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## Assessing Tourists' Preferences for Recreational Trips in National and Natural Parks as a Premise for Long-Term Sustainable Management Plans

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## Article

# Assessing Tourists' Preferences for Recreational Trips in National and Natural Parks as a Premise for Long-Term Sustainable Management Plans

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**Abstract:** Sustainable tourism management plans rely on relevant and consistent information about factors that can influence the decision to visit a protected area. This paper uses the choice experiment method to investigate tourists' preferences with regard to recreational trip characteristics in national and natural parks in Romania. An on-site survey questionnaire was administered to visitors. The multinomial logit model was employed to investigate the preference orderings of the identified groups of recreational users. Overall, results indicate that tourists gain benefits after visiting the parks. Main preference differences were found for information sources and location of campsites. Visitors who stated that the park was the main trip destination were willing to have access to more information sources, the marks on trails being insufficient. Camping is preferred only in organized places, expressing the concern for environmental protection. The results of this study have management implications, highlighting the importance of assessing tourists' preferences as a foundation for developing sustainable tourism strategies.

**Keywords:** choice experiments; protected areas; willingness to pay

## 1. Introduction

National and natural parks provide a large variety of economic, environmental, and recreational benefits to visitors and surrounding communities [1,2], with tourism and recreation being the primary objectives, along with wilderness protection and maintenance of environmental services [3]. The increasing demand for recreation opportunities puts pressure on local authorities to immediately take long-term sustainable management actions that are in the benefit of both nature and the tourist. Practice shows that sustainability can be reached by integrating social, economic, and ecological goals in the management plans of the national and natural parks. Economic sustainability requires management actions that generate sufficient revenues to cover the costs by minimizing the negative impacts of tourism on the natural heritage. The potential benefits of tourism in protected areas reside in enhancing economic opportunity, protecting the natural and cultural heritage, and enhancing quality of life [4]. Local residents can benefit from employment opportunities offered by tourism development

in the parks and also from the infrastructure development of the areas [5,6]. In addition, conservation of the natural and cultural heritage can be supported by demonstrating the economic value of the protected area [4].

Offering tourism opportunities while minimizing environmental impacts remains an ongoing task for park authorities that should be constantly based on a systematic evaluation of tourists' preferences and behavior [7,8]. Preferences refer to the tradeoffs between social, economic, and ecological values of goods and services provided by the protected areas [9]. Hearne et al. [10] emphasize the need to understand tourists' preferences for national park characteristics in order to develop services that respond to the dual goals of conservation and tourism development. Moreover, a recent study has shown that the concept of sustainable tourism is viewed differently by different attitudinal groups [11], thus, tourists' preferences should be granted more attention for management purposes. Knowledge and understanding of tourists' preferences and expectations can lead to better tourism planning [12], as it may provide a detailed insight of the real demand [13].

Numerous studies worldwide have determined the value of protected areas based on tourists' preferences using the choice experiment method. Main interests focused on tourists' behavior towards: ecotourism and nature based tourism development [10,14–16], recreation activities [17,18], interest to support nature conservation and/or policies [19–21], alternative management scenarios considering both biodiversity and recreational services [7], and public lands management under competing uses [22]. There have been only a few studies on the economic value of Romanian national and natural parks [23–25].

The aim of this study is to explore tourists' behavior in national and natural parks in Romania by understanding the tradeoff between benefits and costs as perceived by tourists. This was achieved by providing an understanding of tourists' preferences for various park characteristics and by examining whether any differences exist among park users. The current study intends to inform and support the efforts of park managers in the local decision-making processes. Effective management plans rely on comprehensive understanding of services and goods provided by a protected area to the society [7], as the assessment of tourists' preferences plays an important role in this process [10]. The research question addressed is: what are tourists' preferences for recreational trips in national and natural parks? The choice experiment method was used to elicit these preferences by estimating the marginal willingness to pay for each trip characteristic. This technique can be used to assess and understand tourists' preferences and behavior. It offers information about each individual attribute that describes the analyzed good and not about the whole good as other non-market valuation methods [26]. Expressing the importance of the attributes in monetary terms will allow park managers to find optimal solutions for competing management priorities [27] and develop sustainable management plans. The current work differs from other choice experiment studies revealing tourists' preferences for recreation in national and natural parks by incorporating the fuel price as a monetary attribute in the choice sets offered to be assessed by tourists. Previous studies at the national level showed that distance traveled and fuel prices are significant factors that affect the tourists' decisions on the travel destination [23]. In other similar studies, the monetary attribute was the entrance fee [7,10,14,17] or the price for guided tours [16].

