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EXPLORING THE IMPACT OF GREEN SELF-EFFICACY, PERCEIVED VALUE, AND GREEN IMAGE ON GREEN CREATIVITY: THE MEDIATING ROLES OF GREEN KNOWLEDGE SHARING AND GREEN TECHNOLOGICAL SELF-EFFICACY, AND THE MODERATING ROLE OF GREEN MINDFULNESS

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Abstract
This research investigates the causes of green creativity by incorporating psychological, cognitive, and organizational aspects into the framework of Social Cognitive Theory. A quantitative, cross-sectional approach was used to collect data from employees in Pakistan's industrial, energy, and service sectors, and structural equation modeling was used for analysis. The findings show that green self-efficacy and perceived value of green creativity significantly improve green creativity, but perceived green image has an indirect influence via mediating processes. Green knowledge sharing and green technological self-efficacy appear as essential channels for transforming individual ideas and perceptions into eco-innovative results. Furthermore, green mindfulness improves the relationship between technical self-efficacy and creativity, emphasizing its importance in promoting sustainable innovation. The findings add to theory by applying Social Cognitive Theory to sustainability situations, and they have practical significance for enterprises looking to cultivate green innovation. To attain long-term success, managers should increase employee self-efficacy, foster knowledge-sharing cultures, invest in technology competency, and encourage mindfulness practices.

INTRODUCTION

Organizations are accepting green innovation and innovative solutions in response to the need for ecologically friendly operation. The capacity to generate creative and meaningful ideas to improve environmental sustainability is known as "green creativity," and it is becoming more widely acknowledged as a critical skill for businesses aiming for green transformation. Little is known about the organizational and psychological processes that underlie green innovation.

In order to encourage sustainable behavior and innovation, green self-efficacy, the perceived worth of green creativity, and the way one thinks of a green image are becoming important psychological and perceptual factors. Green mindfulness is the term used to describe an individual's increased awareness and attention to green concerns. Knowledge-sharing behaviors and technological self-efficacy are equally significant since they improve the flow and implementation of green ideas and skills inside

organizational settings. To better understand how green creativity may be fostered in contemporary businesses, this study aims to investigate a comprehensive framework that incorporates contextual, cognitive, and personal dimensions. The study intends to address important theoretical and practical gaps in green organizational behavior and study of innovation by studying the moderating function of green mindfulness and the mediating effects of green knowledge sharing and green mathematical self-efficacy.

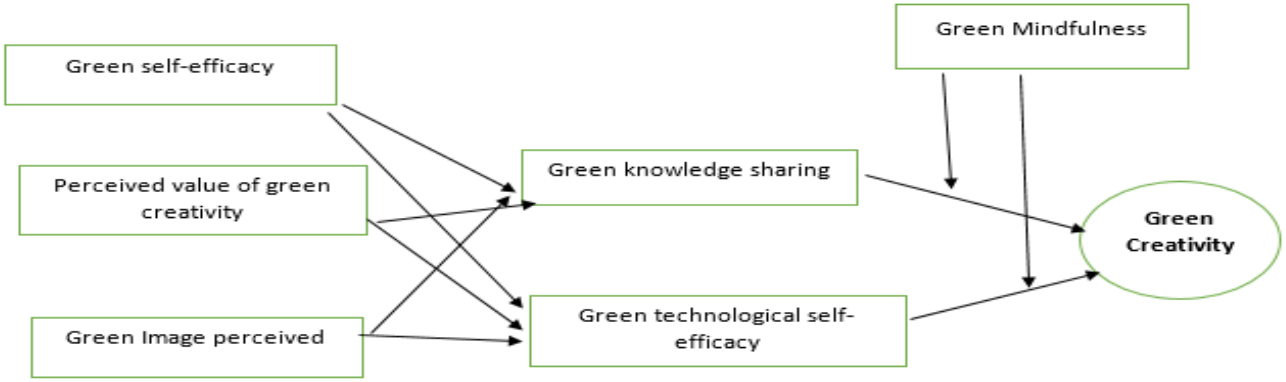
Even though sustainable innovation is becoming more and more important, many businesses still have trouble fostering green creativity among their staff. It is currently unclear how psychological concepts like green self-efficacy and perceived value, which push people to innovate in an ecologically responsible way, relate to behavioral results like green creativity. Additionally, it remains unclear how these relationships are influenced by internal processes like knowledge sharing and technological self-efficacy. The role of green mindfulness in moderating these relationships also lacks empirical validation. Without a clear understanding of these dynamics, organizations face challenges in designing strategies that effectively promote sustainable innovation.

The scope of this study is centered on exploring the psychological and organizational factors that influence green creativity among employees in environmentally conscious organizations in Pakistan. It focuses specifically on key individual-level constructs including green self-efficacy, perceived value of green creativity, and green image, and examines their direct and indirect effects on green creativity through the mediating roles of green knowledge sharing and green technological self-efficacy. Additionally, the study investigates the moderating role of green mindfulness in enhancing these relationships. The research is limited to organizational settings, excluding external environmental variables such as regulatory policies or market conditions. Data will be collected from employees in manufacturing, energy, and service sectors where sustainability practices are increasingly relevant. The study adopts a quantitative approach using structured questionnaires and employs structural equation modeling for data analysis.

This study holds significant theoretical and practical value. From a theoretical standpoint, it contributes to the advancement of Social Cognitive Theory by applying it to the context of green organizational behavior and creativity. It introduces green knowledge sharing and green technological self-efficacy as key mediators and green mindfulness as a moderator, offering a more comprehensive understanding of how cognitive, social, and psychological factors interact to influence green creativity. Practically, the study offers actionable insights for managers and sustainability practitioners aiming to foster innovation through green human resource practices. By identifying the drivers of green creativity, the research helps organizations develop effective strategies to enhance employee engagement in environmental initiatives, improve technological competence, and strengthen their green image. Ultimately, this study supports the development of sustainable organizational cultures aligned with broader environmental and strategic goal.

The objectives of this study:

1. To examine the direct effect of green self-efficacy on green creativity.
2. To investigate the influence of perceived value of green creativity on green creativity.
3. To analyze the impact of perceived green image on green creativity.
4. To assess the mediating role of green knowledge sharing in the relationship between:
5. To explore the mediating role of green technological self-efficacy in the relationship between Green self-efficacy and green creativity.
6. To evaluate the moderating role of green mindfulness between Green knowledge sharing and green creativity



Literature Review

Social Cognitive Theory (SCT)

SCT Bandura (1986) is the most comprehensive and appropriate framework for the model as it explains the interplay between individual beliefs, social interactions, and cognitive processes in fostering green creativity. At its core, SCT emphasizes self-efficacy, highlighting that individuals who believe in their capabilities are more likely to initiate and sustain creative and goal-directed actions, such as green creativity. It also accounts for mediating factors like knowledge sharing and technological self-efficacy, as behaviors are learned through social interaction and by developing competence in using tools and technology—both crucial for enhancing green creativity. Furthermore, SCT views creativity and innovation as behavioral outcomes shaped by personal beliefs (self-efficacy), social environments (knowledge sharing), and cognitive skills (technological abilities). Although SCT does not explicitly mention mindfulness, its emphasis on cognitive regulation and attentional control aligns with the moderating role of green mindfulness, which strengthens how individuals process environmental knowledge and apply it creatively.

