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Research Article

## MOUNTAIN DESTINATION INNOVATIVENESS MODEL (MDIM) FOR BABADAĞ-TURKEY\*

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### ABSTRACT

*Muğla is an international tourism destination in Turkey. Babadağ Mountain, located in Fethiye, is also one of the renowned paragliding destinations in the world. The objective of this study is to implement MDIM in Babadağ mountain paragliding destination. This model has already been empirically tested in Alpine mountain tourism destinations (Kuscer, 2013); a destination which is located out of Europe is tried to be focused in terms of MDIM. The rationale is to understand links among destination environment, innovativeness, and tourism development. The relations among these concepts might contribute to sustainable tourism development and create a competitive advantage. Data have been collected by gathering the opinion of paragliding pilots who work in Babadağ. Results related to MDIM were tested by using confirmatory factor analyses (CFA) and structural equation modelling (SEM). The results may help Babadağ mountain paragliding destinations and similar destinations adapt their responses regarding mountain tourism development.*

**Key Words:** destination, mountain, paragliding, tourism, MDIM

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## Dağ Destinasyonu Yenilikçilik Modeli (DDYM) Babadağ-Türkiye

### ÖZET

*Muğla Türkiye’de yer alan ünlü turizm destinasyonlarından biridir. Ayrıca Fethiye’de yer alan Babadağ dünyaca ünlü paragliding destinasyonlarından biridir. Bu çalışmanın amacı DDYM Babadağ dağ paragliding destinasyonunda uygulamaktır. Bu model hâlihazırda Alpin dağ turizmi destinasyonlarında test edilmiştir (Kuscer, 2013). Çalışmada DDYM bağlamında Avrupa dışında bir destinasyona odaklanılmıştır. Çalışmanın amacı destinasyon çevreleri, yenilikçilik ve turizm gelişimi arasındaki ilişkilerin anlaşılmasıdır. Bu kavramlar arasındaki ilişkiler sürdürülebilir turizm gelişimine katkıda bulunabilir ve bir rekabetçilik avantajı yaratabilir. Veriler Babadağ’da faaliyet gösteren paragliding pilotlarının görüşlerinden derlenmiştir. DDYM ilişkin veriler doğrulayıcı faktör analizi (DFA) ve yapısal eşitlik modellemesi (YEM) kullanılarak test edilmiştir. Elde edilen sonuçlar Babadağ dağ paragliding destinasyonu ve benzer destinasyonların dağ turizmi gelişimine ilişkin yanıtlarını uyarlamalarına yardımcı olabilecektir.*

**Anahtar Kelimeler:** *destinasyon, dağ, paragliding, turizm, DDYM*

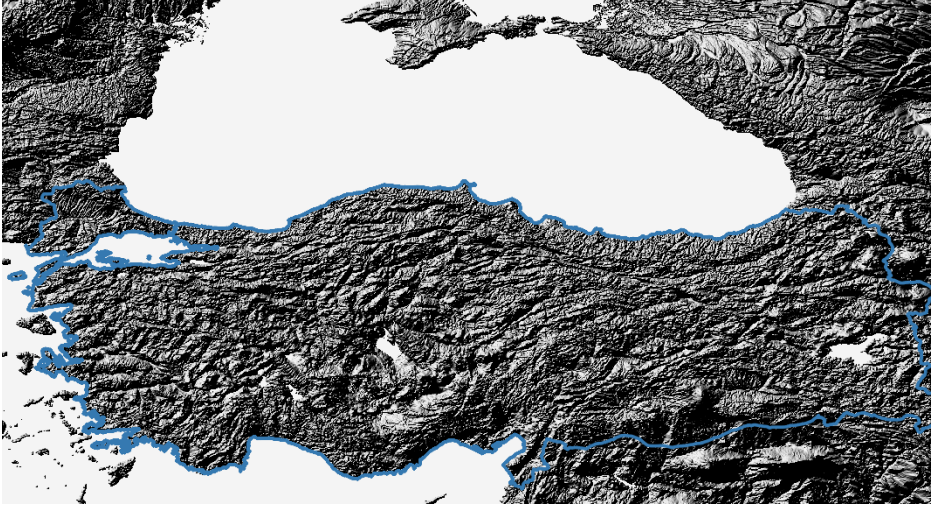
### Introduction

Mountains are essential for the global ecosystem (Kuscer, 2012: 1). 25% of the terrene land surface is covered by mountains (United Nations Educational Scientific and Cultural Organization-UNESCO, 2021). Mountains and mountain ranges affect the climate and the lives and activities of living in the world (Core Knowledge History and Geography, 2016: 1).