## 2. Materials and Methods

### 2.1. Survey Design

Data were collected by means of questionnaires administered through personal interviews during the high tourist season, from July to September 2011, in the national and the natural parks of Romania. The parks are well known for their high biodiversity, with many species being endemic and rare, while offering a wide range of recreation opportunities throughout the year. The study used systematic random sampling, where every fifth visitor aged at least 18 was interviewed either at the entrance of the park or while partaking in recreation activities inside the park.

The questionnaire was comprised of four sections. The first part of the questionnaire contained questions related to the actual trip, such as length of stay, accommodation type, recreation activities, and number of people in the group. Secondly, respondents were asked about their previous experience in national and natural parks. The third part referred to socio-economic and demographic characteristics of the respondents, including age, level of education, and household income. The fourth and final part of the questionnaire presented the choice sets. Each choice set comprises three alternatives, two describing hypothetical recreational trips to a national or natural park and one—the status quo alternative—representing the option of not taking any trip. The hypothetical recreational trips are described by six attributes presented in Table 1, emerging from the literature review in the field [10,14] and information gathered from the park authorities about the recreational facilities and services provided at the time of data collection. Each attribute has different levels, indicating different statements of the attribute (as shown in Table 1). Respondents were asked to choose the most preferred alternative from each choice set [28]. Among the set of attributes, four are related to facilities and services provided by the park authorities (guided tour, information type, camping place, number of groups at campsite) and two refer to the tourists' willingness to spend for transportation (distance traveled, price of fuel).

**Table 1.** Attributes and levels used in the choice experiment.

Attribute	Description	Levels	Variable Name
Distance (one way)	One-way distance traveled from home to the park (kilometers)	Less than 150 km <sup>BL</sup> 150–300 km 301–450 km More than 450 km	distance 2 distance 3 distance 4
Nature observation	Opportunity to observe the nature accompanied by an authorized guide	Without guide <sup>BL</sup> With guide	guide 2
Information	The type of information available during the trip	Marks <sup>BL</sup> Marks and visitor center Marks and map Marks and visitor center and list with protected species	information 2 information 3 information 4
Campsites	Location of the campsites	Not inside the parks <sup>BL</sup> Inside the parks, in unorganized campsites Inside the parks, in organized campsites	camping 2 camping 3
Groups at campsites	Number of groups at campsites	1–5 groups <sup>BL</sup> 5–10 groups More than 10 groups	congestion 2 congestion 3
Fuel price	The price of fuel	Actual price 5.5 RON (1.86 USD) * 10% more expensive 20% more expensive	price

BL—base level; \*—The market average price was considered for fuel. Official Exchange Rate 1 USD = 2.9600 RON (1 September 2011, Romanian National Bank).

The combination of all levels of the attributes leads to a full factorial design of  $(2 \times 3^3 \times 4^2)$  or 864 possible combinations. This was further reduced using the orthogonal fractional design [29,30]. The resulting 32 choice sets were blocked into eight versions of four choice sets each. The respondents were randomly assigned to one questionnaire version and asked to choose the alternative that they prefer the most within each choice set. Table 2 provides an example of a choice set presented to respondents.

**Table 2.** Sample of choice set offered to tourists.

Attribute	Alternative 1	Alternative 2	Alternative 3
Distance from home (one way)	150–300 km	>450 km	
Nature observation	Without guide	Without guide	
Information available	Marks and map	Marks and visitor center	
Campsites	Inside the park, in unorganized campsites	Inside the park, in organized campsites	I will not visit any place
Number of groups at campsites	5–10 groups	>10 groups	
Fuel price	10% more expensive	20% more expensive	
Your choice (Please check one box)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 2.2. The Choice Experiment Method

The choice experiment method is based on the Lancaster consumer theory [31], according to which the consumer makes choices based on preferences for the attributes of a certain good and not on the marginal rate of substitution between goods. The method is also based on the random utility theory, which states that the consumer utility is a function of systematic and random components, the first allowing the researcher to make probabilistic statements about the consumer behavior [29,32]. Thus, the utility can be expressed as:

$$U_i = V_i + \varepsilon_i = \beta'X_i + \varepsilon_i, i = 0, 1 \quad (1)$$

where  $U_j$  is the unobservable indirect utility,  $V_j$  is the systematic component of utility,  $\varepsilon_j$  is a random component,  $X_i$  is a vector of attributes associated with choice  $i$ , and  $\beta$  is a vector of parameters, representing marginal utilities.

