

Investigating and identifying natural attraction and environmental potential for sport tourism development from user viewpoint

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ABSTRACT

The study aimed at identifying and determining the importance of Shahrood County potential and environmental attractions effective in sport tourism development from the users's viewpoint. This study is descriptive and analytical type carried out in two parts. In the first part, basic information on sport tourism status quo as well as environmental status of Shahrood County was collected. Then the list of environmental attractions and sport-natural potential of the study area was drawn. In the next step, Shahrood land use map and its natural attractions distribution map was prepared through GIS and Index Overlaying. The information layers have been prepared by means of ArcGIS software version 9.2. In the second part, a self administered questionnaire involving 33 questions was designed based on Likert questionnaire. The questionnaire reliability was examined by a pilot study through which 25 questionnaires were administered on a sample resembling original population. The reliability was measured by Cronbach alpha – 95%. The statistical population involved sport and tourism activity users either local or non-local in Shahrood County. The sample, making 373, was determined by Conchran Formula. The sampling was done randomly. Survey results indicate that from users' point of view natural factors are the most important in sport tourism development in Shahrood respectively involving the mountains, the natural scenery and landscape, and the desert. Natural attractions involving more excitement, physical motion, and adventure were given more score by the users.

Key words: Sport tourism, Shahrood county, Natural attraction, Environmental potential

Introduction

In many areas tourism is seen as an answer to economic development, particularly areas of natural beauty [18]. Tourism remains the world's largest industry and one of the fastest growing sectors, accounting for over one-third of the value of total worldwide services trade [28]. Worldwide tourism grew phenomenally from 25 million arrivals in 1950 to more than 825 million in 2007, with an average annual growth rate of 6.5 percent [27].

International statistics and tourism experts' viewpoints show that this industry will turn to the biggest one by 2020, providing high income and numerous job opportunities for different countries, and play a key role in combating poverty in underprivileged or underdeveloped countries. Tourism makes up 11% of world GDP, and annually 200 million people are active in this sector – that is to say one jobholder out of 12 [23].

Throughout the world, one of the fastest growing tourism niche markets is sport tourism [10,17,7]. The links between sport and tourism have expanded considerably, and become more clearly defined, in recent years [9,11,26]. Sport tourism broadly defined is “leisure-based travel that takes individuals temporarily outside their home communities to participate in physical activities, to watch physical activities, or to venerate attractions associated with physical activities” [9]. Both now stand among the largest and fastest growing industries in the global economy. While sport tourism is not a new phenomenon, it has received increasing attention in recent years as an economic development strategy [4,5,8,11,21].

Indeed, the resource and infrastructural requirements of sport and tourism are often shared [26]. These include natural environments, constructed facilities, transport, services and hospitality. This shared foundation suggests the

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likelihood that developments in sport will affect the tourism sector, and vice versa [11].

In 2001, the World Tourism Organization and the International Olympic Committee (IOC) held a joint conference to discuss the relationship between sport and tourism. To support the event, the WTO and IOC jointly commissioned an ‘‘introductory report’’ to the conference [19].

Sport tourism is a term made up of two industries ‘‘tourism’’ and ‘‘sport’’. In other words, sport is one of the main activities of tourists during a tour. As a matter of fact, sport tourism is a type of travel for noncommercial purposes to either watch or take part in sport activities far from one’s residence [12]. The interaction of these two is demonstrated in Fig. 1.

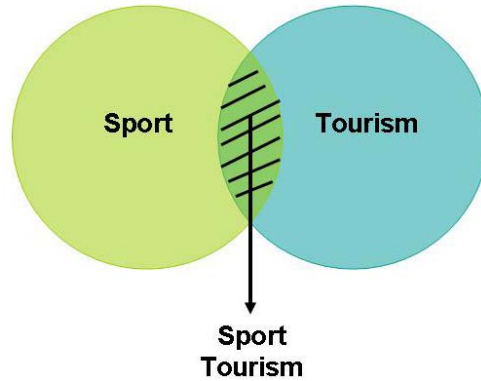


Fig. 1:Relationship between Sport and Tourism.

