Sustainable travel and tourists' satisfaction. The Case of Constanta, Romania

Andreea Barbu [1i], Dana Corina Deselnicu [2] and Gheorghe Militaru [3]

[1,2,3] Department of Entrepreneurship and Management, University POLITEHNICA of Bucharest,

E-Mail: barbu.andreeab@yahoo.com, d_deselnicu@yahoo.com, gheorghe.militaru@upb.ro

1. *ABSTRACT:* The development of tourism is essential for the economic growth of maritime or mountainous areas. Lately, the emphasis is on the development of sustainable tourism, which will bring benefits to both the community and the planet. However, to achieve this goal, a series of measures and investments are needed, which must be applied by all stakeholders.

The purpose of this paper is to analyse the relationship between the measures that support sustainable travel and the tourists' satisfaction. The results of the study show that not all the investments and efforts made by the accommodation units are favourably appreciated by tourists, because they prefer comfort, even if it is not necessarily sustainable.

However, it seems that the investments aimed at the dimensions of nature, energy and greenhouse gases, and also waste are those that positively influence the sustainable tourist experience. The results of this study may be the starting point for other extensive research, as well as directions that the authorities could develop to promote pleasant sustainable tourism.

Keywords: ***sustainable tourism, sustainable travel, tourists' satisfaction, Constanta***

2. INTRODUCTION

In the last 2 years, the Coronavirus pandemic has created global problems, affecting not only human health, but also the economic, cultural or natural environment (Muhammad et al., 2020). The restrictions imposed with the declaration of the pandemic have closed many borders, the tourism sector being directly affected by these measures. Many people have turned their attention to domestic tourism, and have begun to visit more of the tourist attractions in their own country. With this phenomenon, there has been a growing awareness among consumers, companies, and governments about the need to prioritize not only profit but also people and the planet (Trends HRB, 2021). A solution could be to ensure sustainable tourism strategies that contribute to the promotion of rural and regional tourism in the main tourist cities. In addition, in countries such as Sweden, Finland, and Austria, sustainable tourism is complemented by the development of efficient transport infrastructure and alternative forms of travel, with an emphasis on transforming traditional accommodation into sustainable ones (Trends HRB, 2021).

At the European Union level, several projects support the growth of responsible and sustainable tourism, some of them targeting the development of some training programs that teach people to develop their "green" and digital skills that can be implemented in tourism, the implementation of mechanisms to reduce the impact on the environment, to obtain eco-certificates and eco-labels to certify the sustainable efforts of the accommodation units, to promote the destinations less known by tourists, to avoid the overcrowding of certain cities (Wall-street, 2019).

In Romania, the creation of a sustainable tourist experience is just at the beginning, this being noted especially by the potential developed in the area of agro-tourism (pottery workshops, visits the sheepfold, beekeeping, various craft workshops). Many of the houses are transformed into spaces of accommodation for tourists, it is practically an approach and a greater integration of the tourist in the local life (Life&travel, 2021). Ensuring sustainable tourism is conditioned by the generation of a minimal impact on the environment, being necessary to focus attention on the exploitation of resources below the limit of its renewal. However, the population of Romania is still not very educated in terms of sustainability, Romania is spending and wasting more than other European countries (Foodwaste, 2016). In addition, during travel, unfortunately, tourists do not always use trash cans to dispose of food waste, nor do they selectively collect waste, or do not behave carefully with the environment. However, tourists consider that the problem is not necessarily their behaviour, motivating the fact that there are not the necessary facilities to behave responsibly neither around the tourist objectives nor around the accommodation units. Thus, they are the ones who signal dissatisfaction regarding the tourist experience (Protv news, 2014).

However, in recent years, the owners of accommodation units in Romania have started to invest in various methods that will contribute to the achievement of sustainable tourism (Horeca, 2021). In this context, this paper aims to analyze the factors that influence the level of tourists' satisfaction visiting a tourist city in Romania and identify those measures to ensure a sustainable trip that influences the level of tourists' satisfaction.