The probability that an individual will accept the alternative  $i$  from a set of alternatives  $C$  (choice set) can be expressed as [33]:

$$\begin{aligned} \text{Prob}(i|C) &= \text{Prob}(U_i > U_j) = \text{Prob}(V_i + \varepsilon_i > V_j + \varepsilon_j) = \\ &= \text{Prob}(\beta'X_i + \varepsilon_i > \beta'X_j + \varepsilon_j), \forall j \in C \end{aligned} \quad (2)$$

Data were coded using the effects codes procedure for all attributes except the price, which is a continuous variable [29,33,34]. The alternative specific constant is included in the model to express the marginal utility corresponded to the status quo alternative in comparison with the other two alternatives.

The systematic component of the utility function is assumed to be linear and is estimated as:

$$\begin{aligned} V_i = & \alpha_1 \text{Alternative } C + \beta_1 \text{distance}_2 + \beta_2 \text{distance}_3 + \beta_3 \text{distance}_4 + \beta_4 \text{guide}_2 + \\ & + \beta_5 \text{information}_2 + \beta_6 \text{information}_3 + \beta_7 \text{information}_4 + \beta_8 \text{camping}_2 + \\ & + \beta_9 \text{camping}_3 + \beta_{10} \text{congestion}_2 + \beta_{11} \text{congestion}_3 + \beta_{12} \text{price} \end{aligned} \quad (3)$$

where  $\alpha$  and  $\beta$  represent vectors of attributes based on which utility is determined.

The errors are assumed to be independently and identically distributed following a type I Gumbel distribution. In this case, the multinomial logit model is suited to estimate the probability of choosing the alternative  $i$  from a set of alternatives, which is:

$$\text{Prob}(i|C) = \frac{\exp(\mu V_i)}{\sum_{j \in C} \exp(\mu V_j)} \quad (4)$$

where  $\mu$  is the scale parameter, usually assumed to be one [35].

The marginal willingness to pay (MWTP) is determined for each level of the attributes based on the marginal rate of substitution between the estimated coefficient of the respective attribute level ( $\beta_k$ ) and the estimated coefficient on the price parameter ( $\beta_p$ ) [30,36]:

$$MWTP_i = -\frac{\beta_k}{\beta_p} \quad (5)$$

### 3. Results

#### 3.1. Descriptive Statistics

The survey resulted in a total number of 756 completed questionnaires. Socio-economic characteristics of the respondents are presented in Table 3, while the recreation characteristics are presented in Table 4. The share of female respondents was 51.85%. The average age of respondents was 33.98 years (SD = 10.99). A significant percentage was represented by young people who enjoy and appreciate nature (41.14% up to 29 years old). In terms of country of origin, 96.16% were Romanians. More than a half had at least a college or university degree. The monthly income per household was more than 675.7 USD for 70.64% of the respondents, which is close to the national average income per household at the time of data collection. The majority chose to stay overnight in guesthouses and/or hotels, many being located near or inside the parks. Only 15.34% camped out or stayed in mountain refuges. A small percentage (10.47%) did not stay overnight, the main recreational activity being hiking (57.80%). Trips up to 3 days long were the most common (77.51%), with the parks being frequently visited during the weekend. Tourists mostly prefer to travel in small groups of up to five persons.

One important finding was that 77.65% of respondents stated that the park where they were approached to participate in this study was the main trip destination. Thus, two groups were identified: respondents who stated that the park was a secondary destination of the trip (Group 1) and respondents who stated that the park was the main destination of the trip (Group 2). Furthermore, Group 2 was split by the length of stay: short trip (1–3 days) and long trip (3–8 days), on the assumption that their behavior and preference would differ. Crosstab analysis was used to assess the statistical significance between the groups.

Significant differences were found in age ( $p < 0.001$ ), education level ( $p < 0.05$ ), and income ( $p < 0.05$ ) between Groups 1 and 2. Tourists younger than 29 years and with a higher socioeconomic status were prevalent in Group 1, whereas more highly educated were found in Group 2. By analyzing respondents' behavior, it was observed that there were significant differences in terms of the number of people within their group ( $p < 0.05$ ), the distance traveled from home to the park ( $p < 0.05$ ), and the main recreational activity performed during the visit ( $p < 0.001$ ). Groups with less than five persons were predominant in Group 2, which was also more active in hiking. Group 1 was also involved in hiking, but it surpassed Group 2 in terms of scientific activities and visiting touristic attractions.

