An Application of Mountain Destination Innovativeness Model (MDIM) in Babadag Mountain-Paragliding Destination of Fethiye District of Mugla Province in Turkey

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Abstract

Mugla province is one of the popular destinations of Turkey. Fethiye district, which is located in Mugla province is one of the famous resort destinations in Mugla province. Babadag Mountain is in Fethiye, and it is one of the popular paragliding destinations in the world. This paper aims to apply MDIM, which was empirically tested in Alpine mountain tourism destinations (Kuscer et al., 2017), in Babadag mountain paragliding destination. The purpose of this paper is to examine MDIM in a different non-European destination to comprehend the relationships between destination environments, innovativeness, and tourism development. The data have been collected by gathering the opinion of the pilots of the Babadag mountain paragliding destination. Results related to MDIM tested using confirmatory factor analyses (CFA). The results may help Babadag mountain paragliding destination and similar destinations for adapting their responses regarding mountain tourism development.

Keywords: Mountain Destinations, Mountain Tourism, Paragliding, MDIM, SEM

Introduction

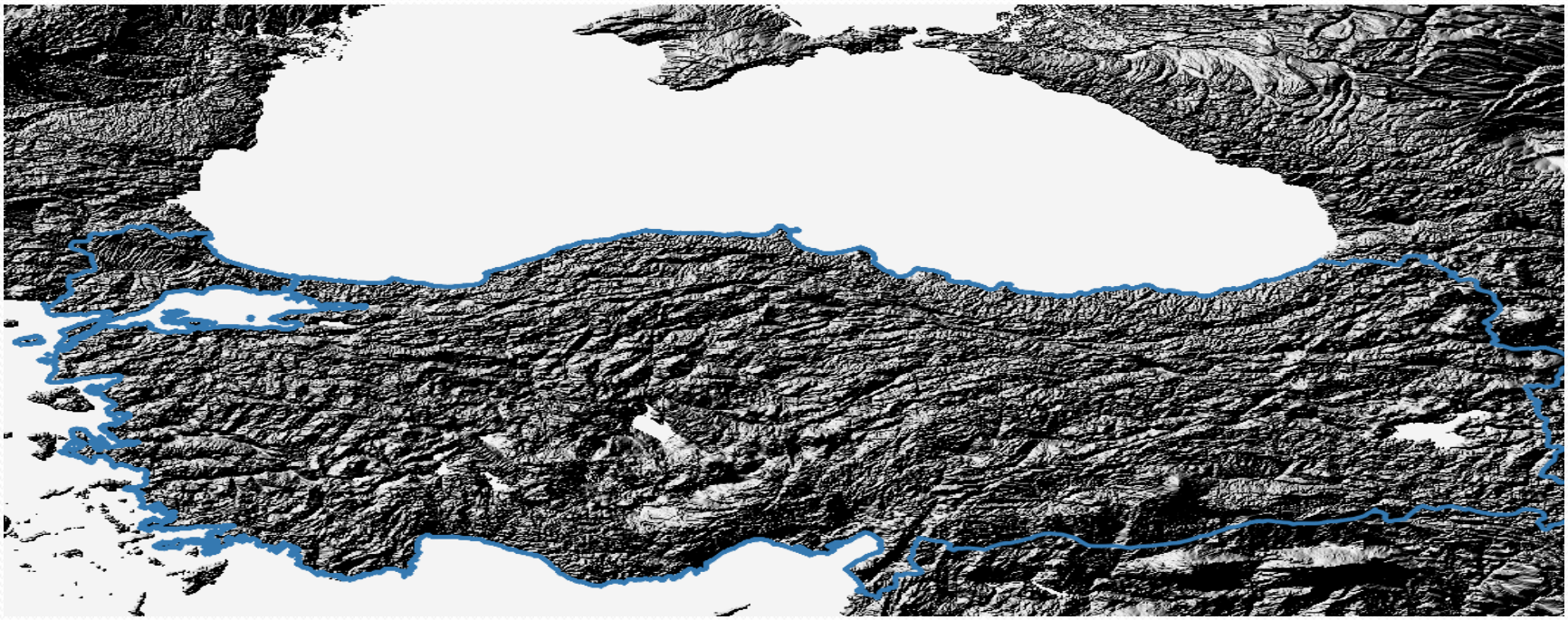
- Mountains are essential for the global ecosystem (Kuscer, 2012: 1). Over 20% of the terrene land surface covered by mountains (Ives, 1992). Some of the highest peaks of the world include Everest (8848 m), Aconcagua (6962 m), Denali (6190 m), Kilimanjaro (5895 m), Elbrus (5642 m) and Mont Blanc (4696 m). Andes (South America), Rockies and Appalachians (North America), Himalayas and Urals (Asia), Atlas (Africa), and Alps and Caucasus (Europe) are the major mountain ranges in the world. Mountains and mountain ranges affect the climate and the lives and activities of living in world (Core Knowledge History and Geography, 2016: 1).

The growth of tourism thereupon the popularisation of mountain tourism is a result of mountains which provide recreation sources. After resorts mountains are the second most well-liked tourist destinations in the world, mountain tourism hereat mountain destinations are a trying and complicated phenomenon that meets a wide range of tourist's needs like sports, leisure, relax, nature, culture, health, and wellness (Duglio and Beltramo, 2019: 129). Hence, mountain destinations need appropriate management of mountain resources and the sufficient socio-economic advancement of mountain communities (Kuscer, 2012: 1). Starting from this point of view this research set focus on Babadag Mountain in Fethiye.

