The Effect of Green Dynamic Capabilities on Environmental Management Performance in Certified Green Star Hotels: Mediating Role of Environmental Organizational Culture

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Abstract
This study investigates how environmental management performance is affected by green dynamic capabilities in the hotel industry context. It also explores the mediating role of environmental organizational culture. Responses were collected from the middle and front-line managers of 60 certified green star hotels in the Red Sea and South Saini districts of Egypt. A total of 350 valid responses were gathered and analyzed by PLS-SEM using WarpPLS 7.0. The study found that there is a positive relationship between green dynamic capabilities, environmental organizational culture, and environmental management performance. Furthermore, environmental organizational culture has a positive correlation with environmental management performance. The study also found that the mediation effect of environmental organizational culture on the relationship between dynamic capabilities and environmental management performance is statistically significant. The study's findings have significant consequences for both theory and practice. This study helps to lessen ambiguity in the existing literature on green dynamic capabilities in relation to hotel environmental management performance. In practice, the research provides hotel enterprises with recommendations for improving the effectiveness of environmental management performance.

Keywords: Green Dynamic Capabilities, Environmental Management Performance, Environmental Organizational Culture, Certified Green Star Hotels, Egypt.

Introduction
With the increase in natural disasters resulting from technological progress, climate change, industrial activity, and global warming, environmental degradation has become a serious threat to human life (Gürlek&Koseoglu, 2021; Tran &Adomako, 2022). The growth of individuals' awareness and interest in environmental issues and sustainable activities leads to an increase in their expectations about the organization's activities concerning environmental responsibilities and environmental performance (Gerged et al., 2022). Based on these consequences, organizations were expected to reorient their activities and operations towards eco-friendly practices and activities with a significant emphasis on sustainability through environmental management practices (Ouyang et al., 2019; Valero-Gil et al., 2023).

Environmental management works on helping organizations in reducing their negative impacts on the environment and brings them within acceptable levels. Hospitality organizations have adopted various environmental strategies to reduce the negative impacts of their day-to-day operations on the environment, such as developing environmental policies, setting a green training program, or encouraging green employee behaviors and environmental auditing. Effective environmental management performance can achieve many advantages for hotels such as significantly decreasing energy consumption and operating charges, constructing an

environmentally friendly climate for customers and employees, enhancing the organization's preferred brand image, and obtaining competitive advantages (Mensah, 2006; Molina-Azorínet al., 2015). Environmental management can be applied ideally in all activities and operations of the organization by involving the stakeholders, whether internal or external, at the lowest costs while considering the relevant environmental legislation (Ladyman et al., 2022).

Some scholars argued that hotels' adoption of environmental management may be driven by a set of external and internal aspects (Dief& Font, 2012; Ouyang et al., 2019). Therefore, organizations depend on their dynamic capabilities and organizational culture for the success of their environmental management. Environmental management requires outstanding and difficult-to-duplicate dynamic capabilities. Dynamic capabilities comprise an organization's difficult-to-duplicate capabilities, which are needed to adjust to changes related to customers and technological opportunities (Teece, 2007). They may be divided into the ability to recognize and form opportunities and threats, to grasp opportunities, and to maintain competitiveness through improving, saving, and reconfiguring the organization's tangible and intangible assets. Further, Lin & Wu (2014) divided them into dynamic integration, dynamic learning, and dynamic reconfiguration. Dynamic capabilities adopt the organization's ability to form the required environmental strategies and ecosystem, set up and execute feasible business models, and design unique products and processes (Teece, 2007; Valdez-Juárez& Castillo-Vergara, 2021).

Environmental organizational culture is among the internal factors affecting the success of environmental management. Terms that describe the concept of Environmental organizational culture have varied, including sustainability-oriented culture, eco-friendly culture, green organizational culture, environment-friendly culture, etc., which depend mainly on the extension of organizational culture to the environment-oriented context (Liu & Lin, 2020). Environmental organizational culture refers to the organization's values, symbols, and behaviors that are developed to protect the environment, besides determining how the organization reacts to the environment (Roscoe et al., 2019; Wang et al., 2020). Environmental organizational culture acts to develop new behaviors, ideas, or functions that reduce the negative impacts of the organization on the environment, as it is a pattern of the organization's common assumptions about environmental issues and environmental management that constitute the expected standard employee behaviors in the organization (Khazal, 2018). Environmental organizational culture is critical for organizations to facilitate and promote green innovation (Roscoe et al., 2019; Chen et al., 2020), and to ensure the effective implementation of green practices and behaviors (Yeşiltaş et al., 2022).