Green Self-Efficacy Positively

Green self-efficacy (GSE) refers to an individual's belief in their ability to successfully perform tasks and behaviors that contribute to environmental sustainability (Bandura, 1997). Rooted in self-efficacy theory, GSE serves as a key motivational force that encourages proactive engagement in eco-friendly practices and the development of innovative green solutions. Employees with high levels of GSE are not only more confident in their environmental capabilities but are also more resilient, self-directed and persistent when tackling sustainability challenges, which enhances green creativity (Ahmad et al., 2023).Green creativity involves generating novel and valuable ideas that contribute to environmental improvement. (Farooq et al., 2022) claim that GSE has a direct impact on innovative green practices by enabling staff members to question conventional thinking and develop sustainable methods. People are more inclined to take the initiative to suggest, test, and improve ecologically friendly ideas when they believe they are capable of participating in green activities. This proactive approach is very suited with creative processes that include taking risks and addressing problems in unpredictable situations. The helpful correlation between GSE and green creative performance has been reaffirmed by recent empirical research. According to (Ahmad et al., 2022) GSE is an accurate gauge of employees' involvement in innovation with a sustainability focus, particularly when combined with green psychological empowerment.. Workers who feel competent and

independent are more likely to think creatively, which can result in ground breaking eco-innovation concepts. Furthermore, by increasing intrinsic motivation and creative confidence Chen, J., & Zhang, A. (2023) showed how GSE plays a crucial role in promoting green creative behavior in high-tech companies. Opportunities for environmental education and training are essential for fostering GSE and, consequently, green creativity. According to (Ahmad et al., 2022) workers that receive focused green training have greater GSE, which encourages them to provide eco-innovative ideas. These learning interventions assist staff members in gaining technical knowledge while strengthening their conviction that they can use creativity to create a meaningful workplace. The social environment and organizational climate modify the association between GSE and green innovation. According to (Prayag et al., 2023) the benefits of GSE on creativity are amplified in the presence of peer support and team cooperation. Collaborative innovation cultures are fostered by supportive team settings which boost people's confidence to discuss and execute green ideas. Similarly, (Meirun et al., 2024) emphasized that by confirming employees' talents and contributions, feedback rich environments and recognition systems reinforce the connection between GSE and creative behaviors. Another psychological method that GSE affects creativity is through the formation of a green identity. Employees that are comfortable in their ability to be proactive about the environment tend to incorporate sustainability into their self-perception, which results in more consistent and innovative environmental behavior. According to (Saleem et al., 2023), this green identity encourages sustained involvement in eco-innovation, particularly when it is in line with corporate sustainability objectives. One of the most potent cognitive and motivating factors influencing green creativity is green self-efficacy. Through strategies including intrinsic motivation, training, empowerment, and green identity, GSE enables staff members to innovate for environmental sustainability. Employers who want to foster green innovation should make an investment in boosting staff members' self-efficacy through feedback, inspiration, and training.

H1: Green Self-Efficacy Positively Influences Green Creativity

Perceived Value of Green Creativity

The degree to which workers feel that their eco-innovative ideas are valued, acknowledged, and deemed beneficial inside their firms is known as perceived value of green creativity or PVGC. Their drive to solve environmental problems creatively is greatly impacted by this impression. Employees are more likely to suggest, create, and execute creative sustainability solutions when they believe their green ideas will be respected and encouraged (Valdiviezo et al., 2022).Expectancy theory, on which PVGC is based, contends that people are more likely to act in ways they perceive will result in desirable consequences. Employees who believe that green innovation is highly valued are more naturally inclined to come up with and develop eco-innovative ideas, claim Yu, L., & Wu, W. (2024). When businesses have official procedures in place to assess and reward green ideas like green innovation competitions, recommendation systems, and green KPIs in performance reviews this incentive is very strong. The psychological empowerment component of PVGC is highlighted by recent research. According to Li, X. (2022), employees' feeling of purpose, autonomy, and self-confidence are all increased when they believe that green innovation counts. Higher involvement in environmental innovation is a result of this psychological empowerment, particularly in sectors where ecological responsibility is a top strategic objective. Workers are more willing to take the initiative and participate in ongoing eco-improvement if they believe their green ideas are having an impact. Additionally, PVGC encourages staff members to embrace the organization's sustainability ideals by reinforcing their environmental identity. According to Rehman, F. U., & Zeb, A. (2023), workers are more inclined to include sustainability into their professional self-concept when they feel that their green contributions are valued. This identity connection fosters long-term innovative behavior targeted at environmental performance and develops emotional engagement to the organization's green goal. How PVGC affects green innovation is also influenced by organizational culture. Perceived value is more powerful in inventive, encouraging cultures

because these settings encourage experimentation and creativity. Kusi et al. (2022) demonstrated how cultural factors such psychological safety, shared sustainability objectives, and willingness to change affect the effect of PVGC on creativity. When workers feel they won't face consequences for taking innovative chances, they are more inclined to implement green ideas. Digitalization enhances PVGC through visibility and communication. Employees may see their ideas acknowledged and debated using platforms like as innovation dashboards, knowledge repositories, and corporate social networks. Digital platforms, according to (Huang et al., 2024), not only make green contributions more transparent, but they also foster eco-innovation communities that affirm and uphold the worth of innovative endeavors. In summary, a key factor in encouraging and maintaining eco-innovation practices is the perceived value of green creativity. Organizations may develop a creative workforce that is involved in ongoing sustainability by fostering a culture of appreciation, acknowledging contributions, and coordinating individual perspectives with company goals.

H2: Perceived value of Green creativity positively affects green creativity.

Green Image Perceived

The term "green image perceived" (GIP) describes how staff members view their company's standing as a sustainable and environmentally conscious enterprise. By encouraging pride, encouraging eco-innovative contributions, and promoting affiliation with the organization's principles, this view has the power to profoundly influence employee behavior. When staff members embrace the company's environmental image as a component of who they are, green innovation flourishes (Agu et al., 2024).According to research, PGI encourages green creative activities by acting as a psychological and motivating factor. Employees who feel they work for an ecologically conscious company have a higher feeling of social identity and moral duty, which motivates them to make innovative contributions to sustainability goals, claim Luo et al. (2023).This alignment of personal and organizational values acts as a catalyst for proactive green innovation. PGI also influences the cognitive framing of tasks and challenges. Employees in high PGI environments tend to view environmental issues as opportunities for positive impact rather than burdens. (Zhang et al., 2025) demonstrated that when organizations promote a strong green image through internal communication and external branding, employees are more likely to take the initiative in addressing environmental problems with creative solutions. The image sets expectations and norms that support innovation. PGI enhances employees' affective commitment and job satisfaction, which are positively associated with creativity. (Chawla et al., 2025) found that employees who feel emotionally connected to their organization's green reputation exhibit higher levels of organizational citizenship behavior and are more inclined to go beyond their formal roles to propose eco-innovative ideas. According to (Chawla et al., 2025) workers who have a strong emotional attachment to their company's green image have greater levels of organizational citizenship behavior and are more likely to suggest eco-innovative ideas outside of their designated duties. Thus, PGI fosters an emotional environment that encourages creativity. HR procedures and leadership may amplify PGI's impact. (Aslam et al. 2024) shown that the motivating impacts of PGI are amplified by green HRM practices and leadership behaviors that uphold the organization's environmental reputation. Leaders who openly advocate for sustainability and acknowledge green accomplishments, for instance, enhance the company's reputation and legitimize the innovative work of their staff. Furthermore, PGI and employees' perceptions of external validation are related. When workers feel that the public, partners, and regulatory agencies have a favorable opinion of their company, they can be more inclined to innovate. According to (Le et al., 2024), this external prestige impact increases self-esteem and motivates actions that support maintaining the company's green reputation. In conclusion, by improving social affiliation, emotional commitment, environmental framing, and perceived prestige, the perceived green image has a favorable impact on green creativity. Therefore, companies looking to increase innovation in sustainability initiatives should aggressively convey and showcase their green image to internal stakeholders.

H3: Green image perceived positively affects green creativity.

Green Knowledge Sharing, Green Self-Efficacy and green creativity

The voluntary exchange and receipt of sustainability related knowledge, insights, and innovations among staff members is known as "green knowledge sharing" (GKS). People are more likely to actively engage in group green initiatives when they have strong green self-efficacy (GSE) or confidence in their capacity to carry out actions that support environmental sustainability. By increasing the communal pool of concepts, methods, and eco-innovative practices, this psychological empowerment encourages participation in information exchange which boosts green creativity (Abrar et al., 2025). In addition to believing in their environmental abilities, high GSE people are more eager to learn from others and exchange ideas, which fosters a vibrant atmosphere for information exchange. According to (Zaid et al., 2025) the degree to which workers share green information mediates the association between green self-efficacy and green creativity. This suggests that social contact and shared learning are more successful when combined with self-belief. GKS creates a space where concepts may be discussed, improved and verified by other people. Arsawan et al., (2023) underlined that GKS gives staff members access to a variety of perspectives and technical knowledge from colleagues, enabling them to interpret their eco-ideas. This cooperative method promotes experimentation with sustainable techniques and increases cognitive variety which is a crucial component of creative thinking. (Shahbaz et al., 2024) point out that when people with high GSE take on the role of knowledge leaders, the frequency and quality of GKS are increased. In addition to disseminating important information throughout the company, this fortifies the group's identity around sustainability. Green innovation is more likely to emerge at the team level as more people participate in this interaction. Technology facilitates this mediation as well. High GSE personnel that are comfortable with technology are more likely to share information about sustainability using intranets, green communication platforms, and collaboration tools. According to (Jalil et al., 2025), sharing green information via digital networks speeds up the adoption of creative green practices, facilitating ongoing eco-improvement and real-time problem-solving. For this mediation to be successful, a culture of trust and appreciation is essential. People with high GSE feel valued and are more likely to keep contributing when businesses openly recognize their knowledge-sharing practices (Abdulmuhsin et al., 2025). This reciprocal support establishes a feedback loop in which information exchange stimulates innovation, which in turn fortifies confidence in one's green proficiencies. In conclusion, by offering a cooperative forum for information sharing, validation, and group ideation, green knowledge sharing mediates the association between green self-efficacy and green creativity. A more creative and sustainability-driven workforce will be seen by organizations that foster knowledge-sharing cultures and enable self-efficacious individuals through digital and social platforms.