The growth of tourism thereupon the popularisation of mountain tourism results from mountains that provide recreation sources. As a result, mountains are the runner-up destinations globally after mountains. Mountain tourism hereat mountain destinations are a trying and complicated phenomenon that meets a wide range of tourist’s needs like sports, leisure, relaxation, nature, culture, etc., health, and wellness (Duglio & Beltramo, 2019: 129). Nonetheless, such a quick and sudden development reveals some issues. This is why mountain destinations

require appropriate management strategies for the resources and the socio-economic advancement communities living in the mountain destinations (Kuscer, 2012: 1). In this manner, this research focuses on Babadağ Mountain in Fethiye.

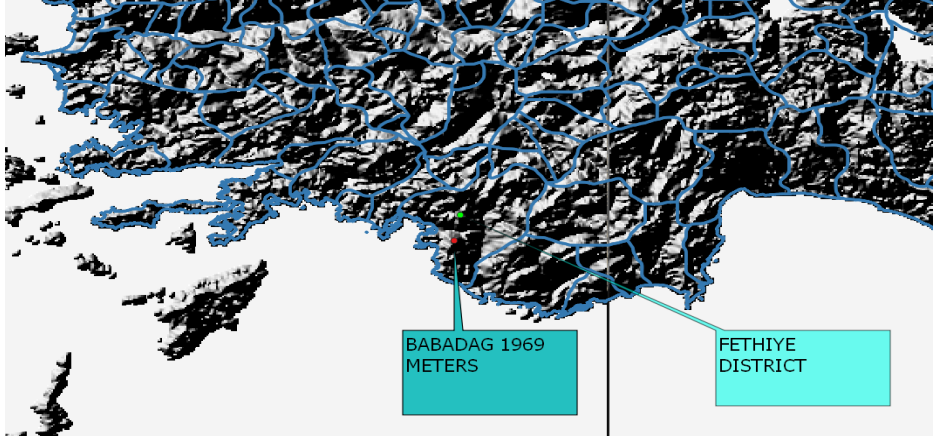
According to the latest United Nations World Tourism Organization (UNWTO) (2020) statistics for 2019, international tourist arrivals reached 1,460 million worldwide. Turkey is sixth among the top ten destinations, with 51 billion international tourist arrivals in 2019 (UNWTO, 2020). The effects of the pandemic have had a critical result for international tourism. However, with the accelerated rate of vaccine application, worldwide international tourism show signs of recovery. Turkey had over 15 million international tourist arrivals in 2020 (Turkish Statistical Institute, 2021). Muğla province received 3.068.796 international and 197.854 domestic total 3.266.650 total tourist arrivals in 2019 (Muğla Provincial Directorate of Culture and Tourism, 2019). When Fethiye district was examined as a popular tourism destination in Muğla province district received 450 thousand international and 700 thousand domestic total 1,1 million tourist arrivals in 2017 (Muğla Provincial Directorate of Culture and Tourism, 2018). These latest statistics certify that Fethiye is a popular tourist destination.



**Figure 1.** Elevation Map of Turkey

Source: Elevation Map Created by Authors Using Qgis Software

Turkey is a mountainous country. The elevation map of Turkey is presented in Fig. 1. Fethiye is also a mountainous region. The mid and western Taurus mountain ranges' edges lay parallel to the sea, starting from areas north.



**Figure 2.** Elevation Map of Fethiye

Source: Elevation Map Created by Authors Using Qgis Software

Babadağ Mountain, which is located in Fethiye near the famous resort Ölüdeniz (Blue Lagoon), is the nearest peak to the sea (5 km) with a height of 1969 meters. Fethiye region also has the Akdağ Mountains (3050 m), Boncuk Mountains (2700 m), and Cal Mountain (2200 m) (Fethiye Chamber of Commerce and Industry, 2017). The elevation map of the Fethiye district and Babadağ Mountain is presented in Fig. 2.

Sports activities in Fethiye with the number of tourists and businesses are presented in Tab. 1. As can be seen from the data in Fethiye, paragliding is an essential sports tourism activity, with 95622 tourists and 13 paragliding travel agencies. In addition, the rich and wide-ranging thermic points, availability of ascending after the jump for flying over the sea, the rich flora around the mountain, and the stunning view of Ölüdeniz make Babadağ mountain a popular paragliding destination (Hazar, 2007: 147).

