

Guest editorial: Greening knowledge management in organizations: antecedents and opportunities for shaping research and practices

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In recent years, environmental sustainability has become a central concern for organizations worldwide, driven by increasing regulatory pressures, stakeholder expectations and the urgent need to address climate change. As organizations transition toward more sustainable practices, knowledge management (KM) has emerged as a critical enabler in supporting this transformation. By facilitating the creation, sharing and application of knowledge, KM plays a pivotal role in embedding environmental considerations into organizational processes and decision-making.

The concept of green knowledge management (GKM) reflects this evolving landscape, where traditional KM practices are extended to incorporate sustainability-oriented goals. GKM focuses on leveraging knowledge resources to promote environmentally responsible behavior, enhance green innovation and improve sustainable performance. Despite growing scholarly interest, there remains a need to better understand the antecedents, mechanisms and outcomes of GKM across different organizational contexts.

This special issue, titled “Greening Knowledge Management in Organizations: Antecedents and Opportunities for Shaping Research and Practices,” aims to address this gap by bringing together a collection of studies that explore how organizations can integrate sustainability into their KM systems. The contributions in this issue examine a wide range of factors, including green human resource management, organizational culture, digital platforms, strategic alliances and innovation processes, providing a comprehensive perspective on the role of GKM in driving sustainable outcomes.

Brief overview of research papers

The first paper, “Predicting Green Knowledge Sharing and Creation Through Green Knowledge Acquisition, Storage and Application,” investigates the foundational processes of GKM and their role in fostering knowledge sharing and creation. The study highlights the importance of structured knowledge processes in enabling effective sustainability practices. Data were collected from 135 males and females working with public and private organizations in the United Arab Emirates. The findings showed that green knowledge acquisition, storage and application, together or separately, have a positive and significant impact on green knowledge sharing and green knowledge creation. The findings of the study may serve as a valuable reference for exploring the relationships among the key concepts of green KM.

The second paper, “Go Green! Impact of Green Innovation on Environmental Sustainability and Firm Performance: Green Knowledge Management as a Moderator,” examines how GKM strengthens the relationship between green innovation and organizational performance, demonstrating its strategic importance in enhancing both environmental and economic outcomes. This study used a cross-sectional approach, collecting data from 282 Pakistani small and medium-sized enterprises (SMEs) using a questionnaire. The findings indicate that green innovation substantially increases environmental sustainability and firm performance, with GKM playing a robust moderating



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influence. This study adds value to the existing literature on green innovation, GKM, environmental sustainability and firm performance.

Focusing on the human resource dimension, the third paper, "The Impact of Green HRM on Green Innovative Work Behavior: The Mediating Role of Green Knowledge Management in Higher Education Institutions," reveals how green HR practices influence employee behavior through the mediating role of GKM, particularly in academic settings. The study is quantitative in nature and uses "partial least squares structural equation modeling (PLS-SEM)" for data analysis. A total of 242 responses are collected for data analysis. The findings of the research illustrate the direct relationships between "green human resource management" and "green knowledge management", "green knowledge management" and "green innovation work behavior" and "green human resource management" and "green innovation work behavior" with positive p -value. This study extends the framework to higher education institutions in Uttarakhand, which is an underexplored sector for sustainability transactions.

The fourth paper, "Green Knowledge Management Practices and Green Innovation: Unveiling the Mediating Influence of Green Culture and Green Entrepreneurial Self-Efficacy," the authors explored the effect of GKM practices on green innovation (GI) through adopting a green culture (GC) and green entrepreneurial self-efficacy (GESE). The authors used cross-sectional data from Saudi Arabia's top SME managers and based the findings on 368 valid samples. This study's findings demonstrate that GKM constructs, such as green knowledge acquisition (GKA), green knowledge dissemination (GKD) and green knowledge responsiveness (GKR), have a positive and significant effect on GI. This study empirically fills the gaps by demonstrating the role of GC and GESE in developing the connection between GKM practices and GI and, more specifically, Saudi Arabia's SMEs.

Extending the discussion to digital contexts, the fifth paper, "Green Knowledge, Social Media Usage and Investor Intentions: An Application of the Theory of Planned Behavior in the Egyptian Context," examines how green knowledge disseminated through social media influences investor decision-making, highlighting the role of digital platforms in sustainability communication. The study used partial least squares structural equation modeling to analyze the data and test hypotheses based on a sample of 450 individual investors who have investment experience. The results show that attitude (ATT), subjective norm (SN), GK and social media platform usage SMPU have a significant relationship with behavioral intention toward green investments (BIGI). The study provides some implications for investment providers, service providers and policymakers.