Haldorai et al. (2022) and Wei et al. (2023) did not mention the hospitality industry and, hence, did not conclude that factors that drive environmental performance in the hospitality industry have not been thoroughly investigated. To address this gap, this study investigated the relationship between green dynamic capabilities, environmental organizational culture, and environmental management performance. Furthermore, it also demonstrated the relationship between environmental organizational culture and environmental management performance and investigated the mediating role of environmental organizational culture in the relationship between green dynamic capabilities and environmental management performance.

Literature Review and Hypotheses Development
Green dynamic capabilities and environmental organizational culture

Organizations' dynamic capabilities form their ability to make their resource base or modify it as a response to changes in markets (Helfat& Winter, 2011). The increase in customer and stakeholder awareness of environmental sustainability issues has made it necessary for organizations to identify factors or resources and capabilities that help them implement environmental management (Ouyang et al., 2019; Haldorai et al., 2022). This requires organizations to reconfigure their resources and capabilities to develop green dynamic capabilities to sense and grasp stakeholders' demands effectively and manage different viewpoints and interests, to retain their competitive status or improve it (Singh et al., 2022). Green capabilities refer to the assets, expertise, and technologies of the organizations that are utilized to manage the miscellaneous ecological demands of customers and stakeholders (Albort-Morant et al., 2018). Green dynamic capability is one of the organization's resources that allows it to respond rapidly to customers' environmental requirements and fulfill them timely (Teece, 2018). Teece et al. (1997) defined green dynamic capabilities as ''the ability of a company to exploit its existing resources and knowledge to renew and develop its green organizational capabilities to react to the dynamic market''. In addition, green dynamic capabilities enable organizations to utilize their current resources and knowledge to update and promote green organizational capabilities to face the dynamic business environment (Lin & Chen, 2017) and remain competitive in the marketplace (Chen & Chang, 2013).

The development of green dynamic capabilities is significantly affected by organizations' green organizational culture. This may be attributable to the complementary nature of the relationship between organizational culture and dynamic capabilities (Violinda&Jian, 2016). Specifically, two important dimensions of organizational culture (market orientation, and learning orientation) positively influence the expansion of organizations' dynamic capabilities (Peng& Lin, 2017). Costello &Plester (2020) showed that the characteristics of dynamic capabilities seem to be closely associated with specific organizational cultures. As organizational culture guide organizations' members as to how to identify, react, and adapt to ongoing environmental changes. The adaptability of individuals is a cultural characteristic that directs processes and behaviors which support suitable responses to external situations (Costanza et al., 2016) and is the mainstay of both dynamic capabilities and organizational culture (Kleinbaum& Stuart, 2014). Green dynamic capabilities help organizations to become green in every possible way (Nassani et al., 2022). According to some scholars, green organizational culture is among the antecedents of green dynamic capabilities (Woo & Kang, 2021; Khan & Terason, 2022). Therefore, the following hypothesis was formulated:

H1: Green dynamic capabilities positively correlate with hotel environmental organizational culture.

Green Dynamic Capabilities and Environment Management Performance
Due to growing environmental concerns, there has been an increase in the need to evaluate and disclose the environmental performance of organizations. (Campos et al., 2015; Repar et al., 2017). Environmental performance is a critical element of environmental management. It measures the success of organizations in reducing their negative impacts on the environment and increasing their positive ones (Melnyk et al., 20003). Environmental performance also refers to the organization's initiatives to reduce the negative impacts of its operations on the

natural environment by adopting eco-friendly policies, products, and processes such as reducing the consumption of sustainable green resources, energy, and waste, and adopting environmental management system (Latan et al., 2018; Dzikriansyah et al., 2023).To improve environmental performance, organizations have to impose their assets, expertise, and technologies to manage the various environmental demands of customers and stakeholders (Albort-Morant et al., 2018). Organizations depend on their green dynamic capabilities to enhance environmental management and improve their performance, as dynamic capabilities provide the capabilities and resources necessary to achieve environmental goals and enhance environmental performance (Ouyang et al., 2019; Nassani et al., 2022).