**Table 1.** Sports Activities in Fethiye for Tourism Purposes

Activity	Number of Tourists						Number of Businesses					
	2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017
Jeep Safari	75000	90000	70000	70000	80000	72800	7	8	7	7	14	15
Bus-Minibus Safari				5000	1000					3	2	
Quad Safari	7500	7500	7500	7500	2500	120000	3	2	3	2	2	3
Paragliding	62000	75000	92494	92494	95622		10	12	11	10	13	12
Surface Water	20000	25000	20000	20000	20000	20000	13	15	16	20	19	21
Under Water	18000	22500	20000	20000	20000	6500	10	10	10	11	12	10
Rafting	20000	30000	30000	30000		31000	3	2	3	3		2
Horse Riding	5000	5000	6000	6000		45000	3	1	2	2		
Boat Tour	360000	375000	375000	375000		9380	143	147	162			
<b>Total</b>	<b>567500</b>	<b>630000</b>	<b>625994</b>	<b>625994</b>			<b>192</b>	<b>197</b>	<b>214</b>	<b>162</b>		<b>184</b>

Source: Fethiye Chamber of Commerce and Industry, 2017: 145

Destination development, marketing, and management are globally coherent with tourism development (Wang, 2011: 1). Today's highly competitive tourism sector requires destinations to adopt well-organized development, marketing, and management activities. However, as stated in the statistics above, high tourist arrivals to the region may put pressure on the Fethiye destination. Therefore, sustainable and innovative development is a crucial issue for the area.

### Literature Review

Adventure/recreation, biodiversity, cultural diversity, difficult access, ecosystem fragility, lack of infrastructure/services, natural hazards, poverty, protected areas, scenic beauty, spirituality, and traditional micro-enterprise are mountain tourism features depend on and

formed. These features are pertinent to high altitude and relative isolation (Godde, 1998: 9). These critical features of mountain tourism are essential for the sustainable development of the destinations, especially for mountain destination environments. The environments here contain the culture, the social structure, and the ecology of natural premises (Flagestad & Hope, 2001: 450). The exploitation of the environment is a potential source for a decline in competitiveness (Butler, 1980). Therefore, destinations should be innovation-oriented and fragile environments should be protected (Kuscer, 2012: 20).

### *Tourism Destination and Mountain Paragliding Destination*

Before defining the mountain-paragliding destination, it may be proper to set the destination first. However, the definitions of destination in the literature vary (Buhalis, 2000; Vanhove, 2005; Bornhorst et al. 2010). For example, the definition by UNWTO (2021) is:

*“A local tourism destination is a physical space in which a visitor spends at least one overnight. It includes tourism products such as support services and attractions and tourism resources within one day’s return travel time. It has physical and administrative boundaries defining its management, images, and perceptions defining its market competitiveness. Local tourism destinations incorporate various stakeholders, including a host community, and can nest and network to form larger destinations.”*

Paragliding is an adventure (extreme) sport that can be performed using specially designed equipment (parachute) either individually or in tandem (accompanied by a pilot) (Imerci, 2015). A mountain paragliding destination can be identified as an asset that involves firms, organizations, activities, areas, and establishments. They produce supply for the paragliding demand (adapted from Flagestad & Hope, 2001).

## *Destination Competitiveness, Innovation, Environments, and Development*

Tourism is becoming internationally competitive. The rapid growth of tourism recently focused on destinations' economic policy to attract tourists while competing with other destinations. Therefore, destinations need to supply sustainable tourism products and appealing technology-oriented investment for a strong economy while competing. Moreover, widely studied topic in tourism literature as tourism destination competitiveness is an essential element for the success of tourism destinations (Cracolici & Nijkamp, 2005).

Porter's (1980) model is a seminal study in competitiveness literature. In the model, he argues that a firm should constantly improve its processes and products to have a competitive advantage. Competitiveness is widely studied at the micro (company) and macro (nation) levels. Here micro-level refers to competitiveness among companies at the country level while the macro-level refers to international competitiveness among countries (Porter, 1980; Crouch & Ritchie, 2000).

Destination competitiveness has long been a studied topic in the tourism literature (Ritchie & Crouch, 2003; Dwyer & Kim, 2003; Milicevic et al. 2017; Novais et al. 2018). Several authors defined destination competitiveness (Enright & Newton, 2005; Dwyer & Kim, 2003). Ritchie and Crouch (2003: 2) define destination competitiveness as:

