



Predicting Green Innovation in Egyptian Travel Agencies and Hotels through Green Organizational Responses

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ABSTRACT

This research aims to examine the nexus between green organizational responses (GOR) and green innovation (GI) in Egyptian travel agencies and hotels. A total of 500 online questionnaires were analysed by managers in Egyptian travel agencies and hotels. Questionnaires are analysed through correlation and Regression-based by using SPSS V25 to support all the research hypotheses. The results showed only four dimensions of GOR including top management support, training, research and development investments, and environmental management systems have a positive influence on GI. While the results also revealed that the fifth dimension of GOR (collaboration networks) has no significant effect on GI. These results have significant theoretical and practical implications for Egyptian travel agencies and hotels. The research recommends the owners and managers of Egyptian travel agencies and hotels strengthen cooperation networks with suppliers, universities, competitors, and government agencies to achieve GI, and provide HR specialists and all the necessary tools to support research and development investments, which will positively reflect on GI.

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1. Introduction

As the economy has developed more rapidly, environmental challenges have become increasingly significant. As one of the most important threats to human existence in the future, a rising number of organizations are turning to GI as a strategy for both environmental protection and economic growth. Tourism is one of the most promising growth drivers for the global economy, as well as a crucial driver of the transition to a green economy. Because of tourism's cross-cutting

character and intimate ties to a variety of sectors at the destination and international levels, even little steps toward higher sustainability will have a significant impact on the transition to more sustainable, cleaner, and low-carbon economic growth (OECD, 2013; Elnagar and Derbali, 2020). Tourism is a phenomenon that is strongly reliant on innovation, so the tourist sector has placed a premium on the innovation concept to boost productivity (Razafindravelo, 2017, Elnagar and Derbali, 2020). In the same context, most tourist places place a high priority on tourism innovation.

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As a result, tourism innovation should be regarded as one of the most crucial procedures in every tourist business (Cosma et al., 2014).

Academic research has likewise shifted its focus to GI. According to studies, GI incorporates an ecological concept into the development process to minimize or mitigate environmental harm (Gunasekaran & Spalanzani, 2012). Furthermore, firms with GI capabilities can leverage green resources and have the capacity to adapt swiftly and properly to client needs, giving them a competitive advantage (Albort- Morant et al., 2018; Zhang et al., 2020).

According to a study of the literature, it was found that green organizational responses (GOR) have been identified as the key drivers of GI (Wagner, 2008; Khazal and Zaeb, 2019). Huang et al. (2016), on the other hand, discovered that three types of GOR (top management support (TMS), training, and R&D investments) are all positively connected to GI. This is consistent with previous research, which suggests that these three forms of GOR play a crucial function in GI implementation (Zilahy, 2004; Rehfeld et al., 2007; Cuerva et al., 2014). The other two types of GOR (collaboration networks and environmental management systems (EMS), according to Huang et al. (2016), have a beneficial but not significant impact on GI. This result contradicts the findings of some previous investigations (Wagner, 2008; Khazal and Zaeb, 2019).

The contradictory results show that the mechanism through which GOR causes GI is still a mystery. This study suggests the notion of GOR to fill up this vacuum in the GI literature. A conceptual model based on institutional theory is used to study the impact of GOR on GI. Based on the foregoing, this study focuses on GOR and its impact on GI. Theoretical studies on GOR and its importance in travel agencies and hotels have been limited, thus the objective of the research is to bridge the gap between prior studies on GOR and GI in travel agencies and hotels.

2. Literature Review

2.1. Green Innovation Hotel Technology

Hart (1995) showed that GI is dependent on the coordination of external forces and internal capabilities. The responses of different businesses to the same degree of pressure may explain why their GI performance varies so much. The construction and usage of GOR is more efficient

when an organization is more sensitive to the two types of pressure, which is reflected in its GI performance (Huang et al., 2016). The tourist industry's green innovation is a direct reflection of GI in the economy, the tourism-environment interaction, and environmental civilization (Liu *et al.*, 2018).