Adapted from: Hinch & Higham, 2003:

In recent years, a great deal of research has been conducted on sport tourism and the role of different factors in sport tourism development. Adabi [1] concludes in his study that those attractions less affected by seasonal phenomena and associated with more diverse activities have a longer tourism season and hold more significance pertaining to tourism development in Iranian.

Honarvar [13] counts fondness for culture, art, and architecture as well as night life as sport tourism development key factors.

Cave [3] points out other types of tourism in which tourists’ main purpose is doing sport are worth considering. Natural attractions including wildlife, waterfalls, lakes, mountains, and forests strongly influence sport tourism development.

Ko Sasi [20] mentions winter sports such as skiing and skating as more important sport natural attractions in India.

Andueza and Miranda [2] in their sport tourism examination in Spain find that natural attraction factor, water sports, and hiking respectively are the most significant in terms of attracting sport tourists.

Prideaux and Cooper [24] highlight the significance of ecotourism in Indonesian local economy.

Marobela [22] put emphasis on stakeholders’ role in tourism industry in Botswana

Objective of the study:

The whole country (IRAN) is divided into 7

tourism regions in National Document of Tourism and Ecotourism Development and Management, created by Iranian Culture Heritage, Handicraft and Tourism Organization. According to this document, the country’s provinces are put in individual regional structures based on common climate, adjacency, geographical, and cultural features to produce diversity in various kinds of tourism presented across the country, and to fulfill foreign and national user’s needs with different tourist purposes and motivations [14]. A particular strategy is devised for each of these regions. Shahrood Township is located in the region known as Alborz (Region 1), and it is advised infrastructures required for sustainable tourism management be provided by 2015.

Fig. 2 depicts the heptafold division of Iran associated with tourism development. As it shows, the study area is located in Alborz Region.

The study aimed at identifying and determining the importance of Shahrood County potential and environmental attractions effective in sport tourism development from the users’ viewpoint. Indeed, altering the attitudes toward being solely sportive was among the study aims as there are a lot of tourism opportunities hidden in all domestic and oversea events. Since after conducting this study the user interest level in any of the environmental attractions was to be determined, sport tourism development could be executed more confidently in the area. This can have a role in tourism development in the area and prevent time and capital loss.



Fig. 2: Heptafold division of tourism regions in Iran and the study area.

Materials and Methods

Area of study:

The study was carried out in the Shahrood, in the East of Iran. Shahrood lies between longitude 37°19' and 35°30' north of the equator and between 54°32' and 57°2' east of the equator (Fig. 1). The mean annual rainfall is 157 mm and the average minimum temperature is about -14°C while the average maximum temperature is about 42°C [15]. The total population of the Shahrood region was around 225000 in the year 2006 [16].

Shahrood lies on which side of the Alborz terrain with many fountains green landscape which is left from the times of Hirkhani Dynasty. Shahrood is a big county with the most beautiful nature and a four season climate, is of the remainder of ancient civilization of Iran and has many historical sights and hills. Because this area lies on the Silk Road becomes very important. Khosh Yeylagh Protected Area is located in the north of Shahrood with an area of 135000 hectare [25]. It is a Wildlife refuge with a unique ecological characteristic which should be preserved for the next generation. Climate variety in a limited geographical area caused this thirty-four thousand hectare to be the suitable place for tall forest trees and also, an appropriate habitat for herbivorous species like red deer, roe deer, wild sheep, wild goat, gazelle, Persian wild ass and carnivorous species like brown bear, north Persian leopard, wolf and different kinds of wildcats and different kinds of birds of prey [6].

Methodology:

This study is descriptive and analytical type carried out in two parts. In the first part, basic information on sport tourism status quo as well as environmental status of Shahrood County was collected. Then the list of environmental attractions and sport-natural potential of the study area was drawn (Table 1). In the next step, Shahrood land use map and its natural attractions distribution map was prepared through GIS and Index Overlaying.

The information layers have been prepared by means of ArcGIS software version 9.2.

In the second part, a self administered questionnaire involving 33 questions was designed based on Likert questionnaire. To verify its validity university professors and experts were consulted and after gathering their views, questions reduced to 20. The questionnaire reliability was examined by a pilot study through which 25 questionnaires were administered on a sample resembling original population. The reliability was measured by Cronbakh alpha – 95%. The statistical population involved sport and tourism activity users either local or non-local in Shahrood County. The sample, making 373, was determined by Conchran Formula. The sampling was done randomly.