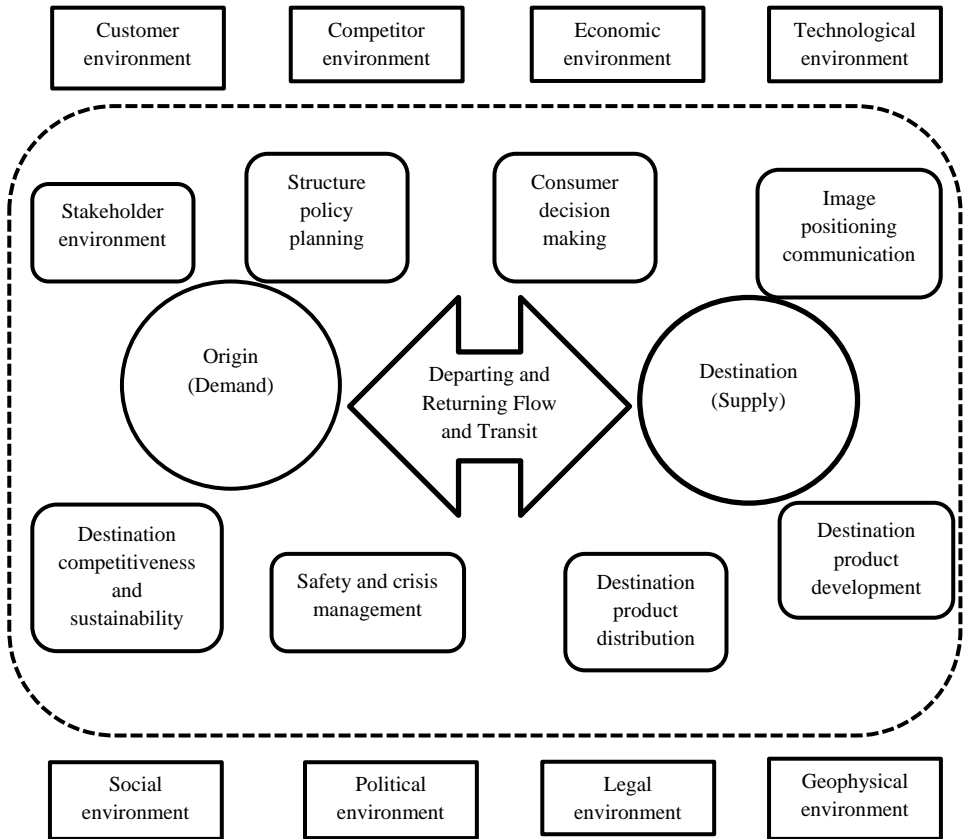
“What makes a tourism destination truly competitive is its ability to increase tourism expenditure, to increasingly attract visitors while providing them with satisfying, memorable experiences, and to do so in a profitable way, while enhancing the well-being of destination residents and preserving the natural capital of the destination for future generations.”



The term innovation has been a widely studied topic in the academic field. However, as a fledgling concept, it is investigated as process and product innovation in the economic field (Sledzik, 2013; Drucker, 1985).

Innovation is the invention, enactment of novel enhanced goods and services (Cowan & Paal, 2000). In terms of tourism, innovation needs to take into account differently because tourism is not purely a production and consumption phenomenon. It is an economic fact (Sessa, 1984). Moreover, as Burns and Holden argued (1995), tourism is not a physical good. It is a subjective experience.

Innovation in tourism is broadly studied by scholars in tourism (Hjalager, 2010; Approach & Paget, 2010; Novelli et al., 2006). Tourism is a system that receives and sends influences from outside the system. Thus, a system is “subject to many influences and pressures that arise outside the system itself.” (Ritchie & Crouch, 2003). Therefore, the tourism sector continuously develops new products. And innovation here is a crucial element for competitiveness.



**Figure 3.** Concept and Scope of Destination Marketing and Management

Source: Adapted from Wang, 2011: 6

Destination environments as natural, political/legal, technological, economic, cultural, and social factors are the base of destination product that a destination can offer (Murphy et al., 2000). These environments are vital for destination development (Ritchie & Crouch, 2003; Dwyer & Kim, 2003). The development of destinations as part of an open tourism system is based on external systems or

environments (Wang, 2011). Therefore, the concept and of destination marketing and management are presented in Fig. 3. Combined destination management and development efforts may help bridge the gap between macro and microsystems for destination competitiveness (Fyall, 2011).

To achieve competitive advantage, destination development is a vital issue. According to Liu (2003), tourism development is a concurrent combination of satisfying the needs of the tourists, businesses, the host community, and environmental protection. Nevertheless, the destination is a complex network involving different actors where many challenges need to be overcome while developing different strategies (Haugland et al., 2011).

## **Materials and Methods**

Confirmatory Factor Analyses (CFA) have been performed for grouping elements of MDIM into factors. CFA is used because MDIM is tested in Alpine mountain tourism destinations before. After CFA was applied (SPSS), structural equation model analysis (SEM) (LISREL) was performed. Previously research model developed by Kuscer (2013) was established by the guidance of mountain destination stakeholders in Alpine destination, and it was applied to destination managers.