According to Beise and Rennings (2005), GI is a set of applications in newly developed or improved technologies, systems, techniques, and products. The goal is to avoid or minimize environmental risks. Kemp and Pearson (2007) indicated that GI as the creation, absorption, or exploitation of an innovative product, manufacturing process, service, or management technique by the companies that produce or adopt it. This strategy is used throughout the product's life cycle, reducing environmental hazards, pollution, and other negative consequences on resource consumption. According to Halila and Rundquist (2011), GI is a catch-all word encompassing a variety of creative activities. It aids in the improvement of the ecological environment and contributes to long-term growth (Cui et al., 2021).

GI refers to product, process, and managerial innovations that can help firms attain long-term competitive advantages while also being environmentally friendly (Porter and Van der Linde, 1995; Schiederig et al., 2012). According to Zhang et al. (2020), the definition of GI includes (a) the entire product life cycle; (b) innovative items are products, services, processes, and methods; (c) the objective of innovation is to decrease or eliminate the environmental effect.

Because GI is so complicated and sophisticated, it necessitates much knowledge-related resources and capacities (Cainelli et al., 2015; Cui et al., 2021). GOR has been shown to have an impact on GI health in previous research (Wagner, 2008; Huang *et al.*, 2016; Khazal and Zaeb, 2019).

Based on the foregoing, businesses should pay more attention to their environmental management, as consumers are more willing to choose green products, even if they pay a higher price for them. As a result, businesses have no choice but to engage in activities that protect the environment and adhere to international regulations. Recognizing GI as one of the most important determinants of financial and environmental sustainability.

2.2. Green Organizational Responses

Environmental projects are heavily reliant on external pressure, with various types of external pressure resulting in diverse internal organizational reactions. The word "GOR" refers to an organization's response to a certain external factor that influences the level of GI (Zilahy, 2004). It also employs green capabilities to respond to organizational demand or gain a competitive advantage, and it tends to adopt such innovations by building various regulatory support factors (Delmas and Toffel, 2008). GOR, according to Huang et al. (2016), explains the internal dynamic aspects of the organizational framework.

When an organization views GI as a viable means to respond to institutional pressure or achieve a competitive advantage, it is more likely to create the GOR needed to adopt such innovations (Colwell and Joshi, 2013; Lin et al., 2014; Huang et al., 2016; Khazal and Zaeb, 2019), such as:

- top management support (TMS). If TMS is supportive of GI activities, it may aid the company in establishing a positive reputation and developing positive connections with stakeholders.
- Investments in green products or cleaner manufacturing technologies through research and development (R&D). When a corporation invests in R&D, new ideas, intermediate goods, and processes are expected to be produced to save money. It has the potential to greatly contribute to GI by developing and using the foundational knowledge required to produce cleaner manufacturing technologies.
- Green Training is a set of environmental actions carried out by employees with the goal of achieving certain objectives, such as teaching employees' eco-design processes and procedures, recycling materials, or using renewable technologies. As a result, training can assist employees in reorienting their traditional views of the world and modifying their behaviours to improve environmental learning capabilities, resulting in improved GI performance.
- Collaboration networks (CN): GI's success is largely determined by the company's green research and development efforts, which include the adoption of new goods and technology.

- Environmental management systems (EMS): EMS implementation is a joint effort to satisfy government laws, decrease organizational constraints, and provide corporate clients a high premium on suppliers who can deliver environmental certifications.

2.3. Green Organizational Responses and Green Innovation

According to the natural resource-based view, positive organizational reactions enable firms to acquire dynamic capacities in managing their static resources strategically and, as a result, improve their innovation performance (Hart and Dowell, 2010). In fact, developing the firm's green capabilities, which may be increased through eliciting green reactions, is a critical aspect of achieving the aims of GI. In this regard, it is argued that each GOR has an impact on the organization's GI performance.