H4: Green knowledge sharing mediates the relationship between green self-efficacy and green creativity.

Green Technological Self-Efficacy, Green Self-Efficacy and green creativity

Green technological self-efficacy (GTSE) acts as a key mechanism linking green self-efficacy (GSE) to green creativity. Employee confidence in their capacity to create sustainable solutions using digital tools and environmental technology is referred to as GTSE (Chen, R., & Cao, L. (2025). While GSE encourages individual initiative toward eco-innovation, GTSE makes it easier to put that confidence into practice through innovative problem-solving and technical experimentation. This mediation emphasizes how crucial it is to give self-sufficient workers the tools and resources they need to be creatively green. High GSE employees are more inclined to look for chances to put their sustainability beliefs into practice. However when individuals feel comfortable employing green technology their influence on green innovation is at its highest. By enabling staff members to deploy digital solutions including energy monitoring systems, green logistics platforms and intelligent resource management tools (Iram et al., 2025) demonstrated how GTSE greatly mediates the impact of GSE on sustainable innovation. The connection between GSE and GTSE is strengthened when businesses offer

training on green technologies. According to Seshadrinathan, S., & Chandra, S. (2025) organized environmental technology workshops increase staff members' participation in eco-creative practices as well as their confidence in utilizing green technologies. Workers who are proficient with these tools feel more in charge of their contributions and are more inclined to suggest creative fixes. GTSE promotes independent experimentation. Workers are more inclined to test and improve their ideas when they think they can use environmental technology efficiently. According to (Kouser et al., 2025) workers with high GTSE were more likely to use cross-functional innovation, design thinking, and prototyping for sustainability. The basic self-efficacy created by the GSE is what drives this exploratory activity. This mediation is further reinforced by digital infrastructure and organizational assistance. According to (Zhang et al., 2025) when conjunction platforms, data analytics tools, and green IT systems are used to assist them, personnel with high GSE are more likely to create GTSE. Employees' capacity to transform confidence into creativity is improved by the availability of user friendly technology and a culture that supports their usage. Peer modeling and leadership are also important. The idea that such innovation is both feasible and appreciated becomes more apparent when managers and coworkers exhibit assurance and success in introducing green technology. According to (Elshall et al., 2025) eco-innovation role models and digital mentorship increase GTSE, particularly for people who already have high levels of GSE. Finally, by converting confidence into ability, GTSE mediates the connection between green self-efficacy and green creativity. It enables employees to transform sustainability values into impactful innovation by using environmental technologies effectively. Building GTSE through training, infrastructure, and leadership is therefore essential for fostering a technologically empowered, creative and sustainable workforce.

H5: Green technological self-efficacy mediates the relationship between green self-efficacy and green creativity

Green Knowledge Sharing, Perceived Value of Green Creativity and green creativity

Perceived Value of Green Creativity (PVGC) refers to employees' belief in the usefulness, relevance, and importance of their green creative efforts within the organization. When employees perceive their eco-innovative ideas as valuable, they become more inclined to engage in behaviors that support and reinforce those beliefs. One such behavior is Green Knowledge Sharing (GKS), which acts as a key mediator translating PVGC into tangible green creative outcomes (Asbari, M. (2024).Employees who believe their contributions are meaningful are more motivated to share those insights with peers and across teams. Their ideas are validated by this exchange of green information, which also enables others to develop, modify and build upon them. Perceived value, as (Yu, L., & Wu, W. (2024) showed, creates an inherent incentive to engage in collaborative learning settings which in turn promotes group eco-innovation. Best-case applications, experiential learning, and green practices may all be widely disseminated thanks to GKS. According to Tuan, L. T. (2023) staff members are more inclined to participate in corporate knowledge networks and sustainability conversations if they believe their green innovation has an influence. These cooperative interactions foster a co-creational atmosphere that encourages ongoing green innovation. Furthermore, PVGC fosters an environment of openness and reciprocal learning. Employees who believe their innovation is appreciated are more willing to share their expertise because they know their opinions will be respected.(Islam et al., 2022) claim that by enabling quicker concept validation and improvement, this trust-based information exchange promotes eco-innovation. This mediation link is further amplified by digital platforms. In order to exchange green insights, employees with high PVGC often participate in forums, sustainability dashboards, and innovation platforms. According to (Aslam et al., 2025), digital green knowledge-sharing platforms increase the impact and dissemination of innovative ideas, especially when staff members feel their input counts. Leadership and organizational support also improve this mediation. According to (Elnagar, A. K., & Aljuwaiber, A. 2025) leaders that openly acknowledge and encourage green contributions strengthen PVGC

and encourage GKS, which in turn fosters more innovation across departments. In conclusion, by directing personal value beliefs into group invention, Green Knowledge Sharing mediates the association between Perceived Value of Green Creativity and Green Creativity. This pathway emphasizes how crucial it is to foster an environment of acknowledgment, transparency, and organized information sharing in order to promote long-term innovation.

H6: Green knowledge sharing mediates the relationship between perceived value of green creativity and green creativity.

Green Technological Self-Efficacy, Perceived Value of Green Creativity and green creativity

A worker's opinion that their environmentally creative ideas are valued, acknowledged, and have a significant impact is reflected in their Perceived Value of Green Creativity (PVGC). The real-life execution of innovative green initiatives frequently hinges on the employee's confidence in utilizing eco-friendly technology, also known as Green Technological Self-Efficacy (GTSE), even if this impression encourages motivation and a feeling of purpose. GTSE serves as a crucial mediating variable, enabling the translation of motivation into tangible creative actions (Chen, R., & Cao, L. (2025).Employees with high PVGC are more likely to engage in idea generation. However, these ideas require technological competence to be effectively implemented. According to (Mollah et al., 2024), employees are more inclined to investigate digital and environmental technologies and produce useful green innovation if they believe their green ideas are desirable. This process is greatly enhanced when employees have high GTSE, allowing them to confidently prototype, refine, and execute creative ideas. GTSE also reinforces proactive behavior. Confident employees are not only more likely to use existing green tools but also to advocate for technological innovation within their teams.(Amjad et al., 2024) showed that psychological empowerment and self-efficacy in using green technologies significantly mediate the effect of PVGC on sustainable innovation behaviors.(Mubarak et al., 2024) emphasized that organizations investing in digital training and environmental platforms see a stronger link between perceived value and creative outcomes. These resources build GTSE and ensure employees have the technical skills needed to act on their creative impulses. Leadership and organizational support are also critical. (Le et al., 2025) confirmed that perceived organizational encouragement enhances both PVGC and GTSE, particularly when leaders recognize technological contributions to sustainability. This combination cultivates an environment where green creativity can thrive. In conclusion, Green Technological Self-Efficacy mediates the relationship between Perceived Value of Green Creativity and Green Creativity by transforming individual belief into empowered, skilled, and technology-enabled innovation. Organizations should align recognition systems with green tech enablement to support this pathway.

H7: Green technological self-efficacy mediates the relationship between perceived value of green creativity and green creativity.