The MDIM consists of mountain destination environments, innovation, and development of mountain destinations. Mountain destination environments element has technological, socio-cultural, natural, and political, and legal environment factors. Mountain destination innovativeness has socio-cultural sustainability and stakeholder participation, environmental sustainability, and proactiveness factors. And lastly, the mountain destination development element has visitor satisfaction, preservation of the natural environment, tourist traffic, and socio-economic prosperity factors.

However, considering the limitations of the research resources, Fethiye Babadağ Paragliding pilots were defined as the focus of the survey. After the interviews with the active 13 paragliding travel agency managers, they mention that paragliding touristic activity employs an average of 350 pilots in the Fethiye region. When paragliding activity is considered, pilots are the most critical stakeholders providing paragliding services. Therefore, this study focus on paragliding pilots in Fethiye as the population. According to Gürbüz and Şahin (2016) 183 responses is enough for a 350 population in 95% confidence intervals. In this study, 188 usable responses were obtained from the pilots flying in Babadağ.

## Results

### *Mountain Destination Environments*

First, CFA was conducted in mountain destination environments which enhances 19 items. Second, the measure of sampling adequacy is not acceptable (KMO: 0,496). This result reveals that factor analyses need to be analysed again after removing lower factor loading elements. Additionally, Bartlett's Test of Sphericity ( $p=0,0000$ ) shows that correlations are available between some questions. The results were presented in Tab. 2. Tab. 3.

**Table 2.** Component Correlation Matrix of Mountain Destination Environments

Component	1*	2**	3***	4****
1*	<b>1,000</b>	,574	,661	,566
2**	,574	<b>1,000</b>	,504	,640
3***	,661	,500	<b>1,000</b>	,772
4****	,566	,640	,072	<b>1,000</b>
Ext. Mthd: Principal Component Analysis.				
Rot. Mthd: Promax with Kaiser Normalization.				

\*Technological environment

\*\*Socio-cultural environment

\*\*\*Natural environment

\*\*\*\*Political and legal environment

**Table 3.** CFA Results for Mountain Destination Environments

<b>Item</b>	<b>F1: Technological Environment</b>	<b>Communality</b>
1-Efficient electricity infrastructure	,931	,840
2-Efficient health and medical facilities	,920	,947
3- Availability of Internet connection features	,912	,885
4-Efficient water supply infrastructure	,818	,954
5-Mobile phone signal broadcasting	,790	,893
6-*Acceptance of credit cards and the presence of ATMs	,410	,798
<b>Item</b>	<b>Fac2: Socio-Cultural Environment</b>	<b>Communality</b>
1-Presence of multilingual written instructions and guides (traffic signs, maps, and restaurant menus)	,829	,888
2-Local managerial and staff skills	,753	,875
3-Ease of oral communication (in English and other languages)	,722	,756
4-Hospitality of local population	,721	,875
5-**Support of tourism development by the local population	,437	,808
<b>Item</b>	<b>F3: Natural Environment</b>	<b>Communality</b>
1-Visual appeal	,887	,812
2-Favorable climate conditions	,856	,886
3-Variety and diversity of terrains for different sports	,638	,813
4-Carrying capacity	,544	,857

Item	F4: Political and Legal Environment	Communality
1-The efficiency of the regulatory framework	,868	,780
2-The efficiency of decision making	,800	,840
3-Support of government at the municipality level	,747	,847
4-Support of government at the regional level	,666	,943

Firstly “acceptance of credit cards and the presence of ATMs” removed from technological environment items. This seems acceptable because Babadağ has paragliding airfields and paraglider tourists book their flights through travel agencies, verifying the items’ low factor loading score. Secondly, “support of tourism development by the local population” is removed from socio-cultural environment items. After removing the common factor loading items, factor analyses were conducted again. Rotated Component Matrix presented in Tab. 4. KMO measure of sampling adequacy is acceptable (0,632). Additionally, Bartlett’s Test of Sphericity ( $p=0,0000$ ) shows that correlations are available between some questions.

