

1–5 Years

6–10 Years

11–15 Years

16–20 Years

21 and above

**INSTRUCTIONS:** Below given are the questions related to the Sustainable Human Resource Management practices. A number of statements dealing with various aspects of Human Resources in your organisation are given below. Please indicate the extent to which each statement describes your organisation using the following 5-point scale.

5 = Strongly Agree

4 = Agree

3 = Neutral

2 = Disagree

1 = Strongly Disagree

**INSTRUCTIONS:** Please indicate the extent to which you agree/disagree with the following statements by using the given scale.

Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)		
<b>Sustainable Human Resource Management</b>						
<b>Green HRM PRACTICES</b>						
Sr. No.	Questions	1	2	3	4	5
1	My company provides employees with green training to promote green values.	1	2	3	4	5
2	My company provides employees with green training to develop employees' knowledge and skills required for green management.	1	2	3	4	5
3	My company considers employees' workplace green behaviour in performance appraisals.	1	2	3	4	5
4	My company relates employees' workplace green behaviours to rewards and compensation.	1	2	3	4	5

**INSTRUCTIONS:** Below given are the questions related to the Green Knowledge Sharing that individuals usually use. The response scale mentioned below indicates the extent to which you Agree/Disagree with the following statements.

Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)		
<b>GREEN KNOWLEDGE SHARING:</b>						
Sr. No.	Questions	1	2	3	4	5
1	I always share green knowledge obtained from newspapers, magazines, journals, television and other sources	1	2	3	4	5
2	I enjoy sharing environment-friendly knowledge with my colleagues	1	2	3	4	5
3	In my organisation, people share expertise from work experience with each other	1	2	3	4	5
4	Sharing my knowledge with colleagues is pleasurable	1	2	3	4	5

**INSTRUCTIONS:** Below given are the questions related to the organisational citizenship behaviour for the environment (OCBE) that individuals usually use. Using the response scale shown below, indicate the extent to which you Agree/Disagree with the following statements.

Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
<b>INSTRUCTIONS:</b> Using the response scale shown below, indicate the extent to which you Agree/Disagree with the following statements. This research scale contributes to the understanding about organisational sustainability by analysing the perception of individual employees in your organisation				
Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)

**ORGANISATIONAL SUSTAINABILITY**

Sr. No.	Questions	1	2	3	4	5
1	My organisation has optimal plans for constant revenue generation over foreseeable number of years	1	2	3	4	5
2	My organisation is financially strong to withstand economic uncertainties	1	2	3	4	5
3	My organisation has scope of making profit for the next 5 years	1	2	3	4	5
4	My organisation has intention to reinvest its profit for its growth	1	2	3	4	5
5	My organisation supports creativity and innovation	1	2	3	4	5
6	My organisation supports opinions and views for improvement from all levels of employees	1	2	3	4	5
7	My organisation has clear alignment with its policies and vision	1	2	3	4	5
8	My organisation is investing in right policies for future growth environmental management sustainability	1	2	3	4	5
9	My organisation is providing optimal air quality assurance	1	2	3	4	5
10	My organisation encourages to walk, use cycle or use public transport to keep air clean	1	2	3	4	5
11	My organisation has adequate ventilation system that helps air quality assurance	1	2	3	4	5
12	My organisation is thoughtful about sustainable development in maximum possible ways	1	2	3	4	5
13	My organisation has a proper solid waste management system	1	2	3	4	5
14	My organisation has a proper electronic waste management system	1	2	3	4	5
15	My organisation is not polluting the nature	1	2	3	4	5
16	My organisation has appropriate recycling systems for paper, plastic, glass and other solid waste	1	2	3	4	5
17	My organisation provides optimal job security to its employees	1	2	3	4	5
18	My organisation supports training and development of staff.	1	2	3	4	5