Green Knowledge Sharing, Green Image Perceived and green creativity

Green image perceived (GIP) reflects how employees view their organization's commitment to environmental sustainability. When employees perceive their organization as genuinely green, it not only fosters a sense of pride and belonging but also motivates them to engage in activities that reinforce this image. One of the primary ways this motivation is operationalized is through Green Knowledge Sharing (GKS) which mediates the relationship between PGI and Green Creativity (Rasheed et al., 2024).Employees who identify with their organization's green values are more inclined to participate in the sharing of sustainability-related knowledge.(Ma **et al., 2025**) noted that a positive green image encourages collaborative behavior and eco-conscious discussions which in turn lead to the co-creation of innovative green ideas. Employees may share experiences, suggest enhancements and investigate creative ideas based on group knowledge thanks to GKS. Additionally GKS offers a platform for approving and improving individual contributions. According to (Riaz et al., 2024), employees are more inclined to freely share information in companies with a strong green identity because they believe their

opinions will be valued and used. This trust-based interaction fosters the development of ideas and improves the creative environment as a whole. GKS practices are reinforced when the internal culture and the exterior green image are seen to be consistent.(Martínez et al., 2024) showed that when workers think their company's environmental messaging is genuine, GKS is more common. These kinds of settings facilitate cross functional cooperation, improve communication channels and lower obstacles to information sharing all essential components of green innovation. By making it simpler for staff members to obtain and share sustainability information, digital platforms help to further promote this mediation. Digital technologies including intranets, green wikis and virtual communities enhance GKS and support the momentum of innovation, according to (Zhen et al., 2021) because they encourage employees to match their conduct with the organization's reputation. These systems work particularly well when PGI is high. In summary, by converting reputational pride and identity into cooperative action, Green Knowledge Sharing mediates the link between Perceived Green Image and Green Creativity. Investing in knowledge-sharing platforms and promoting green principles in internal communications are crucial for firms looking to improve sustainability driven innovation.

H8: Green knowledge sharing mediates the relationship between green image perceived and green creativity.

Green Technological Self-Efficacy, green image perceived and green creativity

Green image perceived (GIP) reflects employees' beliefs about their organization's environmental reputation and values. When organizations are known for their green image, it positively influences employees' behavior and commitment to sustainability. However for this perception to be converted into green creativity, Green Technological Self-Efficacy (GTSE) an employee's confidence in using green technologies must act as a mediating mechanism (Lopes Cancela et al., 2024).Employees who perceive their organization as environmentally responsible tend to adopt pro-environmental attitudes and behaviors. This alignment often encourages them to take ownership of sustainability goals and participate in green innovation (Kundi et al., **2024)** assert that PGI fosters social identification, which can motivate employees to contribute to organizational objectives. Yet, creativity depends on their ability to effectively apply green technologies a function of GTSE.GTSE bridges the gap between motivation and capability. Yang, M. J., & Zhu, N. (2024) found that organizations with a positive green image often invest in training and digital platforms that empower employees to use environmental tools confidently. This self-efficacy enhances employees' willingness to engage in experimentation, design thinking and problem-solving using green technologies. The psychological empowerment derived from a strong PGI boosts employees' belief that they can make a difference (Nasir **et al., 2024)** showed that GTSE mediates the effect of green orientation on creative behavior by enabling individuals to act on their ideas. Employees are more inclined to absorb environmental principles and look for technology ways to accomplish them in settings with a strong green image. This association is further amplified by organizational support and digital literacy. According to Chuan et al., 2025) companies that offer organized access to digital eco-tools and platforms have higher GTSE. Employees' inventiveness thrives when they believe in their technological prowess and feel supported by their company. Leadership is also very important. According to (Shih et al., 2024) by setting an example of proper conduct and reaffirming the perceived value of technological proficiency in accomplishing sustainability objectives, visible green leadership improves both GTSE and green creativity. In conclusion, by empowering staff members to transform environmental ideals into innovative uses of green technology, green technological self-efficacy mediates the association between perceived green image and green creativity. Therefore, companies should develop their workforce's technology skills as well as a strong green image.

H9: Green technological self-efficacy mediates the relationship between green image perceived and green creativity.

Green Mindfulness, Green Knowledge Sharing and Green Creativity

Green Knowledge Sharing (GKS) is the process through which employees disseminate, exchange, and co-create sustainability related knowledge. While GKS provides the cognitive and collaborative infrastructure for green creativity, its effectiveness can vary depending on individual and contextual factors. Green Mindfulness (GM) an individual's conscious awareness of and attention to environmental details serves as a critical moderator that enhances the relationship between GKS and Green Creativity (Kusi et al., 2022).Employees with high levels of green mindfulness are more likely to deeply process shared environmental knowledge. They do not merely exchange facts or procedures; they critically analyze the implications, contextual relevance, and long-term sustainability of the knowledge received.(Sun **et al., 2025)** highlighted that employees with higher absorptive capacity closely tied to mindfulness—are better positioned to translate knowledge into innovative outcomes.GM fosters greater cognitive engagement and reflection, allowing employees to identify connections between disparate pieces of shared knowledge and generate novel solutions. Li, Y., & Li, Y. (2025) found that GM amplifies the creativity potential of GKS by facilitating more thoughtful interpretation and application of shared insights in environmental innovation. Furthermore, green mindfulness helps overcome barriers to knowledge utilization such as habitual thinking or resistance to change. In knowledge-rich environments, not all shared ideas automatically contribute to creativity. It is the mindful employee who applies discernment and creative integration that drives innovation. Li, Y., & Li, Y. (2025) argue that green mindfulness enhances creativity by enabling deeper cognitive elaboration and insight generation from shared inputs. Organizations that encourage mindfulness alongside GKS through reflective dialogues, mindfulness training, and sustainability-centered discussions strengthen the effectiveness of knowledge sharing in promoting green creativity. This intentional pairing leads to more insightful conversations, knowledge reinterpretation, and innovative environmental practices. In conclusion, Green Mindfulness moderates the relationship between Green Knowledge Sharing and Green Creativity by ensuring that shared environmental knowledge is meaningfully processed and creatively applied. To fully leverage the potential of GKS, organizations should invest in cultivating a culture of environmental mindfulness.

H10: Green Mindfulness positively moderates the relationship between Green knowledge sharing and Green Creativity.

Green Mindfulness, Green Technological Self-Efficacy and green creativity

Green Technological Self-Efficacy (GTSE) refers to employees' confidence in their ability to use green technologies effectively. While GTSE has been shown to significantly influence green creativity, its effectiveness is not uniform across all individuals. Green Mindfulness GM)defined as a state of heightened environmental awareness and intentional engagement with sustainability issues moderates this relationship by influencing how technological confidence is translated into creative environmental behavior (Yuan et al., 2021).Employees with strong GTSE are more likely to experiment with eco-innovative tools and platforms. These acts could not be purposeful or in line with more general sustainability objectives, though, if mindfulness is absent. According to (Devi et al., 2025), GM improves the influence of green skills on environmental performance and innovative ideation. Employees that practice mindfulness are able to use technology to create innovative and ecologically significant solutions. Additionally, practicing green mindfulness increases cognitive flexibility, which is necessary for utilizing technical knowledge in novel and imaginative ways. Higher mindfulness among employees improves their ability to perceive environmental data and modify their behavior in response to complex ecological difficulties (Saleem et al., 2024). This flexibility makes it possible to use GTSE more effectively while coming up with innovative green concepts.GM reduces the possibility of overconfidence or improper use of technology. Mindful workers always consider the effects of their work, making sure that their innovative ideas are both ethical and consistent with the sustainability principles of the company. According to Murad, M., & Li, C. (2025) this kind of introspective conduct enhances the connection between technical self-belief

and useful invention. By including mindfulness training into technology-focused development initiatives, organizations may promote this moderating impact. (Alshebami et al., 2024) note that personnel trained to mindfulness therapies exhibit greater eco-ethical conduct and higher creative outputs when supplied with green digital tools. In summary, by ensuring that technology confidence is used with awareness, intention, and sustainability in mind, green mindfulness moderates the association between green technological self-efficacy and green creativity. Organizations seeking to optimize eco-innovation should cultivate both digital skills and mindful thinking among employees.

H11: Green Mindfulness positively moderates the relationship between Green technological self-efficacy and Green Creativity

Research Methodology

This study adopts a positivist research philosophy, emphasizing objective reality and quantifiable measures. A deductive approach is employed, beginning with theory-driven hypotheses derived from Social Cognitive Theory (Bandura, 1986) and testing them empirically using a structured research model. The study uses a quantitative, cross-sectional survey design to examine the direct, mediating, and moderating relationships between green self-efficacy, perceived value of green creativity, green image, and green creativity, with green knowledge sharing, green technological self-efficacy, and green mindfulness as mediators and moderators. The target population consists of employees working in environmentally conscious organizations, particularly in industries such as manufacturing, energy, and services, where sustainability practices are being implemented.

This study will employ a probability-based convenience sampling technique to ensure that participants are selected in a manner that allows for generalizability while maintaining practical feasibility. A minimum sample size of 300 respondents is targeted to achieve the statistical power necessary for conducting structural equation modeling (SEM), which requires a sufficiently large dataset to test complex relationships between variables. The sampling frame will consist of employees working in mid- to large-sized companies in Pakistan that are recognized for their green practices, such as those certified under ISO 14001. This focus ensures that the study gathers data from organizations actively engaged in sustainable environmental management, thereby enhancing the relevance and validity of the findings.