According to the statistics by the United Nations World Tourism Organization (UNWTO) (2019), international tourist arrivals reached 1,4 billion worldwide. Turkey is in the eight positions among the top ten destinations with 37,6 billion international tourist arrivals in 2017 (UNWTO, 2018). In the first quarter of 2019 international tourist arrivals reached 6,8 million with a growth rate 7,07% in Turkey compared to the previous year. This latest data verify that as a top tourism destination Turkey shows an active recovery in tourism. When Fethiye district examined as a popular tourism destination in Mugla province district received 450 thousand international and 700 thousand domestic total 1,1 million tourist arrivals in 2017 (Mugla Provincial Directorate of Culture and Tourism, 2018). This latest statistics certify that Fethiye is a popular tourist destination.

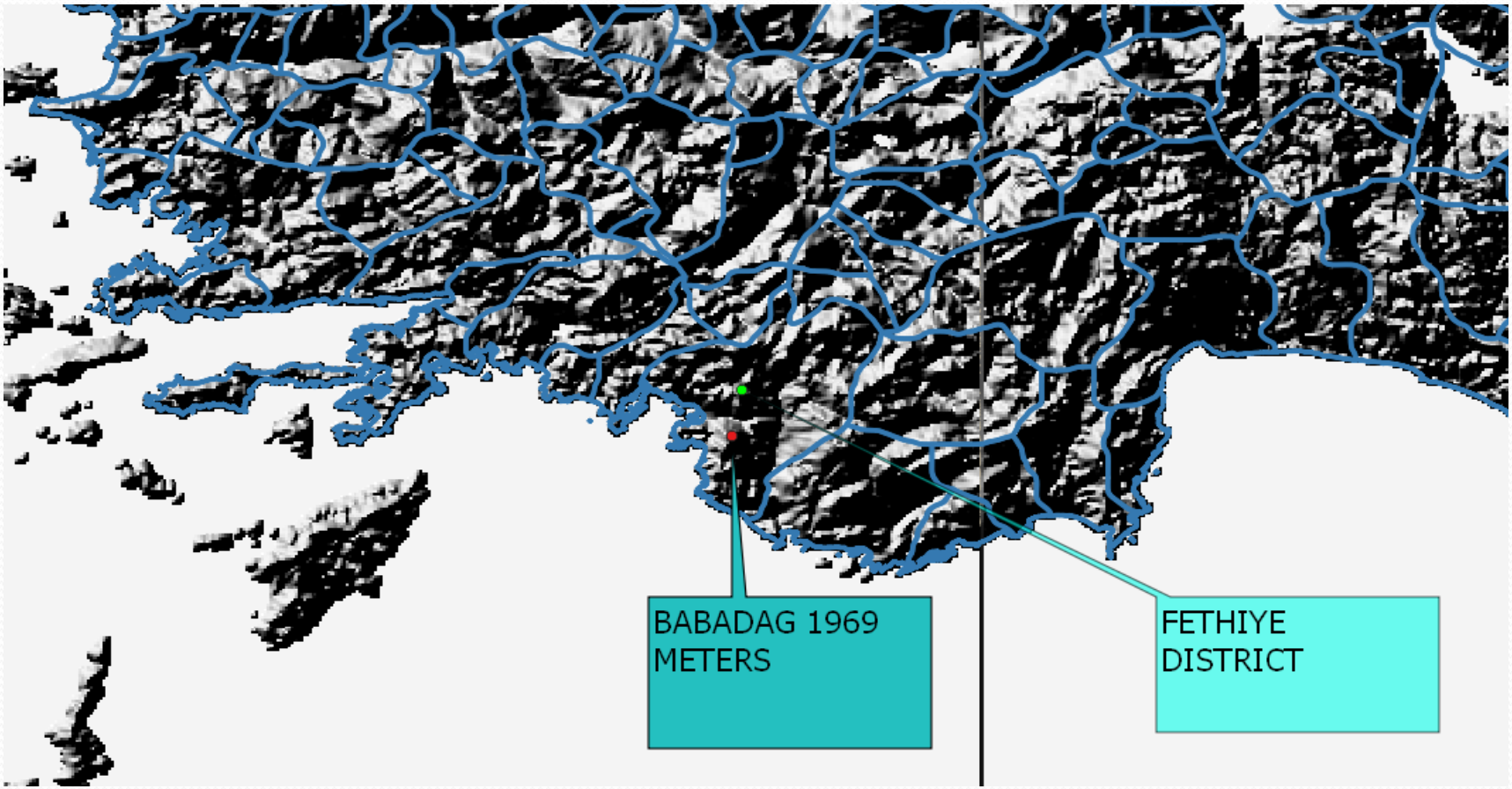
Turkey is a mountainous country. The elevation map of Turkey is presented in Figure 1. Fethiye is also a mountainous region. The mid and western Taurus mountain ranges' edges lay parallel to the sea starting from areas north.

