Sustainable Tourism Management: Views and Attitudes of Visitors in Regional Unit of Pella (Greece)

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Abstract. Environmental resources (meadows, forests, aquatic, gaming, spa-wellness) develop land policies and service networks with spatial distribution in one region, resulting in the multifaceted function and importance of natural resources for a society and the multidimensional benefits which can be obtained from them. Mountainous regions fall into the above contexts as they include areas under specific legal frameworks and special protection regimes which need to cope with natural and technological needs and hazards. In many cases, knowledge of the value of intangible goods offered to humans is unknown and cannot be conceptualized by the existing market only. Therefore, it is necessary to design a new hypothetical market by simulating services and resources in an economic valuation grid. It is for these reasons that the present research has been initiated, exploring the attitudes and views of the visitors of the Ski Center of Kaimaktsalan based on the frame of guest satisfaction.

Keywords: Tourism Management; Ski Center; Sustainability; Policy making; WTT.

1 Introduction

Among the methods developed and used for the economic valuation of environmental goods and services in recent decades, are the Revealed Preference Methods (RPM) and the Stated Preference Methods (SPM), for which there is, or there is not a real market. The Total Economic Value (TEV) is the economic value that results from the Use Value (UV) and Non-Use Value (NUV) (Aanesen et al. 2010). As the tourism infrastructure and facilities offer multiple benefits in terms of recreational satisfaction rate, the evaluation of the observed and current developmental criteria for recreational utility is needed to improve many different services and characteristics of a mountainous region (Christopoulou and Trizoni, 2007; Malasevska and Haugom, 2018; Soutsas et al. 2006). The design of areas that comprise intensive growth poles of special forms of tourism, such as ski centers, needs to be based on integrated tourism development interventions which involve both the protection and enhancement of the natural environment through the improving and promoting special tourism infrastructure. Therefore, all the values associated with these areas including the possible modification of them values under different circumstances (e.g., demand and environmental conditions, infrastructure

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on offer, among others) should be considered (Apostolidis and Latinopoulos, 2015). It is for these reasons that the present research has been initiated, providing an economic valuation of the recreational value of the area.

2 Statistical Methodology

Questionnaires completed by the visitors to the Ski Center of Kaimaktsalan-Voras Mountain (Greece) were used during the winter period of 2015-2016 to conduct the present research. The sample size (n=323 guests) is considered as representative, and the use of results met the necessary statistical conditions. The research tool, a questionnaire, was developed to be filled on site with the investigator conducting personal interviews of the respondents-guests. The Haphazard Sampling method was used and the statistical package IBM SPSS v.20. for the processing of the results and the analysis of the data (Apostolidis 2017b, 2017a).

3 Field of Research

The research area selected was the Voras Mountain Range due to its environmental significance. Specifically, the area identified for analysis (valuation survey) is the Kaimaktsalan Ski Center (highest altitude ski center in Greece-2500m).

4 The Results

To estimate the frequency of their visits, the visitors were invited to respond whether it was their first time in the ski resort area or not. All sample visitors, i.e., 100%, responded to the question; of the total sample (n=323), 44.3%, said they had visited the ski resort before in the past, while 55.7%, stated that it was their first visit. Over the past year, visitors in the sample who did not come the study area for the first time, visited the ski resort 152 times. There were no visits reported by 42.7% of the sample, while a total of 57.3% had visited other ski resorts in Greece and abroad such as the 3-5 Pigadia, Elatochori, Pisoderi, Vasilitsa, Parnassos, Bansko, etc.

There is a neutral to positive satisfaction among the respondents, which marks an improvement in infrastructure and overall resource management. It is of interest that the whole sample n = 323 provided an answer for all the variables and the criteria set. What is more, the quality of accommodation was evaluated by visitors to indicate their satisfaction with staying in the area. 48.3% stated to be satisfied, 20.7% stated to be very satisfied, neither satisfied nor dissatisfied were 22.3% and 1.5% were dissatisfied, and 1.5% were very dissatisfied; 18 of the respondents in the sample did not respond (5.6% missing data). The results show a positive impact concerning the funding which was provided by the European Rural Development Programs LEADER in the region, which has resulted in the construction of accommodation, shopping centers and catering facilities in order to create a traditional cultural

identity. Respondents at 98.5% believe that the Ski Center contributes to the development of the wider area, while it is worth noting that only 1.5% of the visitors shared a different opposite attitude and opinion. According to the data concerning the availability of the recreational facilities at the Ski Center area, 15.8% of the total sample were very satisfied, 144 were satisfied (i.e., 44.6% (almost 1/2 of the total sample)), 31.3% were neutral while 24 guests, namely 7.4% were dissatisfied, and 0.9% were very unhappy. Table 1 shows the financial investigation of travel costs and daily consumer spending in the region. The cost of fuel from home to the destination area amounted to a total of 17,728 € while the cost of food and drink during the stay for the sample amounted to 20,841 €. Additionally, the actual cost of stay was analyzed into five components: a) transportation; b) food and drink; c) skiing cost; d) recreational activities; e) other expenses (e.g., purchases, accommodation).