Studies have started to use the dynamic capabilities approach in the field of environmental management. The adoption of environmental management is engendered and promoted by the three aspects of dynamic capabilities (Essid&Berland, 2018). Russo (2009) showed that the dynamic capability of learning is positively associated with better environmental performance. Hofmann et al. (2012) showed that the dynamic capability of integrating, which depend on adopting modern technologies and promoting innovation and cooperation with customers and suppliers, helps organizations to successfully achieve environmental objectives. Dynamic capabilities in the form of reconfiguration capability have a positive impact on an organization's environmental performance. This may be attributed to the fact that dynamic capabilities can easily reconfigure or modify the organization's resources to adapt to customer demands (Albort-Morant et al., 2016). Other studies also highlighted the relationship between green dynamic capabilities and environmental performance (e.g., Eikelenboom& de Jong, 2019; Del Rosario Reyes-Santiago et al., 2019; Pereira-Moliner et al., 2021). Therefore, the following hypothesis was formulated:

H2: Green Dynamic Capabilities Positively Correlate with Hotel Environmental Management Performance.

Environmental Organizational Culture and Environment Management Performance
Another important aspect that affects environmental management performance is environmental organizational culture (Al-Swidi et al., 2021). This variable is closely related to an organization's internal culture (Ong et al., 2019). Environmental organizational culture refers to the organization's values and beliefs that guide various practices to become eco-friendly (Afum et al., 2020; Liu & Lin, 2020). Organizations are described as having an environmental culture if their employees think and perform on minimizing the negative consequences of operational activities on the environment rather than focusing on maximizing the organizations' profitability (Roscoe et al., 2019). The environmental organizational culture encourages norms, attitudes, and values that enhance environmental performance. Such a culture enables organizations to acknowledge environmental concerns and enhance employees' positive behaviors toward sustainability. It adjusts the current culture to be more proactive toward maintaining the environment (Porter et al., 2016). It is also shaping the behaviors of employees that further leads to promoting their pro-environmental attitudes and behaviors, besides aiding organizations to improve their environmental performance (Imran et al., 2021).

Nassani et al. (2022) reported that the significant reasons behind organizations embracing the environmental organizational culture are to improve their environmental performance, consequently enhancing their image, and satisfying the environmental pressure of customers and other stakeholders. Organizations incorporating their pro-environmental vision, mission, and

values in all practices and activities lead to the development of an environmental organizational culture that promotes employees' green behaviors and leads to better environmental management and performance (Al-Swidi et al., 2021). Environmental organizational culture was confirmed to have a significant positive relationship with organizational environmental performance (Afum et al., 2020; Abou-AL-Ross & Abu Mahadi, 2021; Al-Swidi et al., 2021, Nassani et al., 2022). Employees' desire to complete their environmental responsibilities and achieve a competitive advantage over their co-workers motivates them to engage in the organization's activities to protect the environment and develop environmentally friendly habits, which subsequently leads to improved environmental management performance (BakhshMagsi et al., 2018). Therefore, the following hypothesis was proposed:

H3: Environmental Organizational Culture Positively Correlates with Hotel Environment Management Performance.

Mediating Role of Environmental Organizational Culture

Environmental sustainability is a significant feature of organizations, and it guides their efforts toward the adoption of activities and processes that maintain the ecosystem (Chong et al. 2018). The increased concern toward environmental sustainability and green innovation imposes more demand to enhance the green dynamic capabilities of the organizations (Joshi &Dhar 2020). Organizations that have green dynamic capabilities have a high association with the adoption of a unique sustainable and innovative solution for satisfying their customers' environmental requirements, hence, rises the performance of environmental management (Eriksson 2014; Qiu et al. 2020). Organizations have a high emphasis on nurturing green dynamic capabilities through adopting environmental organizational culture to find out innovative ideas and eco-friendly products, which improve environmental performance (Monferrer et al., 2015; Del Rosario Reyes-Santiago et al., 2019; Nassani et al., 2022).

