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The Application of Dwyer and Kim Integrated Model of Competitiveness in Egypt Geotourism Sites: A Case Study of Jebel Qatrani

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Abstract *The aim of this paper is to identify the application of Dwyer and Kim integrated model of competitiveness to increase the demand of geotourism sites Jebel Qatrani in Egypt. This research adopted a quantitative approach based on questionnaire, two types of sampling including a convenience sample for official staff and snowballing sampling for experts. The total number of distributed questionnaires was 250 copies. The final returned questionnaires were 190 copies with 76% response rate. The study finding highlighted that the benefits of the competitiveness indicators and variables which including; created resources, site management, situational condition and endowed resources. The findings mentioned that the majority of the resource variables created are not available in Jebel Qatrani and need more attention from those responsible for managing this site. The finding showed that camera not available in Jebel Qatrani. A security procedure is lack in Jebel Qatrani, so there is no procedure for protected customers. The findings showed that there is a unique exceptional variety in geological and geomorphological in Jebel Qatrani. It also indicated that geotourism competitiveness indicators are an important driver of the competitiveness of Jebel Qatrani development. The findings further reported that the geotourism sites demand play an important role for increasing the competitiveness of tourism. This study contributed to enhance knowledge of geotourism sites competitiveness by using Dwyer and Kim integrated model. Challenging point in this study is among fewer studies talking about geotourism competitiveness in Egypt.*

Keywords: *Geotourism, Geosite, Geomorphology, Competitiveness, Jebel Qatrani, Egypt*

INTRODUCTION

Currently, the tourists demand and need for service quality are increasing, which leads to the emergence of new special forms of tourism such as ecotourism or geotourism which are sustainable and nature-friendly forms of tourism (Vasiljević et al., 2011). Also, increase competitiveness of tourism in the international market are considered the very important issues in Egypt (Abdel-Maksoud et al., 2017). Vasiljević et al. (2011) mentioned that the participants in these modern forms of tourism increasing their knowledge not only for the importance and attractiveness of visited place but also on the vulnerability of the environment and its individual parts. Further, the participants are primarily focusing on the abiotic part of the environment where geosites get into the spotlight (Theodosiou, 2010). Although, there are many different definitions of geotourism introduced till now, but almost all of them refer to special, geologically or geomorphologically significant places which mean geosites and geomorphosites represent a fundamental resource for geotourism (Kubalíková, 2013; Abdou, 2017). The study of Tomić and Božić (2014) reported that geotourism play an important role for more efficient conservation of geoheritage and geosites.

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According to the Travel & Tourism Competitiveness Report, which published by the World Economic Forum (WEF) claimed that the natural and cultural resources are considered the main principals and reasons to travel. As well as, World Economic Forum (2017: 150) reported that Egypt rank is (74th) from 136 countries, gaining nine positions compared with two years ago. In 2015, it welcomed about 9 million international tourists. Additionally, Egypt has greatly developed its cultural resources. Also, the increasing digital presence has led to the growth of digital demand for popular cultural resources in the country (8th place) (WEF, 2017).

While, it ranks is (97th) in natural resources and the natural tourism digital demand ranks (46th). On the other hand, the Egyptian Center for Economic Studies (ECES) (2017) indicated that the natural resources Egypt is falling behind because of the decline in the attractiveness of the Egyptian natural sites and the limited number of natural reserves and protected areas for the entire land area (Abdou et al., 2017). On the other hand, the requirements of tourists are still increasing, and there are still new challenges in this field (Allan, 2011). Therefore, the aim of this paper is to identify the application of Dwyer and Kim integrated model of competitiveness to increase the demand of geotourism sites in Egypt, in particularly Jebel Qatrani.

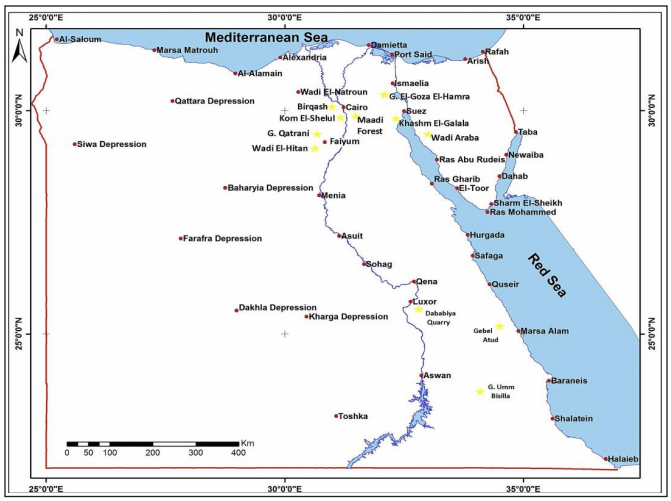
REVIEW OF LITERATURE

Geotourism Sites

Geotourism is defined as a special kind of tourism that depending on geosite (Chakrabarty & Mandal, 2018). On contrary, Pralong (2005) indicated that the site is "place" which defined as "a part of a territory bearing significance". From another point of view, there is an overlap between the location and site that they can replace one another (Ilies et al., 2014). Furthermore, Farsani et al. (2013: 5) mentioned that site was considered "the area around which the primary has planted the functional model and the structure itself," so there are many differences between the location and the sites.