Figure 1. Elevation Map of Turkey



Babadağ Mountain which is located in Fethiye near famous resort Oludeniz (blue lagoon) is the nearest peak to the sea (5 km) with a height of 1969 meters. Fethiye region also has Akdağ Mountains (3050 m), Boncuk Mountains (2700 m) and Cal Mountain (2200 m) (Fethiye Chamber of Commerce and Industry, 2017: 15). The elevation map of Fethiye district and Babadag Mountain is presented in Figure 2. Fethiye

Figure 2. Elevation Map of Fethiye



Sports activities in Fethiye with the number of tourists and businesses are presented in Table 1. As can be seen from the data in Fethiye paragliding is the most essential sports tourism activity in Fethiye with 95622 tourists and 13 paragliding travel agency. 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 Oludeniz (Blue Lagoon) make Babadag mountain a popular paragliding destination (Hazar, 2017: 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			
Total	**567500**	**630000**	**625994**	**625994**			**192**	**197**	**214**	**162**		**184**

According to Kuscer's dissertation (2012: iii), mountain destination development can be measured through four factors, and these are visitor satisfaction, tourist traffic, socio-economic prosperity, preservation of the natural environment.

Literature Review

- Mountain tourism is bases on and shaped by a number of features as 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 which is related to high altitude and comparative isolation (Godde, 1998: 9). These critical features of mountain tourism are essential for 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 and Hope, 2001: 450). The exploitation of the environment is a potential source for a decline in competitiveness (Butler, 1980). Therefore, when developing tourism in mountain destinations, it is central to be innovative and protective against fragile mountain destination environments (Kuscer, 2012: 20).

Before defining the mountain-paragliding destination, it is maybe right to set destination first. However the definitions of destination in the literature vary. Three characteristics of destination and its definition by UNWTO is presented in Table 2 (adapted from Pearce and Schanzel, 2015: 5, UNWTO).

Table 2. The Characteristics and The Definition of Destination

Characteristics	**Reference**
1- Destinations come into existence of an amalgam, bundle, cluster, composite, package, portfolio, set or a total of activities, attractions, attributes, experiences, places, products or services.	Hu and Ritchie, 1993; Buhalis, 2000; Murphy et al., 2000; Framke, 2002; Paradellas de Blas and Fabeiro, 2005; Presenza et al., 2005; Vanhove, 2005; Capone, 2006; Hanlan et al., 2006; Ekinci et al., 2007; Cracolici and Nijkamp, 2008.
2- The features of the destinations are linked with particular locations, localities, areas, regions, or spaces at a range of scales from the local to the macro-regional. This verifies its geographical dimension.	Pechlaner and Fuchs, 2002; Presenza et al., 2005; Vanhove, 2005; Capone, 2006; Tinsley and Lynch, 2008; Botti et al., 2009; Bornhorst et al., 2010; Barros et al., 2011.
3-Destinations have demand and supply perspectives in terms of the tourists' needs, perceptions, and experiences	Bieger, 1998; Buhalis, 2000; Fuchs and Weiermair, 2003; Zehrer et al., 2005; Botti et al., 2009; Bornhorst et al., 2010; McIntyre, 1993; Presenza et al., 2005; Sainaghi, 2006
Definition	**Reference**
"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 often including a host community, and can nest and network to form larger destinations."	United Nations World Tourism Organization (UNWTO) Tourism Definitions, 2019.

- Paragliding is an adventure (extreme) sport that can be performed using a specially designed equipment (parachute) either individually or in tandem (accompanied by a pilot) (Imerci, 2015). In the scope of this research, a mountain paragliding destination may be defined as a geographical, economic, and social unity. It involves firms, organizations, activities, areas, and establishments which are planned to supply the specific needs of paragliding sports tourist (adapted from Flagestad and Hope, 2001).

Destination envorinments as natural envorinment, political/legal factors, technological factors, economic factors, cultural factors and social factors are in the base of destination product which a destination can offer (Murphy et al., 2000).

Data and Methodology

Confirmatory Factor Analyses (CFA) has been performed for grouping elements of MDIM into factors. CFA is used because MDIM is tested in Alpine mountain tourism destinations before. After the interviews with the active 12 paragliding travel agency managers they mention that paragliding touristic activity provides employment to an average 350 pilots in Fethiye region. When paragliding activity considered pilots are the most important stakeholder who provides pragaliding services. Therefore, this study focus on paragliding pilots in Fethiye as its universe. According to Gurbuz and Sahin (2016: 132) 183 responses is enough for a 350 population universe in 95% confidence intervals. In this study 188 usable responses obtained from the pilots who are flying in Babadag.

Mountain Destination Environments

First CFA was conducted to mountain destination environments, which consist of 19 elements. The Kaiser-Meyer-Olkin measure of sampling adequacy is not acceptable (0,496). This result reveals that factor analyses need to be analyzed again after removing lover factor loading elements. Additionally, Bartlett's Test of Sphericity (p=0,0000) adequate correlations exists amongst items.

Table 3. Component Correlation Matrix of Mountain Destination Envorinments

Component	1*	2**	3***	4****
1*	**1,000**	,574	,661	,566
2**	,574	**1,000**	,504	,640
3***	,661	,500	**1,000**	,772
4****	,566	,640	,072	**1,000**

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.

*Technological environment
**Socio-cultural environment
***Natural environment
****Political and legal environment

Table 4.