Three dimensions of GOR (TMS, training, and R&D investments) are significantly and favourably associated to GI performance, according to an analysis of the nexus between GOR and GI. This is consistent with previous research, which suggests that these three types of GOR are important determinants in GI health improvement (Zilahy, 2004; Rehfeld et al., 2007; Cuerva et al., 2014). The findings also imply that the other two forms of GOR (CN and EMS) have a beneficial but little impact on GI function. This finding contradicts with some previous investigations (Wagner, 2008). Although the development of a CN or the deployment of EMS may normally be used to relieve stakeholder pressure in the current Chinese setting, some enterprises' reactions are marked by a lack of meaningful action for GI, such as in-depth R&D investments and actual EMS implementation. This shows that achieving GI performance is mostly dependent on the platforms that CN and EMS provide for actual GI activities and execution.

According to (Huang et al., 2016) the findings also give managers insight into organizational solutions that need to be prioritized to enhance GI performance. They emphasize the role of senior executives in the development of green ideas. Apart from having a direct impact on GI performance, TMS has a direct impact on the other two forms of GOR as well (CN and EMS). As a result, practitioners must emphasize the importance of senior managers' involvement in the

operation and management of GI processes. In addition, Khazal and Zaeb (2019) concluded that the significant effect of GOR (TMS, green training, R&D investments, CN, and EMS) on GI of the Karungi group in Kirkuk. As a result, they gave several recommendations to help the organization be more effective in dealing with environmental challenges related to green processes and products. As a result, we provide the following hypothesis:

H1 GOR positively influences the GI at travel agencies and Hotels.

2.3.1. Top Management Support and Green Innovation

Environmental training, knowledge sharing within functional areas, and rewarding employees for environmental contributions are all ways that top management can undertake (Liu *et al.*, 2020). Top management may help with learning by collaborating with supply chain participants, which can lead to the generation of new knowledge (Arfi *et al.*, 2018). Top managers can also collaborate with other stakeholders to deploy GI and make it easier for employees to learn. Mahindra & Mahindra Ltd.'s top management in India has successfully engaged in various sustainable innovation programs and focuses on providing adequate opportunity for its workers to engage in innovation through learning (Bhatia *et al.*, 2021). It is widely known that TMS is a critical strategic resource (capacity) of the business in advancing GI. Top management helps to advance GI performance by effectively communicating and starting programs in support of GI efforts, as well as dedication to environmental concerns and supply of necessary resources to support such activities (Drumwright, 1994). Likewise, each of the other four categories of GOR (training, R&D investments, CN, and EMS) is thought to have a favourable influence on GI performance. Top leaders, according to Drumwright, can help GPI by offering new ideas, giving essential resources, and inspiring people. TMS is a critical strategic resource (capacity) for the company when it comes to driving green ideas (Huang *et al.*, 2016). As a result, we provide the following hypothesis:

H1.1 TMS enhance GI at travel agencies and Hotels.

2.3.2 Training and Green Innovation

The influence of training on GI is first attributed to its function in enhancing the learning capacities needed for GI (Saturnino Neto *et al.*, 2014). Employees can be motivated to reorient their conventional perspective of the world and alter their behaviour to increase environmental learning skills, which leads to gains in GI, with the help of training. In the same context, Khazal and Zaeb (2019) mentioned that the role of training in strengthening the learning capacities required for GI can be linked to its effect on GI. As a result, training can assist employees in reorienting their traditional views of the environment and changing their behaviour. To strengthen environmental learning capacities, which will result in GI improvements. As a result, we provide the following hypothesis:

H1.2 Training is positively effect on GI of travel agencies and Hotels.

2.3.3. Research & Development Investments and Green Innovation

Rehfeld *et al.* (2007) discovered empirical evidence that R&D spending may accelerate environmental innovation by establishing and leveraging the knowledge base necessary for the development of cleaner manufacturing solutions. As a result, R&D efforts are anticipated to help enhance GI performance. R&D investments are a critical component in enhancing the technological capabilities necessary for GI. More R&D personnel and more spending suggest a larger range of improved absorptive capacities, speeding up the technological innovation process (Simpson and Samson, 2010). Furthermore, R&D investments can greatly contribute to green innovations by establishing and utilizing the knowledge base required to develop cleaner manufacturing processes (Khazal and Zaeb, 2019). As a result, we provide the following hypothesis:

H1.3 The implementation of R&D investments at travel agencies and Hotels positively affects GI.