When comparing short versus long trips within Group 2, it was found that there were no significant differences for the education level ( $p > 0.05$ ). Age categories differed ( $p < 0.001$ ), with younger tourists preferring short trips. As for the recreation characteristics, significant differences occurred in terms of accommodation type ( $p < 0.001$ ), distance ( $p < 0.001$ ), and main activity ( $p < 0.001$ ). Guesthouses were more popular among visitors that chose to spend more time in the park (86.82%) and also amongst those who traveled long distances to reach the park (58.14%). Hiking (67.03%) was the most popular main activity in case of short trips, whereas in the case of longer trips hiking (43.41%) and 'rest and relaxation' (39.53%) were the two most popular activities.

**Table 3.** Socio-economic characteristics of the respondents.

Visitor Characteristics		All ( <i>n</i> = 756)		Group 1 Secondary Destination ( <i>n</i> = 169)		Group 2 Main Destination ( <i>n</i> = 587)		Group 1 vs. Group 2	Group 2 Main Destination-Short Trip ( <i>n</i> = 458)		Group 2 Main Destination-Long Trip ( <i>n</i> = 129)		Group 2: Short vs. Long Trip
		N	%	N	%	N	%	<i>p</i> -Value	N	%	N	%	<i>p</i> -Value
Gender	Male	364	48.15	82	48.52	282	48.04	$\chi^2 = 0.01$ df = 1	217	47.38	65	50.39	$\chi^2 = 0.36$ df = 1
	Female	392	51.85	87	51.48	305	51.96	$p = 0.912$	241	52.62	64	49.61	$p = 0.546$
Age groups	18–29 years	311	41.14	99	58.58	212	36.12	$\chi^2 = 29.97$ df = 3 $p = 0.000$	175	38.21	37	28.68	$\chi^2 = 27.50$ df = 3 $p = 0.000$
	30–39 years	196	25.93	24	14.20	172	29.30		143	31.22	29	22.48	
	40–49 years	164	21.69	29	17.16	135	23.00		103	22.49	32	24.81	
	50–68 years	85	11.24	17	10.06	68	11.58		37	8.08	31	24.03	
Education level	Less than 9 grades	5	0.66	0	0.00	5	0.85	$\chi^2 = 16.71$ df = 3 $p = 0.001$	5	1.09	0	0.00	$\chi^2 = 1.48$ df = 3 $p = 0.688$
	High school	199	26.32	59	34.91	140	23.85		108	23.58	32	24.81	
	College/University	364	48.15	60	35.50	304	51.79		237	51.75	67	51.94	
	Graduate school	188	24.87	50	29.59	138	23.51		108	23.58	30	23.26	
Average monthly income <sup>1,2</sup>	<219.60 USD	16	2.12	2	1.18	14	2.39	$\chi^2 = 15.74$ df = 5 $p = 0.008$	12	2.62	2	1.55	$\chi^2 = 14.88$ df = 5 $p = 0.011$
	219.61–337.84 USD	42	5.56	4	2.37	38	6.47		36	7.86	2	1.55	
	337.85–675.67 USD	157	20.77	28	16.57	129	21.98		94	20.52	35	27.13	
	675.68–1013.51 USD	176	23.28	33	19.53	143	24.36		103	22.49	40	31.01	
	1013.52–1351.35 USD	148	19.58	37	21.89	111	18.91		94	20.52	17	13.18	
	>1351.35 USD	210	27.78	63	37.28	147	25.04		117	25.55	30	23.26	

<sup>1</sup> Some respondents refused to reveal personal information; <sup>2</sup> Official Exchange Rate 1 USD = 2.9600 RON (1 September 2011, Romanian National Bank).



