Green Dynamic Capabilities and Green Creativity in Hospitality and Tourism Industry: The Moderating Role of Green Transformational Leadership

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Abstract

This study aims to investigate the effect of green dynamic capabilities (GDC) on green creativity (GC). It also examines the moderating role of green transformational leadership (GTL). The study investigated five-star hotels and category-A travel agencies in Egypt in greater Cairo, chosen due to their commitment to green initiatives. The research sample consisted of employees from 22 hotels and 55 travel agencies. 600 surveys were distributed; however, only 425 were valid, representing a 70.8% response rate. 60% of the sample worked at five-star hotels, while 40% worked for travel agencies. The study found that green dynamic capabilities (GDC) positively impact green creativity (GC). Green transformational leadership (GTL) positively impacts GDC and GC. Furthermore, GTL positively moderates the relationship between GDC and GC. Theoretical and managerial implications were also added in addition to further research avenues.

Introduction

Today's world grapples with complex economic, environmental, social, and energy issues (Qiu et al., 2021). In response, nations strive for green development, a sustainable approach to address these challenges. As a fundamental driver of economic growth, the hospitality and tourism industry significantly impacts the environment through its operations (Thommandru et al., 2023). Therefore, hospitality and tourism organizations must prioritize environmental and social concerns (Khairy et al., 2023a). They must integrate low-carbon goals into their
long-term plans and actively fulfill their social responsibilities by minimizing their carbon footprint (Malheiro et al., 2020; Khatte, 2023). Research suggests that green dynamic capabilities, green creativity, and green transformational leadership can be powerful tools for tackling these growing challenges, moving beyond purely economic objectives (Çop et al., 2021; Li et al., 2023).

Green dynamic capabilities (GDCs) were defined as the organization's ability to strategically combine its assets and skills to minimize negative environmental impact and achieve long-term sustainability in its operations and offerings (Rodrigo-Alarcón et al., 2018). Organizations with strong GDCs excel at leveraging their existing resources, knowledge, and expertise to develop environmentally friendly practices and adapt to the ever-changing market (Khairy et al., 2023b). This agility allows them to innovate and design products that are both sustainable and meet evolving customer preferences (Lin & Chen, 2017; Joshi & Dhar, 2020). Organizations that develop strong GDCs can significantly improve their environmental and social performance. The agility of organizations enables them to swiftly tackle sustainability issues such as global warming, resource depletion, waste generation, and pollution (Singh et al., 2022). Research indicates that green dynamic capabilities and green creativity are crucial for achieving organizational goals and promoting environmentally friendly operations (Khairy et al., 2023b; Li et al., 2023).

Green creativity (GC) refers to the generation of fresh and innovative ideas related to environmentally friendly products, services, or processes that offer benefits to the organization (Song & Yu, 2018). In the drive towards sustainability, green creativity emerges as a crucial driver of success, influencing both the individual and organizational levels on a micro and macro scale. This is because creative solutions for going green stem from specific traits within people and organizations, creating a ripple effect of positive impact (Tuan, 2023). A multitude of factors contribute to green creativity, including the organizational commitment to environmental practices, a culture of eco-innovation, employees' green lifestyle, and green transformational leadership (Öğretmenoğlu et al., 2022; Meng et al., 2022; Tuan, 2023). Environmental and social progress hinges on a potent combination of novel ideas and their subsequent translation into action (Singh et al., 2022). While novel solutions, driven by innovation, address emerging environmental and social challenges, green creativity fuels this process by igniting new perspectives and approaches to ecological problems. In turn, these fresh ideas not only enhance environmental performance but also contribute to organizational performance (Setyaningrum et al., 2023).

Green transformational leadership (GTL) encompasses the motivating and inspiring actions of leaders that drive their followers to excel in achieving ecological objectives, exceeding standard expectations for environmental performance (Mittal & Dhar, 2016). GTL characterized by aspects such as intellectual stimulation, positively influences subordinate performance (Singh et al., 2020). This stimulation enhances self-efficacy, leading to heightened intrinsic motivation and extrinsic behavioral improvements, exceeding initial expectations (Mansoor et al., 2021). GTL's impact goes beyond green policies; it fosters a culture of environmental responsibility that impacts employees' behaviors and converts them into more conscious eco-citizens (Cahyadi et al., 2022). Transformational leadership works as
a catalyst for creativity (Chen & Chang, 2013). In particular, GTL style sparks employee creativity in driving green production (Li et al., 2020; Zhang et al., 2020). This is because GTL goes beyond simply motivating employees to achieve environmental targets and business goals (Sidney et al., 2022). It fosters a supportive, stimulating environment equipped with the necessary resources, where creative expectations are encouraged and flourish (Maitlo et al., 2022).