2.3.4. Collaboration Networks and Green Innovation

It is believed that, in comparison to non-cooperative innovations, Inter-firm networks are thought to enable firms to employ more innovative knowledge sources and integrate internal and external knowledge in a systematic manner, allowing them to activate GI more effectively than

non-cooperative innovations (De Marchi, 2012). Furthermore, it appears that external information is more crucial for GI than for other types of innovation; organizations often increase their external knowledge sources by improving their own CN. Collaboration with universities, institutions, and, most crucially, suppliers can improve innovation efficiency through technical communication, knowledge sharing, and trust development (Khazal and Zaeb, 2019). As a result, we provide the following hypothesis:

H1.4 CN is significantly and positively related to GI at travel agencies and Hotels.

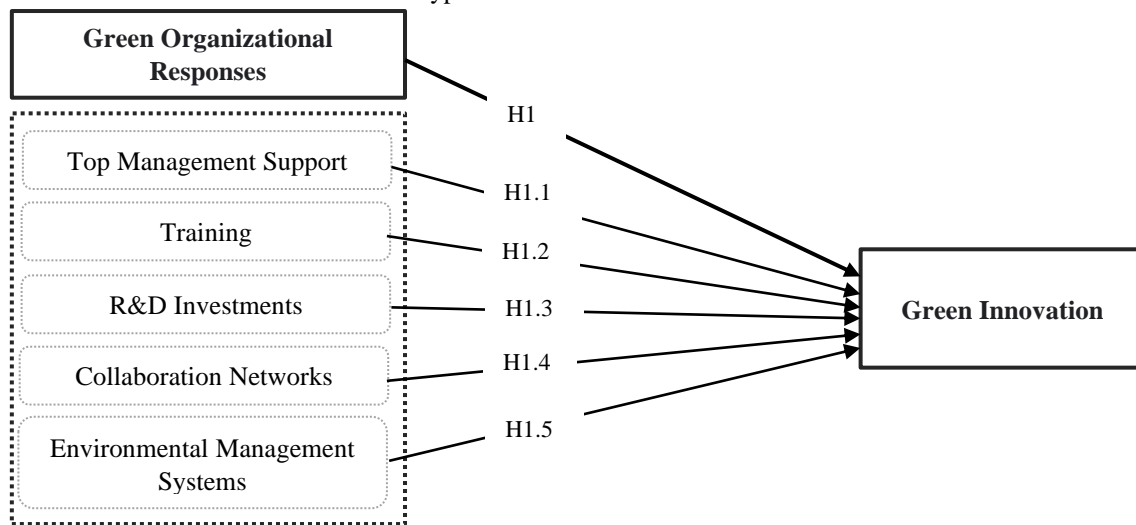
2.4.5 Environmental Management Systems and Green Innovation

EMS serves as a management tool that allows businesses to define environmental goals and track their progress (Cuerva et al., 2014). Due to the possibility of identifying and processing missing information, improvements in eco-process innovation performance may be predicted (Horbach et al., 2012). It is important to remember that EMS does not operate in a vacuum and that their existence must be understood in the context of resources and a company's environmental capabilities. It has the potential to help businesses reduce their environmental impact while also improving the quality of their products and operations (Khazal and Zaeb, 2019). As a result, we provide the following hypothesis:

H1.5. EMS is positively influencing the GI at travel agencies and Hotels

Figure 1

Theoretical Framework and Research Hypotheses



3. Methodology

3.1 The Sample and Data Collection

To assess the research hypotheses, we used a questionnaire to gather data. The questionnaire using Google Forms and disseminated on LinkedIn. According to Basak and Calisir (2014), LinkedIn is one of the most prominent professional social networking sites, with users from travel agencies, and hotels. Dusek *et al.* (2015) go on to say that using social media networks like LinkedIn may assist researchers in acquiring data from study participants who are distributed over large geographical locations (such as Cairo, and Sharm Elshiekh in the current study) and are difficult to

reach, as well as make questionnaire distribution easier to the search sample.