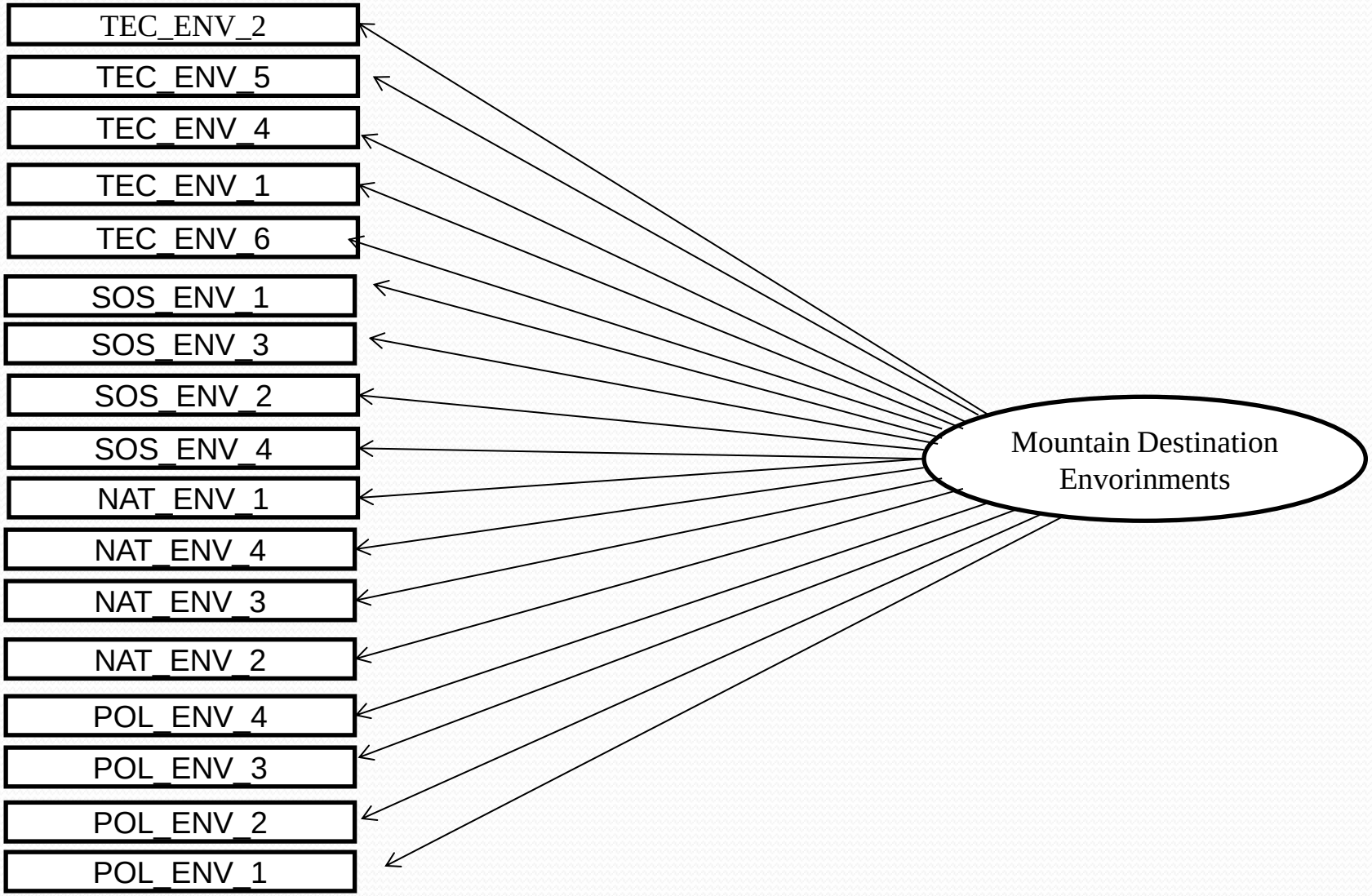
Item	Factor 1: Technological Environment	Communality
Efficient electricity infrastructure (TEC_ENV_2)	,931	,840
Efficient health and medical facilities (TEC_ENV_5)	,920	,947
Presence of Internet connection facilities and Internet coverage (TEC_ENV_4)	,912	,885
Efficient water supply infrastructure (TEC_ENV_1)	,818	,954
Mobile phone signal coverage (TEC_ENV_1)	,790	,893
*Acceptance of credit cards and the presence of ATMs (TEC_ENV_6)	,410	,798
Item	**Factor 2: Socio-Cultural Envorinment**	**Communality**
Presence of multilingual written instructions and guides (traffic signs, maps, and restaurant menus) (SOS_ENV_1)	,829	,888
Local managerial and staff skills	,753	,875
Ease of oral communication (in English and other languages) (SOS_ENV_3)	,722	,756
Hospitality of local population (SOS_ENV_2)	,721	,875
**Support of tourism development by the local population (SOS_ENV_4)	,437	,808
Item	**Factor 3: Natural Environment**	**Communality**
Visual appeal (NAT_ENV_1)	,887	,812
Favorable climate conditions (NAT_NV_4)	,856	,886
Variety and diversity of terrains for different sports (NAT_ENV_3)	,638	,813
Carrying capacity (NAT_ENV_2)	,544	,857
Item	**Factor 4: Political and Legal Environment**	**Communality**
The efficiency of the regulatory framework (POL_ENV_4)	,868	,780
The efficiency of decision making (POL_ENV_3)	,800	,840
Support of government at the municipality level (POL_ENV_2)	,747	,847
Support of government at the regional level (POL_ENV_1)	,666	,943