Previous studies highlighted the relationship between green dynamic capabilities and green creativity in several contexts like electronics industry (e.g., Chen & Chang, 2013), the handicraft sector (e.g., Joshi & Dhar, 2020), manufacturing industries (e.g., Ma et al., 2022), pharmaceutical industries (e.g., Li et al., 2023), and SMEs (e.g., Kiranantawat & Ahmad, 2023). Despite the importance of creativity and dynamic capabilities for hospitality and tourism organizations, there are no studies that have addressed the relationship between green dynamic capabilities and green creativity, which indicates a gap in the literature. Thus, there is a pressing need to conduct empirical research explicitly targeting the hospitality and tourism industry, as it may provide a more in-depth understanding of the relationship between green dynamic capabilities and green creativity. So, the current study aimed to bridge the gap in the literature by investigating the direct relationship between green dynamic capabilities and green creativity. The study also delves into the indirect relationship between green dynamic capabilities and green creativity by examining the moderating role of green transformational leadership.

Theoretical Background and Literature Review

Green Dynamic Capabilities and Green Creativity

Organizations navigate dynamic markets by harnessing their dynamic capabilities, and the agility to integrate and adapt their existing competencies in response to shifting trends (Ferreira et al., 2020). This adaptability extends beyond core business operations to encompass GDCs, which represent an organization’s ability to strategically align its resources and processes toward achieving environmental sustainability (Lin & Chen, 2017). Organizations leverage dynamic capabilities and resources to proactively identify and address environmental challenges. Those with more robust capabilities are better equipped to adapt to ecological changes and improve performance through GDCs (Joshi & Dhar, 2020). Research suggests that leaders prioritize fostering employees’ capabilities in developing environmentally friendly solutions and practices (Luu, 2023). GDCs act as a catalyst for green creativity, driving positive innovation in employee behavior toward environmental and social goals (AlNuaimi et al., 2021). In addition, GDCs empower organizations to reshape their resources and capabilities, securing a sustainable competitive advantage (Zhu et al., 2023).

The GDCs-GC relationship was built on the resource-based view (RBV) (Barney, 2000; Joshi & Dhar, 2020). RBV emphasizes the crucial role of an organization’s internal valuable, rare, and inimitable resources and capabilities in achieving sustainable competitive advantage (Khan et al., 2019). In the context of GC, the RBV highlights the importance of GDCs, this goes beyond simply using existing resources; it involves continuous growth and renewal to
meet environmental challenges and achieve green goals (Kiranantawat & Ahmad, 2023). Emerging research highlighted the crucial role of GDCs in fostering GC within organizations (Li et al., 2023). Several studies underscore this vital connection. For example, Joshi and Dhar (2020) and Ma et al. (2022) emphasized the significant influence of GDCs on GC. Kiranantawat and Ahmad (2023) concluded a positive correlation between GDCs and employee’s GC. This implies that fostering GDCs encourages employees to think green and develop innovative solutions. Furthermore, Li et al. (2023) noted that GDCs inspire organizations to think outside the box and find novel solutions to problems. Hence, organizations that encourage GDCs are prone to unlock the potential for GC. Therefore, the following hypothesis was formulated:

**H1: GDCs positively impact GC.**

**Green Transformational Leadership and Green Dynamic Capabilities**

GTL refers to championing environmental goals, nurturing employees' growth, and motivating them to go beyond expected green performance and reach their full potential in sustainable innovation (Chen and Chang, 2013). The essence of GTL lies in four key elements: green intellectual stimulation, green individual consideration, green charisma, and green motivation (Robertson, 2018; Abou Raia et al., 2023). Through green intellectual stimulation, leaders encourage employees to think critically and creatively about environmental challenges to develop better green solutions and improve environmental problem-solving efficiency (Robertson, 2018). Green individual consideration enables leaders to nurture their followers' green concerns and motivate them to contribute their unique perspectives and skills to sustainability efforts (Peng et al., 2020). The green charisma of leaders with a strong passion for the environment can ignite similar feelings in their followers. This shared connection fuels commitment and builds a culture of care for the environment (Srour et al., 2020). Through green motivation leaders effectively communicate the importance of environmental actions and support employees' green opinions can spark intrinsic environmental passion and encourage green behaviors (Abou Raia et al., 2023).