During November 2021, the questionnaire was sent to a simple random sample of 500 managers working in 20 four-and five-star hotels, and 25 travel agencies in Egypt. Based on such reply, questionnaires were circulated to managers of the respective travel agencies and hotels. There were 243 responses received, yielding a response rate of 44.2%, with 22 of them being invalid and 221 valid for statistical analysis. According to Manfreda *et al.* (2008), online questionnaires had a response rate of 11% lower than traditional techniques, but this is not considered an issue. As a result, this response rate to be reasonable.

1.1 Measurements of Variables

The following techniques were used to create the final questionnaire for this study: First, we used scales from earlier studies (Huang et al., 2016; Huang and Li, 2018; Khazal and Zeal, 2019) to generate all variables (GOR, and GI). Second, we tweaked the measuring scales after consulting with members and having them arbitrated by five academics and ten travel agencies and hotel managers.

The questionnaire is divided into two parts, the first of which is concerned with the demographic data of the respondents, and the second of which is divided into six sections, the first of which measures TMS and involves four items, the second section measuring training and involving four items, the third section measuring R&D investment and involving two items, the fourth section

measuring CN and involving five items, the fifth section measuring EMS and involving five items, and the sixth section measuring GI and involving four items. All of these factors were assessed using a five-point Likert scale, with 1 indicating severe disagreement and 5 indicating strong agreement. The independent variables are represented in the first five sections, while the dependent variable is shown in the sixth section.

4. Finding and results

4.1. Demographic characteristics of the research sample.

Table (1) shows the distribution of the research sample according to demographic variables (gender, age, education, work experience, and place of work).

Table 1:

Demographic Profile of Sample

Demographics	Items	Frequency (F)	Percentage %
Gender	Male	183	82.7
	Female	38	18.3
Age	35 and less	75	33.9
	36-45 year	91	41.2
	46-55 year	39	17.8
	More than 55 years	16	7.1
Education	Bachelor	147	66.5
	Diploma	23	10.4
	Master	30	13.6
	PhD	4	1.8
	Other	17	7.7
Work experience	5 years and less	21	9.5
	5-10 years	52	23.5
	11-15 years	41	18.7
	15 years and more	107	48.3
Place of work	Hotels	152	68.9
	Travel agencies	69	31.1

Table 1. indicates that there is a big difference in the number of male managers 183 (82.7%) compared to 38 (18.3%) female managers. According to age, most of the managers are young people between 36-45 years 91 (41.2%) followed by 35 years and less than 75 (33.9). As for education, the most proportion of the managers has a bachelor’s degree 147 (66.5%), followed by a master’s degree of 30 (13.6%). Also, the table shows that most of the managers in the sample have more than 15 years of experience 107 (48.3%). This contributes to obtaining accurate responses. Moreover, 152 (68.9%) of managers work in the

hotel sector and 69 (31.1%) of them work in travel agencies.

4.2. Reliability and Validity Test of Research Scale Confirmatory factor analysis (CFA)

This section summarizes the findings of the empirical study, including model reliability and validity, as well as hypothesis testing for the proposed model. As shown in table 2, Cronbach’s correlation coefficient test was utilized to assess the reliability and validity of both GOR types and GI

Table 2
Reliability and Validity of Research Scale

Constructs	Cronbach's α	Validity
Top Management Support (TMS)	0.960	0.979
Training	0.959	0.979
Research & Development investments (R&D)	0.959	0.979
Collaboration Networks (CN)	0.958	0.978
Environmental Management Systems (EMS)	0.958	0.978
Green Innovation (GI)	0.958	0.978

Cronbach's alpha was used to assess the model's dependability, with values greater than 0.7 regarded acceptable, and validity, with values equal to or greater than 0.6 considered acceptable (Nunnally and Bernstein, 1978). The Cronbach's and validity indexes are considerably above threshold values, indicating that the variables are adequately reliable, as shown in Table 2.

4.3. Hypotheses Testing

We estimated the means, standard deviations, skewness, kurtosis, and correlation of all variables before considering research hypotheses.