Dynamic capabilities enable organizations to gain a competitive advantage (Pervan et al., 2017), as they express best practices that are commonly executed by the organizations based on their resources and abilities (Seo et al., 2021). Additionally, Violinda&Jian (2016) confirmed that competitive advantage is achieved through the relationship between dynamic capabilities and organizational culture. They asserted that the correlation between organizational culture and dynamic capabilities promotes reconfiguration and deployment of organizational resources. Shuaib et al. (2021) added that the link between dynamic capabilities and organizational culture is characterized by property interdependency. Thus, it is challenging for rivals to replicate or imitate it.

Organizations' cultural structure is an important determinant of their environmental practices. Green organizational culture shapes the environmental practices of organizations and their employees and their awareness of environmental issues (Imran et al., 2021). The culture encourages employees and imposes pressures on them to act in conformity with environmental and cultural values. Sharing green behaviors, beliefs, and values within the organization modify methods of work, prompting eco-friendly management practices and improving environmental performance. Green organizational culture is thus an essential prerequisite for the ongoing increase and promotion of environmental performance (Al-Swidi et al., 2021).

Chen et al. (2020) argued that environmental organizational culture can improve organizational capabilities that assist organizations in transforming their strategies and objectives into positive environmental performance. Based on the ability to reconfiguration, employees in organizations

with an environmental organizational culture carry accumulated and certain knowledge about environmental issues. As a result, the absorption and learning capabilities generated by environmental organizational culture enable these organizations to design new methods of using current knowledge to improve environmental management performance (Essid&Berland, 2018). Building on this, the following hypothesis was proposed:

H4: Hotel Environmental Organizational Culture Mediates the Relationship between Green Dynamic Capabilities and Hotel Environment Management Performance.

Materials and Methods
Measures and Instrument Development
A survey-based quantitative research approach was used to test the suggested study model. The data was gathered via a self-administered questionnaire. Additionally, in this study, literature-based constructs were used to ensure the validity and reliability of the measures (see Appendix A). To evaluate green dynamic capability a 12-item scale of Lin and Wu (2014) was used. To assess environment management performance, the 7-items scale adapted from Ouyang et al. (2019) and Valdez-Juárez and Castillo-Vergara (2021) was relied on. To measure environmental organizational culture 5-item scale adapted from Wang et al. (2020) was used.

The questionnaire was back-translated into Arabic to ensure that it was of the required caliber and that no significant elements of the original questionnaire were forgotten. The questionnaire had two parts. The participants' demographic data, including their age, gender, and educational level, as well as information on their employment, including their department and tenure, was covered in the first part. The participants' opinions of the three variables under study— green dynamic capacities, environmental management performance, and environmental organizational culture—were asked about in the second part of the questionnaire.

Sampling and Data Collection
Because this study primarily focuses on hotel facilities that display a strong commitment to the continuous and intense preservation of the environment in all sectors, particularly in Egyptian locations, the population of this study was made up of Certified Green Star Hotels in Egypt. The Egyptian Hotel Association (EHA) manages the Green Star Hotel (GSH), a national green certification and capacity-building project under the auspices of the Egyptian Ministry of Tourism. The GSH program allows Egyptian hotels to receive worldwide certification for improving their social and environmental performance while cutting operational costs (Green Star Hotels, 2022).

According to Green Star Hotels (2022), Egypt has 120 Green Star-certified hotels with 30,000 rooms spread throughout 16 different locations. The Red Sea and South Saini districts of Egypt were chosen for this study because they are home to about 78% of the hotels that have received the Green Star. Only 60 hotels volunteered to take part in this study. The hotels under investigation had to take part in the survey under an anonymous identity. The convenience sample method was applied in this study, in which individuals were selected only because they provide useful data sources for researchers (Lavrakas, 2008). 400 surveys were distributed to both middle and front-line managers. Only 350 valid forms were collected, implying an 87.5% response rate. Almost four months (August–November 2022) were spent on the data collection process.