Data will be collected through a self-administered online questionnaire distributed via email, LinkedIn, and corporate HR departments. Participation will be voluntary, and ethical considerations (anonymity, consent, data security) will be strictly followed.

Results:

Measurement Model

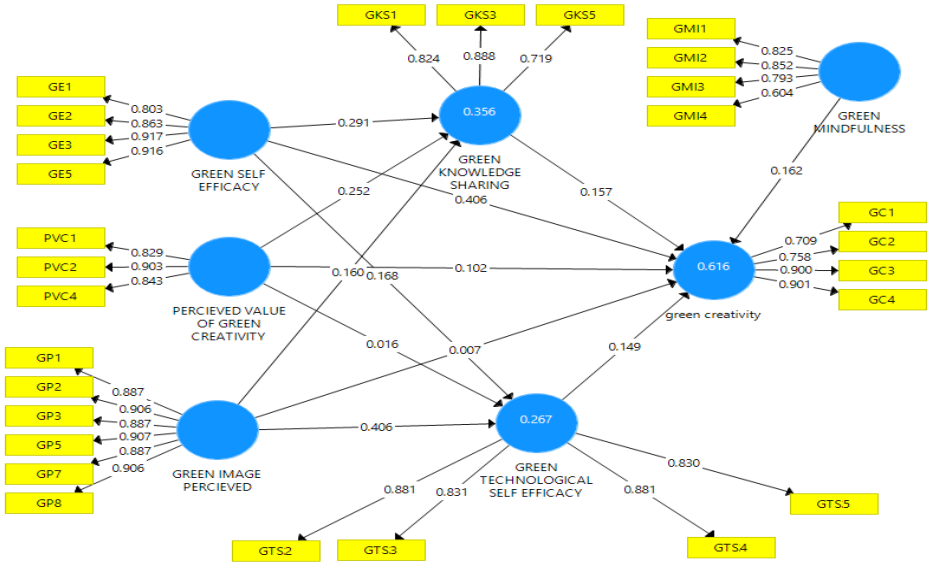


Table 1 Reliabilty and validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
GREEN IMAGE PERCIEVED	0.951	0.953	0.961	0.804
GREEN KNOWLEDGE SHARING	0.742	0.760	0.853	0.661
GREEN MINDFULNESS	0.772	0.794	0.855	0.600
GREEN SELF EFFICACY	0.898	0.899	0.929	0.767
GREEN TECHNOLOGICAL SELF EFFICACY	0.879	0.885	0.916	0.733
PERCIEVED VALUE OF GREEN CREATIVITY	0.821	0.831	0.894	0.737
green creativity	0.836	0.855	0.891	0.675

Table 2 Discriminant validity (Fornell Larcker)

	GIP	GKS	GM	GSE	GTS	PVG	GC
GREEN IMAGE PERCIEVED	0.897						
GREEN KNOWLEDGE SHARING	0.460	0.813					
GREEN MINDFULNESS	0.551	0.609	0.775				
GREEN SELF EFFICACY	0.460	0.513	0.538	0.876			
GREEN TECHNOLOGICAL SELF EFFICACY	0.493	0.489	0.660	0.364	0.856		
PERCIEVED VALUE OF GREEN CREATIVITY	0.661	0.529	0.550	0.590	0.383	0.859	
GREEN CREATIVITY	0.496	0.594	0.634	0.691	0.522	0.575	0.821

Table 3 Discriminant validity (HTMT)
Heterotrait-Monotrait Ratio (HTMT)

	GIP	GKS	GM	GSE	GTS	PVG	GC
GREEN IMAGE PERCIEVED							
GREEN KNOWLEDGE SHARING	0.549						
GREEN MINDFULNESS	0.644	0.811					
GREEN SELF EFFICACY	0.495	0.614	0.629				
GREEN TECHNOLOGICAL SELF EFFICACY	0.537	0.613	0.839	0.399			
PERCIEVED VALUE OF GREEN CREATIVITY	0.746	0.676	0.683	0.679	0.444		
green creativity	0.557	0.750	0.790	0.773	0.607	0.695	

Measurement Model Assessment

The measurement model was subjected to a rigorous evaluation to ensure the constructs demonstrated reliability, convergent validity, and discriminant validity, in accordance with established guidelines for variance-based structural equation modeling (Hair et al., 2019; Henseler et al., 2015). Reliability was first assessed through Cronbach's alpha, rho_A, and

Composite Reliability (CR), with all measures surpassing the recommended cut-off of 0.70 (Nunnally & Bernstein, 1994; Dijkstra & Henseler, 2015), indicating that the items consistently measured their respective constructs. Cronbach's alpha values ranged from 0.742 for Green Knowledge Sharing to 0.951 for Green Image Perceived, while CR values spanned from 0.853 to 0.961, confirming robust internal consistency. For example, Green Self-Efficacy (α = 0.898, CR = 0.929) and Green Technological Self-Efficacy (α = 0.879, CR = 0.916) displayed particularly high reliability, demonstrating that individuals' perceived competence in adopting sustainable practices and technological capabilities were measured with strong precision. Even the lowest reliability coefficient for Green Knowledge Sharing (α = 0.742) was within the acceptable threshold, suggesting that employees' willingness to exchange green-related knowledge was still measured reliably. Convergent validity, examined through the Average Variance Extracted (AVE), further supported the measurement quality, as all constructs exceeded the minimum benchmark of 0.50 (Fornell & Larcker, 1981). AVE values ranged from 0.600 for Green Mindfulness to 0.804 for Green Image Perceived, signifying that the constructs explained more than half of the variance in their indicators. Constructs such as Green Image Perceived (AVE = 0.804) and Perceived Value of Green Creativity (AVE = 0.737) provided strong evidence that respondents consistently associated pro-environmental branding and the perceived benefits of creative green initiatives with their observed measures, thus demonstrating meaningful convergence. Discriminant validity was assessed using both the Fornell–Larcker criterion and the Heterotrait–Monotrait Ratio (HTMT). The Fornell–Larcker criterion showed that the square root of AVE for each construct was greater than its inter-construct correlations (Fornell & Larcker, 1981), for instance, Green Image Perceived (√AVE = 0.897) was higher than its correlations with Green Knowledge Sharing (0.460) and Green Mindfulness (0.551), confirming that the constructs were empirically distinct. To reinforce this finding, HTMT ratios were evaluated, with all values falling below the conservative threshold of 0.85 (Clark & Watson, 1995) and the more liberal threshold of 0.90 (Gold et al., 2001). Although the HTMT value between Green Mindfulness and Green Technological Self-Efficacy was relatively high at 0.839, it remained within acceptable limits, suggesting that while both constructs share conceptual proximity, they capture sufficiently distinct aspects of mindfulness and technological confidence in sustainability contexts. Similarly, the HTMT ratio between Green Knowledge Sharing and Green Creativity (0.750) confirmed discriminant validity, indicating that the exchange of ecological knowledge is related to but not identical with the generation of environmentally innovative ideas. Collectively, these results demonstrate that the constructs exhibit strong psychometric properties, with high reliability, substantial convergent validity, and robust discriminant validity, thereby providing a solid foundation for subsequent hypothesis testing in the structural model.