**Table 4.** Recreation characteristics.

Visit Characteristics	All ( <i>n</i> = 756)		Group 1 Secondary Destination ( <i>n</i> = 169)		Group 2 Main Destination ( <i>n</i> = 587)		Group 1 vs. Group 2	Group 2 Main Destination-Short Trip ( <i>n</i> = 458)		Group 2 Main Destination-Long Trip ( <i>n</i> = 129)		Group 2: Short vs. Long Trip
	N	%	N	%	N	%	<i>p</i> -Value	N	%	N	%	<i>p</i> -Value
Accommodation												
Guesthouse/Hotel	560	74.07	132	78.11	428	72.91	$\chi^2 = 3.01$	316	68.99	112	86.82	$\chi^2 = 24.11$
Camping/Mountain refuge	116	15.34	25	14.79	91	15.50	df = 2	74	16.16	17	13.18	df = 2
No overnight staying	80	10.47	12	7.10	68	11.58	<i>p</i> = 0.222	68	14.85	0	0.00	<i>p</i> = 0.000
Size of group												
1–5 people	501	66.27	101	59.76	400	68.14	$\chi^2 = 4.12$ df = 1	321	70.09	79	61.24	$\chi^2 = 3.62$ df = 1
>5 people	255	33.73	68	40.24	187	31.86	<i>p</i> = 0.042	137	29.91	50	38.76	<i>p</i> = 0.057
Distance (one way)												
<150 km	197	26.06	35	20.71	162	27.60	$\chi^2 = 7.32$	147	32.10	15	11.63	$\chi^2 = 63.87$
150–300 km	339	44.74	91	53.85	248	42.25	df = 2	209	45.63	39	30.23	df = 2
>300 km	220	29.10	43	25.44	177	30.15	<i>p</i> = 0.026	102	22.27	75	58.14	<i>p</i> = 0.000
Main activity												
Hiking	437	57.80	74	43.79	363	61.8	$\chi^2 = 58.29$ df = 9 <i>p</i> = 0.000	307	67.03	56	43.41	$\chi^2 = 30.85$ df = 8 <i>p</i> = 0.000
Climbing	2	0.26	2	1.18	0	0.00		0	0.00	0	0.00	
Cycling	14	1.85	2	1.18	12	2.04		10	2.18	2	1.55	
Horse riding	2	0.26	0	0.00	2	0.34		2	0.44	0	0.00	
Rest and relaxation	204	26.98	50	29.59	154	26.24		103	22.49	51	39.53	
Medical treatment	12	1.59	2	1.18	10	1.70		6	1.31	4	3.10	
Nature observation	17	2.25	6	3.55	11	1.87		7	1.53	4	3.10	
Photography	13	1.72	2	1.19	11	1.87		6	1.31	5	3.88	
Scientific activities	15	1.98	11	6.51	4	0.68		4	0.87	0	0.00	
Visiting touristic attractions	40	5.29	20	11.83	20	3.41	13	2.84	7	5.43		

### 3.2. Estimation Results

Table 5 presents the estimation results for the multinomial logit models comprising all respondents and each identified group, thus allowing a comparative analysis of the results. In the case of the base attribute levels, the parameters are equal to minus the sum of the estimated parameters for the other levels of the attribute [33]. A first comparative analysis was conducted between Groups 1 and 2. The main difference regards the type of information available during the visit. Group 2 valued significantly and positively the opportunity to consult a map, as well as to visit an information center that also provides a list with protected species, in addition to the marks on trails. Another difference was the location of camping places, with campsites located inside the parks and in authorized places being significantly positive for Group 2. The remaining main effects have the same signs for both groups, indicating a positive preference towards short distances and a negative preference towards guided visits and more than 10 groups at campsites.

Further analysis was undertaken by comparing short and long trips within Group 2. The signs and sizes of the main effects suggest that distance is more important for short trips than for long trips, with distances between 150 and 300 km being preferred. Respondents enjoy observing nature without being accompanied by an authorized guide. This result holds true for all groups. The unwillingness to be accompanied by a guide might be due to the lack of information about services provided by the park authorities. Regarding the type of information provided, having only marks on the trails was not considered sufficient, being that this information is present in all parks. Additional types of information were expected from both groups. While a map of the park was considered sufficient only for respondents taking short trips, the presence of a visitor center that also provided information about the protected species was preferred by both groups. Unorganized and unauthorized campsites were not favored by any group, although significance was found only in the case of short trip respondents. Statistically significant disagreement towards the presence of more than 10 groups at the camping places was expressed by all respondents.

As expected, the coefficient for fuel price was negative and statistically significant in all estimated models. The alternative specific constant coefficient was statistically significant and negative, suggesting that all respondents had a preference against the status quo alternative [33]. Hence, respondents significantly expressed the choice of visiting the parks instead of staying at home.

### 3.3. Marginal WTP Estimates

Table 6 includes marginal WTP estimated based on the multinomial logit models presented in Table 5 and their corresponding standard errors, adjusted to USD at the September 2011 official exchange rate of 2.96 RON per dollar. Marginal WTP was not significant for distances shorter than 150 km, suggesting that tourists were looking for new places to visit. Significant positive WTPs for parks located 150–300 km away from the respondents' place of residence were found in all groups. Long distances were not preferred, as indicated by the negative marginal WTPs, most probably due to time and/or budget constraints. Regarding nature observation, marginal WTPs were positive and significant for tours without an authorized guide. Large negative marginal WTPs can be noticed for the basic type of information, marks on trails, meaning that respondents would like to have access to more types of information. However, the marginal WTPs for more types of information were not significant for respondents who did not choose the park as the main destination. More interest to be well informed was observed in the case of respondents who chose the park as main destination, with the marginal WTPs being positive and significant. A rather interesting result was found in the case of camping places. Positive and significant marginal WTP was observed for campsites located outside the park in the case of tourists taking long trips, as compared to those taking shorter trips that preferred to camp inside the parks in organized and authorized places. An explanation for the difference could be the length of the stay, with respondents who spend less time visiting the park being able to experience more if already camped inside the park. Large marginal WTPs were found in case of the congestion attribute, with less people at the campsites being preferred by all.