The importance of leadership in shaping both organizational and individual dynamic capabilities is undeniable (Kindström et al., 2013). Dynamic capabilities are not only influenced by external factors, but also by internal elements like trust, leadership, and social capital (Sezer, 2022). Some leadership styles “GTL” influences the efficacy of dynamic capabilities (Fainsmidt & Frazier, 2017). Transformational leadership plays a crucial role in shaping dynamic capabilities, particularly through fostering a culture of learning, encouraging risk-taking, and effectively managing organizational change (Torres et al., 2018). Research suggests that specific elements of transformational leadership hold common positive effects, particularly in nurturing employees' dynamic capabilities (Pichlak, 2021). Leaders who transcend self-interest and inspire growth in others embody the essence of transformational leadership. This style hinges on forging strong connections with employees, leveraging charisma, igniting motivation, and sparking intellectual stimulation, and by nurturing and recognizing individual talents, these leaders unlock the dynamic capabilities
within each organization member (Kozcu & ÖZMEN, 2021). Hence, the study proposed the following hypothesis:

**H2: there is a positive relationship between GTL and GDCs.**

**Green Transformational Leadership and Green Creativity**

Green creativity refers to sparking native, novel, and practical innovative ideas in different aspects like products, services, processes, and practices that benefit the environment (Chen & Chang, 2013). Green creativity is the lifeblood of eco-friendly and clean production (Awan et al., 2019). Its spark ignites novel green ideas, paving the way for sustainable innovations and manufacturing processes (Li et al., 2020). While various factors influence green creative behavior, including environmental passion (Jia et al., 2018), organizational green identity (Mittal & Dhar, 2016), and eco-friendly extrinsic and intrinsic stimulation (Li et al., 2020), leadership stands as a pivotal force. Organizational creativity heavily hinges on the characteristics and actions of its leaders, as they hold significant sway over improving environmental performance (Al-Ghazali et al., 2022). Cultivating employees’ green creativity for optimal innovation has become a top priority for many managers today (Maitlo et al., 2022; Cahyadi et al., 2022).

Leadership and management, as key components of creativity, can act as powerful catalysts for creativity. When leaders actively encourage new ideas, provide stimulating challenges, and express innovative visions, employees’ creativity and innovation are more likely to thrive (Amabile & Pillemer, 2012). So, green creativity thrives under GTL, which plays a crucial role in guiding and motivating their teams to embrace GC (Chen & Chang, 2013; Mansoor et al., 2021). Recent research highlighted the crucial role of green transformational leadership in fostering green creativity (e.g., Al-Ghazali et al., 2022; Maitlo et al., 2022; Öğretmenoğlu et al., 2022). For example, Al-Ghazali et al. (2022) demonstrated a significant relationship between green transformational leadership and green organizational identity in small and medium-sized enterprises, which catalyzes green creativity. Maitlo et al. (2022) found that when leaders embrace green principles and inspire their teams to be creative, employees become more innovative with environmental solutions. This effect happens both directly, through leadership inspiration and indirectly, by fostering a climate that encourages and rewards green creativity. Consequently, this led to the following hypothesis:

**H3: there is a positive relationship between GTL and GC.**

**The Moderating Role of Green Transformational Leadership**

The link between leadership qualities and effective dynamic capabilities, as shown by Fainshmidt and Frazier (2017), highlights the importance of studying the role of leadership characteristics in driving creativity. Leadership plays a crucial role in shaping the workplace environment, exerting a powerful influence on the attitudes and behaviors of employees (Alzghoul et al., 2018). So, previous studies highlighted the importance of transformational leadership as a key factor for fostering adaptability and innovation (Chen & Chang, 2013; Li et al., 2020). Sezer (2022) emphasizes its role as a boundary condition in developing dynamic
capabilities, while Sidney et al. (2022) underscore the impact of GTL on green creativity. Furthermore, green transformational leadership takes this influence a step further by building strong connections with employees. Hameed et al. (2022) showed how green transformational leaders, through their care, trust, and support for environmental goals, establish a robust partnership with their followers, paving the way for positive environmental outcomes.