Structural Model Assessment

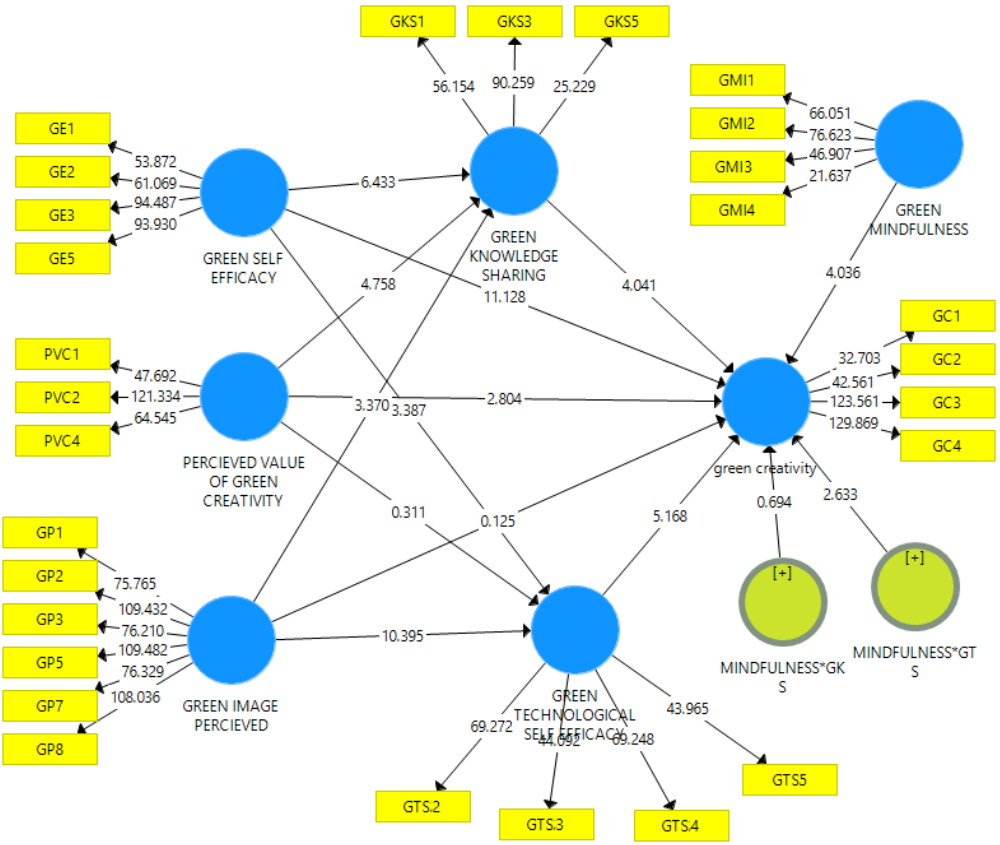
The structural model was assessed using the path coefficients, t-statistics, and p-values to evaluate the hypothesized relationships. Consistent with SEM reporting standards (Hair et al., 2019), the analysis included testing direct effects, mediation pathways, and moderation effects. The results reveal strong support for several hypothesized direct effects. Green Self-Efficacy (H1) had a significant positive influence on Green Creativity (β = 0.406, t = 10.808, p < 0.001), highlighting the central role of individual confidence in promoting eco-innovative practices. Similarly, Perceived Value of Green Creativity (H2) significantly affected Green Creativity (β = 0.102, t = 2.807, p = 0.005), confirming that when employees perceive creativity as valuable, they are more inclined to engage in environmentally innovative actions. In contrast, Green Image Perceived (H3) did not significantly influence Green Creativity directly (β = 0.007, t = 0.193, p = 0.847), suggesting that image alone may not be sufficient to translate into creative behavior without mediating mechanisms. Additionally, Green Mindfulness demonstrated a significant direct effect on Green Creativity (β = 0.162, t = 4.026, p < 0.001), underscoring the importance of awareness and reflective practices in fostering sustainable innovation. The mediation analysis provided nuanced insights into the indirect mechanisms linking antecedents with Green Creativity. Green Knowledge Sharing significantly mediated the

relationship between Green Self-Efficacy and Green Creativity (H4: β = 0.046, t = 4.095, p < 0.001), indicating that self-efficacious employees enhance creativity by actively sharing ecological knowledge. Similarly, Green Technological Self-Efficacy mediated this relationship (H5: β = 0.025, t = 3.117, p = 0.002), suggesting that technological competence strengthens the impact of self-efficacy on creative green outcomes. Perceived Value of Green Creativity also demonstrated an indirect effect on Green Creativity via Green Knowledge Sharing (H6: β = 0.039, t = 3.077, p = 0.002), but not via Green Technological Self-Efficacy (H7: β = 0.002, t = 0.323, p = 0.747, rejected), highlighting that the perceived importance of creativity drives knowledge-sharing behaviors rather than technological reliance. Similarly, Green Image Perceived exerted a significant indirect influence on Green Creativity through both Green Knowledge Sharing (H8: β = 0.025, t = 2.713, p = 0.007) and Green Technological Self-Efficacy (H9: β = 0.060, t = 4.383, p < 0.001), demonstrating that while image does not directly influence creativity, it enhances creativity indirectly through knowledge- and technology-related mechanisms.

Moderating Effects

The moderating role of Green Mindfulness was partially supported. The interaction between Green Mindfulness and Green Knowledge Sharing on Green Creativity (H10) was non-significant (β = 0.029, t = 0.694, p = 0.488), indicating that mindfulness does not strengthen the knowledge-sharing–creativity pathway. However, the interaction between Green Mindfulness and Green Technological Self-Efficacy on Green Creativity (H11) was significant (β = 0.025, t = 2.633, p = 0.009), suggesting that mindfulness enhances the effectiveness of technological competence in fostering green creativity. This implies that when individuals are mindful, they are better able to translate their technological confidence into creative sustainability outcomes. Overall, the structural model demonstrates robust explanatory power. Green Self-Efficacy and Perceived Value of Green Creativity emerged as the strongest direct predictors of Green Creativity, while Green Image Perceived showed no direct effect but significant indirect effects via mediators. Mediation analyses highlighted the central roles of Green Knowledge Sharing and Green Technological Self-Efficacy as mechanisms that channel the influence of antecedent factors into creativity outcomes. The moderation analysis further emphasized mindfulness as a critical condition that amplifies the link between technological efficacy and creativity, but not between knowledge sharing and creativity. Collectively, these findings validate most of the hypothesized pathways (H1, H2, H4, H5, H6, H8, H9, H11), while rejecting a few (H3, H7, H10), providing a balanced picture of how personal, organizational, and cognitive factors interact to foster green creativity.

Table 4MODERATOR



Conclusion, Discussion and Recommendations

This study set out to investigate the antecedents and mechanisms influencing green creativity in organizational contexts. The measurement model confirmed the constructs' reliability, convergent validity, and discriminant validity, thereby establishing a strong foundation for hypothesis testing. The structural model results showed that Green Self-Efficacy and Perceived Value of Green Creativity are the strongest direct predictors of Green Creativity, while Green Image Perceived, though insignificant as a direct predictor, exerted meaningful indirect influence via mediators. Green Knowledge Sharing and Green Technological Self-Efficacy emerged as critical mediating mechanisms, highlighting how knowledge exchange and technological confidence transform individual perceptions into creative sustainability outcomes. The moderating analysis further revealed that Green Mindfulness amplifies the relationship between technological self-efficacy and creativity but not between knowledge sharing and creativity. Overall, the findings underscore the interplay of personal, cognitive, and organizational factors in shaping innovative green practices, offering a nuanced understanding of how green creativity can be cultivated.

The findings contribute to the growing body of literature on sustainability-driven innovation by confirming the theoretical significance of self-efficacy and value perceptions as drivers of green creativity. Consistent with Social Cognitive Theory (Bandura, 1997), employees with higher self-efficacy demonstrated stronger creative engagement in environmental initiatives, both directly and indirectly through knowledge sharing and technological self-efficacy. The positive role of Perceived Value of Green Creativity further validates Resource-Based Theory (Barney, 1991), suggesting that when individuals see green creativity as a valuable capability, they are motivated to engage in eco-innovative behaviors. Conversely, the insignificance of Green Image Perceived as a direct predictor echoes prior critiques that corporate image often functions as a symbolic

resource rather than a driver of tangible innovation unless mediated by behavioral processes such as knowledge sharing. The role of Green Mindfulness as a moderator is especially noteworthy; while it did not enhance knowledge-sharing effects, it significantly strengthened the impact of technological efficacy on creativity, supporting the argument that mindfulness enhances cognitive resources and facilitates the application of technical skills in creative domains (Brown & Ryan, 2003). Together, these insights extend existing theories by integrating individual cognitive capacities with organizational processes to explain green creativity.

Based on the results, organizations aiming to enhance green creativity should prioritize the development of employee self-efficacy through targeted training, mentorship, and empowerment initiatives. Programs that enhance technological self-efficacy—such as digital upskilling for sustainable technologies—should be emphasized, as these skills strongly influence creativity, especially when combined with mindfulness practices. Managers should also cultivate environments that value creativity, not just in rhetoric but in practice, by recognizing and rewarding eco-innovative contributions. Knowledge-sharing platforms, green communities of practice, and cross-functional sustainability workshops should be institutionalized to ensure that individual insights are transformed into collective creative outputs. Additionally, organizations should invest in mindfulness interventions such as reflective learning sessions, stress management programs, and wellness initiatives, which can enhance employees' cognitive capacity to apply technological knowledge creatively.