Results
Participant's characteristics

Table 1: Participant's profile (n=350)

		Frequency	Percent
Gender	Male	329	94
	Female	21	6
Age	< 30 yrs	41	11.7
	30:< 40	227	64.9
	40:< 50	61	17.4
	> 50 yrs	21	6.0
Education	High institute	34	9.7
	Bachelor	234	66.9
	Master	51	14.6
	PhD	31	8.9
Work experience	3-5 Yrs	42	12.0
	6-10 Yrs	248	70.9
	> 10 Yrs	60	17.1
Work area	Front-of the-house	142	40.6
	Back-of the-house	208	59.4

According to the sample's characteristics (Table 1), men made up a large proportion of respondents (n=329, or 94%). Out of 350 responders, 227 (64.9%) had age between 30 and under 40. There were 234 responders, or around 66.9%, who possessed bachelor's degrees. The majority (n=248, 70.9%) had 6–10 years of work experience. Employees were working in both front and back of the house working areas; (n=142, 40.6%) and (n=208, 59.4%), respectively.

Descriptive statistics and factor loadings
According to Hair et al. (2010), item loading must be greater than 0.5 to be considered appropriate. The item loadings for the present study, which range from 0.573 to 0.901, were calculated and confirmed to be acceptable. Additionally, all P values for item loadings are excellent for reflective indicators as the P value for each item included in the measures was less than 0.05 (see Table 2). Table 2 also showed that for green dynamic capabilities, environmental management performance, and environmental organizational culture, respondents gave mean scores of (3.93±.73), (3.83±.79), and (3.63±.91), respectively.

Table 2: Descriptive statistics and factor loadings (N=350)

	Mean*	Standard Deviation	Item loading
Green Dynamic Capabilities (GDC)	3.93	.73	
DC.1	3.88	.99	0.573**
DC.2	3.95	.97	0.599**
DC.3	3.92	.62	0.829**
DC.4	3.75	1.05	0.795**
DC.5	3.92	.98	0.819**
DC.6	4.01	.93	0.784**
DC.7	4.07	.80	0.823**

DC.8	3.93	.95	0.819**
DC.9	3.70	1.27	0.807**
DC.10	4.06	.98	0.747**
DC.11	3.98	.78	0.826**
DC.12	3.98	.98	0.852**
Environment Management Performance (EMP)	3.83	.79	
EMP.1	3.88	.85	0.901**
EMP.2	3.84	.98	0.824**
EMP.3	3.94	.85	0.838**
EMP.4	3.78	.94	0.936**
EMP.5	3.87	.77	0.957**
EMP.6	3.70	1.09	0.713**
EMP.7	3.82	.93	0.900**
Environmental organizational culture (EOC)	3.63	.91	
EOC.1	3.70	1.05	0.779**
EOC.2	3.19	1.26	0.901**
EOC.3	3.79	.97	0.833**
EOC.4	3.54	1.22	0.852**
EOC.5	3.94	.94	0.779**
* Mean score "Low: 1.00 to 2.33, Average (Moderate): 2.34 to 3.66, High: 3.67 to 5.00" ** P values for loadings <0.05			

Reliability and validity

According to Shrestha (2021), four metrics— "Cronbach's alpha, composite reliability, average variance extracted (AVE), and the full multicollinearity variance inflation factor (VIF)"— should be used to assess the effectiveness of the measures that have been chosen. Table (3) shows that all constructs have appropriate reliability, with Cronbach's alpha and composite reliability scores for all constructs more than 0.7. Table (3) further established appropriate validity based on Hair et al. (2020) and (Kock, 2021) criteria since the AVE values are more than 0.5 and the full collin. VIF is <=3.3.

Table 3: Reliability and convergent validity

Construct	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)	Full Collin. VIF
Environmental organizational culture	0.886	0.917	0.689	1.745
Environment Management Performance (EMP)	0.945	0.956	0.758	1.250
Green dynamic capabilities (GDC)	0.939	0.948	0.605	1.553

Additionally, according to Franke and Sarstedt (2019), the correlation between two latent variables must be much lower than unity to show discriminant validity. The data presented in Table (4) demonstrates that each variable's AVE value is greater than the greatest common value, hence demonstrating the discriminant validity of the research model.

Table 4: Discriminant validity

	EOC	EMP	GDC
Environmental organizational culture (EOC)	0.830	0.443	0.594
Environment Management Performance (EMP)	0.443	0.871	0.311
Green dynamic capabilities (GDC)	0.594	0.311	0.778

Model fit and quality indices for the research model

The ten-model fit, and quality index criteria proposed by Kock (2021) were used in the current study. The results of the present study are consistent with the indices, indicating that the model is appropriate and ready to test the study's hypotheses (see Appendix B).