Firstly “acceptance of credit cards and the presence of ATMs” removed from technological environment items. This seems acceptable because Babadag has paragliding airfields and paraglider tourists book their flights through travel agencies, and this verifies the items low factor loading score. Secondly “support of tourism development by the local population” removed from socio-cultural environment items. After removing the low factor loading items, factor analyses conducted again. Rotated Component Matrix presented in Table 5. The Kaiser-Meyer-Olkin measure of sampling adequacy is acceptable (0,632). Additionally, Bartlett’s Test of Sphericity (p=0,0000) adequate correlations exists amongst items. After factor analyses the factors of mountain destination environments is presented in figure.

Table 5.

Rotated Component Matrix[a]				
	Component			
	1	2	3	4
TEC_ENV_2	,934		,264	
TEC_ENV_5	,924			
TEC_ENV_4	,923			
TEC_ENV_1	,823		,340	
TEC_ENV_6	,789			,202
SOS_ENV_1		,807		
SOS_ENV_3		,804		
SOS_ENV_2		,757		
SOS_ENV_4	,254	,667		
NAT_ENV_1		,209	,858	
NAT_ENV_4	,202		,820	
NAT_ENV_3			,773	
NAT_ENV_2			,658	
POL_ENV_4				,882
POL_ENV_3				,849
POL_ENV_2	,308			,632
POL_ENV_1	,254			,542
Extraction Method: Principal Component Analysis. Rotation Method: Promax with Kaiser Normalization.				

Figure 3. Research-Based Mountain Destination Environments



Mountain Destination Innovativeness

Secondly, CFA was conducted to mountain destination environments, which consist of 25 elements. The Kaiser-Meyer-Olkin measure of sampling adequacy is acceptable (0,896). This result reveals that factor analyses need to be analyzed again after removing lover factor loading elements. Additionally, Bartlett's Test of Sphericity (p=0,0000) adequate correlations exists amongst items.

Table 6. Component Correlation Matrix of Mountain Destination Innovativeness

Component Correlation Matrix of Mountain Destination Innovativeness

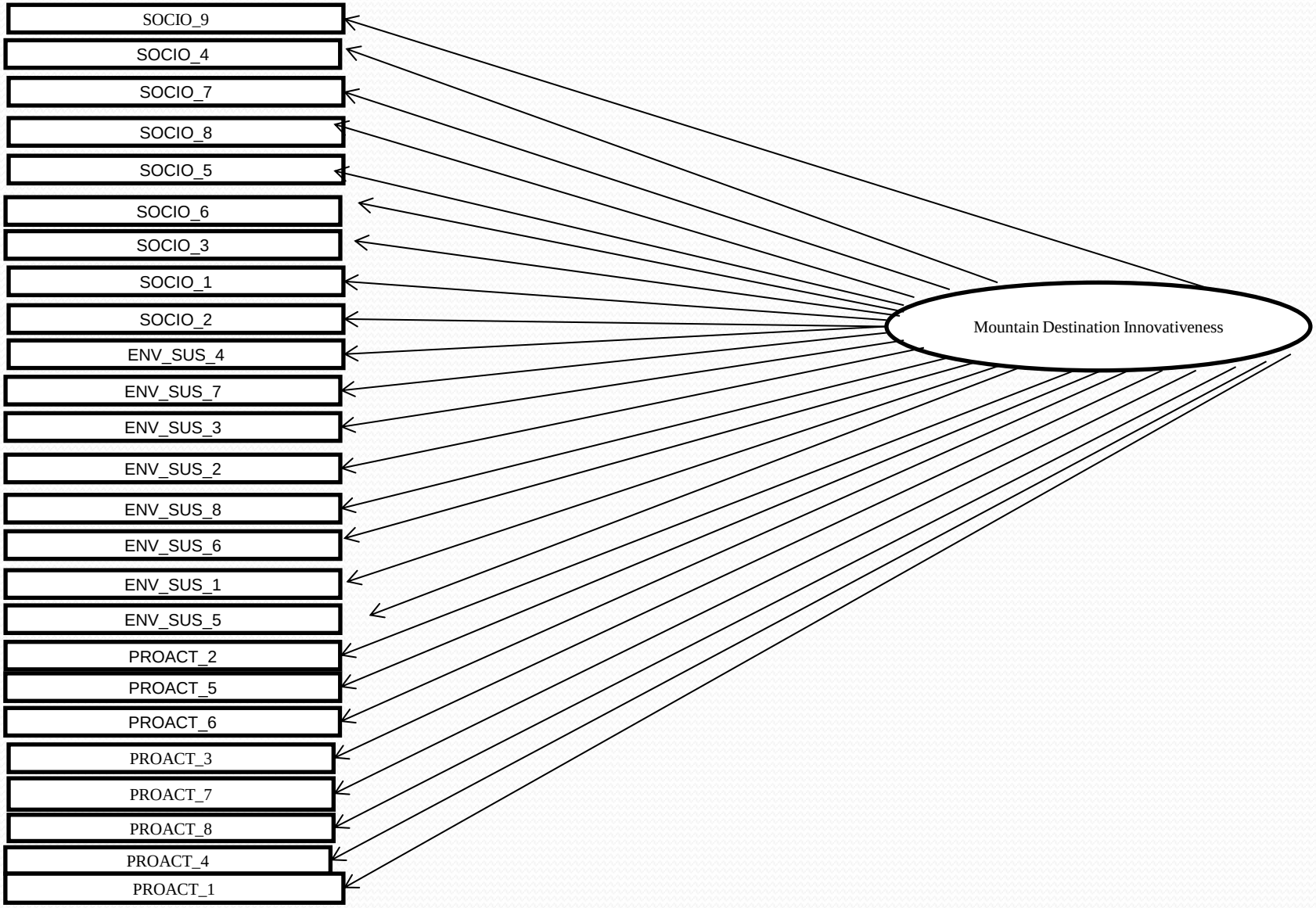
Component	1	2	3
1*	,1000	,622	,524
2**	,637	,1000	,666
3***	,522	,573	,1000