As displayed in Table 3, descriptive analysis of research variables indicates that the mean values of green organizational responses (GOR) dimensions

(TMS, training, R&D investments, CN, EMS) ranged from 3.91 to 4.14. This mean a high proportion of managers in travel agencies and hotels agreed that GOR is a very important motive for GI (overall $\mu = 4.04$). In this regard, TMS ($\mu = 4.14$) was the most influential reason for GI from GOR. All standard deviation values for variables are ranged from 0.536 to 0.827. This indicates that the data follow the normal distribution and the data do not focus too much on the mean but move away and deviate slightly. As for the skewness values for all variables are positive and close to zero (ranged from 0.17 to 0.76). Thus, the data follow the normal distribution. Also, all the kurtosis values for all variables are positive, closed to zero, and ranged from 0.736 to 1.12.

Table 3

Descriptive Analysis for GOR

Variables	Dimensions	Items	Mean	Std. Devi.	Skewness		Kurtosis	
					Statistic	Std. Error	Statistic	Std. Error
Green Organizational Responses (GOR)			4.04	0.603	1.07	0.164	0.681	0.326
	Top Management Support (TMS)	4	4.14	0.536	0.960	0.164	0.917	0.326
	Training	4	4.02	0.714	0.821	0.164	0.955	0.326
	Research & Development investments (R&D)	2	4.09	0.754	1.08	0.164	0.736	0.326
	Collaboration Networks (CN)	5	4.05	0.703	1.27	0.164	0.826	0.326
	Environmental Management Systems (EMS)	3	3.91	0.827	1.15	0.164	1.12	0.326

As displayed in Table 4, a descriptive analysis of research variables indicates that the mean values of green innovation (GI) dimensions (green product innovation, green process innovation, green technological innovation, and green organizational innovation) ranged from 3.88 to 4.17. This means a high proportion of managers in travel agencies

and hotels agreed that GI (Overall $\mu = 4.00$). In this regard, green technological innovation ($\mu = 4.17$) was the most influential reason for GI. All standard deviation values for variables ranged from 0.536 to 0.827. This indicates that the data follow the normal distribution and the data do not focus too much on the mean but move away and deviate

slightly. As for the skewness values for all variables are positive and close to zero (ranged from 0.919 to 1.17). Thus, the data follow the

normal distribution. Also, all the kurtosis values for all variables are positive, closed to zero, and ranged from 0.316 to 1.21.

Table 4

Descriptive Analysis for GI

Variables	Dimensions	Mean	Std. Devi.	Skewness		Kurtosis	
				Statistic	Std. Error	Statistic	Std. Error
Green Innovation (GI)		4.00	0.725	1.11	0.164	0.924	0.326
	Green Product Innovation	3.88	1.10	1.03	0.164	0.427	0.326
	Green Process Innovation	3.94	1.16	.919	0.164	0.316	0.326
	Green Technological Innovation	4.17	0.743	1.16	0.164	0.981	0.326
	Green Organizational Innovation	4.04	0.967	1.17	0.164	1.21	0.326

The Pearson correlation coefficient "r," a measure of the strength of the linear link between two variables, was measured between GOR and GI to evaluate these assumptions, as shown below. The existence of a substantial and positive association between all dimensions of GOR and GI was supported by "r" values ($r > 0$, $P < 0.01$). However,

it's vital to note that the significance and degree of this association varied between the dimensions. Table (3) shows that there is a substantial and strong positive link between GOR and GI ($P < 0.01$, correlation rate of 79.1%), implying that the primary hypothesis (H.) is validated

Table 5

Correlation Matrix among Research Variables (Pearson's R correlation).