LITERATURE REVIEW

Sustainable tourism

Sustainable tourism refers to all measures taken to protect the environment, to improve the quality of life, to ensure cultural diversity, and also a dynamic economy that can provide jobs and prosperity for all stakeholders (The Tourism Sustainability Group, 2007). Sustainable tourism is also defined as "all forms of activities, management, and development of tourism that preserve natural, economic, and social integrity and guarantee the maintenance of natural and cultural resources" (Niedziolka, 2012). The keywords used to describe sustainable tourism are also responsible tourism, ecotourism, green tourism, fair trade tourism, or conscious tourism (Smith, 2017).

The concept of sustainable tourism is based on 3 important pillars: ecological, economic, and social sustainability (Lozano & Huisingh, 2011). These dimensions should be treated together and not separately, creating a unitary framework to support sustainable tourism (Voinov & Smith, 2008), minimize the negative tourism impacts, and also maximize the positive impact on the environment, economy, and society (Mitra, 2018). These 3 pillars can also stay at the basis of the tourists' satisfaction. This statement can be supported by several studies, which analyze the relationship

between various factors associated with sustainable tourism and tourists' satisfaction. In 2021, Jasrotia et al. (2021) analyzed sustainable tourism in India and the impact of sustainable tourism on tourists' satisfaction. The results of this study highlighted a positive relationship of environmental, sociocultural, and institutional sustainability dimensions on tourists' satisfaction. Awang et al. (2018) studied how green practices affect customer satisfaction. The results of their study revealed that tourists' educational background moderates the relationship between green practices and customer satisfaction. Even if the investments in green technology can positively affect customer satisfaction, the existing organizational culture within the accommodation units can play a partially mediating role acting as a significant intermediate variable between customer satisfaction and investments in green technology (Barbu et al., 2018). Thus, the emphasis on employees and the development

of an organizational culture based on the values and principles of ensuring sustainable tourism can positively affect customer satisfaction (Barbu et al., 2018). In an official report on Best Environmental Management Practice in the Tourism Sector (Styles et al., 2013), the following important directions are mentioned on which nations must focus if they wish to achieve sustainable tourism: environmental education, green area management, energy efficiency, water efficiency, waste minimization, wastewater management.

Whether or not the accommodation units invest in measures to ensure sustainable tourism, they prefer to post their offers on tourism platforms due to the marketing advantages offered by them (David-Negre, et al., 2018). The Booking.com platform is one of the favourite platforms for tourists in Romania who want to book a stay in the country, or abroad, as they can see much easier the availability of the accommodation units, their prices, the facilities offered, they can read reviews from other tourists and can book the desired accommodation at any time. The Booking.com platform also offers the possibility to select the properties that have made investments to ensure a sustainable trip for tourists (Booking.com, 2021). To categorize the accommodation units into ones that offer sustainable travel, the Booking.com platform analyzed the actions undertaken by the accommodation units on 5 main categories: Waste, Water, Energy and greenhouse gases, Destination and community, and Nature (Booking.com, 2021).

The case of Constanta, Romania

Constanta is one of the most important cities in Romania, being the capital of Constanta county, the 5th in Romania in terms of the number of inhabitants (758,186 inhabitants, on July 1, 2021), in 2020 registering a total number of 1,004,521 tourists (Constanta County Directorate of Statistics, 2021). The city of Constanta has a very important social, economic, political, and cultural role for Romania, being also one of the most famous tourist cities from the Romanian Black Sea coast (Moraru et al., 2021). This is the main attraction for tourists both because of the nearby beaches and because of the tourist attractions, such as The Holiday Village Mamaia, Dolphinarium, Aquarium, Constanta Casino, Telegondola Mamaia, Aqua Magic Mamaia, Tomis Yachting Club and Marina, Museum of National History and Archeology, Neversea music festival. In addition, Constanta is also a port city, being the most important seaport in Romania, but also the fourth largest in Europe (Romania Tourism, 2021).