The users' fondness for any of the environmental attractions and natural potential was measured by this questionnaire.

Factor analysis was utilized to determine factor significance. That is to say different factors were analyzed with regard to a topic and the best ones were selected for future planning.

In this part, KMO Test was used to find out whether the data pertaining to sport tourism development factors are appropriate for factor

analysis. The test result always ranges between 0 and 1. If it is less than 0.5, data is not suitable for factor analysis; if it is between 0.5 and 0.7 factor analysis can be performed with extra care; and if it is greater

than 0.7, correlation among data is appropriate for factor analysis. kmo result of this study amounted to 7.4 showing factor acceptability.

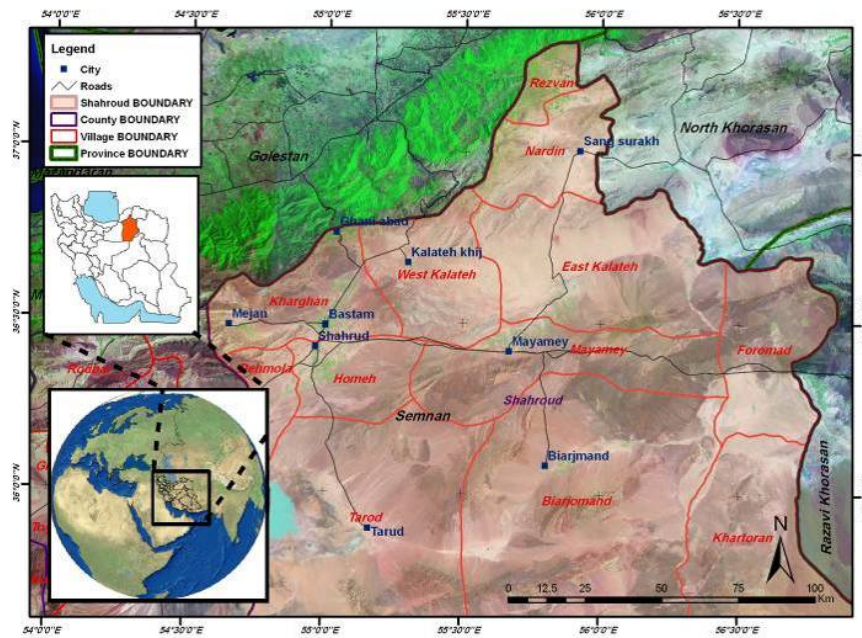


Fig. 3: Location of the study area.

Table 1: List of Sport-natural attractions existing in the study area.

Sport-natural attractions
1. Natural sport attractions associated with desert tours
a. attractions associated with caravan tours in the desert
b. attractions associated with desert excursion
c. attractions associated with Desert rallying (car and motorcycle)
d. attractions associated with Desert biking
2. Attractions associated with hill climbing and nature tours
a. attractions associated with jogging, strolling, hiking, and mountain biking on mountain foots
b. attractions associated with biking and mountain biking on mountain foots and resorts
c. attractions associated with riding (horsed, camel, etc.) on mountain foots, grasslands, and deserts
d. attractions associated with golf on resorts
3. Attractions associated with mountain, mountain climbing, and caving
a. attractions associated with mountaineering, mountain climbing, and conquering peaks
b. attractions associated with rock climbing
c. attractions associated with caving
4. Attractions associated with winter sports
a. attractions associated with snow skiing
b. attractions associated with snow climbing
5. Attractions associated with air sports
a. attractions associated with Kiting
b. attractions associated with Paragliding
6. Attractions associated with Shooting
a. attractions associated with archery (competition/drill)
b. attractions associated with firearms (competition/drill)
7. Attractions associated with the nature and wildlife
a. attractions associated with Picnic and staying in the nature
b. attractions associated with the nature and wildlife watching and photography
c. attractions associated with education and research in terms of sport and leisure in the nature

The flowchart of the methodology and steps of the study are shown in Fig. 4.