The structural models for hypotheses testing

The hypotheses testing results as shown in Figure 1 and Table 5 revealed that green dynamic capabilities positively correlate with environmental organizational culture ($\beta=0.76$, $P<0.01$) and environmental management performance ($\beta=0.12$, $P=0.01$). This means that green dynamic capabilities increase environmental organizational culture and environmental management performance. Thus, H1 and H2 are supported. In addition, findings revealed that environmental organizational culture positively correlates with environmental management performance ($\beta=0.46$, $P<0.01$), this means that environmental organizational culture increases environmental management performance. Therefore, H3 is supported.

Figure 1 illustrated that green dynamic capabilities interpreted 58% of the variance in environmental organizational culture ($R2=0.58$). Also, green dynamic capabilities and environmental organizational culture interpreted 29% of the variance in environmental management performance ($R2=0.29$).
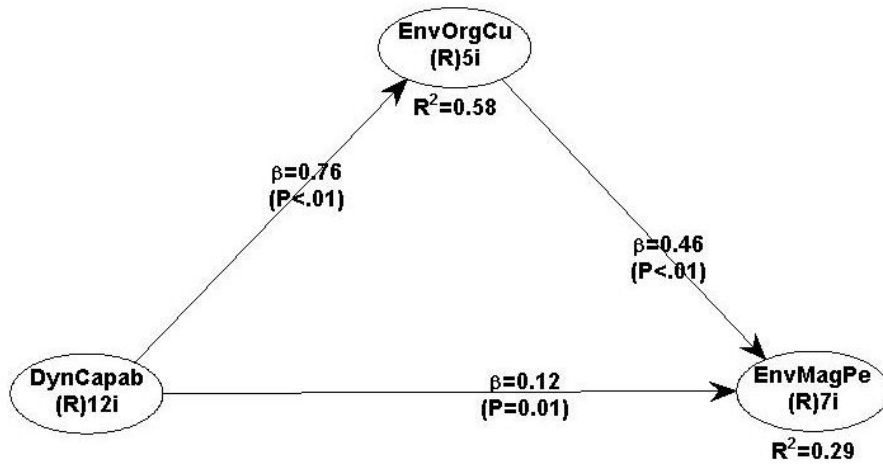

Figure (1): results of the study

Finally, the mediation role proposed in this study was examined using Preacher and Hayes' (2008) bootstrapping analysis method. The bootstrapping analysis, as shown in Table 5, indicated that the indirect impact's Std. $\beta=0.350$ ($0.760*0.460$) was significant with a t-value of 9.711. Also, the indirect impact of 0.350, 95% Bootstrapped Confidence Interval: (LL= 0.279, UL= 0.420), does not cross a zero in the middle, demonstrating mediation. As a result, the

mediation effect of environmental organizational culture in the relationship between green dynamic capabilities and environmental management performance may be considered statistically significant. H4 is therefore supported.

Table 5: Mediation analysis "Bootstrapped Confidence Interval"

						Bootstrapped Confidence Interval		*Decision*
	Path a	**Path b**	**Indirect Effect**	**SE**	*t-value*	**95% LL**	**95% UL**	Mediation
H4	0.760	0.460	0.350	0.036	9.711	0.279	0.420	