	1	2	3	4	5	6	7	8	9	10	11
Green Organizational Responses (1)	1										
Top Management Support (2)	0.630	1									
Training (3)	0.679	0.651	1								
Research & Development investments (4)	0.623	0.656	0.579	1							
Collaboration Networks (5)	0.644	0.545	0.633	0.731	1						
Environmental Management Systems (6)	0.711	0.647	0.692	0.755	0.664	1					
Green Product Innovation (7)	0.715	0.831	0.728	0.588	0.834	0.760	1				
Green Process Innovation (8)	0.692	0.683	0.584	0.622	0.799	0.815	0.873	1			
Green Technological Innovation (9)	0.803	0.730	0.742	0.625	0.569	0.581	0.745	0.890	1		
Green Organizational Innovation (10)	0.645	0.738	0.700	0.732	0.655	0.759	0.732	0.666	0.691	1	
Green Innovation (11)	0.791	0.695	0.611	0.572	0.487	0.683	0.614	0.714	0.664	0.650	1

All Correlations are significant at the 0.01 level

Table (3) further reveals that all GOR dimensions are favorably related to GI ($r > 0$, $P < 0.01$). Therefore, all of the sub-hypotheses were

confirmed. TMS ($P < 0.01$, with a correlation rate of 69.5%) is the most closely related dimension to GI, followed by EMS of menu items ($P < 0.01$, with a

correlation rate of 68.3%), training (P<0.01, with a correlation rate of 61.1%), R&D investments (P<0.01, with a correlation rate of 57.2%), and finally CN of menu items (P<0.01, with a correlation rate of 48.7%).

Table 6.

The Impact of GOR Dimensions on GI.

Green Innovation (GI)					
	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
(constant)	0.183	0.207		.884	0.378
Top Management Support (TMS)	0.288	0.052	0.296	5.58	0.000
Training	0.259	0.054	0.263	4.76	0.000
Research & Development investments (R&D)	0.207	0.045	0.222	4.59	0.000
Collaboration Networks (CN)	0.034	0.069	0.026	.490	0.625
Environmental Management Systems (EMS)	0.176	0.052	0.207	3.37	0.001
F= 116.86	Sig. = .000	R= .855	R ² = .731		

Table (6) reveals that the F value is 116.86, and the model's significance (P<0.01 and R² model of 73.1%) was validated at the level of significance. GOR dimensions are favorable to GI. As a result, the H1. GOR is positively influence the GI at travel agencies and Hotels is accepted.

Also, Table (6) also shows that GOR aspects (TMS, training, R&D investments, and EMS) have a positive regression on GI. The following is the order of dimensions based on regression value:

- TMS has a favorable influence on GI, with a regression value of ($\beta=.288$), T= 5.58, where T is significant when it is ≤ 2 at level Sig. P< 0.001 and this dimension is regarded the most effective GOR dimensions on GI. As a result, *H1.1 TMS enhance GI at travel agencies and Hotels* is accepted.
- Training has a favorable influence on GI, with a regression value of ($\beta=.259$), T= 4.76, where T is significant when it is ≤ 2 at level Sig. P< 0.001 and this dimension is regarded the second effective GOR dimensions on GI. As a result, *H1.2 Training is positively effect on GI of travel agencies and Hotels* is accepted.
- R&D investments have a favorable influence on GI, with a regression value of ($\beta=.207$), T= 4.59, where T is significant when it is ≤ 2 at level Sig. P< 0.001 and this dimension is regarded the third effective GOR dimensions

Through the results (Table 4) there is a positive correlation between the variables which mean GOR was positively correlated with GI. The findings of the path analysis demonstrate that a positive relationship was found

on GI. As a result, *H1.3 The implementation of R&D investments at travel agencies and Hotels is positively affect GI* is accepted.

- EMS has a favorable influence on GI, with a regression value of ($\beta=.176$), T= 3.37, where T is significant when it is ≤ 2 at level Sig. P< 0.01 and this dimension is regarded the fourth effective GOR dimensions on GI. As a result, *H1.4 EMS is positively influencing the GI at travel agencies and Hotels* is accepted.

Also, the results in Table (6) indicates that there is no significant effect of CN on GI as it reached the level of significance Sig. P= 0.625. As a result, the *H1.4 CN is significantly and positively related to GI at travel agencies and Hotels* is not accepted.

5. Conclusion

The aim of this study is to examine the role of GOR on predicting GI in Egyptian travel agencies and hotels. The results supported the proposed model and showed that GOR dimensions (TMS, training, R&D investments, CN, and EMS) are positively correlated with GI indicators. This result is in line with previous studies, conducted by Zilahy, 2004; Rehfeld et al., 2007; Hart and Dowell, 2010; Cuerva et al., 2014; Haung et al. 2016; Khazal and Zaeb, 2019).