**Table 4.** Rotated Component Matrix Results for Mountain Destination Environments

Rotated Component Matrix				
	Component			
	1	2	3	4
2-Efficient health and medical facilities	,934		,264	
5- Mobile phone signal broadcasting	,924			
4-Efficient water supply infrastructure	,923			
3- Availability of Internet connection features	,910			
1-Efficient electricity infrastructure	,823		,340	
1-Presence of multilingual written instructions and guides (traffic signs, maps, and restaurant menus)		,807		

3-Ease of oral communication (in English and other languages)		,804		
2-Local managerial and staff skills		,757		
4-Hospitality of the local population	,254	,667		
1-Visual appeal		,209	,858	
4-Carrying capacity	,202		,820	
3-Variety and diversity of terrains for different sports			,773	
2-Favorable climate conditions			,658	
4-Support of government at the regional level				,882
3-Support of government at the municipality level				,849
2-The efficiency of decision making	,308			,632
1-The efficiency of the regulatory framework	,254			,542
Ext. Mthd: Principal Component Analysis. Rot. Mthd: Promax with Kaiser Normalization.				

### *Mountain Destination Innovativeness*

Secondly, CFA was conducted in mountain destination environments, which enhances 25 elements. KMO measure of sampling adequacy is acceptable (0,896). Additionally, Bartlett's Test of Sphericity (p=0,0000) shows that correlations are available between some questions. The results were presented in Tab. 5. Tab. 6.

**Table 5.** Component Correlation Matrix of Mountain Destination Innovativeness

Component	1*	2**	3***
1*	<b>,1000</b>	,622	,524
2**	,637	<b>,1000</b>	,666
3***	,522	,573	<b>,1000</b>

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

\*Socio-cultural sustainability and stakeholder participation

\*\*Environmental sustainability

\*\*\* Proactiveness

**Table 6.** CFA Results for Mountain Destination Innovativeness

<b>Item</b>	<b>F1: Socio-Cultural Sustainability and Stakeholder Participation</b>	<b>Communality</b>
1-Offering local products in combination with experiencing local craftsmanship	,906	,732
2-Cooperation of all stakeholders in the decision-making process	,897	,807
3-Availablity of knowledge resources and education	,895	,742
4-Respect for the socio-cultural authenticity of host communities (conservation of cultural heritage and traditional values)	,875	,684
5-Taking into account the interests of the local community	,863	,741
6-The organizational structure that supports the involvement of all stakeholders	,854	,648
7-Participation of all stakeholders in tourism planning	,846	,749
8-The local population's support for change	,844	,360
9-The local population's capacity to change	,814	,546
<b>Item</b>	<b>F2: Environmental Sustainability</b>	<b>Communality</b>
1-Transportation policies that favour alternative transportation modes and public transportation	,898	,812
2-Implementing new practices in environmental management	,876	,788
3- Optimal use of environmental resources	,866	,768
4-Environmental policies that support sustainable development	,793	,714
5-Adapting to changing climate conditions	,781	,761



6-Exploiting opportunities created by changing climate conditions	,696	,685
7-Energy policies that support usage of alternative sources of energy	,621	,857
8-Maintaining ecological processes and helping to conserve natural resources and biodiversity	,563	,543
<b>Item</b>	<b>F3: Proactiveness</b>	<b>Communality</b>
1-Creation of distinctive image of the destination	,896	,833
2-Tourism products adapted to changing demand (last-minute bookings, price sensitivity, etc.)	,848	,844
3-Formation of destination's innovation strategy	,797	,879
4-Logistics adapted to changing demand (last-minute reservations, new reservation systems, etc.)	,795	,780
5-Creation of innovative vision	,775	,783
6-Ease of access information through a highly developed communication system	,746	,834
7-Web portal providing the rich user experience	,701	,650
8-Dynamic content on the web portal	,649	,591

### *Mountain Destination Development*

Thirdly, CFA was conducted to mountain destination development, which enhances 28 elements. KMO measure of sampling adequacy is acceptable (0,773). Additionally, Bartlett's Test of Sphericity ( $p=0,0000$ ) shows that correlations are available between some questions. The results were presented in Tab. 7. Tab. 8.

**Table 7.** Component Correlation Matrix of Mountain Destination Development

Component	1*	2**	3***	4****
1*	<b>,1000</b>	,514	,520	,532
2**	,553	<b>,1000</b>	,572	,586
3***	,527	,517	<b>,1000</b>	,678
4****	,510	,558	,543	<b>,1000</b>
Ext. Mthd: Principal Component Analysis. Rot. Mthd: Promax with Kaiser Normalization.				