Extraction Method: Principal Component Analysis.
Rotation Method: Promax with Kaiser Normalization.
*Socio-cultural sustainability and stakeholder participation
**Environmental sustainability
*** Proactiveness

Table 7.

Item	Factor 1: Socio-Cultural Sustainability and Stakeholder Participation	Communality
Offering local products in combination with experiencing local craftsmanship (SOCIO_9)	,906	,732
Collaboration of all stakeholders in decision-making process (SOCIO_4)	,897	,807
Availability of knowledge resources and education (SOCIO_7)	,895	,742
Respect for the socio-cultural authenticity of host communities (conservation of cultural heritage and traditional values) (SOCIO_8)	,875	,684
Taking into account the interests of the local community (SOCIO_5)	,863	,741
The organizational structure that supports involvement of all stakeholders (SOCIO_6)	,854	,648
Participation of all stakeholders in tourism planning (SOCIO_3)	,846	,749
The local population's support for change (SOCIO_1)	,844	,360
The local population's capacity to change (SOCIO_2)	,814	,546
Item	**Factor 2: Environmental Sustainability**	**Communality**
Transportation policies that favour alternative transportation modes and public transportation (ENV_SUS_4)	,898	,812
Implementing new practices in envorinmental management(ENV_SUS_7)	,876	,788
Making optimal use of envorinmental resources (ENV_SUS_3)	,866	,768
Envorinmental policies that support sustainable development (ENV_SUS_2)	,793	,714
Adapting to changing climate conditions (ENV_SUS_8)	,781	,761
Exploiting opportunities created by changing climate conditions (ENV_SUS_6)	,696	,685
Energy policies that support usage of alternative sources of energy (ENV_SUS_1)	,621	,857
Maintaining ecological processes and helping to conserve natural resources and biodiversity (ENV_SUS_5)	,563	,543
Item	**Factor 3: Proactiveness**	**Communality**
Creation of distinctive image of the destination (PROACT_2)	,896	,833
Tourism products adapted to changing demand (last minute bookings, price sensivity, etc.) (PROACT_5)	,848	,844
Formation of destination's innovation strategy (PROACT_6)	,797	,879
Logistics adapted to changing demand (last minute reservations, new reservation systems, etc.) (PROACT_3)	,795	,780
Creation of innovative vision (PROACT_7)	,775	,783
Ease of access information through a highly developed communication system (PROACT_8)	,746	,834

Figure 4.


SOCIO_9
SOCIO_4
SOCIO_7
SOCIO_8
SOCIO_5
SOCIO_6
SOCIO_3
SOCIO_1
SOCIO_2
ENV_SUS_4
ENV_SUS_7
ENV_SUS_3
ENV_SUS_2
ENV_SUS_8
ENV_SUS_6
ENV_SUS_1
ENV_SUS_5
PROACT_2
PROACT_5
PROACT_6
PROACT_3
PROACT_7
PROACT_8
PROACT_4
PROACT_1
Mountain Destination Innovativeness

Mountain Destination Development

Thirdly, CFA was conducted to mountain destination development, which consists of 28 elements. The Kaiser-Meyer-Olkin measure of sampling adequacy is acceptable (0,773). Additionally, Bartlett's Test of Sphericity (p=0,0000) adequate correlations exists amongst items.

Table 8.

Component Transformation Matrix

Component	1	2	3	4
1*	,1000	,514	,520	,532
2**	,553	,1000	,572	,586
3***	527	,517	,1000	,678
4****	,510	,558	,543	,1000

Extraction Method: Principal Component Analysis.