Additionally, Ilies and Josan (2009) stated that the site refers to the cultural and physical characteristics and to the features of the place itself. Nevertheless, Pralong and Reynard (2005) explained the features of a place (site) which are: firstly, location (absolute or mathematics and relative), secondly, size (small, large, and extended), thirdly, geographic contents. Finally, area (a certain special structure is shifting in time, space, contents and functions).

Egypt is endowed with abundant natural diversity that positions it well to compete in the regional, national and international tourism market. It has the natural diversity such as various landscapes including coastlines, beaches, extensive mountain, desert landforms, canyons and natural arch ranges (Sallam & Ruban, 2017). As well as, Egypt is one of the most significant historical areas on earth, with a variety of natural, geological and archaeological attractions. Such sites have significant scientific and scenic value (Abdel-Maksoud et al., 2017; Abdou et al., 2017). The geological sites in Egypt are diverse and encompass historic geotourism sites, geologic features and landscape geology (Abdou et al., 2017). As well, Egypt has various different geosites (see Fig. 1).



Source: Sallam and Ruban, 2017, 741.

Fig. 1: Location of Geotourism Sites in Egypt

Geosites

Geosites mean valuable sites geologically (Zorina & Silantiev, 2014). It includes important geographical development stages of volcanic eruption, erosion and sedimentation in the history of the earth and geomorphological characters of volcanic and fault zones (Brocx & Semeniuk, 2015). Reynard (2005) and Kubalíková (2013) mentioned that the synonym of "geosites" is "geotopes". Moreover, geosciences sites that can be considered as part of the Earth's atmosphere and which are of particular importance for understanding Earth's history (Zorina & Silantiev, 2014).

As well as, Zorina and Silantiev (2014) identified geographical locations as geological organisms offering a special interest in the understanding of Earth, climate and life history. Geosites help to analysis of the spatial and temporal evolution of an area and the understanding of the meaning of surface processes and the importance of rocks in the development of specific landscapes. However, Errami et al. (2015) considered the geosites as "each geological object, mineral site, landform, fossil, etc. that present a certain value to human perception or exploitation". Also, Bouzekraoui et al. (2018, 88) defined the geosites as "remarkable sites containing rocks, geological phenomena, or specific landforms need valorisation and protection".

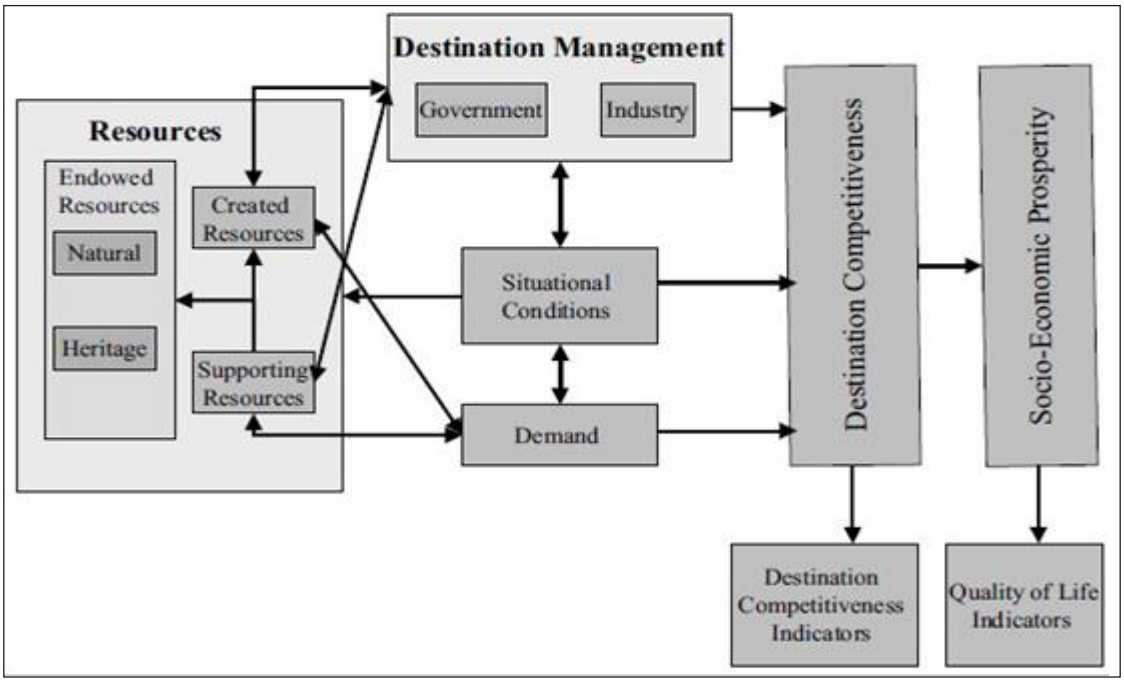
Consequently, these definitions present four types of values for geosites are; scientific, aesthetic, cultural/historical and economic. As well as, geotourism adds the recreational value of landscape (Chakrabarty & Mandal, 2018). In addition, Reynard (2005), Kubalíková (2013) and Kubalíková and Kirchner (2016) highlighted that the geological value as "scientific value" and they proposed to differentiate the values of geosites at two levels: the central (scientific) and additional values (ecological, aesthetic, cultural and economic).