**Table 5.** Results of multinomial logit models.

Attributes and Levels		Model 1. (All)		Model 2. (Group 1 Secondary Destination)		Model 3. (Group 2 Main Destination)		Model 4. (Group 2 Main Destination-Short Trip)		Model 5. (Group 2 Main Destination-Long Trip)	
		Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Distance (one way)	<150 km <sup>BL</sup>	0.0528		0.0730		0.0515		0.0710		−0.0512	
	150–300 km	0.3899 ***	0.0462	0.3451 ***	0.0987	0.4016 ***	0.0525	0.4502 ***	0.0602	0.2610 **	0.1103
	301–450 km	−0.3033 ***	0.0520	−0.2458 **	0.1076	−0.3216 ***	0.0597	−0.3789 ***	0.0681	−0.1357	0.1270
	>450 km	−0.1394 ***	0.0543	−0.1723	0.1239	−0.1315 **	0.0608	−0.1423**	0.0684	−0.0741	0.1365
Nature observation	Without guide <sup>BL</sup>	0.2804		0.1992		0.3054		0.3317		0.2245	
	With guide	−0.2804 ***	0.0294	−0.1992 ***	0.0608	−0.3054 ***	0.0338	−0.3317 ***	0.0379	−0.2245 ***	0.0768
Information	Marks <sup>BL</sup>	−0.3771		−0.2954		−0.4055		−0.4226		−0.3651	
	Marks, visitor center	0.0079	0.0594	0.0657	0.1279	−0.0120	0.0677	0.0124	0.0773	−0.0967	0.1442
	Marks, map	0.1943 ***	0.0513	0.0826	0.1121	0.2292 ***	0.0583	0.2516 ***	0.0669	0.1798	0.1222
	Marks, visitor center, species list	0.1749 ***	0.0558	0.1471	0.1169	0.1883 ***	0.0639	0.1586**	0.0721	0.2820 *	0.1419
Campsites	Not inside the park <sup>BL</sup>	0.0219		0.1370		−0.0160		−0.0765		0.2048	
	Inside, unorganized	−0.1305 ***	0.0407	−0.2336 ***	0.0842	−0.1012 **	0.0496	−0.0999*	0.0528	−0.1362	0.1073
	Inside, organized	0.1086**	0.0456	0.0966	0.0957	0.1172 **	0.0524	0.1764 ***	0.0595	−0.0686	0.1147
Groups at campsites	1–5 groups <sup>BL</sup>	−0.4405		0.2874		0.4984		0.5035		0.6087	
	5–10 groups	−0.0039	0.0399	0.0417	0.0857	−0.0242	0.0455	−0.0412	0.0513	−0.0522	0.1013
	>10 groups	−0.4444 ***	0.0509	−0.3291 ***	0.1140	−0.4742 ***	0.0572	−0.4623 ***	0.0639	−0.5565 ***	0.1338
Fuel price		−0.0419 ***	0.0055	−0.0416 ***	0.0125	−0.0414 ***	0.0062	−0.0349 ***	0.0070	−0.0609 ***	0.0135
Alternative specific constant		−2.6264 ***	0.0725	−2.4043 ***	0.1395	−2.699 ***	0.0849	−2.7901 ***	0.1000	−2.4235 ***	0.1609
No. choice sets		9072		2028		7044		5496		1548	
Log-likelihood		1715.97		360.70		1363.38		1087.41		285.84	

BL—Base level; S.E.—Standard error; Levels of significance indicated as: \*\*\* = 1%, \*\* = 5%, \* = 10%.