The beaches of Constanta stretch for about 13 km, from Tomis Port to Mamaia resort (Moraru et al., 2021). Both due to these beaches and due to the tourist attractions, Constanta stands out as an important destination for tourists, both for Romanians and foreigners. Regarding the number of tourist arrivals in the accommodation units in Constanta, it is found that until 2019, the number of foreign and Romanian tourists has been increasing since year after year, the Romanians continue to visit the coast even at the beginning of the pandemic. Instead, foreigners were more reluctant to leave the country and visit the city of Constanta and the coastal area, their number being almost 6 times lower than that recorded in 2018 (National Institute of Statistics, 2021).

Being such an important city on the map of Romania, the city of Constanta went through an analysis process to determine the main aspects that could be implemented to transform the city into a sustainable one. The process is long and difficult, but especially bureaucratic, aimed at creating additional green spaces in the city, increasing the energy performance of buildings, high-efficiency cogeneration, and eco-efficient street lighting, using the local potential of renewable energy sources and eco-urban mobility achieved through intelligent and secure traffic management, including the implementation of electro-mobility (Covenant of Mayors, 2016). The actions carried out by the authorities regarding the promotion of the Sustainable Energy Action Plan of Constanta municipality, also took into account the encouragement of the accommodation units to offer sustainable travels (Covenant of Mayors, 2016), by reducing water consumption, electricity, food waste (Barbu et al., 2018). Thus, the accommodation units in Constanta were able to participate individually in creating an improved level of sustainable tourism in the area.

METHODOLOGY

The authors' research consisted of four stages. Firstly, the authors conducted secondary research, analyzing data on tourism in Constanta on specialized websites and in statistical publications related to Constanta

County (e.g. National Institute of Statistics), as well as in the papers of other authors who addressed the topic of sustainable tourism, consulting international databases (e.g. Scopus, Springer). Secondly, the authors focused on the online platforms used to book tourist accommodation, choosing the Booking.com platform for this case study. In this regard, the authors selected the accommodations from Constanta that offer sustainable travel, collecting data on the appreciation and satisfaction of tourists who were accommodated in these units. Thirdly, the authors analyze the reviews on Booking.com, as well as analyze the descriptions and pictures posted on this platform, after which the authors determined what were the types of measures that the analyzed accommodation units implemented to ensure a sustainable trip. Fourthly, the collected data were processed and analyzed using SPSS statistical software. To analyze the relationship between tourists' satisfaction and sustainable travel measure, correlation tests and t-tests for independent samples were applied.

RESULTS

By searching accommodations units from Constanta on the Booking.com platform, there were identified 486 accommodation units. By selecting the filter with the properties that have made investments to ensure a sustainable trip for tourists, the authors found that out of the 486 accommodation units listed on Booking.com, only 9 of them implemented practices that ensure the sustainability of travel. For the 9 accommodation units that offer sustainable travel, the following variables were followed: type of property, number of reviews, the overall score of satisfaction, the minimum number of rooms offered for rent, price per night for 2 people both in the off-season, and in peak season, distance from the city center, distance from the beach, the average rating for the evaluation by tourists of employees, location, cleanliness, comfort, facilities, free Wi-Fi, and the overall rating for the value for the proposed price. For the off-season price, 1-night accommodation was analyzed for the period March 22-23, and for the price for the summer season, the period July 22- 23 was analyzed (Table 1).