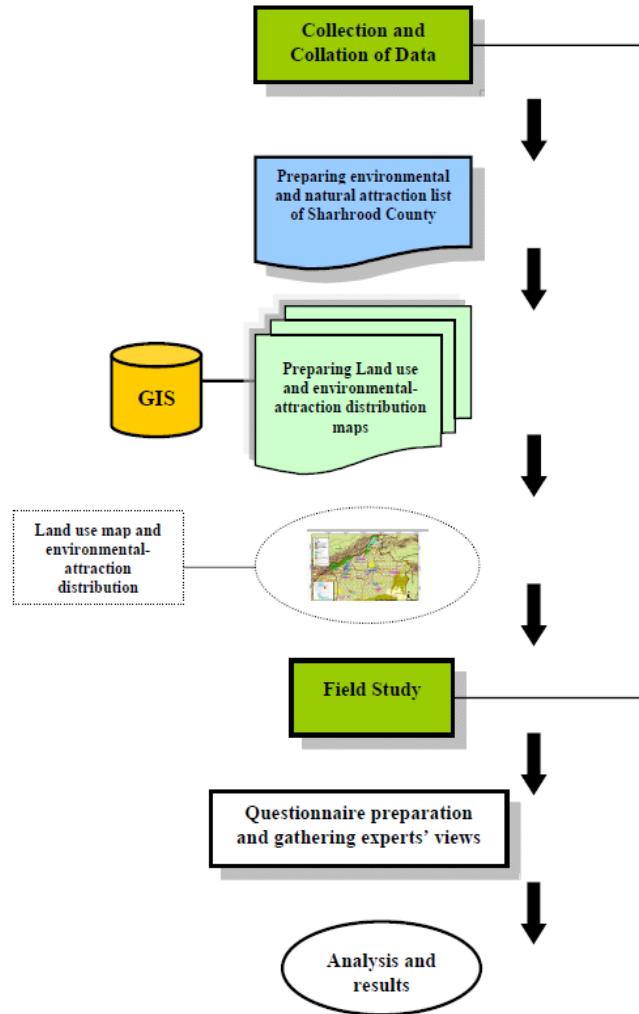


Fig. 4: Flowchart of the methodology and steps of the study.

Result and Discussion

Based on documented data sources and field study, a list of environmental and natural-sport attractions of Shahrood County was prepared (Figure 5).

In addition, the area land use map was produced by overlaying information layers (Figure 6).

According to the above maps, southern and eastern parts of the study have desert land use – about 17%. A protected area and a national park, the

biggest one in Iran, exist within these parts. A vast stretch of the area, about 60%, is covered with ranges and plains largely forming the middle part of the study area. Moreover, Mountains (about 20%) and forest lands (10%) are situated on northern side.

Additionally, survey results indicate that from users’ point of view natural factors are the most important in sport tourism development in Shahrood respectively involving the mountains, the natural scenery and landscape, and the desert (Table 2).

Table 2: Ranking factors associated with natural resources and their role in sport tourism development in Shahrood County.

Factor	Factor loading
Mountains	68.1
Natural scenery and landscape	65
Desert	58.7
Forests	54.1
Wildlife	53.4
National park	48.6
Protected area	37.2
Rivers and waterfalls	33.2
Plains and ranges	21.6