The current study investigates how green transformational leadership influences the connection between green dynamic capabilities and green creativity, drawing on the resource-based view perspective (Barney, 2000). Transformational leadership is a well-established concept in leadership research, lauded as one of the most recognized paradigms (Herman et al., 2023). The RBV perspective proposed that transformational leadership acts as a crucial contextual resource, potentially driving an organization’s environmental performance (Hussain et al., 2022). According to the RBV perspective, the study suggests that through green transformational leadership behaviors, organizations acquire valuable resources in the form of motivated and engaged employees with strong environmental values. These resources, coupled with consideration for individual needs and a supportive environment, contribute to the development of green dynamic capabilities, ultimately enhancing green creativity and value creation. Therefore, the study hypothesized that:

H4: GTL positively moderates the relationship between GDCs and GC.

The conceptual framework of the study is illustrated in Figure 1 below.

![Conceptual framework of the study](https://jaauth.journals.ekb.eg)

### Methodology

The current study is based on scales developed by Chen and Chang (2013) to measure the three variables investigated. The green dynamic capability is assessed using the 7-item scale, sample items include: “The organization has the ability that can fast monitor the environment to identify new green opportunities” and “The organization can successfully integrate and manage specialized green knowledge within the company”. The green creativity was
evaluated with a six-item scale, for example, “The members of the organization suggest new ways to achieve environmental goals” and “The members of the organization propose new green ideas to improve environmental performance”. To measure green transformational leadership, a six-item scale was used, for instance, “My leader inspires the organization members with the environmental plans” and “My leader provides a clear environmental vision for the members to follow”.

This study investigated five-star hotels and category-A travel agencies in Egypt in greater Cairo, chosen due to their commitment to green initiatives. The Greater Cairo region comprises 30 five-star hotels and 1666 category-A travel agencies, as per the Ministry of Tourism in 2022. To acquire authorization to disseminate the surveys inside their organizations, the human resources managers of the premises under investigation were contacted. The research sample consisted of employees from 22 hotels and 55 travel agencies. 600 surveys were distributed; however, only 425 were valid, representing a 70.8% response rate. 60% of the sample (n = 255) worked at five-star hotels, while 40% (n = 170) worked for travel agencies.

Out of the 425 personnel, 288 (67.76%) were men and 137 (32.24%) were women. There were 164 employees (38.59%) under the age of 30, 203 (47.76%) between the ages of 30 and 45, and 63 (14.82%) over 45. The bulk of the participants (n=325, 76.47%) held a bachelor’s degree. Each participant had at least a year of job experience.

Results

Research model’s reliability and validity

Table (1) presents the study's confirmatory factor analysis. Results revealed satisfactory item loadings, Cronbach's alpha and composite reliability values, and AVE values, demonstrating scale reliability and validity. The variance inflation factor (VIF) of ≤3.3 indicates the absence of common method bias and pathological collinearity in the model.

| Table 1. Factor loadings, Cronbach’s, CR, AVE, and VIF |
|---------------------------------|------------------|-----------|-----------|---------|
| Green Dynamic Capabilities (GDC) | Item loading     | CR        | CA        | AVE     | VIF     |
| GDC .1                          | (0.744)          |           |           |         |         |
| GDC .2                          | (0.828)          |           |           |         |         |
| GDC .3                          | (0.813)          |           |           |         |         |
| GDC .4                          | (0.766)          |           |           |         |         |
| GDC .5                          | (0.724)          |           |           |         |         |
| GDC .6                          | (0.784)          |           |           |         |         |
| GDC .7                          | (0.747)          |           |           |         |         |
| Green Creativity (GC)           |                  | 0.912     | 0.887     | 0.598   | 3.261   |
| GC .1                           | (0.832)          |           |           |         |         |
| GC .2                           | (0.723)          |           |           |         |         |
| GC .3                           | (0.804)          |           |           |         |         |
| GC .4                           | (0.808)          |           |           |         |         |
| GC .5                           | (0.707)          |           |           |         |         |
| GC .6                           | (0.706)          |           |           |         |         |
The discriminant validity of the current study is demonstrated (see Table 2) since the square root of every AVE value for each latent construct is considerably bigger than any correlation between any two latent constructs (Zaiț & Bertea, 2011).