The sixth paper, "Green Persistence: Unraveling the Influence of Green HR, Green Corporate Strategy and Green Knowledge on Employee Persistence in Green Tasks," investigates the relationship between green HR practices, green knowledge and employee persistence in green tasks. Responses from 355 employees across various companies in the Kingdom of Saudi Arabia were collected using a survey. The data were analyzed using simple mediation and moderated mediation models. This study confirms that green HR practices influence green knowledge, which in turn determines employee persistence in green tasks. This study offers a novel perspective on employee persistence in green tasks, including its proximal and distal predictors and a boundary condition.

Two bibliometric studies provide a broader overview of the field. The seventh paper, "Green Knowledge Management: A Bibliometric Analysis, Research Trends and Future Directions," maps the intellectual structure and emerging trends in GKM research. This study conducted a bibliometric analysis of 994 papers related to GKM from 2005 until August 2024. Similarly, the ninth paper, "A Bibliometric Perspective: Three Stages of Green Knowledge Management Thematic Evolution in Business Literature," identifies the

evolution of key themes and highlights future research directions. This study performed a bibliometric analysis of 1,274 papers related to GKM from 1995 until January 2024. This review offers practitioners a holistic picture of GKM to tackle emerging environmental concerns and increase businesses' competitive advantages. This study is the first to provide a comprehensive picture of the GKM literature, from its earliest forms of corporate social responsibility and SD until the introduction of SDGs and in combination with the evolution of KM cycle stages.

The eighth paper, "The Impact of Knowledge Management on Sustainable Performance with Mediation Effect of Green Innovation in Malaysian SMEs," demonstrates how KM contributes to sustainable performance through green innovation, particularly in small and medium-sized enterprises. The data were collected from individuals from Malaysia's small and medium enterprise (SME) sector by using a convenience sampling technique and analysis was performed by using SmartPLS4. This study's results revealed that KM influences performance by inclusion of green practices. This study has been conducted to determine the sustainable business performance influenced by KM, technological advancements and green supply chain management, moderated by leadership support. This study contributed to the body of knowledge by explaining the effect and influence of KM practices and greening perspectives on sustaining performance.

The tenth paper, "Green Knowledge Sharing as the Backbone of Sustainable Performance: Evidence from the Spanish Wine Industry," provides sector-specific insights into how knowledge sharing supports sustainability outcomes in traditional industries. This study proposes a conceptual model based on previous studies, which is tested using structural equations with data collected from 196 Spanish wineries between September 2022 and January 2023. The research results reveal the existence of a positive and significant relationship between the development of GKS and SP in Spanish wineries.

Finally, the eleventh paper, "The Impact of Dual Alliance on Firm Green Innovation: A Moderated Mediation Effect Model," examines how inter-organizational collaborations influence green innovation, emphasizing the role of knowledge exchange within strategic alliances. The hypotheses are validated by using hierarchical regression analysis and the bootstrapping method, with questionnaire survey data collected from 316 manufacturing firms in China. Empirical results show that both exploratory alliance and exploitative alliance have an inverted U-shaped effect on GI, in which GKR plays a mediating role in the above relationship. Moreover, this research reveals the mechanism of dual alliance on GI through the mediation of GKR and enriches the boundary conditions by integrating the moderating role of alliance tie strength.

Collectively, the papers in this special issue highlight that green KM is not only a supporting function but also a strategic capability that underpins sustainable transformation. They demonstrate that effective GKM requires the alignment of organizational culture, leadership, technology and human resource practices. Furthermore, the findings emphasize the importance of collaboration, both within and across organizations, in facilitating knowledge flows that drive green innovation.

From a practical perspective, this special issue offers valuable insights for managers seeking to integrate sustainability into their organizations. It underscores the need to invest in knowledge infrastructure, foster a culture of knowledge sharing and align strategic initiatives with environmental goals. For researchers, the issue provides a rich foundation for future inquiry, particularly in exploring the dynamic interplay between knowledge processes and sustainability outcomes.

In conclusion, this special issue contributes to advancing the understanding of how KM can support the transition toward more sustainable and environmentally responsible organizations. As the challenges of sustainability continue to evolve, the

role of green KM will remain critical in shaping both research and practice in this important domain.

Umair Akram

The Business School, RMIT University Vietnam, Hanoi, Vietnam

Xiaoyu Yu

School of Management, Shanghai University, Shanghai, China

Heesup Han

*College of Hospitality and Tourism Management, Sejong University,
Seoul, Korea, and*

Qiaolei Jiang

*School of Journalism and Communication, Tsinghua University,
Beijing, China*