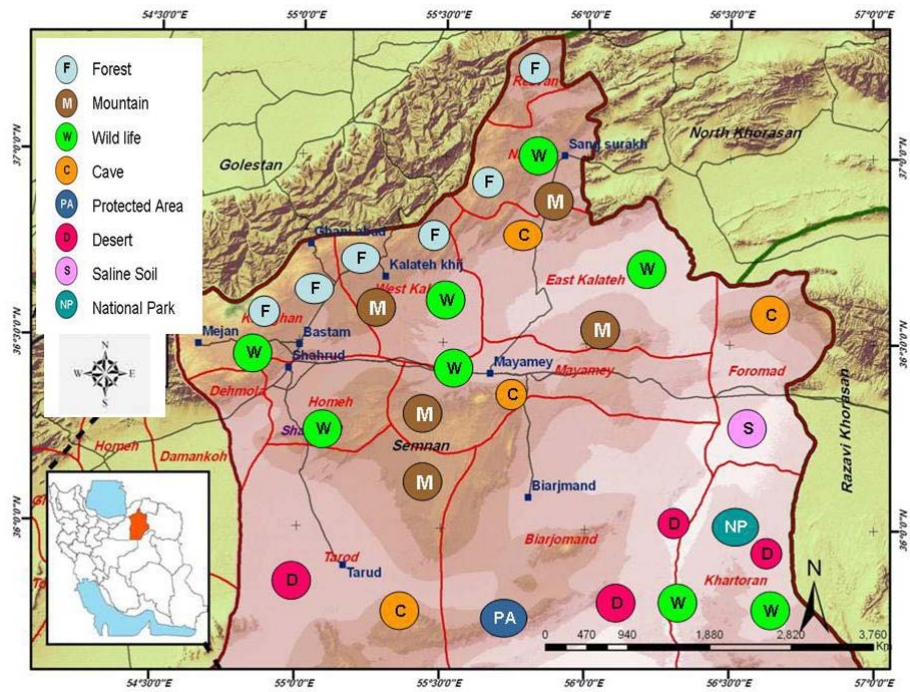


Fig. 5: location of significant natural attractions in Shahrood County.

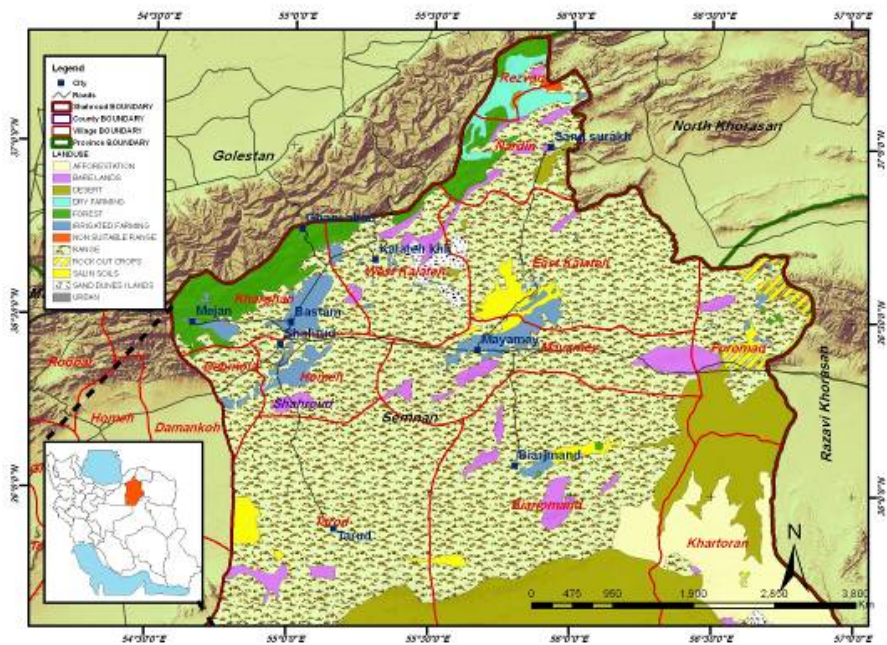


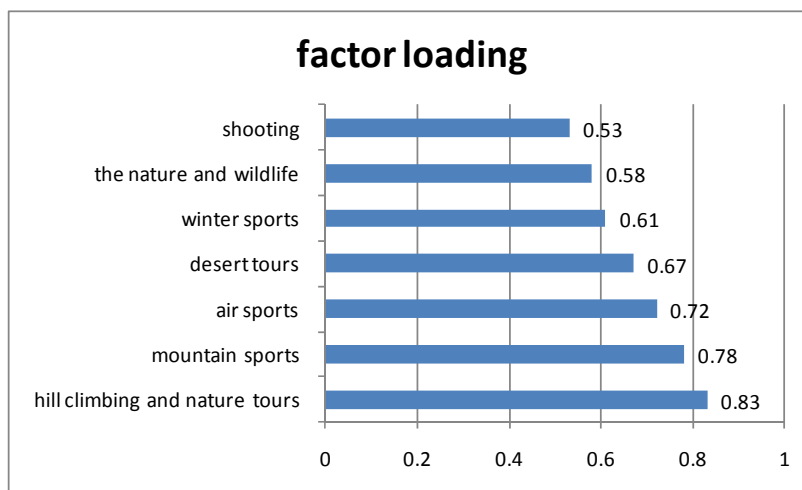
Fig 6: Land use map of the study region.