Table 2. Discriminant validity results

<table>
<thead>
<tr>
<th></th>
<th>GDC</th>
<th>GC</th>
<th>GTL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green Dynamic Capabilities (GDC)</td>
<td>0.773</td>
<td>0.730</td>
<td>0.799</td>
</tr>
<tr>
<td>Green Creativity (GC)</td>
<td>0.730</td>
<td>0.765</td>
<td>0.726</td>
</tr>
<tr>
<td>Green Transformational Leadership (GTL)</td>
<td>0.799</td>
<td>0.726</td>
<td>0.781</td>
</tr>
</tbody>
</table>

The research model fit and quality indices

The study research model successfully met all ten "model fit and quality indices" recommended by Kock (2021), as illustrated in Table (3).

Table (3) Model fit and quality indices

<table>
<thead>
<tr>
<th>Model fit and quality indices</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average path coefficient (APC)=0.427, P&lt;0.001</td>
<td></td>
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<tr>
<td>Average R-squared (ARS)=0.675, P&lt;0.001</td>
<td></td>
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<tr>
<td>Average adjusted R-squared (AARS)=0.673, P&lt;0.001</td>
<td></td>
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<tr>
<td>Average block VIF (AVIF)=2.418, acceptable if &lt;= 5, ideally &lt;= 3.3</td>
<td></td>
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<tr>
<td>Average full collinearity VIF (AFVIF)=2.483, acceptable if &lt;= 5, ideally &lt;= 3.3</td>
<td></td>
</tr>
<tr>
<td>Tenenhaus GoF (GoF)=0.687, small &gt;= 0.1, medium &gt;= 0.25, large &gt;= 0.36</td>
<td></td>
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<tr>
<td>Sympson's paradox ratio (SPR)=1.000, acceptable if &gt;= 0.7, ideally = 1</td>
<td></td>
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<tr>
<td>R-squared contribution ratio (RSCR)=1.000, acceptable if &gt;= 0.9, ideally = 1</td>
<td></td>
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<tr>
<td>Statistical suppression ratio (SSR)=1.000, acceptable if &gt;= 0.7</td>
<td></td>
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<tr>
<td>Nonlinear bivariate causality direction ratio (NLBCDR)=0.750, acceptable if &gt;= 0.7</td>
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Results of testing study hypotheses

As shown in Figure (2), the study found that green dynamic capabilities (GDC) positively impact green creativity (GC) ($\beta=0.52$, $P<0.01$), indicating that higher GDC leads to higher GC, supporting H1. Green transformational leadership (GTL) positively impacts GDC ($\beta=0.83$, $P<0.01$) and GC ($\beta=0.33$, $P<0.01$), indicating that increased GTL leads to higher
GDC and GC, supporting H2 and H3. Furthermore, GTL positively moderates the relationship between GDC and GC (β=0.14, p=0.03), strengthening the positive relationship, therefore supporting H4. Figure 2 also shows that GTL interprets 58% of the variance in GDC (R²=0.58), while GTL and GDC interpret 62% of the variance in GC (R²=0.62).

![Diagram showing relationships between GDC, GTL, and GC with beta coefficients and R² values.]

### Discussion

The study investigates the impact of green dynamic capabilities (GDC) on green creativity (GC) and the moderating role of green transformational leadership (GTL). Findings revealed that GDCs positively impact GC. This result is consistent with Joshi and Dhar (2020), Ma et al. (2022), and Li et al. (2023) who emphasized the significant influence of GDCs on GC. Organizations with strong green dynamic capabilities, characterized by their ability to innovate and implement sustainable practices, have the capability to foster green innovation (Song & Yu, 2018). This translates to a significant positive impact on green creativity, leading to novel ideas and solutions that benefit hospitality and tourism organizations. So, fostering green dynamic capabilities encourages employees to think green and develop innovative solutions, inspiring organizations to think creatively and find novel solutions to problems (Joshi & Dhar, 2020). Furthermore, Li et al. (2023) illustrated that organizations are increasingly integrating green resources and capabilities to tackle environmental challenges like climate change and ecosystem protection. In this context, green dynamic capabilities emerge as a powerful tool. It enables organizations to seamlessly combine resources and competencies, fostering green creativity behaviors among employees. By adopting strategies to strengthen their GDCs, hospitality and tourism organizations can unlock a world of possibilities for developing environmentally creative practices.