Dwyer and Kim Integrated Model

The competitiveness concept may seem easy to understand, in fact, the complexity of the concept becomes evident when we seek to define and measure it and there seems to be no generally accepted definition (Cracolici & Nijkamp, 2009). In the same way, Albayrak et al. (2018) argued that its ambiguity comes from the wide variety of perspectives on competitiveness, which makes it difficult to give an operational or conclusive definition.

According to Crouch and Ritchie (1999), Cracolici and Nijkamp (2009) presented a definition of tourism competitiveness for a destination or area that based on both a comparative concept (related to endowment resources of the destination such as human, physical, knowledge, and capital resources; infrastructure and tourism superstructure; historical and cultural resources) and competitive advantage (refers to the resources deployment audit and inventory, maintenance, growth and development, efficiency and effectiveness).

Dwyer and Kim (2003) presented a holistic approach to the determinants and indicators of destination competitiveness. According to Berdo (2016) this integrated model of competitiveness of Dwyer and Kim (2003) was developed from a Crouch and Ritchie conceptual model of competitiveness. The following model explained the competitiveness indicator which including; endowed resources, supporting factors, destination management, situational conditions, and demand factors (see Fig. 2).



Source: Dwyer and Kim, 2003, 378.

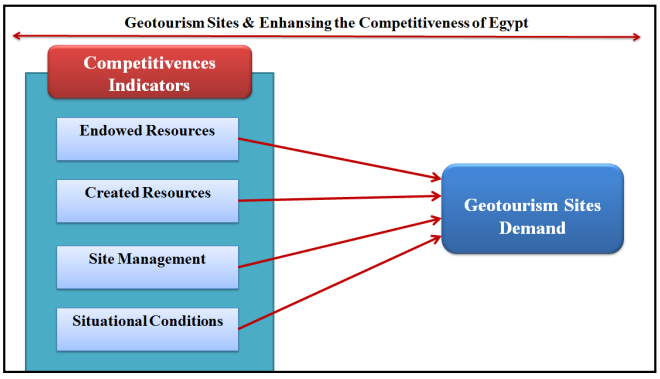
Fig. 2: Main Elements of Destination Competitiveness

A CONCEPTUAL FRAMEWORK OF GEOTOURISM SITES COMPETITIVENESS IN EGYPT

In the following Fig. 3 showed that the importance of the determinant and indicators of competitiveness in increase the geotourism demand in Jebel Qatrani. There is an arrow from endowed resources to geotourism sites demand showed the important of endowed resources in increase demand of geotourism sites. There is an arrow of the resources created to the geotourism sites demand indicates that the mere existence of such resources is insufficient to generate a visit to a site in the absence of tourism infrastructure, which

enables or facilitates the visit. As well as, the model showed there is an arrow from site management to geotourism sites demand, which showed the activities of public sector tourism organizations influence on the geosites developed.

There is an arrow from situational conditions to geotourism sites demand indicating the influence of political, economic, sociocultural, technological, environmental, and other variables on each of the key elements of the model. Thus, economic conditions may affect the amount and types of created resources; political variables. The direct impact that changes in situational conditions have directly upon attributes of site competitiveness.



Sources: adopted from Dwyer and Kim, 2003.

Fig. 3: A Conceptual Framework of Geotourism Sites Competitiveness in Egypt

The previous explanations guided us to test the following hypotheses:

H1: There is a positive effect of endowed resources in increase the demand for geotourism in Jebel Qatrani.

H2: There is a positive effect of created resources in increase the demand for geotourism in Jebel Qatrani.

H3: There is a positive effect of site management in increase the demand for geotourism in Jebel Qatrani.

H4: There is a positive effect of situational conditions in increase the demand for geotourism in Jebel Qatrani.

RESEARCH METHODOLOGY

A single case study was applied in this research to identify the application of Dwyer and Kim integrated model of competitiveness in geotourism sites to increase the demand of geotourism sites in Egypt, in particularly Jebel Qatrani. The current study is depending on a quantitative approach to understand the research aim and objectives (Saunders, 2011). As well, this study collected primary data by using questionnaire. A questionnaire will be developed on the basis of the literature review. Two types of sampling used in the current study which including; firstly, a convenience sample for official staff in Ministry of Tourism, Fayoum Tourism Authority, Egyptian Environmental Affair Agency and Manger of Jebel Qatrani. Secondly, snowballing sampling for experts (which have experience, knowledge and research in geotourism sites). The total number of distributed questionnaires was 250 copies. The final returned questionnaires were 190 copies with 76% response rate. SPSS version 25 programme used for data analysis.

Measurement

Before the pilot process is performed, as Alexander (2013) recommended it is desirable to obtain the unique assessment. Andres (2012) mentioned that conducting a pilot study by involving colleagues, friends and family and other people who assume an audience role. The questionnaire was pre-testing by circulating it among 15 colleagues to find out misunderstand words or concepts. Pre-testing ensured correct phrasing, format, length and question sequence. Pre-testing was performed to ensure the initial survey reliability and to explore any potential misunderstanding among respondents related to the items wording or survey length. The questionnaire was corrected after feedback.