Discussion

Responding to the calls of previous studies of Klewitz & Hansen (2014) and Singh et al. (2022) who argued that enterprises must have their own distinct green dynamic capabilities and be better understood, the current study conducted to explore how green dynamic capabilities affect environmental organizational culture and environmental management performance in the hotels. The results of this study add to the body of knowledge by illuminating the effects of green dynamic capabilities in hotels. The primary findings of the research showed that environmental organizational culture and environmental management performance in hotels is influenced by green dynamic capabilities. Additionally, we found that the link between environmental management performance and green dynamic capacities is mediated by environmental organizational culture. These results come to be consistent with the findings of other studies "i.e. Amui et al., 2017; Del Rosario Reyes-Santiago et al., 2019; Eikelenboom & de Jong, 2019; Pereira-Moliner et al., 2021". These studies argued that green dynamic capabilities enhance organizations' environmental management performance by improving green innovation efforts, promoting green strategic objectives, green management practices, and green research and development. Teece (2014) mentioned that green dynamic capabilities evolve out of the organizational characteristics of the organization as well as from its organizational culture, and it is a unique asset that is difficult to imitate. The current study findings also come to be in the same lines of previous studies "i.e. Afum et al., 2020; Al-Swidi et al., 2021; Abou-AL-Ross & Abu Mahadi, 2021; Nassani et al., 2022". These studies demonstrated that the organizational culture's emphasis on the environment promotes behaviour, viewpoints, and values that improve environmental performance. Such a culture helps businesses to acknowledge environmental issues and strengthens staff members' sustainable behaviors. It alters the present culture to be more proactive in environmental preservation (Porter et al., 2016). Moreover, an essential factor influencing an organization's environmental practices is its cultural framework. Green organizational culture influences an organization's and its workers' environmental practices as well as their understanding of environmental concerns (Imran et al., 2021). Employees are encouraged to act in accordance with environmental and cultural principles and are under pressure to do so by the culture. Encouraging eco-friendly management practices and enhancing environmental performance throughout the organization requires sharing green behaviors, attitudes, and values. To continue improving and promoting environmental performance, a green organizational culture is thus a requirement (Al-Swidi et al., 2021).

Implications

The study's findings, which were previously reported, have consequences for both theory and practice. For contribution to the theory, the study's findings help to lessen ambiguity in the existing literature on green dynamic capabilities in relation to hotel environmental management performance. The results of our research add to the body of knowledge in the area of how green dynamic capabilities improve hotel environmental management performance. Our research also reveals that green organizational culture mediates the positive impact of green dynamic capabilities on hotel environmental management performance. As a result, our study contends that the effectiveness of hotel environmental management depends on the green dynamic capabilities (i.e., learning capability, integrating capability, and reconfiguration capability) required to take advantage of available knowledge and resources in a dynamic business environment (Lin and Wu, 2014; Lin & Chen, 2017) to provide value to the customers (Teece, 2018) and maintains market relevance.

Moreover, the current study provides two main managerial implications. First, to maintain the satisfaction of their major stakeholders, hotel managers and executives must devote a substantial amount of organizational time and resources to building their green dynamic capabilities. The effectiveness of environmental management is significantly influenced by a hotel's green dynamic capabilities. Effective environmental management becomes a reality as hotels create green dynamic capabilities and embed environmental culture in their organizational routines, systems, and processes, allowing hotels to remain competitive. Second, hotel companies should first assess their purpose and mission to be able to adopt a collaborative and environmentally conscious worldview that considers value generation for the stakeholders. Environmental culture should be one in which all organizational members. Hotel corporates also must integrate environmental considerations into daily decisions and operations.

Limitations and further research

Although our work, as previously noted, has many implications for theory and practice, it is not without limits. To identify variations in terms of green dynamic capabilities, environmental organizational culture, and environmental management performance, we first recommend that future researchers utilize our framework to conduct a comparative study of other service firms " i.e. restaurants". Second, given the inherent limits of quantitative studies, future studies might employ both quantitative and qualitative research designs to make up for each discipline's shortcomings and produce good implications for both theory and practice. Third, the current study only investigated the mediating role of environmental organizational culture in the relationship between green dynamic capacities and environmental management performance. Further research could explore the effects of other factors such as green ambidexterity, green transformational leadership, and green creativity. Lastly, the fact that the current study was undertaken in Egypt's hotel business rather than in other MENA nations shows that the findings cannot be generalized to the whole MENA area. To improve the environmental management performance of hotel enterprises and maintain competitiveness in the marketplaces, future studies should empirically evaluate our research model by selecting sample organizations from throughout the MENA or globally.