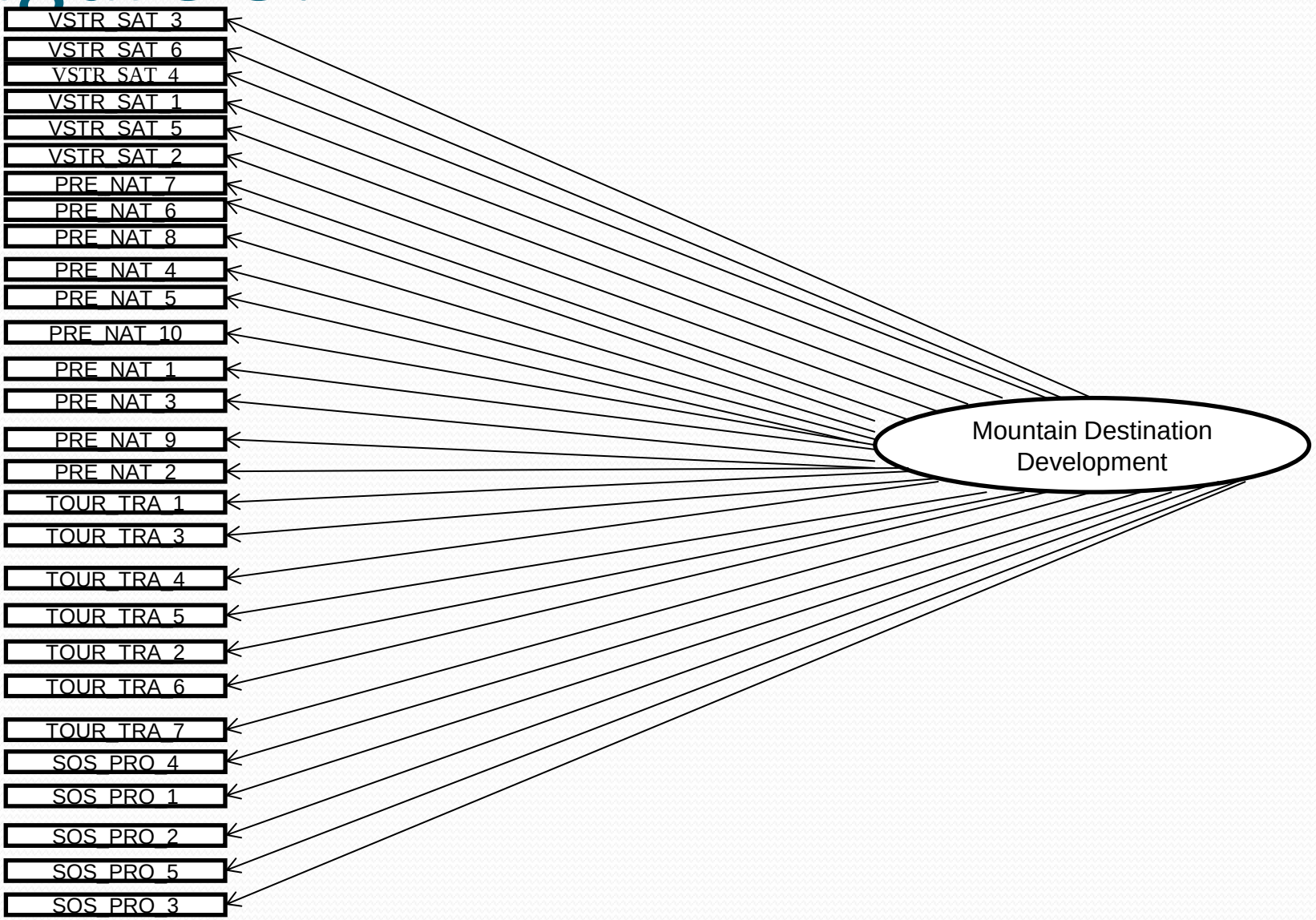
Rotation Method: Promax with Kaiser Normalization.

*Visitor satisfaction
**Preservation of natural envorinment
***Tourist traffic and expenditure
****Socio-economic prosperity

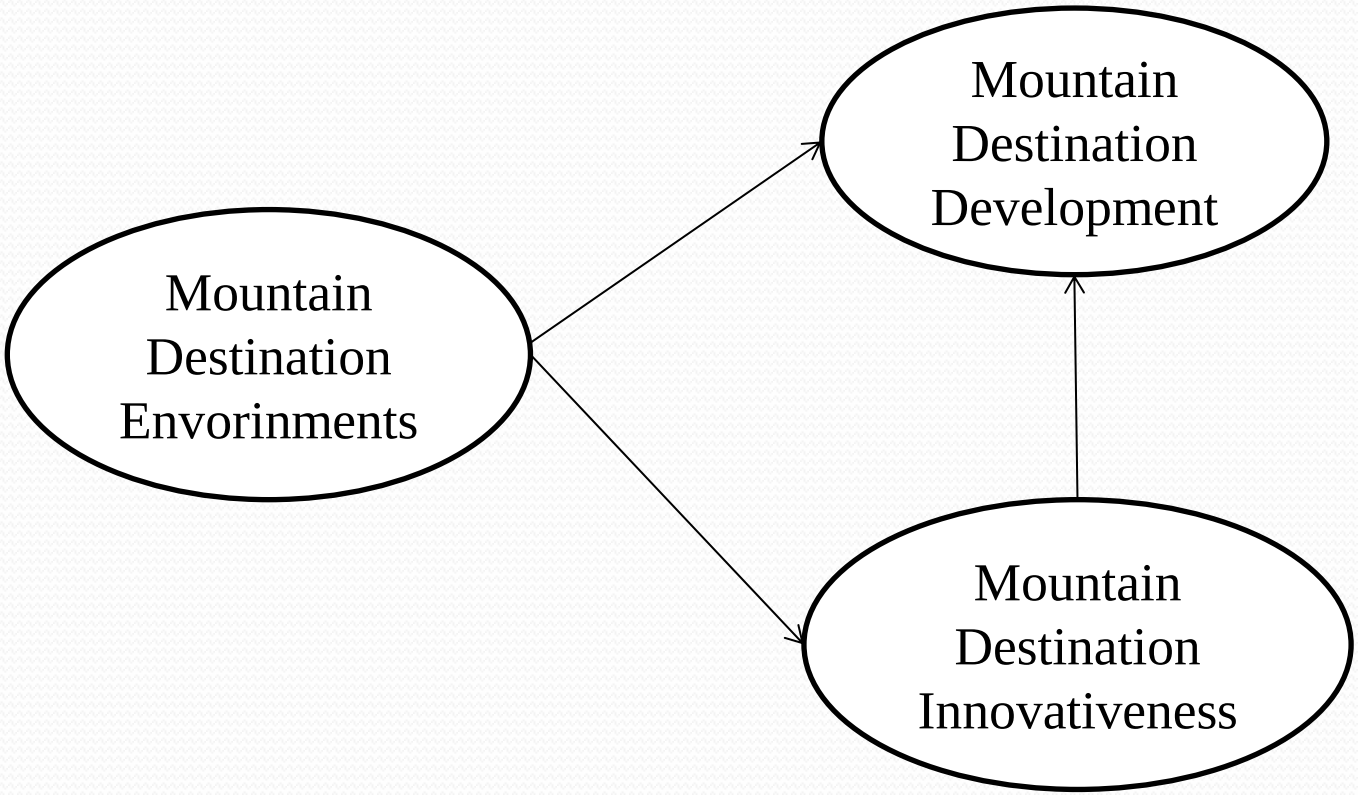
Table 9.