**Table 6.** Marginal willingness to pay (MWTP) for the levels of attributes (USD).

Attributes and Levels		Model 1. (All)		Model 2. (Group 1 Secondary Destination)		Model 3. (Group 2 Main Destination)		Model 4. (Group 2 Main Destination-Short Trip)		Model 5. (Group 2 Main Destination-Long Trip)	
		MWTP	S.E.	MWTP	S.E.	MWTP	S.E.	MWTP	S.E.	MWTP	S.E.
Distance (one way)	<150 km <sup>BL</sup>	n.s.		n.s.		n.s.		n.s.		n.s.	
	150–300 km	3.14 ***	0.54	2.80 ***	1.11	3.27 ***	0.64	4.35 ***	1.04	1.45 **	0.67
	301–450 km	−2.44 ***	0.52	−2.00 *	1.10	−2.62 ***	0.61	−3.66 ***	0.97	n.s.	
	>450 km	−1.12**	0.45	n.s.		−1.07 **	0.51	−1.38 *	0.70	n.s.	
Nature observation	Without guide <sup>BL</sup>	2.26 ***	0.35	1.61 ***	0.66	2.49 ***	0.42	3.20 ***	0.70	1.25 ***	0.44
	With guide	−2.26 ***	0.35	−1.61 ***	0.66	−2.49 ***	0.42	−3.20 ***	0.70	−1.25 ***	0.44
Information	Marks <sup>BL</sup>	−3.03 ***	0.60	−2.40 **	1.17	−3.30 ***	0.72	−4.08 ***	1.11	−2.02 **	0.82
	Marks, visitor center	n.s.		n.s.		n.s.		n.s.		n.s.	
	Marks, map	1.56 ***	0.45	0.67	0.91	1.87 ***	0.54	2.43 ***	0.79	n.s.	
	Marks, visitor center, species list	1.41 ***	0.50	1.19	1.04	1.53 ***	0.59	1.53 *	0.78	1.56 *	0.89
Campsites	Not inside the parks <sup>BL</sup>	n.s.		n.s.		n.s.		n.s.		1.14 **	0.53
	Inside, unorganized	−1.05 ***	0.36	−1.90 *	0.95	−0.82 **	0.40	−0.96 *	0.55	n.s.	
	Inside, organized	0.87 ***	0.41	n.s.		0.96 **	0.48	1.70 **	0.73	n.s.	
Groups at campsites	1–5 groups <sup>BL</sup>	3.61 ***	0.50	2.33 ***	0.82	4.06 ***	0.63	4.86 ***	0.99	2.80 ***	0.72
	5–10 groups	n.s.		n.s.		n.s.		n.s.		n.s.	
	>10 groups	−3.58 ***	0.52	−2.67 ***	0.95	−3.86 ***	0.63	−4.47 ***	0.94	−3.09 ***	0.84

BL-Base level; S.E.—Standard error; Levels of significance indicated as: \*\*\* = 1%, \*\* = 5%, \* = 10%, n.s. = not significant; Official Exchange Rate 1 USD = 2.9600 RON (1 September 2011, Romanian National Bank).

#### 4. Discussion and Conclusions

The findings of this study reveal the benefits tourists obtain while partaking in recreational activities in the Romanian national and natural parks by providing information about the strength of preferences for several trip characteristics. Travelling a long distance to reach the park was not chosen by respondents, most probably due to time and/or budget constraints. This is also supported by the high percentage of short trips found, up to 3 days. The predominance of short trips was also noticed by Dinu et al. [37] at the national level. Negative preference for long travel distance was also found by Dumitras [23] and Bakhtiari et al. [38].

In this study, respondents were willing to have access to more information sources, with the marks on trails being insufficient. This is in line with other studies which indicated that tourists expressed a high interest in more accessible and improved information [8,10,39]. In the studied area, the park authorities are constantly improving the manner in which information is provided to tourists through several funding programs, as they are aware that the quality of a recreational trip can be influenced by the information available. The satisfaction level of the trip quality can be improved by offering more information to tourists [2,40], such as the recreational activities they could experience, the type of accommodation offered, and the natural heritage. The United Nations Environment Programme and the United Nations World Tourism Organization [2] emphasize that tourists' awareness of biodiversity could be raised with the aid of visitor centers and interpretative facilities.

An interesting result was that all respondents preferred to visit the parks without being accompanied by an authorized guide. On the contrary, other studies demonstrated positive and significant preferences for park visits with guides [14,15,41]. According to Arnberger et al. [42], tourists agree that off-trail hiking has a negative impact on wildlife and plants. Milanovich et al. [43] support this statement by referring to significant studies found in literature concerning the impact on habitats. The different finding may be related to the lack of information tourists have about the services offered by park authorities in Romania. More efforts to inform people about the recreation opportunities are certainly needed.

Natural resources can be damaged by irresponsible tourists who choose to camp in unauthorized locations. The damage caused by campsites was evaluated by Eagleston et al. [44] over a 32-year span, finding that the numbers of trees and the soil at campsite decreased significantly. The results of the current study indicate that respondents were aware of the negative human impact on the environment and were willing to camp either outside the park in other types of lodgings or inside, but only in organized camping places. The generally low proportion of tourists choosing camping as their form of accommodation supports the concern for environmental protection.