Findings also revealed that GTL positively impacts GDCs and GC, it also moderates the relationship between GDCs and GC. These results are consistent with Fainshmidt & Frazier (2017) and Pichlak (2021) Al-Ghazali et al. (2022) studies that emphasized the significant influence of GTL on GDCs and GC. Transformational leadership involves leaders who...
inspire growth, build strong connections, and use charisma to motivate and stimulate employees, unlocking their talents and enhancing organizational capabilities (Kozcu & ÖZMEN, 2021). Building dynamic capabilities necessitates embracing calculated risks and navigating inherent uncertainties. Effective transformational leaders possess the ability to make unbiased judgments, not only regarding immediate needs and competitor actions but also concerning the long-term potential of diverse growth opportunities. This demands a specific level of transformational leadership, characterized by vision, inspiration, and the willingness to experiment and learn from setbacks (Sezer, 2022).

Previous studies underscored the pivotal role of transformational leaders in fostering creativity and cultivating essential dynamic capabilities within organizations. Thriving in today's rapidly evolving business landscape necessitates a strong focus on both. Transformational leaders create a supportive and psychologically safe environment, where employees feel empowered to contribute ideas, challenge established norms, and engage in experimentation (Li et al., 2019). In addition, leaders who promote green principles and encourage creativity in their teams lead to increased innovation in environmental solutions (Maitlo et al., 2022). Green transformational leadership fosters motivated, engaged employees with strong environmental values, enhancing green dynamic capabilities, creativity, and value creation within organizations.

**Theoretical and practical implications**

Based on the results of the study, the research significantly advances our understanding of GDCs, GTL, and GC in the hospitality and tourism industry, both theoretically and practically. This research builds on the resource-based view framework, where scholars like Joshi & Dhar (2020), Kiranantawat & Ahmad (2023), and Li et al. (2023) emphasize the crucial role of GDCs in unlocking GC. The study specifically investigated how these capabilities influence the green creativity of employees in the Egyptian hospitality and tourism sector. Despite prior research delving into antecedents influencing green creativity (Chen & Chang, 2013; Jia et al., 2018), the overall impact of GDCs on employee GC is understudied. Notably, no existing research examines this specific relationship within the context of the Egyptian hospitality and tourism industry. Therefore, our study fills this gap by providing valuable insights into how GDCs can foster GC among employees in this crucial sector, contributing to the growing body of literature on this topic (Li et al., 2023).

Secondly, the study contributes to the RBV by highlighting the role of GDCs in driving the success of hospitality and tourism organizations. By adopting a GTL style, hospitality and tourism organizations can unlock the full potential of their workforce, specifically through the motivation and inspiration of GTL. GC is essential in this dynamic industry where market demands evolve constantly and new environmental practices emerge regularly (Bhutto et al., 2021). Green transformational leaders equip their teams with the awareness and adaptability needed to navigate this shifting landscape effectively (Chen & Chang, 2013; Mittal & Dhar, 2016).

Finally, the study advances our knowledge of GDCs and their outcomes link by testing green transformational leadership as a moderator in the research model. The study findings
suggest GTL acts as a crucial contextual resource hospitality and tourism organizations can utilize to amplify the impact of GDCs on employee GC. The study proposed that GTL enhances GDCs, leading to increased green creativity, as GTL fosters a supportive atmosphere where employees feel comfortable sharing and developing green ideas. In addition, GTL encourages employees to think creatively and adapt to green challenges, thereby strengthening their GDCs. By moderating the relationship between GDCs and GC, GTL clarifies when and why these factors combine to drive GC in hospitality and tourism organizations.

On the other hand, the study provides worthy practical implications for practitioners and managers in the hospitality and tourism industry as follows: First, the study offers significant insights into how GDCs and GC help organizations tackle the challenges of environmental and social innovation. Therefore, this study proposes that GDCs integrate their resources and capabilities through the configuration of novel ideas that ultimately enhance the behaviors of ecological and social innovation. These ideas are essential for hospitality and tourism organizations aiming to be eco-friendly to attain sustainability and develop their long-term strategies accordingly. Hospitality and tourism organizations may enhance GDCs through building green knowledge and green organizational and managerial skill expansion leading to increased GC.