The questionnaire in this research is broken into three sections including; geotourism sites demand and attractions (consists of questions relating to the demand of geotourism sites and the attraction of geotourism sites), geotourism sites competitiveness indicators (including; created resources (8 items), site management (9 items), situational conditions (4 items), and endowed resources (5 items). These indicators are modified from Dwyer and Kim (2003). A Likert scale was used for geological and natural features Jebel Qatrani and the management of geotourism site, five point Likert scale (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree.

FINDINGS AND DISCUSSIONS

Validity and Reliability

In quantitative data; reliability represents those answers and scores obtained from participants which are consistent and stable over time (Creswell, 2003). Pallant (2013) reported that the measure of the sample will be dependable, when the Cronbach's Alpha is above 0.7. In the current research quantitative data instruments used scale questions for the research questionnaire; the researcher has conducted the Cronbach's Alpha coefficient (see Table 1). This means that the reliability has been achieved and the scale has been recognized reliable with the sample (Pallant, 2013).

Table 1: Reliability Statistics for the Study Questionnaire

The Scale of Study Variables	No. of Items	Jebel Qatrani Cronbach's Alpha
Created resources	8	0.820
Site management	9	0.801
Situational conditions	4	0.705
Endowed resources	5	0.738

Geotourism Demand at Jebel Qatrani

This section of the questionnaire was aimed to collect information related to the demand of visiting Jebel Qatrani. The respondents were asked *is there demand for visiting Jebel Qatrani?* The participants were answering with *yes* or *no*, depending on their view. 54.6% of the respondents were said *no*, 46.4% of the respondents were said *yes* (see Fig. 4).

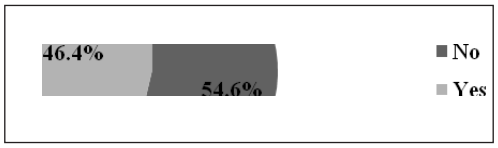


Fig. 4: Demand for Visit Jebel Qatrani

Geotourism Attraction at Jebel Qatrani

The respondents were asked, *what about the attraction on Jebel Qatrani that helps to be considered a geotourism site?* 61.6% of the respondents were answer *yes*, that Jebel Qatrani have attractions such as fossils, rocks, mountains, and fossilized trees, that help it to be considered as a geotourism site. While 38.4% of the participants were answer *no* (see Fig. 5).

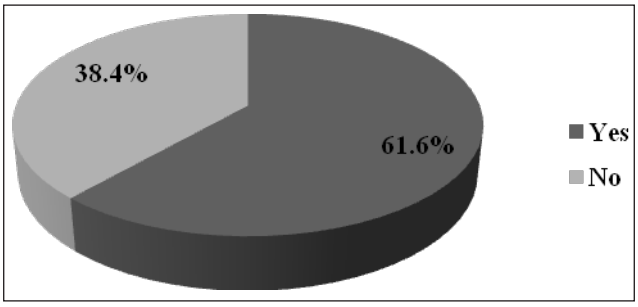


Fig. 5: Geotourism Attraction at Jebel Qatrani

Geotourism Competitiveness Indicators

Endowed Resources in Jebel Qatrani

The findings in Table 2 highlighted that, the mean scores for the geological resources in Jebel Qatrani range from 3.45 to 4.10. Also, the standard deviations for the participants' responses to the items measuring it ranged between 0.33 to 1.92 displays a reasonable level of variability. The findings reported that the grand mean of the variables of geological resources were 3.89, comparing that mean with the 5-piont of Likert scale strongly disagree (1), disagree (2), neutral (3), agree (4), strongly agree (5), this mean is situated between the choice number (3) natural and (4) agree and it is closed by choice (4). The statistics of mean indicated that the majority of participants were agreed for the geological resources. Reviews of the literature confirmed these findings that the granted resources play a crucial role in increasing the demand and constitute the primary motivation for tourist travel, which leads to enhancing the competitiveness of tourism and sustainability (Crouch, 2007).

Table 2: Mean and Standard Deviation of the Endowed Resources in Jebel Qatrani

Endowed Resources in Jebel Qatrani	Mean	Std. Deviation	Number of Responses (n=190)
It is characterized by unique diversity in geological and geomorphological aspects.	3.88	0.42	190
It has a history and geological importance.	4.00	0.33	190
It has an interest to scientists and researchers.	3.45	.921	190
It has an aesthetic value that targets tourists.	4.06	.900	190
It has economic value.	4.10	0.33	190
Statistics for all variables.	3.89	0.76	190

Created Resources in Jebel Qatrani

Findings in the following Table 3 showed that, the mean scores for geotourism competitiveness indicators "created resources" in Jebel Qatrani range from 1.99 to 3.06. As well as, the standard deviations for the participants' responses to the items measuring it ranged between 0.75 to 1.24, which displays a realistic level of variability. The findings reported that the grand mean of the created resources in Jebel Qatrani were 2.36, this means is situated in the choice number (2) disagree. Statistically, these mean showed that the participants disagree for the created resources in Jebel Qatrani. A literature review confirmed that infrastructure plays a critical role in site management. However, geographical heritage and geographical locations faced many challenges, such as accessibility, infrastructure, and the unsustainability of geographical heritage (Errami et al., 2015).