Limitations

While the study makes significant contributions, several limitations must be acknowledged. First, the cross-sectional research design limits causal inference; future studies could adopt longitudinal or experimental designs to capture the dynamic development of green creativity. Second, the study relied on self-reported data, which may be subject to common method bias despite statistical remedies. Third, the focus on employees in a specific regional and organizational context may limit the generalizability of findings; replication in diverse industries and cultural contexts is necessary. Additionally, some relationships, such as the direct effect of Green Image Perceived and the mediation of Perceived Value via technological self-efficacy, were not supported, suggesting that further refinement of measurement or contextual exploration is warranted. Future research should also consider additional moderators such as organizational culture, leadership style, or environmental regulations to enrich the explanatory model.

Managerial Implications

The findings provide actionable insights for managers seeking to embed sustainability within organizational innovation strategies. First, strengthening Green Self-Efficacy should be a top managerial priority, as it directly and indirectly fuels green creativity. This can be achieved through structured capability-building programs, empowerment strategies, and recognition systems that reinforce confidence in sustainable decision-making. Second, managers should institutionalize knowledge-sharing systems, as collaborative exchange emerged as a critical mechanism for translating perceptions and values into creative outcomes. Third, investments in green technologies and digital sustainability training should be coupled with initiatives to foster mindfulness, as mindful employees are better positioned to leverage technical confidence into eco-innovative solutions. Finally, while promoting a green corporate image may enhance legitimacy, it must be supported by internal practices that build real capabilities; otherwise, image remains symbolic without generating meaningful creativity. Collectively, these implications suggest that managers must adopt a holistic strategy that integrates psychological empowerment, organizational learning, technological investment, and mindfulness development to effectively foster green creativity and maintain competitive advantage in sustainability-oriented markets.

REFERENCES

Abdulmuhsin, A. A., Hussein, H. D., AL-Abrrow, H., Masa'deh, R. E., & Alkhwaldi, A. F. (2025). Impact of artificial intelligence and knowledge management on proactive green innovation: The moderating role of trust and sustainability. *Asia-Pacific Journal of Business Administration, 17*(3), 765-795.

Abrar, F., Awan, A. Z., & Rehmani, M. (2025). Examining the impact of knowledge-based HRM practices on organizational innovation with the mediating effect of knowledge sharing in telecom sector of Pakistan. *Center for Management Science Research, 3*(2), 216-230.

Agu, E. E., Iyelolu, T. V., Idemudia, C., & Ijomah, T. I. (2024). Exploring the relationship between sustainable business practices and increased brand loyalty. *International Journal of Management & Entrepreneurship Research, 6*(8), 2463-2475.

Ahmad, B., Iqbal, S., Hai, M., & Latif, S. (2022). The interplay of personal values, relational mobile usage and organizational citizenship behavior. *Interactive Technology and Smart Education, 19*(2), 260-280.

Ahmad, I., Ullah, K., & Khan, A. (2022). The impact of green HRM on green creativity: Mediating role of pro-environmental behaviors and moderating role of ethical leadership style. *The International Journal of Human Resource Management, 33*(19), 3789-3821.

Ahmad, J., Al Mamun, A., Masukujjaman, M., Makhbul, Z. K. M., & Ali, K. A. M. (2023). Modeling the workplace pro-environmental behavior through green human resource management and organizational culture: Evidence from an emerging economy. *Heliyon, 9*(9).

Alshebami, A. S., Fazal, S. A., Seraj, A. H. A., Al Marri, S. H., & Alsultan, W. S. (2024). Fostering potential entrepreneurs: An empirical study of the drivers of green self-efficacy in Saudi Arabia. *Discover Sustainability, 5*(1), 21.

Amjad, F., Rao, Y., Rahman, A. U., Mohsin, M., & Sarfraz, M. (2024). Fostering sustainability through the Green HRM and green inclusive leadership: The dual mediating role of creative self-efficacy and green skill competency. *Current Psychology, 43*(26), 22181-22199.

Arsawan, I. W. E., Prokopenko, O., Koval, V., Kazancoglu, Y., Jabar, N. A. B. A., & Lina, N. P. M. (2023). Green innovation in hospitality industry: role of environmental strategies and top management support. In E3S Web of Conferences (Vol. 408, p. 01010). EDP Sciences.

Asbari, M. (2024). Investigating the role of organizational culture and knowledge sharing on teacher innovation capability. *PROFESOR: Professional Education Studies and Operations Research, 1*(02), 11-21.

Aslam, M., Ahmad, B., & Rasheed, T. (2025). Navigating the impact of green innovation, technological linkages, and knowledge management on sustainable performance of SMEs. *Journal of International Entrepreneurship, 1*-26.

Aslam, N., Sahibzada, U. F., Ahmad, M. S., & Stevenson, A. (2024). Green transformational leadership theory and practice in Italian luxury hotels: Toward environmental performance and green image. *International Journal of Productivity and Performance Management.*

Bandura, A. (1997). *Self-efficacy: The exercise of control.* W. H. Freeman.

Chawla, U., Kraiwanit, T., Mohnot, R., & Dugad, R. (2025). Exploring green energy adoption: A comprehensive study on India's sustainable future trends using stimulus-organism-response model. *International Review of Management and Marketing, 15*(3), 64.

Chen, J., & Zhang, A. (2023). Exploring how and when environmental corporate social responsibility impacts employees' green innovative work behavior: The mediating role of creative self-efficacy and environmental commitment. *Sustainability, 16*(1), 234.

Chen, R., & Cao, L. (2025). How do enterprises achieve sustainable success in green manufacturing era? The impact of organizational environmental identity on green competitive advantage in China. *Kybernetes, 54*(1), 71-89.

Chuan, C. H., Seelig, M., Tsai, W. H. S., & Tao, W. (2025). Eco-Warrior: A theory-based mobile app intervention for forming and sustaining pro-environmental habits. *Mobile Media & Communication, 13*(1), 234-254.

Clark, L. A., & Watson, D. (1995). Constructing validity: Basic issues in objective scale development. *Psychological Assessment, 7*(3), 309–319. https://doi.org/10.1037/1040-3590.7.3.309

Devi, S., Verma, P., Kaur, S., Yadav, B., & Goel, D. (2025). Green mindfulness and circular economy behavior as drivers of environmental performance in SMEs. *[Journal name pending].*

Dijkstra, T. K., & Henseler, J. (2015). Consistent partial least squares path modeling. *MIS Quarterly, 39*(2), 297–316.

Elnagar, A. K., & Aljuwaiber, A. (2025). The nexus of green intellectual capital and sustainable performance: Leadership commitment and knowledge sharing as influences. *Journal of Intellectual Capital, 1-29.*

Elshall, S. E., & Eldeeb, G. A. E. A. (2025). Green intellectual capital and its relation to green knowledge management, green entrepreneurial self-efficacy, and green behavior among intern nursing students. *Menoufia Nursing Journal, 10*(3), 55-73.

Farooq, R., Zhang, Z., Talwar, S., & Dhir, A. (2022). Do green human resource management and self-efficacy facilitate green creativity? A study of luxury hotels and resorts. *Journal of Sustainable Tourism, 30*(4), 824-845.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39–50. https://doi.org/10.1177/002224378101800104

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of Management Information Systems, 18*(1), 185–214. https://doi.org/10.1080/07421222.2001.11045669

Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2019). *A primer on partial least squares structural equation modeling (PLS-SEM)* (2nd ed.). Sage Publications.

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*(1), 115–135. https://doi.org/10.1007/s11747-014-0403-8

Huang, C., Wang, C., Rani, T., & Rehman, S. A. U. (2024). Digitalization's role in shaping climate change, renewable energy, and technological innovation for achieving sustainable development in top Asian countries. *Energy & Environment.* https://doi.org/10.1177/0958305X241258799

Iram, T., Bilal, A. R., Saeed, T., & Liaquat, F. (2025). Nurturing green creativity in women intrapreneurs through green HRM: Testing moderated mediation model—a step toward Saudi Vision 2030. *Kybernetes, 54*(1), 159-181.

Islam, T., Chaudhary, A., Jamil, S., & Ali, H. F. (2022). Unleashing the mechanism between affect-based trust and employee creativity: A knowledge sharing perspective. *Global Knowledge, Memory and Communication, 71*(6/7), 509-528.

Jalil, M. F., Md Isa, A. H. B., Awang Marikan, D. A. B., & Jais, M. B. (2025). Sharing is caring: Exploring digital knowledge sharing and SMEs' green innovative performance through the mediating role of green technology dynamism. *International Journal of Engineering Business Management, 17*, 18479790251359378.