Table 1. The characteristics of the 9 accommodation units that offer sustainable travel
Source: adapted from Booking.com, 2021

No	*Type of property*	*R*	*Sc*	*Ro*	*P.ES*	*P.S*	*DfC*	*DfB*	*S*	*L*	*Cl*	*Co*	*V*	*F*	*W*
1	H	370	9.7	1	88	358	1.7	1	9.8	9.6	9.8	9.8	9.8	9.7	9.7
2	H	805	9.6	1	306	483	1.4	1.3	9.7	8.9	9.7	9.7	9.5	9.7	9.9
3	Gh	476	9.4	1	148	290	4.1	3.2	9.6	8.7	9.6	9.5	9.5	9.4	9.4
4	Gh	15	9.8	1	100	400	2.3	2	10	9.5	10	9.8	9.8	9.8	9.9
5	Ap	5	8.7	2	2536	2818	5.1	1.5	9.5	6.5	9.5	8.5	9.5	9	8.7
6	Ap	37	9.5	2	98	334	1.3	0.2	9.4	9.5	9.5	9.5	9.3	9.5	9.8
7	Gh	5	9.8	2	527	607	0.3	750	10	10	9.5	10	9.5	10	9.9
8	Ap	66	8.5	2	300	300	5	1	8.5	8.8	8.8	8.5	8.5	8.4	8.2
9	Ap	66	8.5	2	2930	2930	5.1	1.5	8.5	8.4	8.2	8.7	8.7	8.5	8.8

Note: 1-Victory Sea House, 2-JMR Royal, 3-Relax Eaza - Casa cu Hamac, 4-Pensiune Mirada, 5-City Living Apartments Constanta, 6- Tomis 105, 7- Casa Goldring, 8-Apartament in Constanta, 9-Constanta Residence Apartments; H- Hotel; Ap-Apartament; Gh-Guest house; R- Reviews; Sc-Score; Ro- Number of rooms; P.ES-Price per night, off-season; P.S-Price per night, peak season; DfC-Distance from the center; DfB-Distance from the beach; S-Staff; L-Location; Cl-Cleanliness; Co-Comfort; V-Value for money; F-Facilities; W- Free Wi-Fi.; The data were valid on 20 December 2021

The results show that all 9 units have implemented additional measures for health and safety, 2 of these units being hotels, 3 guest houses, and the rest apartments. If in the case of apartments, the price did not vary much, for many remaining even constant, it is noticeable that in the case of other accommodation units, the difference in season makes the prices increase up to 4 times.

To see if certain actions of the accommodation units influence the tourists' satisfaction (which is analyzed by the overall score of satisfaction and the value for money score), the correlations between the collected variables were analyzed (Table 2).

Table 2. Correlations between the analyzed variables

	R	Sc	V	P.ES	P.S	DfC	DfB	S	L	Cl	Co	F	w
Sc	0.309	1	0.819**	-0.703*	-0.660	-0.892**	0.355	0.894**	0.692*	0.822**	0.980**	0.977**	0.956**
V	0.269	0.819**	1	-0.373	-0.291	-0.588	0.130	0.955**	0.198	0.912**	0.732*	0.872**	0.773*
P.ES	-0.338	-0.703*	-0.373	1	0.995**	0.618	-0.085	-0.474	-0.726*	-0.634	-0.677	-0.583	-0.545
P.S	-0.337	-0.660	-0.291	0.995**	1	0.595	-0.116	-0.409	-0.749*	-0.559	-0.650	-0.533	-0.502

Note: N=9, **. Correlation is significant at the 0.01 level (2-tailed); *. Correlation is significant at the 0.05 level (2-tailed); R- Reviews; Sc-Score; P.ES-Price per night, off-season; P.S-Price per night, peak season; DfC-Distance from the center; DfB-Distance from the beach; S-Staff; L-Location; Cl-Cleanliness; Co-Comfort; V-Value for money; F-Facilities; W-Free wifi.