Table 3: Mean and Standard Deviation of Created Resources in Jebel Qatrani

Created Resources in Jebel Qatrani	Mean	Std. Deviation	Number of Responses (n=190)
Transportations are available for visitors in Jebel Qatrani.	2.16	1.01	190
Pamphlet and maps are accessible to visitors in different languages.	2.16	1.01	190
There are recreational activities in Jebel Qatrani such as camping.	2.96	.211	190
There are places to sell souvenirs in Jebel Qatrani.	1.99	0.75	190
There are medical services within or near Jebel Qatrani.	2.20	0.92	190
There is a communication network within Jebel Qatrani.	3.06	1.24	190
There is food and beverage service within or near Jebel Qatrani.	2.27	1.07	190
There are festivals and special events are carried out Jebel Qatrani.	2.11	0.94	190
Statistics for all variables.	2.36	1.02	190

Geotourism Site Management in Jebel Qatrani

Findings in (Table 4) showed that the mean scores for geotourism site management in Jebel Qatrani range from 1.96 to 3.28. On the other hand, the standard deviations for the participants' responses to the items measuring it ranged between 0.73 to 1.20, which displays a reasonable level of contrast. The findings reported that the grand mean of geotourism site management in Jebel Qatrani were 2.37, this means is situated between the choice number (3) natural (2) disagree, and it is closed by choice (2). Statistically, these mean showed that the participants disagree for the geotourism site management in Jebel Qatrani. However, the study of Crouch (2007) reported that site management is the third core component of their model which comprising some factors and activities to enhance the appeal of the resources and attractors of tourism destinations.

Table 4: Mean and Standard Deviation of Geotourism Site Management in Jebel Qatrani

Geotourism Site Management in Jebel Qatrani	Mean	Std. Deviation	Number of Responses (n=190)
There is a marketing plan for the promotion of Jebel Qatrani.	2.18	0.87	190
There is cooperation between the Tourism Promotion Authority, the EEAA and the tourism companies for the marketing of Jebel Qatrani.	2.17	0.80	190
There is a plan for development of Jebel Qatrani.	2.31	0.95	190
The local community will be involved in the development and marketing plans of the Jebel Qatrani.	1.96	0.73	190
Environmental protection laws and the application of the concept of sustainability within the Jebel Qatrani shall be applied.	3.16	1.20	190
The employees are trained to carry out the guidance process within Jebel Qatrani.	1.96	0.73	190
There is a budget to be set up to manage Jebel Qatrani.	3.28	1.20	190
Development and marketing of new tourism products such as geotourism.	2.16	0.98	190
There are suitable programs to promote tourism awareness of the importance of geotourism sites.	2.41	1.11	190
Statistics for all variables.	2.37	0.95	190

Situational Conditions in Jebel Qatrani

The findings in Table 5 indicated that, the mean scores for the indicator of situational condition in Jebel Qatrani range from 1.77 to 2.05. As well, the standard deviations for the participants' responses to the items measuring it ranged between 0.63 to 0.80, which displays a reasonable level of contrast. The gran mean of this indicator is 1.95. The findings reported that the mean of situational condition in Jebel Qatrani were situated between the choice number (1) strongly disagree (2) disagree, and it is closed by choice (2). Statistically, these mean showed that the participants disagree for the indicator of situational condition in Jebel Qatrani. These findings did not match with the literature

review that situational conditions are forces in the external environment that impact upon destination competitiveness (Dwyer & Kim, 2003).

Table 5: Mean and Standard Deviation of Situational Conditions in Jebel Qatrani

Situational Conditions in Jebel Qatrani	Mean	Std. Deviation	Number of Responses (n=190)
There are cameras within Jebel Qatrani.	1.77	0.63	190
Visitors are accompanied by staff in Jebel Qatrani.	2.01	0.74	190
Visitors' IDs, account, and registration are presented before entering Jebel Qatrani.	2.05	0.80	190
Security procedures are in place to protect visitors in Jebel Qatrani.	1.98	.790	190
Statistics for all variables.	1.95	0.74	190

*H1: There is a positive effect of endowed resources in increase the demand for geotourism in Jebel Qatrani***.**

The following Table 6 showed the testing of the first hypothesis. This table provides the R, R2, adjusted R2, and the standard error of the estimate, which can be used to determine the suitability of the regression model to the data. The determination coefficient value was (R^2) for an endowed resource of Jebel Qatrani was (0.721). The percentages of the determination coefficient (R^2) were (72%) in Jebel Qatrani. This means that there is a strong influence on the independent variable on the dependent variable, indicating that changes occurring in the dependent variable increase the demand for the geotourism site due to the changes occurring within the dependent variable.

Table 6: Findings of Multiple Regression Analysis of Endowed Resources in Jebel Qatrani

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.184[a]	0.721	0.055	0.45711

a. Predictors: (Constant), Economic value, Diversity of geological features, Geological heritage, Scientific significance, Aesthetic value.