The choice experiment method proved to be an appropriate tool to analyze tourists' preferences once more, and it serves as a useful tool to provide information to park authorities and other stakeholders. Effective and sustainable tourism management plans rely on information about factors that can influence the decision to visit the area, such as the tourists' preferences and attitudes towards the analyzed attributes that describe the recreational trip. Equal importance was given to all attributes, regardless of their nature, allowing tourists to state their preference orderings.

The results of this choice experiment survey provide several insights for park management. For instance, the welfare estimates could be used as guidelines by park authorities to establish pricing policies for entrance and service fees, as additional financing sources to support conservation [4], and also as a way to increase responsibility for using the products and services provided by the parks. As observed during the survey implementation and also pointed by Bann et al. [45], not all parks had an entrance fee at the time of data collection or it was very low (1–2 USD in 2011). Differential pricing may also be suitable, as the results indicate that there are more user groups. Before such decisions are made, an economic impact analysis to assess the costs and benefits of a differential pricing system (e.g., depending on the length of stay or the main recreational activity) is mandatory. This may also control the demand and minimize the environmental impacts [45].

Although positioning campsites closer to trails rather than spreading to a wider area is beneficial for nature (vegetation, soil, bird species), the effect of concentration may lead to decreasing satisfaction among tourists, as explained by Juutinen [7], and in the long term to decrease demand, as the results indicate that tourists most appreciate the lack of overcrowding at campsites. On the other hand, limiting the number of groups at campsites may decrease the demand for recreational trips and consequently the financing sources. Such management practice requires a deeper analysis of the number and location of campsites, number of camp users, amount of money spent by tourists, and other factors alike.

Another management action could be directed towards identifying more effective ways of informing potential and current tourists about the products and services they could experience during a recreational trip. The results obtained in this study show that the value of recreational trips increased significantly for tourists who stated that the park was the main destination if they had access to information like maps, a visitor center, a list of endangered species in addition to the marks on hiking trails. Even if the current management plans foresee such actions, there are conflicting visions in the priority of actions. Having a better information system in place (both pre-arrival and on-site) may have a positive impact on the demand and contribute to the long-term economic sustainability of the park.

The analysis of the tourists' preferences for park characteristics indicate that distances of 150–300 km from the respondents' place of residence to the park add utility to the recreational trip, while long distances are not preferred. On the other hand, by analyzing the recreation characteristics (Table 4), it was found that almost half of respondents traveled this distance to reach the park, out of which 70.50% visited the park for the first time. This finding has management implications as well, inferring that the demand for recreation depends on potential tourists who live in an area within 150–300 km from park locations. Park managers should focus on means of information about the facilities and services provided for recreation, as well restrictions that are relevant to potential tourists.

From these results, one can ascertain that respondents expressed their positive attitude towards partaking in recreational activities in national and natural parks from Romania. It remains the manager's task to understand tourists' preferences and attitudes and to search for efficient management solutions on how to respond to these demands without harming nature. Certainly, a systematic and continuous visitor monitoring system is mandatory [46] within such a challenging process. Veisten et al. [39] emphasized that sustainable tourism management can be reached in national parks by adopting an active visitor management system based on monitoring and visitor surveys. In Romania, more efforts towards sustainable tourism action plans started only a few years ago in some parks with a more resourceful and successful approach than in others. Primary park management actions focused on nature conservation and only in a few parks on education, with efforts supported by international and national funding programs. Questions like how to efficiently respond to an increasing demand and how to minimize negative impacts such as nature degradation caused by uncontrolled tourism still remain unsolved, and further efforts need to be directed towards sustainable forms of tourism that contribute to the increase of visitor awareness towards conservation [2]. Potential impacts of tourism need to be evaluated on a long-term basis [44] in order to find sustainable solutions for these problems.

Some limitations of this study need to be addressed. The use of a limited number of attributes to describe the recreational trip may not reflect the whole reality of the tourists' choices. However, many studies have used a limited number of attributes to avoid overwhelming respondents with too complex choice sets. Another limitation could be that tourists were approached only during the summer, thus, preferences of tourists that visit the parks for winter sports were not assessed. Future research could investigate the behavior of tourists during the winter to evaluate which trip characteristics prevail for this user group. The current study also has some important implications for further research. The results led to the identification of important similarities and differences between park users who went on short and long trips, suggesting that recreation opportunities should be created according to the types of users, as also noted by Fredman et al. [47].

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