Table 1. Descriptive Statistics of the Travel Cost Parameters.

Variables	Minimum	Maximum	Sum	Mean	Std. Deviation
Food / Drink cost and other expenses (travel cost)	0	550	20841	64.52	76.124
Fuel cost needed to get from home area to the recreation area	5	500	17728	54.89	65.885
Cost of other expenses - purchases (Costs in the region € per Day)	0	200	17330	53.65	51.806
Cost of skiing	0	180	6790	21.02	25.011
Cost of further recreation activities	0	200	4045	12.52	23.264
Cost of means of transport	0	100	5654	17.50	14.522
Cost of food / drink	0	200	12963	40.13	30.659

In the question of creating a new vision or making a proposition on managing the wider area, 81.1% of the sample visitors have a new vision for the wider region, with only 18.9% of the respondents not having one. Next, those of the visitors who have a vision for new management plans were asked to respond to closed prefabricated type questions and choose from several proposals that can be implemented in the wider area with the Willingness to Travel (WTT) WTT technique. The first proposal concerned the construction of the Cable Car from the Pozar Thermal Springs to the Kaimaktsalan Ski Center, as both recreational areas are located in the same mountainous area. The results showed that this scenario would be chosen by 67.2 % of visitors and would not be chosen by 13.9%. Concerning the second proposal which involved building an ice skating and a hockey skating rink, there was a positive choice by 47.1% of respondents, while a negative one by 34.1% of respondents. Regarding the third proposal, i.e., the development of infrastructure for campsites in the spring season, it was selected by 119 visitors, i.e., 36.8%, with the larger percentage of them 44.3%. The sample visitors were also given the opportunity to express their opinion through a free and open-ended question. Finally,

the Alternative Management Proposals for the Greater Area are: Aesthetic interior design, Upgrading the Lift, Highlighting all the activities that can take place on the mountains, Renovation of Lifts (speed and infrastructure), Developing the productive activities of the area with emphasis on the production base of the region, Construction of a Wind Generator, Exploitation of Vegoritida Lake, Fast aerial chairlift (with cover/closed), Introducing a Summer Cinema, a Festival with local dishes and music, a Glassboat, Creating bars, Creating nightclubs, Creation of a guesthouse next to the Ski Center, Creating more chalets, Modernizing the cafe-bar-restaurant, Aerial cable car, Developing Renewable Sources of Energy, Construction of wooden houses, Construction of an Ecological Village, Construction of more cafes and chalets in the Ski Center, Construction of a sliding plate up to the top, Construction of a cable car from Agios Athanasios to Panagitsa, Construction of a cable car from the Ski Center to Agios Athanasios, Enlarge the Chalet, Elarge the Chalet with an ultramodern restaurant, Integrated alternative tourism package, Organized Mountaineering trips, Organized activities of all types, More tracks-extending the Ski Center, Lower tracks in the Ski Center, Lower tracks in the Ski Center, Signs for travel destinations in the area, Collaboration of the authorities of all recreational areas, Artificial snowfall across the track, Submission of proposals for Government funding, Funding by the Government and the European Union.

Estimating an additional frequency of visits to the Ski Center if the choices of the relevant visions for the wider region were realized reveals significant results with reference to the positive economic and social impacts that may arise. 77.1% of the sample, would visit the Kaimaktsalan Ski Resort more often while only 4% would not visit it. Response visit count figures for most frequent visits to the Thermal Springs per year are 1522 visits, while the Willingness to Travel (WTT) of Ski Center Kaimaktsalan per visitor are six travels. Regarding the management of the Ski Center, the respondents were asked to indicate whether they had a proposal/vision. A majority of 69.3% suggested an alternative, with only 30.7% not making a suggestion. Of the 223 respondents who had a positive choice, using closed-ended scenarios again, alternative options were available. Statistical results for the first proposal, which was related to the creation of a modern new lift, showed that 180 respondents would like to have this vision realized 55.7%, while 44, i.e., 13.6% of the 69.3% of the sample who had a positive choice in the scenarios would not choose it. The analysis of the results for the second scenario, the construction of a new ski track, showed a positive choice for 48.6%, while it was identified as a non-desirable choice by 20.7% of the sample. The construction of protective technical works (e.g., from avalanches, etc.) was related to the third proposal for the management of the ski resort; 129 visitors 39.9% opted for the implementation of the proposal as opposed to 95, 29.4%, who did not choose it. The sample visitors were also given the opportunity to express their opinion with a free and open-ended question with a focus on what they want to have implemented in the area of the Ski Center, with the results presented below (Alternative Management Scenarios for the Ski Center): Creating a children's sled track, Waiting space for parents near children, E-Ticketing service, Assignment to a Private Contractor, Renewable Energy Sources (Exploitation of wind and solar energy - creation of parks etc.), Improvement of Ski Center facilities, Improving artificial snow and facilities, Improving artificial snow, Creation of recreational facilities for those who do not wish to ski, Creating a Special Area for