Secondly, unlocking green creativity requires an investment in resources, which can be a hurdle for some startup hospitality and tourism organizations. Therefore, proactive government initiatives are essential to bridge this resource gap. Investment incentives, tax incentives, and access to infrastructure can equip startup organizations with the tools they need to revolutionize sustainability through their innovative green ideas. In addition, to foster green creativity, organizations must invest in educating and empowering their employees. Equipping them with knowledge about green practices and giving them the autonomy to experiment and innovate allows them to contribute fresh ideas that drive environmental progress. This fosters the development of future leaders who not only embrace green values but also champion transformative change through creative and sustainable solutions.

Finally, the findings of this study propose that hospitality and tourism organizations investing in environmental management systems are useful for creating a good image in the minds of stakeholders, as it requires organizations to green not only their processes but also products and services. Our study advocates hospitality and tourism managers to adopt the GTL style to promote employees’ GDCs. GTL is characterized by recognition-driven trust and encouragement of green innovative behaviors, positively impacting employees’ GC and organizational competitive advantage. Further, the managers have to stimulate their workforce to engage in more green creative behaviors which may enable the organization to gain a competitive edge in the marketplace.

**Limitations and further research**

Building upon the valuable insights gained from studying the impact of GDCs and GTL on GC in hospitality and tourism, it’s crucial to acknowledge the limitations of the study and explore future research paths:
Firstly, while this study sheds light on the hospitality and tourism industry, its applicability to other sectors remains ambiguous. Future research should explore whether GTL similarly moderates the GDCs-GC relationship in diverse industries like restaurants, airlines, and supply chains. This expanded perspective would enhance the study's reach and reveal broader potential for applying its findings. Secondly, recognizing the significant impact of cultural and contextual factors within the diverse hospitality and tourism landscape is vital. Future research should compare findings across different cultural and contextual settings. This comparative approach would allow researchers to assess the generalizability of their results and identify potential boundary conditions where those results might not hold true. By considering cultural context, we gain a deeper understanding of how it interacts with research findings.

Thirdly, the potential influence of measurement tools on the validity of findings is another limitation of this study. To address this, future research could benefit from a multi-method approach, combining self-report surveys with observation and qualitative interviews. This triangulation would provide a richer, more nuanced picture of the concepts under investigation, ultimately deepening our knowledge of the topic. Finally, while the study reveals GTL as a moderator between GDCs and GC, the specific mechanisms behind this influence remain unclear. Future research should investigate the mediating role of GTL, along with exploring additional factors like green identity, green training, green human resource management, and green culture. By examining these factors, we can illuminate the intricate processes at play in the moderation effect.

By expanding the scope, considering cultural specifics, refining measurement, and delving deeper into the moderation mechanisms, future research can build upon the existing foundation and provide even more valuable insights into the intricate relationship between GDCs, GC, and GTL.

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تهدف هذه الدراسة إلى دراسة تأثير القدرات الديناميكية الخضراء على الإبداع الأخضر، كما تدرس دور المعدل للقيادة التحويلية الخضراء. وقد تناولت الدراسة فنادق الخمس نجوم وكالات السفر من الفئة (أ) في مصر في القاهرة الكبرى، والتي تم اختيارها بسبب التزامها بالممارسات الخضراء. تكونت عينة الدراسة من موظفين من 22 فندقًا و55 وكالة سفر. تم توزيع 666 استبيان، ومع ذلك، كانت 425 منهم صالحة، وهو ما يمثل معدل استجابة قدره 76.8%.

وجدت الدراسة أن القدرات الديناميكية الخضراء تؤثر بشكل إيجابي على الإبداع الأخضر. بالإضافة إلى ذلك، تؤثر القيادة التحويلية الخضراء بشكل إيجابي على القدرات الديناميكية الخضراء والإبداع الأخضر. علاوة على ذلك، القيادة التحويلية الخضراء لها دور معدل إيجابي على إدارة العلاقة بين القدرات الديناميكية الخضراء والإبداع الأخضر.