The findings in the following table showed the Variance Analysis, the findings reported that the calculated (F) value was (1, 179) = 5.752, *Sig.* = 0.012, so there was effect of endowed resources to increase the demand of geotourism in Jebel Qatrani.

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.296	1	1.296	6.202	0.012[a]
	Residual	36.983	179	0.209		
	Total	38.270	180			

a. Predictors: (Constant), Economic value, Diversity of geological features, Geological heritage, Scientific significance, Aesthetic value.
b. Dependent Variable: enhance demand of geotourism in Jebel Qatrani.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.560	0.547		5.963	0.000
	A unique diversity in geological features	1.345	0.145	0.037	4.352	0.001
	Geological heritage	2.012	0.231	0.025	2.421	0.002
	Scientific significance	0.236	0.055	0.063	1.322	0.013
	Aesthetic value	1.621	0.056	0.050	2.561	0.011
	Economic value	1.122	0.077	0.036	1.243	0.005

a. Dependent Variable: Enhance demand of geotourism in Jebel Qatrani.

The findings indicated that the regression determination in the table, it was found that the constant coefficient *B*=1.345, *Sig.*=0.000 for A unique diversity in geological features, *B*=2.012, *Sig.*=0.002 for geological heritage, *B*=0.236, *Sig.*=0.013 for scientific significance, *B*=1.621, *Sig.*=0.011 for aesthetic value, *B*=1.122, *Sig.*=0.005 for economic value. This means there is a direct effect of independent variables on the dependent variable. For test the regression coefficients significant, (T) value of the independent variable of endowed resources was ranged from *T*=4.352 to *T*=1.243, *Sig.*=0.001 to *Sig.*=0.005 at a significant level less than (0.05). Therefore, there was effect of endowed resources on increase the demand of geotourism in Jebel Qatrani. Consequently, there was an effect of endowed resources on increasing the demand for geotourism in Jebel Qatrani. As a result, the results indicated that there is positive effect of

the endowed resources on the increase in the demand for geotourism in Jebel Qatrani. The study rejected the null hypothesis and agreed to the alternative which declared that there is positive effectof the saved resources on increasing the demand for geotourism in Jebel Qatrani.

H2: There is a positive effect of created resources on increase the demand for geotourism in Jebel Qatrani.

For testing the second hypothesis, the researcher was used Multiple Regression Analysis for measuring the effect of created resources on increase the demand of geotourism in Jebel Qatrani see Table 7.

Table 7: Findings of Multiple Regression Analysis of Created Resources

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.229[a]	0.650	0.047	0.44731

a. Predictors: (Constant), Transportations, Pamphlet available, Recreational activities, Places to sell souvenirs, Medical services, Communication network, Food and beverage service.

The previous table of interest is the Model Summary table. This table provides the R, R2, adjusted R2, and the standard error of the estimate, which can be used to determine the suitability of the regression model to the data. The determination coefficient value was (R^2) for a created resource in Jebel Qatrani was (0.650), The percentages of the determination coefficient (R^2) were (65%). This means that there is a strong influence on the independent variable on the dependent variable, indicating that changes occurring in the dependent variable increase the demand for the geotourism site due to the changes occurring within the dependent variable.

ANOVA[b]						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.019	1	2.019	10.089	0.002[a]
	Residual	36.416	183	0.200		
	Total	38.435	184			

a. Predictors: (Constant), Transportations, Pamphlet available, Recreational activities, Places to sell souvenirs, Medical services, Communication network, Food and beverage service.

b. Dependent variable: Enhance demand of geotourism in Jebel Qatrani

The previous table showed the Variance Analysis, the findings reported that the calculated (F) value was (10.089) and degrees of freedom (1.183). The findings indicated that the level of (F) at (0.002) level is less than (0.05), this revealed that a significant effect of the independent variables on the dependent variable on Jebel Qatrani.

The findings indicated that the regression determination in the table, it was found that the constant coefficient *B*=1.055, *Sig.*=0.002 for transportations are available for visitors in Jebel Qatrani, *B*=1.231, *Sig.*=0.000 for Pamphlet and maps are accessible to visitors in different languages, *B*=0.356,*Sig.*=0.000 for there are recreational activities in Jebel Qatrani such as camping, *B*=0.482, *Sig.*=0.016 for there are places to sell souvenirs in Jebel Qatrani, *B*=1.130, *Sig.*=0.000 for there are medical services within or near Jebel Qatrani, *B*=0.421, *Sig.*=0.001 for there is a communication network within Jebel Qatrani, *B*=0.382, *Sig.*=0.005 for there is food and beverage service within or near Jebel Qatrani, *B*=0.275, *Sig.*=0.006 for there are festivals and special events are carried out Jebel Qatrani. This means there is a direct effect of independent variables on the dependent variable. As well, for showed the significant of the regression coefficients,(T) value of the independent variable of created resources was ranged from *T*=4.078 to *T*=2.536, *Sig.*=0.000 to *Sig.*=0.016 at a significant level less than (0.05). Therefore, there was effect of created resources on increase the demand of geotourism in Jebel Qatrani.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.088	0.089		23.507	0.000
	Transportations are available for visitors.	1.055	0.099	0.229	3.176	0.002
	Pamphlet, brochures and maps are available.	1.231	0.141	0.422	4.078	0.000
	There are recreational activities.	0.356	0.078	0.206	3.831	0.000
	There are places to sell souvenirs.	0.482	0.101	0.090	2.536	0.016
	There are medical services.	1.130	0.106	0.120	2.631	0.000
	There is a communication network.	0.421	0.074	0.224	3.441	0.001
	There is food and beverage service.	0.382	0.029	0.281	2.719	0.005
	There are festivals and special events	0.275	0.027	0.209	2.678	0.006