Sport-natural attractions effective in sport tourism development in Shahrood County based on their importance are ranked in Table 3 and Fig. 5.

Table 4 demonstrates micro-scale ranking of sport natural attractions effective in sport tourism development in Shahrood County from user viewpoint.

Table 3: natural attractions effective in sport tourism development in Shahrood County from user viewpoint.

Factor	Factor loading
Attractions associated with hill climbing and nature tours	0.83
Attractions associated with mountains, mountain climbing, and caving	0.78
Attractions associated with air sports	0.72
Attractions associated with desert tours	0.67
Attractions associated with winter sports	0.61
Attractions associated with the nature and wildlife	0.58
Attractions associated with shooting	0.53

**Fig. 5:** Natural attractions effective in sport tourism development in Shahrood County from user viewpoint.**Table 4:** Micro-scale ranking of sport-natural attractions effective in sport tourism development in Shahrood County from user viewpoint.

Sport-natural attractions	Factor loading
1. attractions associated with hill climbing and nature tours	0.83
a. attractions associated with jogging, strolling, hiking, and mountain biking on mountain foots	0.79
b. attractions associated with biking and mountain biking on mountain foots and resorts	0.70
c. attractions associated with riding (horsed, camel, etc.) on mountain foots, grasslands, and deserts	0.75
d. attractions associated with golf on resorts	0.46
2. attractions associated with mountain, mountain climbing, and caving	0.78
a. attractions associated with mountaineering, mountain climbing, and conquering peaks	0.71
b. attractions associated with rock climbing	0.69
c. attractions associated with caving	0.63
3. attractions associated with air sports	0.72
a. attractions associated with Kiting	0.65
b. attractions associated with Paragliding	0.64
4. Natural sport attractions associated with desert tours	0.67
a. attractions associated with caravan tours in the desert	0.59
b. attractions associated with desert excursion	0.48
c. attractions associated with Desert rallying (car and motorcycle)	0.65
d. attractions associated with Desert biking	0.50
5. attractions associated with winter sports	0.61
c. attractions associated with snow skiing	0.52
d. attractions associated with snow climbing	0.48
6. attractions associated with the nature and wildlife	0.58
e. attractions associated with Picnic and staying in the nature	0.54
f. attractions associated with the nature and wildlife watching and photography	0.41
g. attractions associated with education and research in terms of sport and leisure in the nature	0.38
7. attractions associated with Shooting	0.53
h. attractions associated with archery (competition/drill)	0.33
i. attractions associated with firearms (competition/drill)	0.43

Conclusion:

The results indicate that the users are interested in nature tours and hill climbing the most and like activities taking place in such natural environments. In addition, attraction underlying mountain climbing,

caving, and air sports are important. In contrast, attractions pertaining to wildlife and archery attract little interest of the users. An important point is eagerness for educational and research aspects with regard to sport tourism activities in the nature, which is worrying and lack consideration to it will lead to

more natural resources and environmental destruction.

As tables 3 and 4 show, natural attractions involving more excitement, physical motion, and adventure were given more score by the users.

The results of the study comply with those of Adabi (2006) on natural attractions in that those attractions less affected by seasonality and involving more various activities has a longer tourism period, hence are more significant in sport tourism development in Iran.

In contracts, the result do not conform to Andueza and Miranda (2005) and unlike Spain where amongst natural factors and attractions, water sports and excursion and walking respectively have highest significance in attracting tourists. In the study area, due to shortage of water resources they are not potential, rather limiting factors.

Although Iran enjoys high potential for tourism, there is a big gap between its tourism revenue and that of other countries. Despite the fact that the Shahrood County's environmental factors and natural resources can play a key role in sport tourism, they are not fully taken advantage of.

Another important point is that neither of above mentioned aspects are not taken into account and explained in National Document of Tourism and Ecotourism Development and Management.