Additionally, the results proved that TMS has a significant and positively effect on GI in Egyptian

travel agencies and hotels, which means that TMS greatly enhance GI. This result is consistent with previous studies (Drumwright, 1994; Arfi et al., 2018; Khazal and Zaeb, 2019; Liu et al., 2020; Bhatia et al., 2021) mentioned that TMS affect positively GI. Also, according to Haung et al. (2016), TMS is a key strategic resource (capacity) of the organization in promoting GI. On other hand, this result is consistent with (Zilahy, 2004; Rehfeld et al., 2007; Cuerva et al., 2014) implied that TMS has a beneficial but little impact on GI function.

Moreover, the results revealed that training is significant and positively affects GI in Egyptian travel agencies and hotels. The result agreed with Saturnino Neto et al. (2014) that training has a positive effect on GI. Also, agreed with Khazal and Zaeb (2019) that the significant effect of training on GI, and recommended the organization be more effective in dealing with environmental challenges related to green processes and products. Also, agreed with

Furthermore, the results showed that R&D investments have a positive influence on GI in Egyptian travel agencies and hotels. This result means that R&D investments enhance and raise GI. This result is in line with the findings of Rehfeld et al. (2007) which illustrated that R&D investments are a critical component in enhancing the technological capabilities necessary for GI. Also, agreed with Simpson and Samson (2010), and Khazal and Zaeb (2019) that R&D investments have a positive impact on GI.

Among the important results, the research proved that there is no significant effect of CN on GI in Egyptian travel agencies and hotels. This result is inconsistent with Zilahy (2004), Rehfeld et al. (2007), and Cuerva et al. (2014) implied that CN has a beneficial but little impact on GI function. Also, many previous studies (Drumwright, 1994; Arfi et al., 2018; Khazal and Zaeb, 2019; Liu et al., 2020; Bhatia et al., 2021) mentioned that affects positively GI.

Finally, the results illustrated that EMS influence significantly and positively GI in Egyptian travel agencies and hotels. This result agreed with (Horbach et al., 2012; Cuerva et al., 2014) mentioned that EMS raise the level of GI. EMS, according to Khazal and Zaeb (2019), does not operate in isolation and must be understood in relation to resources and the company's environmental capabilities.

This research investigated significant findings and contributed theoretically and practically to the relevance of GOR (TMS, training, R&D investments, CN, and EMS) and their favorable impact on GI. These results were applied to the tourism industry in Egypt. Accordingly, the research recommends the owners and managers of Egyptian travel agencies and hotels to strengthen cooperation networks with suppliers, universities, competitors, and government agencies to achieve GI, and provide HR specialists and all the necessary tools to support research and development investments, which will positively reflect on GI. As well as the need for providing top management financial and human resources necessary to raise the level of GI and pay more attention to the implementation of training programs focused on achieving GI.

The research also recommends travel agencies and hotels to publish more stringent environmental regulations and regulations to motivate employees to implement GI by reducing the use of materials, energy and emissions that harm the environment in their green operations and products and use the media to increase environmental awareness in the community through television programs, and the use of posters and flyers that show these agencies and hotels follow ecosystems to enhance GI.

6. Limitation and Future Research

This study, like any other, had constraints that researchers had to deal with. The most obvious restriction is that the field study depended on the distribution of questionnaires to managers of travel agencies and hotels in Egypt. These travel agents and hotels were scattered throughout large geographical areas in Egypt, which takes a long time, a lot of effort, and a lot of money. To address this constraint, researchers utilized LinkedIn to send an online questionnaire to managers of Egyptian travel agencies and hotels, saving time and money. For additional research, academics might look at the distinctions between travel agencies and hotels when it comes to implementing GOR, as well as its function in encouraging GI. In the future, researchers will be able to investigate the influence of GOR on GI through organizational learning in hospitality SMEs and hotels.

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