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Appendix (A)
Green Dynamic Capabilities (GDC)
When dealing with environmental issues,..........
GDC.1: We are constantly learning within the hotel.
GDC.2: In our hotel, the process of knowledge creation and development takes place according to the requirements of the units.
GDC.3: We are constantly setting up training teams.
GDC.4: We have ongoing cross-department training programs.
GDC.5: Our hotel focuses on gathering customer information and discovering potential markets.
GDC.6: Our hotel utilizes the specialized services of other organizations in its management decisions.
GDC.7: Our hotel focuses on technologies related to the pharmaceutical industry to develop new products.
GDC.8: Our hotel emphasizes recording and disseminating its experiences.
GDC.9: Our hotel focuses on reorganizing jobs and creating new job opportunities.
GDC.10: Our hotel reacts quickly to market changes.
GDC.11: Our hotel responds to its competitors on time.
GDC.12: We have effective and efficient communication with partner organizations.
Environment Management Performance (EMP)
EMP.1: My hotel incorporates environmental management into corporate policy.
EMP.2: My hotel involves a manager or a team in environment management.
EMP.3: My hotel implements employee environment management training programs.
EMP.4: My hotel monitors and records environment management performance.
EMP.5: My hotel implements recycling and waste management programs.
EMP.6: My hotel uses energy/water-efficient equipment and products.
EMP.7: My hotel purchases environmentally responsible products and raw materials.
Environmental organizational culture (EOC)
EOC.1: Our hotel emphasizes environmental protection knowledge.
EOC.2: Our hotel emphasizes the cooperation of environmental protection.
EOC.3: Our hotel emphasizes the agreement of environmental protection.
EOC.4: Our hotel emphasizes the impact of environmental protection.
EOC.5: Our hotel emphasizes the vision of environmental protection.

Appendix (B)

Model fit and quality indices

	Assessment	Criterion	Supported/Rejected
Average path coefficient (APC)	0.447, P<0.001	P<0.05	Supported
Average R-squared (ARS)	0.437, P<0.001	P<0.05	Supported
Average adjusted R-squared (AARS)	0.435, P<0.001	P<0.05	Supported
Average block VIF (AVIF)	1.688	acceptable if <= 5, ideally <= 3.3	Supported
Average full collinearity VIF (AFVIF)	1.516	acceptable if <= 5, ideally <= 3.3	Supported
Tenenhaus GoF (GoF)	0.547	small >= 0.1, medium >= 0.25, large >= 0.36	Supported
Sympson's paradox ratio (SPR)	1.000	acceptable if >= 0.7, ideally = 1	Supported
R-squared contribution ratio (RSCR)	1.000	acceptable if >= 0.9, ideally = 1	Supported
Statistical suppression ratio (SSR)	1.000	acceptable if >= 0.7	Supported
Nonlinear bivariate causality direction ratio (NLBCDR)	1.000	acceptable if >= 0.7	Supported

تأثير القدرات الديناميكية الخضراء على أداء الإدارة البيئية في الفنادق الحاصلة على النجمة الخضراء: الدور الوسيط للثقافة التنظيمية البيئية

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الملخص العربي

تبحث هذه الدراسة في كيفية تأثر أداء الإدارة البيئية بالقدرات الديناميكية الخضراء في سياق صناعة الفنادق. كما تستكشف الدراسة ايضا الدور الوسيط للثقافة التنظيمية البيئية. تم جمع البيانات لهذه الدراسة من مديري الخطوط الأمامية والمتوسطة في عدد 60 فندقًا حاصلا على النجمة الخضراء في منطقتي البحر الأحمر وجنوب سيناء في مصر. تم جمع وتحليل 350 استمارة استبيان صالحة بواسطة PLS–SEM باستخدام برنامج WarpPLS 7.0. أشارت النتائج إلى أن القدرات الديناميكية الخضراء ترتبط بشكل إيجابي بالثقافة التنظيمية البيئية وأداء الإدارة البيئية. بالإضافة إلى ذلك، أظهرت النتائج أن الثقافة التنظيمية البيئية ترتبط ارتباطًا إيجابيًا بأداء الإدارة البيئية. علاوة على ذلك، للثقافة التنظيمية البيئية دورا وسيطا في العلاقة بين القدرات الديناميكية الخضراء وأداء الإدارة البيئية. نتائج الدراسة لها عواقب كبيرة لكل من النظرية والتطبيق. تساعد هذه الدراسة على تقليل الغموض في الأدبيات الموجودة حول القدرات الديناميكية الخضراء فيما يتعلق بأداء الإدارة البيئية للفنادق. عمليا، يوفر البحث للمؤسسات الفندقية توصيات لتحسين فعالية أداء الإدارة البيئية.

الكلمات المفتاحية: القدرات الديناميكية الخضراء، أداء الإدارة البيئية، الثقافة التنظيمية البيئية، فنادق النجمة الخضراء المعتمدة ، مصر .