\*Visitor satisfaction

\*\*Preservation of natural environment

\*\*\*Tourist traffic and expenditure

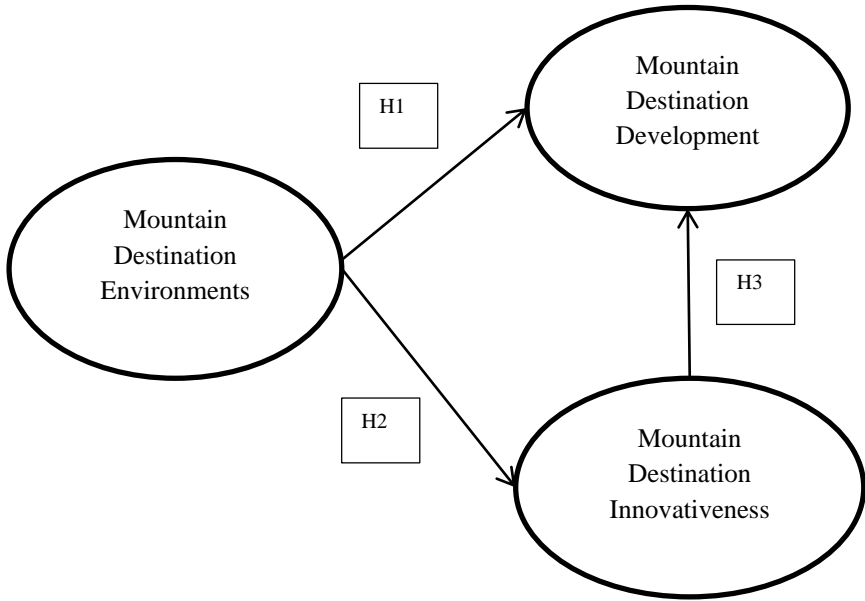
\*\*\*\*Socio-economic prosperity

**Table 8.** CFA Results for Mountain Destination Development

Item	F1: Visitor Satisfaction	Communality
1-Perceived value for money of tourist services	,823	,862
2-Availability of tourism infrastructural services	,795	,716
3-Perceived quality of tourist services	,780	,834
4-Share of returning visitors	,740	,556
5-Visitor satisfaction with environmental issues	,695	,566
6-Share of very satisfied visitors	,683	,787
Item	F2: Preservation of Natural Environment	Communality
1-CO2 emissions in tourism sector	,968	,612
2-Participation of recycled waste in the tourism sector	,915	,759
3- Participation of recycled water in the tourism sector	,837	,605

4-Energy consumption in tourism sector	,786	,834
5-Frequency of environmental accidents related to tourism	,720	,669
6-Water pollution from sewage	,711	,632
7-Water consumption in tourism sector	,698	,612
8-Usage of clean energy in tourism sector	,683	,511
9-Air quality	,653	,550
10-Amount of soil erosion	,537	,545
<b>Item</b>	<b>F3: Tourist Traffic</b>	<b>Communality</b>
1-Growth rate in the average length of stay	,881	,757
2-Market share growth in terms of tourist arrivals	,834	,720
3-Average length of stay	,803	,687
4-Visit to parks, recreation areas	,774	,626
5-Market share growth in terms nights spent	,662	,648
6-Hotel occupancy rate	,640	,715
7-Daily visitor expenditure growth	,588	,647
<b>Item</b>	<b>F4: Socio-economic Prosperity</b>	<b>Communality</b>
1-Lodging revenues	,887	,681
2-The average wage in the tourism sector compared to the other sectors of the economy	,813	,537
3-Contribution of the tourism sector to the economic growth	,755	,913
4-Employment growth in tourism	,728	,834
5-Seasonality of employment in tourism sector	,687	,694

### Structural Equation Model Analysis



**Figure 4.** SEM

Source: Adapted from Kuscer, 2013.

The study results reveal that CFA results of the Mountain Destination Innovativeness measurement model provide sufficient statistics before conducting Structural Equation Model analysis to test the model. The model is presented in Fig. 4. Hypotheses for the SEM are:

H1: Mountain destination environments have a positive impact upon mountain destination development.

H2: Mountain destination environments have a positive impact upon mountain destination innovativeness.

H3: Mountain destination innovativeness have a positive impact upon mountain destination development.

According to the SEM, mountain destination environments as technological, socio-cultural, natural, and political and legal environments impact mountain destination development as visitor satisfaction, preservation of the natural environment, tourist traffic, and socio-economic prosperity. Moreover, mountain destination environments impact mountain destination innovativeness as socio-cultural sustainability and stakeholder participation, environmental sustainability, and proactiveness. Finally, mountain destination innovativeness has an impact on mountain destination development.