Finally, it is proposed that a pilot study at a small scale be carried out based on the priorities presented in this study.

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References

- Adabi, J., 2006. Study of important factors on tourism development in Iran due to international sport events, M.Sc. project, Tarbiat modare University.
- Andueza, Miranda, 2005. The role of sport tourism destination chosen by tourists visiting Spain, *Journal of sport tourism*.
- Cave, P., C. Leader, 2003. Sport tourism: The role of sport tourism: the case for a local approach in Africa, *Second Africans on peace thought tourism*.
- Daniels, M.J., W. Norman, M. Henry, 2004. Estimating Income Effects of a Sport Tourism Event. *Annals of Tourism Research*, 31: 180-199.
- Daniels, M.J., 2007. Central place theory and sport tourism impacts, *Annals of Tourism Research*, 34(2): 332-347.
- DOE., 2006. Atlas of Protected Areas of Iran, I. R. of Iran Department of the Environment, Tehran, Iran.
- Funk, D.C., T.J. Bruun, 2007. The role of socio-psychological and culture-education motives in marketing international sport tourism: A cross-cultural perspectives, *Tourism Management*, 28: 806-819.
- Gelan, A., 2003. Local Economic Impacts: The British Open. *Annals of Tourism Research*, 30: 406-425.
- Gibson, H.J., 1998. Sport tourism: A critical analysis of research, *Sport Management Review*, 1: 45-76.
- Gratton, C., P. Taylor, 2000. The economics of sport and recreation, New York: E & FN Spon.
- Higham, J., T. Hinch, 2002. Tourism, sport and seasons: the challenges and potential of overcoming seasonality in the sport and tourism sectors, *Tourism Management*, 23: 175-185.
- Hinch, T., J. Higham, 2003. *Tourism Development*, Channel View.
- Honarvar, A., 2004. Study of important factors on tourism development in Iran due to international sport events, Ms.c.project, Tarbiat moalem University.
- ICHHTO, 2007. National Document of Tourism and Ecotourism Development and Management, Iranian Culture Heritage, Handicraft and Tourism Organization. Tehran.
- IMO, 2011. I.R. of Iran Meteorological Organization. {www.irimo.ir}.
- ISC, 2010. I.R. of Iran Statistics Center. {www.amar.org.ir}.
- Jago, L., L. Chalip, G. Brown, T. Mules, S. Ali, 2003. Building events into destination branding: Insights from experts. *Event Management*, 8: 3-14.
- Jennifer, K., J.K. Strickland-Munro, H.E. Allison, S.A. Moore, 2010. Using resilience concepts to investigate the impacts of protected area tourism on communities, *Annals of Tourism Research*, 37(2): 499-519.
- Keller, P., 2001. Sport & tourism: Introductory report. Madrid: World Tourism Organization.
- Ko Sasi, V., 2005. Sport tourism in India, *Journal of Sport Tourism*.
- Lee, C., T. Taylor, 2005. Critical Reflections on the Economic Impact Assessment of a Mega-event: The Case of 2002 FIFA World Cup. *Tourism Management*, 26: 595-603.
- Marobela, M.N., 2011. Tourism and Decent Work in Botswana: from private sector to a collectivist model, *African Journal of Hospitality, Tourism and Leisure*, 1(3).
- NDNTM, 2007. I.R. of IRAN National Document for development and Nature Tourism Management, Central Research of Water and Energy, National Committee of Ecotourism.

24. Prideaux, B., M. Cooper, 2010. Ecotourism in Indonesia: A Strategy for Regional Tourism Development, *Asean Journal on Hospitality and Tourism*, 1(2).
25. Shahnama, H., 2009. *Shahrood Tourism Attractions*, Publication by Shahrood Industrial University, Shahrood, Iran.
26. Standeven, J., P. DeKnop, 1999. *Sport tourism* Champaign, IL: Human Kinetics.
27. United Nations World Tourism Organization, 2008. *Tourism facts and figures*. Available from www.unwto.org. Retrieved February 15, 2009.
28. World Tourism Organization, 2006. *International trade statistics 2006*. Geneva: World Trade Organization.