Children and Schools, Setting up Camping and Recreational Sports in the Summer, Create a larger Chalet, Creating of a chalet with accommodation, Developing Spas and Gym, Developing infrastructure for taverns and food, Different spatial planning of the ski resort, Alternative land use management, Expanding the Ski Center to lower altitude, offering rapid lifts and artificial snow, Better recreation facilities and more traditional ones with a local market, Closed cabin, Closed cabin in Sarantovrysi and Artificial Snow, Closed Chair, Closed Lift, Higher speed and safety of lifts, Larger Chalet, Leasing of the Ski Center for more than one calendar year by private entities, The Chalet should not be a dressing room, Night Skiing, More lift and tracks, More Shopping Stores, More cannons for artificial snow, Protection from air in the aerial two-seater lifts (cabin), Chalet in Kremassi, Connection and Cooperation with the 3-5 Pigadia Ski Resort, Cooperation with other Ski Centers in Greece.

The technique of Willingness to Travel was also used in the management scenarios for the Ski Center in case realization of the visions and proposals selected would influence the frequency of visit to the broader region. 67.2% of the sample respondents, would visit the wider area more often, while only 2.2% would not visit it. Response visit figures for more visits to the broader region per year are 1493travels, while 6.88 trips per visitor. The comparative results from the WTT technique have shown that if the scenarios for the management of the wider area are applied, the demand for visiting per year will be 1522 visits compared to the ones of the Ski Center, which are 1493. Additionally, visitors were consulted on environmental issues to explore their views and attitudes towards environmental sensitization, the Natura 2000 Network etc. The environmental awareness of the visitors concerning natural resources (meadows, forests, water, game) was investigated by the degree of their interest. Their responses indicated a high environmental sensitization for 72.4% of the sample, a low environmental sensitization for 25.7% of them, and no environmental sensitization for 1.5% (missing data 0.3%, i.e., n = 1). Regarding knowledge of what the Protected Areas (e.g., areas belonging to the Nature Network 2000) are, the frequencies and percentages of the data from the sample show that most respondents know what the Natura 2000 sites are 68.7% while 31.3% of the respondents are not aware of them. The percentage distribution of the information sources of the Natura 2000 protected areas for the citizens who have knowledge of such areas showed that the percentage of the respondents who obtain information about the protected areas from the media is 33.7%, friends and relatives 16.4%, governmental organizations - local authorities 13.6%, formal studies 22%, 10.8% from seminars, and 0.3% from another source of information. The knowledge of the respondents regarding the characterization and integration of the Voras area into the Natura 2000 Network as a game shelter cannot be considered as satisfactory since more than half of them 52.9% are not aware of the protected area, with 152 visitors (47.1%) of the total sample possessing such knowledge.

To construct a new tourism plan including the special and alternative forms of tourism developed in the wider area, the areas of tourist attraction developed in the area where presented to the sample of visitors who were invited to choose which of the following destinations they will follow or have already followed during their visit. The plan shows that the visitors will go on a trip or have already planned one firstly, to Agios Athanasios (89.8%), which suggests that cultural tourism is highly

valued in the preferences of the visitors of the Ski Center, who next choose the Pozar Thermal Spa as a travel destination (70.6%), followed by eco-tourism on Voras mountain (48.6%), and then, the Agra-Vrython-Nisi wetland with the development of agritourism (30.34%), immediately afterwards, visitors choose Lake Vegoritida, namely Naval Sports tourism (30.34%), while the tourist plan of preference is completed by the selection of the mountain complex of Panagitsa airport (15.48%), i.e., the activities of the sports air travel club.