Thus, it is found that there are very strong positive correlations between the overall score of the satisfaction and the value for money score ($r=0.819$, $p<0.01$), the score for interaction with staff ($r=0.894$, $p<0.01$), the score for cleanliness ($r=0.822$, $p<0.01$), comfort score ($r=0.980$, $p<0.01$), facility score (0.977, $p<0.01$) and Wi-Fi score ($r=0.956$, $p<0.01$). Negative correlations (at least strong) can be noticed between the general score of satisfaction and the price per night in the off-season ($r=-0.703$, $p<0.05$) and the distance from the center ($r=-0.892$, $p<0.01$).

The value for money is very strongly influenced by the grade for interaction with employees ($r=0.955$, $p<0.01$), the grade for cleaning ($r=0.912$, $p<0.01$) and the grade for facility ($r=0.872$, $p<0.01$). The value for money is also strongly influenced by the comfort level ($r=-0.732$, $p<0.05$) or Wi-Fi ($r=0.773$, $p<0.05$). It is found that the price, the location, the distance from the beach or the city center do not influence the value for money, tourists putting more emphasis on the efforts that the accommodation units make to ensure a more beautiful experience. Regarding the price per night, it seems that the accommodation units set these prices depending on how appreciated the unit is in terms of location ($r=-0.726$, $p<0.05$; $r=-0.749$, $p<0.05$), being willing to offer a lower price to attract customers faster, if they appreciate the position of the accommodation unit and not necessarily the other facilities.

Next, the authors focused on analyzing how the tourists' appreciation is influenced by the actions taken by the accommodation units to ensure a sustainable trip. The tourists' appreciation was analyzed through the general score of satisfaction, but also through the value for money score. For the actions related to ensuring a sustainable trip, the actions undertaken by the accommodation units in terms of 5 important dimensions were analyzed: Destination and community, Nature, Energy and greenhouse gases, Waste and Water.

For the Nature dimension, the authors analyzed whether the overall score of satisfaction and the value for money score are influenced by the following 2 variables: green spaces such as gardens/rooftop gardens on the property, most food provided is organic (Table 3).

Table 3. Independent Samples Test for the score, value for money, and Nature

			Levene's Test for Equality of Variances		*t-test for Equality of Means*						
Sustainable measures	*Tourist's perception*	*Variance*	*F*	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*95% Confidence Interval of the Difference*	
										Lower	*Upper*
Green spaces such as gardens/rooftop gardens on the property	Score	E.v.a	15.829	0.005	-2.474	7	0.043	-0.715	0.289	-1.398	-0.032
		E.v.n.a			-2.731	5.138	0.04	-0.715	0.262	-1.383	-0.047
	Value for money	E.v.a	12.153	0.01	-2.203	7	0.063	-0.55	0.25	-1.14	0.04
		E.v.n.a			-2.424	5.275	0.057	-0.55	0.227	-1.124	0.024
Most food provided is organic	Score	E.v.a	0.819	0.396	-0.72	7	0.495	-0.275	0.382	-1.178	0.628
		E.v.n.a			-0.705	5.929	0.508	-0.275	0.39	-1.233	0.683
	Value for money	E.v.a	0.009	0.927	-0.108	7	0.917	-0.035	0.325	-0.803	0.733
		E.v.n.a			-0.109	6.764	0.917	-0.035	0.322	-0.801	0.731

Note: E.v.a.- Equal variances assumed; E.v.n.a.- Equal variances not assumed

The results of the t-test (t(5.13) = -2,731, p <0.05) indicated that the average overall score of satisfaction is higher for those accommodation units that have green spaces such as gardens / rooftop gardens on the property (M = 9.68, SD = 0.189), compared to those who do not ensure green spaces (M = 8.96, SD = 0.546).

For the Waste dimension, the authors analyzed whether the overall score of satisfaction and value for money are influenced by the following 6 variables: recycling bins available to guests and waste is recycled, the property makes efforts to reduce their food wastage, single-use plastic stirrers, straws, beverage bottles, plastic cups/ cutlery/plates not used (Table 4).