Item	Factor 1: Visitor Satisfaction	Communality
Perceived value for money of tourist services (VSTR_SAT_3)	,823	,862
Availability of tourism infrastructural services (VSTR_SAT_6)	,795	,716
Perceived quality of tourist services (VSTR_SAT_4)	,780	,834
Share of returning visitors (VSTR_SAT_1)	,740	,556
Visitor satisfaction with envorinmental issues (VSTR_SAT_5)	,695	,566
Share of very satisfied visitors (VSTR_SAT_2)	,683	,787
Item	**Factor 2: Preservation of Natural Environment**	**Communality**
CO2 emissions in tourism sector (PRE_NAT_7)	,968	,612
Share of recycled waste in the tourism sector (PRE_NAT_6)	,915	,759
Share of recycled water in the tourism sector (PRE_NAT_8)	,837	,605
Energy consumption in tourism sector (PRE_NAT_4)	,786	,834
Frequency of envorinmental accidents related to tourism (PRE_NAT_5)	,720	,669
Water pollution from sewage (PRE_NAT_10)	,711	,632
Water consumption in tourism sector (PRE_NAT_1)	,698	,612
Usage of clean energy in tourism sector (PRE_NAT_3)	,683	,511
Air quality (PRE_NAT_9)	,653	,550
Amount of soil erosion (PRE_NAT_2)	,537	,545
Item	**Factor 3: Tourist Traffic**	**Communality**
Growth rate in average length of stay (TOUR_TRA_1)	,881	,757
Market share growth in terms of tourist arrivals (TOUR_TRA_3)	,834	,720
Averga length of stay (TOUR_TRA_4)	,803	,687
Visit to parks, recreation areas (TOUR_TRA_5)	,774	,626
Market share growth in terms nights spent (TOUR_TRA_2)	,662	,648
Hotel occupancy rate (TOUR_TRA_6)	,640	,715
The growth rate in daily visitor expenditure (TOUR_TRA_7)	,588	,647
Item	**Factor 4: Socio-economic Prosperity**	**Communality**
Lodging revenues (SOS_PRO_4)	,887	,681
The average wage in tourism sector compared to the other sectors of the economy (SOS_PRO_1)	,813	,537
Contribution of tourism sector to the economic growth (SOS_PRO_2)	,755	,913
Employment growth in tourism (SOS_PRO_5)	,728	,834
Seasonality of employment in tourism sector (SOS_PRO_3)	,687	,694

Figure 5.


VSTR_SAT_3
VSTR_SAT_6
VSTR_SAT_4
VSTR_SAT_1
VSTR_SAT_5
VSTR_SAT_2
PRE_NAT_7
PRE_NAT_6
PRE_NAT_8
PRE_NAT_4
PRE_NAT_5
PRE_NAT_10
PRE_NAT_1
PRE_NAT_3
PRE_NAT_9
PRE_NAT_2
TOUR_TRA_1
TOUR_TRA_3
TOUR_TRA_4
TOUR_TRA_5
TOUR_TRA_2
TOUR_TRA_6
TOUR_TRA_7
SOS_PRO_4
SOS_PRO_1
SOS_PRO_2
SOS_PRO_5
SOS_PRO_3
Mountain Destination Development

The results of the study reveals that CFA results of the Mountain Destination Innovativeness measurement model provides sufficient statistics before conducting Structural Equation Model analysis to test the model. MDIM is presented in table.


Mountain Destination Development
Mountain Destination Envorinments
Mountain Destination Innovativeness

Conclusion

Thank you for your attention