a. Dependent Variable: Enhance demand of geotourism in Jebel Qatrani.

Therefore, the findings reported that there was an effect of created resources on increasing the demand for geotourism in Jebel Qatrani. The study rejected the null hypothesis and agreed to the alternative which declared that there is positive effectof created resources on increasing the demand for geotourism in Jebel Qatrani.

H3: There is a positive effect of geotourism site management on increase the demand for geotourism in Jebel Qatrani.

For testing the third hypothesis, the study was used Multiple Regression Analysis for measuring the effect of site management on increase the demand of geotourism in Jebel Qatrani see Table 8.

Table 8: Findings of Multiple Regression Analysis of Geotourism Site Management

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.189[a]	0.761	0.030	0.44951

a. Predictors: (Constant), Marketing plan, cooperation between the Tourism Promotion Authority, the EEAA and tourism companies, development plan, local community, environmental law, trained employee, budget, marketing new tourism, programs to promote tourism.

The findings in the previous table of interest are the Model Summary. This table provides the R, R2, adjusted R2, and the standard error of the estimate, which can be used to determine the suitability of the regression model to the data. The determination coefficient value was (R^2) for site management of geotourism in in Jebel Qatrani was (0.751). The percentage of the determination coefficient (R^2) was (76%). This means that there is a strong influence on the independent variable (site management) on the dependent variable, indicating that changes occurring in the dependent variable increase the demand for the geotourism site due to the changes occurring within the dependent variable.

ANOVA[b]						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.350	1	1.350	6.679	0.001[a]
	Residual	36.370	182	0.202		
	Total	37.720	183			

a. Predictors: (Constant), site management in Jebel Qatrani.
b. Dependent variable: Enhance demand geotourism in Jebel Qatrani.

The findings in the previous table showed the Variance Analysis, the findings showed that F(1,182)=6.679, Sig.=0.001, so there was effect of site management to increase the demand of geotourism in Jebel Qatrani.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.543	0.342		7.375	0.001
	There is a marketing plan for the promotion of Jebel Qatrani.	2.040	0.242	0.054	4.621	0.005
	There is cooperation between the Tourism Promotion Authority, the EEAA and the tourism companies for the marketing of Jebel Qatrani.	1.325	0.352	0.066	2.189	0.004
	There is a plan for development of Jebel Qatrani.	2.421	0.241	0.073	1.754	0.006
	The local community will be involved in the development and marketing plans of the Jebel Qatrani.	1.215	0.142	0.084	2.123	0.011
	Environmental protection laws and the application of the concept of sustainability within the Jebel Qatrani shall be applied.	1.621	0.066	0.077	1.412	0.008
	The employees are trained to carry out the guidance process with-in Jebel Qatrani.	1.172	0.142	0.069	3.241	0.005
	There is a budget to be set up to manage Jebel Qatrani.	2.362	0.096	0.088	2.133	0.007
	Development and marketing of new tourism products such as geotourism.	1.078	0.088	0.078	1.324	0.002
	There are suitable programs to promote tourism awareness of the importance of geotourism sites.	2.099	0.054	0.069	2.429	0.008

a. Dependent Variable: Enhance demand of geotourism in Jebel Qatrani.

The regression determination table, it was found that the constant coefficient, *B*=2.040, *Sig.*=0.005 for marketing plan for the promotion of Jebel Qatrani, *B*=1.325, *Sig.*=0.004 for cooperation between the Tourism Promotion Authority, the EEAA and the tourism companies for the marketing of Jebel Qatrani, *B*=2.421, *Sig.*=0.006 for there is a plan for development of Jebel Qatrani, *B*=1.215, *Sig.*=0.011 for the local community will be involved in the development and marketing plans of the Jebel Qatrani, *B*=1.621, *Sig.*=0.008 for Environmental protection laws and the application of the concept of sustainability within the Jebel Qatrani shall be applied, *B*=1.172, *Sig.*=0.005 for the employees are trained to carry out the guidance process within Jebel Qatrani, *B*=2.362, *Sig.*= 0.007 for there is a budget to be set up to manage Jebel Qatrani, *B*=1.078, *Sig.*=0.002 for Development and marketing of new tourism products such as geotourism, *B*=2.099, *Sig.*=0.008 for there are suitable programs to promote tourism awareness of the importance of geotourism sites. This means there is a direct effect of independent variables on the dependent variable, for testing the significant of the regression coefficients, (T) value of the independent variable of sit management was ranged from *T*=4.621 to *T*=1.324 *Sig.*=0.002 to *Sig.*=0.011, so there was effect of site management on increase the demand of geotourism in Jebel Qatrani.