Table 4. Independent Samples Test for the score, value for money, and Waste dimension

			Levene's Test for Equality of Variances				*t-test for Equality of Means*				
Sustainable measures	*Tourist's perception*	*Variance*	*F*	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*95% Confidence Interval of the Difference*	
										Lower	*Upper*
Recycling bins are available to guests and waste is recycled	Score	E.v.a	25.562	0.001	-3.182	7	0.015	-0.805	0.253	-1.403	-0.207
		E.v.n.a			-3.575	4.375	0.020	-0.805	0.225	-1.410	-0.200
	Value for money	E.v.a	12.153	0.010	-2.203	7	0.063	-0.550	0.250	-1.140	0.040
		E.v.n.a			-2.424	5.275	0.057	-0.550	0.227	-1.124	0.024
The property makes efforts to reduce their food wastage	Score	E.v.a	25.562	0.001	-3.182	7	0.015	-0.805	0.253	-1.403	-0.207
		E.v.n.a			-3.575	4.375	0.02	-0.805	0.225	-1.41	-0.2
	Value for money	E.v.a	12.153	0.01	-2.203	7	0.063	-0.55	0.25	-1.14	0.04
		E.v.n.a			-2.424	5.275	0.057	-0.55	0.227	-1.124	0.024

Single-use plastic stirrers not used	Score	E.v.a	14.328	0.007	-1.468	7	0.186	-0.607	0.414	-1.585	0.371
		E.v.n.a			-2.809	6.572	0.028	-0.607	0.216	-1.125	-0.089
	Value for money	E.v.a	1.496	0.261	-1.095	7	0.31	-0.393	0.359	-1.241	0.456
		E.v.n.a			-1.678	4.417	0.162	-0.393	0.234	-1.019	0.234
Single-use plastic straws not used	Score	E.v.a	21.907	0.002	-1.854	7	0.106	-0.633	0.342	-1.441	0.174
		E.v.n.a			-2.65	5.585	0.041	-0.633	0.239	-1.229	-0.038
	Value for money	E.v.a	3.845	0.091	-1.235	7	0.257	-0.383	0.31	-1.117	0.35
		E.v.n.a			-1.666	6.692	0.142	-0.383	0.23	-0.933	0.166
Single-use plastic beverage bottles not used	Score	E.v.a	12.354	0.010	-1.095	7	0.310	-0.479	0.437	-1.512	0.555
		E.v.n.a			-2.101	6.523	0.077	-0.479	0.228	-1.025	0.068
	Value for money	E.v.a	1.496	0.261	-1.095	7	0.310	-0.393	0.359	-1.241	0.456
		E.v.n.a			-1.678	4.417	0.162	-0.393	0.234	-1.019	0.234
Single-use plastic cups/ cutlery/plates not used	Score	E.v.a	10.11	0.015	0.928	7	0.384	0.414	0.446	-0.641	1.47
		E.v.n.a			1.383	4.001	0.239	0.414	0.3	-0.417	1.246
	Value for money	E.v.a	1.496	0.261	1.095	7	0.31	0.393	0.359	-0.456	1.241
		E.v.n.a			1.678	4.417	0.162	0.393	0.234	-0.234	1.019

Note: E.v.a.- Equal variances assumed; E.v.n.a.- Equal variances not assumed

The results of the t-tests indicated that there were significant differences between the overall score of satisfaction and the following variables: recycling bins available to guests and waste is recycled (t(4.375)= -3.575, p<0.05), the property makes efforts to reduce their food wastage (t(4.375)= -3.575, p<0.05), single-use plastic stirrers not used (t(6.572) = -2.809, p<0.05), single-use plastic straws not used (t(5.585)= -2.65, p<0.05). Thus, these results indicate that the average overall score is higher for situations where recycling bins are available to guests and waste is recycled (M=9.73, SD=0.96), the property makes efforts to reduce their food wastage (M=9.73, SD=0.096), single-use plastic stirrers are not used (M=9.75, SD = 0.071), and single-use plastic straws are also not used (M=9.7, SD=0.1) than the overall score where the accommodation units would not make these efforts.