As part of building a new tourism plan for a new policy of development and governance in the broader region, the visitors were asked to answer whether they would be interested in a Combo Ticket to carry out further recreation activities in the area. The results showed that 91.6% of the sample of 323 respondents, would choose this Combo-Ticket, as opposed to 8.4% who would not choose it. The descriptive results for the visitors who had a positive choice of a combo economic ticket for recreational activities are presented with a Missing System 8.4%. and the Combo-Ticket Total Discount Rate Descriptive Statistics shows that the visitors prefer and like 10% discount of this ticket. It is deduced that the majority of the sample prefer the Spa treatment, then Skiing, Riding, Boating, Kayaking and Flying follow in order of preference. Organized visits to the tourist destinations in the wider region were opted by 84.8% of the visitors, with only a minority of the sample, i.e., 15.2%, not opting for them. 79.9% of respondents would be willing to pay for such a service, while only 5% of the respondents would not. The maximum amount (MaxWTP) of money that they would be willing to pay for such a service is 38.51€, while the total budget for organized visits is 9936€ according the questioners.

The table 2 shows the correlations and their strength among the activities and recreation areas which were selected in the wider region. The greatest strength was presented for boating and kayaking (0.579) which is statistically significant at a basic level $p < 0.05$.

Table 2. Based on x^2 Criterion.

Variables	x^2 Criterion	Phi & Cramer's V Criterion
Ski - Hydrotherapy	$x^2(1)=1.039$ p=0.308	Phi = -0.059, Cramer's V=0.059 p=0.308
Ski - Riding	$x^2(1)=1.715$ p=0.190	Phi =-0.76 Cramer's V=0.076 p=0.190
Ski - Boating	$x^2(1)=3.191$ p=0.074	Phi=-0.104 Cramer's V=0.104 p=0.074
Ski - Kayak	$x^2(1)=2.733$ p=0.098	Phi & Cramer's V=0.096 p=0.098
Ski - Flight	$x^2(1)=6.247$ p=0.012	Phi & Cramer's V=0.145 p=0.012
Hydrotherapy - Riding	$x^2(1)=0$ p=0.984	Phi & Cramer's V=0.001 p=0.984
Hydrotherapy - Boating	$x^2(1)=0.518$ p=0.472	Phi & Cramer's V=0.042 p=0.472
Hydrotherapy - Kayak	$x^2(1)=3.959$ p=0.047	Phi=-0.116 Cramer's V=0.116 p=0.047
Hydrotherapy - Flight	$x^2(1)=1.332$ p=0.248	Phi=-0.067 Cramer's V=0.067 p=0.248
Riding - Boating	$x^2(1)=34.900$ p=0	Phi & Cramer's V=0.343 p=0
Riding - Kayak	$x^2(1)=44.215$ p=0	Phi & Cramer's V=0.386 p=0
Riding - Flight	$x^2(1)=42.473$ p=0	Phi & Cramer's V=0.379 p=0
Boating - Kayak	**$x^2(1)=99.172$ p=0**	**Phi & Cramer's V= 0.579 p=0**
Boating - Flight	$x^2(1)=57.864$ p=0	Phi & Cramer's V=0.442 p=0
Kayak - Flight	$x^2(1)=85.239$ p=0	Phi & Cramer's V=0.537p=0

5 Conclusions

There is a great need for economic evaluation of natural resources in same areas and recreation centers at the National and European Level. The present research presents the most important parameters in the tourism product in Regional Unit of Pella by exploring the attitudes and opinions of the visitors in the area of Kaimaktsalan.

The previously reported problem and the weakness in the area concerning the specific subject, with some solutions and suggestions to be provided through the exploration of the attitudes and opinions of the respondents in mountainous areas and settlements of Greece. A theoretical basis for giving new dimensions to the factors, the level of satisfaction of visitors and their intention to visit ski resorts and spa town around the world was born with successive variables to emerge the new winter tourism in Greece and their contribution to the research goal with strategic practices that have to be implemented to increase the satisfaction of visitors as well as the competitive advantage of the areas.

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Appendix

The guiding questions (key tool of research) of Willingness to Travel-WTT technique (open and ended) are presented below (part of questioner-sampling).

Question. *Have you got a vision or would you like to make proposals concerning* ***the management of the wider area*** *?*

1. □YES *2. □NO*

If YES, *select which options you prefer from the following ones:*

(1). The construction of a cable car from Pozar to Kaimaktsalan □
(2). The development of an ice skating rink in the region for skating and hockey □
(3). Providing infrastructures for camping during the spring season □
(4). Other: ..... □

Should the abovementioned options be realized, do you think that you would visit the ski resort more often?

1. □YES *2. □NO*

If YES, *how many times per year?*

.....

Have you got a vision or would you like to make proposals concerning ***the management of the ski resort*** *?*

1. □YES *2. □NO*

If YES, *select which options you prefer from the following ones:*

(1). Developing modern new lift □
(2). Developing a new ski slope □
(3). Developing protective constructions (eg., avalanches, etc.) □
(4). Other: ..... □

Should the aforementioned vision be realized, do you think that the number of visits to the wider region would rise ?

1. □YES *2. □NO*

If YES, *how many times per year ?*

.....