Kouser, R., Mahmood, G., Watto, W. A., Fahlevi, M., & Aziz, A. L. (2025). Assessing the impact of green manufacturing and green technology innovation on sustainable green practices: Unveiling the mediating role of eco-design. *International Journal of Sustainable Engineering, 18*(1), 2538868.

Kundi, Y. M., Ahmad, F., & Nazir, U. (2025). Ethics, faith, and engagement: Unpacking the effect of voice climate on work engagement. *Journal of Business Ethics*, *198*(1), 127-141.

Kusi, M., Zhao, F., & Sukamani, D. (2021). Impact of perceived organizational support and green transformational leadership on sustainable organizational performance: A SEM approach. *Business Process Management Journal*, *27*(5), 1373-1390.

Le, P. G. L., Pham, V. K., Na, L., & Khue, H. L. (2025). Integrating knowledge sharing and organizational climates to drive talent retention: Insights from the high-end hospitality industry. *International Journal of Innovative Research and Scientific Studies.*

Le, T. T., Le, M. H., Nguyen Thi Tuong, V., Nguyen Thien, P. V., Tran Dac Bao, T., Nguyen Le Phuong, V., & Mavuri, S. (2024). Prestige over profit: Corporate social responsibility boosts corporate sustainable performance—Mediation roles of brand image and brand loyalty. *Journal of Global Responsibility, 15*(2), 215-244.

Li, X. (2022). Green innovation behavior toward sustainable tourism development: A dual mediation model. *Frontiers in Psychology, 13*, 930973.

Li, Y., & Li, Y. (2025). Enhancing pro-environmental behavior through green HRM: Mediating roles of green mindfulness and knowledge sharing for sustainable outcomes. *Sustainability, 17*(6), 2411.

Lopes Cancela, B., Coelho, A., & Neves, M. E. (2024). The role of green strategic alliances and their impact on green organizational identity and sustainability. *Benchmarking: An International Journal, 31*(10), 3723-3753.

Luo, H., & Qu, X. (2023). Impact of environmental CSR on firm's environmental performance: Mediating role of corporate image and pro-environmental behavior. *Current Psychology, 42*(36), 32255-32269.

Ma, L., Ali, A., Shahzad, M., & Khan, A. (2025). Factors of green innovation: The role of dynamic capabilities and knowledge sharing through green creativity. *Kybernetes, 54*(1), 54-70.

Mahmood, A., Ahmad, N., & Khan, S. (2022). Fostering green creativity through green self-efficacy: A study of manufacturing sector employees. *Environmental Science and Pollution Research, 29*(32), 48146–48159.

Martínez Falcó, J., Sánchez-García, E., Marco-Lajara, B., & Akram, U. (2024). Digital transformation and green innovation performance: Unraveling the role of green knowledge sharing and top management environmental awareness. *Internet Research.*

Meirun, T., Ahmed, Z., Alzoubi, R. H., Khosa, M., & Nguyen, N. T. (2024). The road to eco-excellence: How does environmentally specific empowering leadership foster hospitality employees' green creativity through green creative self-efficacy and green learning orientation. *International Journal of Hospitality Management, 120*, 103790.

Mollah, M. A., Pal, D., Amin, M. B., Rahaman, M. A., & Abdullah, M. (2024). Effect of technological culture and knowledge sharing on organizational performance: The mediating role of digital innovation and self-efficacy as moderation. *Journal of Infrastructure, Policy and Development, 8*(12), 7594.

Mubarak, Z. K., & Selimin, M. A. (2024). Effect of technology self-efficacy on the relationship of innovative learning skills and learning sustainability among UAE students. *International Journal of Sustainable Construction Engineering and Technology, 15*(1), 69-87.

Murad, M., & Li, C. (2025). Impact of green inclusive leadership on employee green creativity: Mediating roles of green passion and green absorptive capacity. *Leadership & Organization Development Journal, 46*(1), 118-138.

Nasir, A., Zakaria, N., Do, N., & Velasquez, S. (2024). The impact of knowledge management on sustainable performance with mediation effect of green innovation in Malaysian SMEs. *VINE Journal of Information and Knowledge Management Systems.*

Nunnally, J. C., & Bernstein, I. H. (1994). *Psychometric theory* (3rd ed.). McGraw-Hill.

Prayag, G., & Dassanayake, D. C. (2023). Tourism employee resilience, organizational resilience and financial performance: The role of creative self-efficacy. *Journal of Sustainable Tourism, 31*(10), 2312-2336.

Rasheed, M. H., Khalid, J., Ali, A., Rasheed, M. S., & Ali, K. (2024). Human resource analytics in the era of artificial intelligence: Leveraging knowledge towards organizational success in Pakistan. *Journal of Chinese Human Resource Management, 15*(3), 3-20.

Rehman, F. U., & Zeb, A. (2023). Investigating the nexus between authentic leadership, employees' green creativity, and psychological environment: Evidence from emerging economy. *Environmental Science and Pollution Research, 30*(49), 107746-107758.

Riaz, M., Jie, W., Sherani, Ali, S., & Chang, S. (2024). Assessing the role of organizational strategic factors in stimulating green innovation performance: Moderating effects of green absorptive capacity. *Business Process Management Journal, 30*(4), 1013-1043.

Saleem, F., Pinto, L., & Malik, M. I. (2024). Green knowledge sharing and the green performance nexus: A moderated mediation model. *Sustainability, 16*(22), 9654.

Saleem, S., Sufyan, A., & Rehman, J. U. (2023). Impact of authentic leadership on workers' green creativity: Mediating role of self-efficacy in manufacturing industries. *Pakistan Social Sciences Review, 7*(3), 670-681.

Seshadrinathan, S., & Chandra, S. (2025). Trusting the trustless blockchain for its adoption in accounting: Theorizing the mediating role of technology-organization-environment framework. *Financial Innovation, 11*(1), 44.

Shahbaz, M., Waseem, S. N., & Zafar, H. (2024). Green entrepreneurial self-efficacy, green knowledge sharing and environmental performance of SMEs with moderating effects of leader support and green values. *International Journal of Islamic Business, Administration and Social Sciences, 4*(2), 127-152.

Shih, I. T., Silalahi, A. D. K., Baljir, K., & Jargalsaikhan, S. (2024). Exploring the impact of perceived sustainability on customer satisfaction and the mediating role of perceived value. *Cogent Business & Management, 11*(1), 2431647.

Sun, Y., Shahzad, M., Ali, A., & Razzaq, A. (2025). Synergistic effect of green knowledge sharing and green creative climate for circular economy practices: Role of artificial intelligence information quality. *Journal of Manufacturing Technology Management.*

Tuan, L. T. (2023). Fostering green product innovation through green entrepreneurial orientation: The roles of employee green creativity, green role identity, and organizational transactive memory system. *Business Strategy and the Environment, 32*(1), 639-653.

Valdiviezo, N. V., Litardo, E. C., & Loor, M. V. (2022). Green ideas, technology, university, and business in the 21st century. *International Journal of Health Sciences, 6*(S3), 11711-11722.

Yang, M. J., & Zhu, N. (2024). Online public opinion attention, digital transformation, and green investment: A deep learning model based on artificial intelligence. *Journal of Environmental Management, 371*, 123294.

Yu, L., & Wu, W. (2024). The impact of perceived environmental corporate social responsibility on idea generation and idea implementation. *Humanities and Social Sciences Communications, 11*(1), 1-15.

Yuan, Y., Ren, S., Haochen, J., & Tang, G. (2021). Commitment or exhaustion? Effects of green human resource management on employee green behavior. *Academy of Management Proceedings, 2021*(1), 12393.

Zaid, A. A., Bawaqni, S. A., Shahwan, R., & Alnasr, F. (2025). Effects of greenwashing on green purchase intention: The mediating role of green skepticism, green brand love and green brand loyalty. *Journal of Foodservice Business Research, 28*(4), 927-954.

Zhang, H., Zhang, K., Yan, T., & Cao, X. (2025). The impact of digital infrastructure on regional green innovation efficiency through industrial agglomeration and diversification. *Humanities and Social Sciences Communications, 12*(1), 1-15.

Zhang, S., Li, Y., & Hong, A. (2025). The impact of green inclusive leadership on green innovation in Chinese SMEs: The mediating roles of green knowledge sharing and green organizational identity. *Sustainability, 17*(3), 1180.

Zhen, Z., Yousaf, Z., Radulescu, M., & Yasir, M. (2021). Nexus of digital organizational culture, capabilities, organizational readiness, and innovation: Investigation of SMEs operating in the digital economy. *Sustainability, 13*(2), 720.

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