After the path analysis in LISREL for the SEM, the results verify that the model did not provide sufficient Goodness of Fit Statistics (GFI: 0.62; RMSEA: 0.17; RMR: 0.18; SRMR: 0.15; NFI: 0.53; NNFI: 0.52 CFI: 0.59; AGFI: 0.51; PGFI: 0.48; PNFI: 0.46). Although the t-values for H1 and H2 are over the critic value of 1,96 H3 path has a t-value of 0,87, and SEM did not provide statistically significant results. This is maybe due to a lack of innovativeness activities perceptions by the paragliding pilots. Also, according to Buhalis (2000), destinations encapsulate 6 As: Activities, ancillary services, amenities, attractions, available packages, and accessibility. Each destination has a divergent amalgam of these 6 As; therefore, each destination needs to be evaluated separately.

## **Conclusion**

This study tries to apply MDIM in a different non-European mountain destination. Tourism is an open, dynamic, ever-changing system. As a system, it sends and receives influences from outside the system. Therefore, destinations are a vital component of the system from the supply side. This dynamic, ever-changing system structure made competitiveness and innovation key destination management and development elements.

The results of the CFA for MDIM verify that the measurement scale is a reliable instrument for mountain destinations. Therefore, MDIM in this paper will facilitate a clearer understanding of sustainable mountain destination development. However, the results of the SEM analysis reveal the model did not provide significant statistics. This verifies that each destination needs to be evaluated differently because of distinctive characteristics that influence its innovation.

Each destination comprises a different amalgam of 6 As, which influences innovation and competition. However, MDIM is a good instrument for mountain destination innovativeness. It needs to be adapted for the target destination.

As a limitation of the study, only pilots' responses were surveyed. Although paragliding activity stakeholders vary as travel agencies, transportation, local governance, etc., pilots are the leading service providers for the product offered. Future research surveying more comprehensive stakeholder responses will be helpful for MDIM development.

### **Information Note**

The article has been prepared in accordance with research and publication ethics. This study does not require ethics committee approval. The authors contributed jointly to the study and there is no conflict of interest between the authors.

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## EXTENDED ABSTRACT

*In this study, MDIM was applied to the Fethiye Babadağ mountain paragliding destination. MDIM was tested previously in the Alpine region. Therefore, the focus of this study is to test MDIM in a non-European destination. In the introduction part of the study, sustainable development for mountain destinations is defined. With a growing number of domestic and international tourist arrivals, Muğla is among Turkey's top 5 famous destinations. Fethiye district of Muğla is also a reputed destination with a similar trend with Muğla. Babadağ is located in Fethiye, and it is one of the renowned paragliding destinations of the world. An increasing number of arrivals verifies the need for sustainable and innovative development for Babadağ. Sustainable and innovative development is critical for destinations.*

*In the literature part of the study, firstly, the mountain destination is defined. Subsequently, the importance of destination competitiveness is highlighted. Thus, the internationally competitive characteristics of tourism operations are emphasized. Secondly, the importance of innovation in the tourism sector is tried to be explained. In terms of innovation, tourism is differentiated from the other industries because it is a subjective experience of consuming services instead of tangible goods. Lastly, the environments of the destination are investigated. These environments are very considerable for destination development. Moreover, these environments constitute the fundamental of the destination product which a destination can offer. Destination's environments are like a stage of the theatre. The more quality the destination environment possesses, the more likely is the destination appeal. Without a high-quality destination environment, the destination would solely develop through man-made attractions. In other words, the destination would serve artificially created tourism products rather than nature-based ones.*

*In the last part of the study, the MDIM model is presented. MDIM consists of Mountain Destination Environments, Mountain Destination Innovativeness, and Mountain Destination Development. The questionnaire of MDIM was conducted to paragliding pilots who are actively in charge in Babadağ. Firstly, Confirmatory Factor Analyses (CFA) were performed to test the previously tested model. After removing lower factor loadings from the model, CFA results verify that MDIM has relevant CFA statistics. After CFA, structural equation model analysis (SEM) was performed in LISREL. The hypotheses for the SEM are: Mountain destination environments have an impact upon mountain destination development (H1).*

*Furthermore, mountain destination environments affect mountain destination innovativeness (H2). Therefore, mountain destination innovativeness affects mountain destination development (H3). Although the t-values for H1 and H2 are over the critic*

values, the H3 path has a t-value of lower critic value, and SEM did not provide statistically significant results.

*The results of the study verify that the MDIM measurement scale is a reliable instrument for mountain destinations. But SEM analyses did not provide supportive statistics for the study. The results of the study verify that each destination is different and needs to be evaluated distinctly.*

*As the limitations, only the perceptions of pilots surveyed in this study. A more comprehensive approach for obtaining stakeholder perceptions must be considered further because paragliding activity stakeholders vary as travel agencies, transportation, local governance, etc.*