Therefore, the findings revealed that there was an effect of site management on increasing the demand for geotourism in Jebel Qatrani. The study rejected the null hypothesis and agreed to the alternative which declared that there is positive effect of site management on increasing the demand for geotourism in Jebel Qatrani

H4: There is a positive effect of situational conditions on increase the demand for geotourism sites in Egypt.

For testing the fourth hypothesis, the study was used Multiple Regression Analysis for measuring the effect of situational conditions on increase the demand of geotourism in Jebel Qatrani see Table 9.

Table 9: Findings of Multiple Regression Analysis of Situational Conditions

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.181[a]	0.601	0.035	0.45409

a. Predictors: (Constant), camera, accompanied visitors, visitors accounted and registered, Security procedures.

The findings in the previous table of interest are the Model Summary. This table provides the R, R2, adjusted R2, and the standard error of the estimate, which can be used to determine the suitability of the regression model to the data.The determination coefficient value was (R^2) for a situational condition of geotourism sites in Jebel Qatrani was (0.601). The percentages of the determination coefficient (R^2) were (60%) in Jebel Qatrani. This means that there is a strong influence on the independent variable on the dependent variable, indicating that changes occurring in the dependent variable increase the demand for the geotourism site due to the changes occurring within the dependent variable.

ANOVA[b]						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.258	1	1.258	6.100	0.014[a]
	Residual	37.116	180	0.206		
	Total	38.374	181			

a. Predictors: (Constant), Situational conditions in Jebel Qatrani.
b. Dependent variable: enhance demand geotourism in Jebel Qatrani.

The findings in the previous table showed the Variance Analysis, the findings reported that the calculated (F) value was (6.100) and degrees of freedom (1.180). The findings indicated that the level of (F) at (0.014) level is less than (0.05), this indicates a significant effect of the independent variables on the dependent variable on the Jebel Qatrani.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.656	0.076		21.815	0.000
	There are cameras within Jebel Qatrani.	0.070	0.28	0.181	2.470	0.006
	Visitors are accompanied by staff in Jebel Qatrani.	1.492	0.109	0.451	3.630	0.000
	Visitors' IDs, account, and registration are presented before entering Jebel Qatrani.	0.069	0.028	0.179	2.458	0.015
	Security procedures are in place to protect visitors in Jebel Qatrani.	0.067	0.025	0.150	2.065	0.007

a. Dependent Variable: Increase demand of geotourism sites.

As well as, the regression determination in the previous table found that the constant coefficient, *B*=0.070, *Sig.*=0.006 for There are cameras within Jebel Qatrani, *B*=1.492, *Sig.*=0.000 for visitors are accompanied by staff in Jebel Qatrani, *B*=0.069, *Sig.*=0.015 for Visitors' IDs, account, and registration are presented before entering Jebel Qatrani., *B*=0.067, *Sig.*=0.007 for Security procedures are in place to protect visitors in Jebel Qatrani. This means there is a direct effect of independent variables on the dependent variable. Also, the finding tested the significant of the regression coefficients, (T) value of the independent variable of Jebel Qatrani was *T*=2.470, *Sig.*=0.014 at a significant level less than (0.05). Therefore, the independent variable was effect on the dependent variable. Therefore, the findings reported that there was an effect of situational conditions on increasing the demand for geotourism in Jebel Qatrani. The study rejected the null hypothesis and agreed to the alternative which declared that there is a positive effect of situational condition on increasing the demand for geotourism in Jebel Qatrani.

CONCLUSION AND PRACTICAL IMPLICATIONS

The findings showed that there was not demand for visiting Jebel Qatrani. However Jebel Qatrani has an attraction that help it to be geotourism site. As well, the findings showed that the participants' responses were agreed with endowed resources variables in Jebel Qatrani. The finding indicated that geological foundations in Jebel Qatrani represent one of the important natural resources. Also, the findings found that the participants were disagreed with the created resources variables in Jebel Qatrani. In terms of site management, the findings indicated that the participants' responses were disagreed with site management variables in Jebel Qatrani. The findings revealed that the participants were completely disagreed with situational conditions variables in Jebel Qatrani. It also showed that Jebel Qatrani accessible from all direction. So, anybody can enter at any time and get out at any time without being controlled. Also, a security procedure is lack in Jebel Qatrani, so there is no procedure for protected customers there. The findings of the study showed the importance of competitive indicators and their role in geotourism sites development. Therefore, consideration should be given to the competitiveness indicators in the Jebel Qatrani in order to increase the demand for them and improve the competitiveness of the Jebel Qatrani.

This research has some limitations such as: firstly, the researcher found some limitations during data collection was the study participants either were very busy and they did not have any times, some participants did not wants to talk and said anything, or they would fear that the information gained may be used for official purposes. Secondly, there is a lack of research addressing the competitiveness of geotourism in Egypt and its role in enhancing the demand of geotourism in Jebel Qatrani. The Future research would use another geosites in Egypt; also it would undertake for testing the findings of this research.

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