For the Energy and greenhouse gases dimension, the authors analyzed whether the overall score of satisfaction and the value for money score are influenced by the following 4 variables: most food provided at the property is locally sourced, most lighting throughout the property uses energy-efficient led bulbs, offsets a portion of their carbon footprint, key card or motion-controlled electricity (Table 5).

Table 5. Independent Samples Test for the score, value for money, and Energy and greenhouse gases

			Levene's Test for Equality of Variances				*t-test for Equality of Means*				
Sustainable measures	*Tourist's perception*	*Variance*	*F*	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*95% Confidence Interval of the Difference*	
										Lower	*Upper*
Most food provided at the propertyis locally sourced	Score	E.v.a	0.072	0.796	-1.583	7	0.157	-0.567	0.358	-1.413	0.28
		E.v.n.a			-1.545	3.851	0.2	-0.567	0.367	-1.6	0.467
	Value for money	E.v.a	0	1	-0.815	7	0.442	-0.267	0.327	-1.041	0.507
		E.v.n.a			-0.86	4.712	0.432	-0.267	0.31	-1.079	0.546
Most lighting throughout property uses energy-efficient LED bulbs	Score	E.v.a	0.007	0.936	-0.569	7	0.587	-0.220	0.387	-1.135	0.695
		E.v.n.a			-0.562	6.259	0.593	-0.220	0.391	-1.168	0.728
		E.v.a	0.000	0.994	-0.170	7	0.870	-0.055	0.324	-0.822	0.712
	Value for money	E.v.n.a			-0.171	6.692	0.870	-0.055	0.323	-0.825	0.715

Offsets a portion of their carbon footprint	Score	E.v.a	21.907	0.002	-1.854	7	0.106	-0.633	0.342	-1.441	0.174
		E.v.n.a			-2.65	5.585	0.041	-0.633	0.239	-1.229	-0.038
	Value for money	E.v.a	3.845	0.091	-1.235	7	0.257	-0.383	0.31	-1.117	0.35
		E.v.n.a			-1.666	6.692	0.142	-0.383	0.23	-0.933	0.166
Key card ormotion-controlled electricity	Score	E.v.a	12.354	0.010	-1.095	7	0.310	-0.479	0.437	-1.512	0.555
		E.v.n.a			-2.101	6.523	0.077	-0.479	0.228	-1.025	0.068
	Value for money	E.v.a	1.496	0.261	-1.095	7	0.310	-0.393	0.359	-1.241	0.456
		E.v.n.a			-1.678	4.417	0.162	-0.393	0.234	-1.019	0.234

Note: E.v.a.- Equal variances assumed; E.v.n.a.- Equal variances not assumed

The results of the t-tests indicated that there was a significant difference only between the overall score of satisfaction and Offset a portion of their carbon footprint ($t(5.585)= -2.65$, $p<0.05$). Thus, this test indicates that the average overall score of satisfaction is higher for those units that offset a portion of their carbon footprint (M=9.7, SD=0.1), compared to those who do not ensure this (M=9.07, SD=0.568).

For the Destination and community dimension, it was analyzed whether the overall score of satisfaction and the value for money are influenced by the action of the staff in the accommodation units in terms of providing guests with information regarding local ecosystems, heritage, and culture, as well as visitor etiquette (Table 6).

Table 6. Independent Samples Test for the score, value for money, and Destination and community dimension

		Levene's Test for Equality of Variances				*t-test for Equality of Means*				
Tourist's perception	*Variance*	*F*	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*95% Confidence Interval of the Difference*	
									Lower	*Upper*
Score	E.v.a	1.003	0.35	-1.613	7	0.151	-0.545	0.338	-1.344	0.254
	E.v.n.a			-1.58	5.959	0.166	-0.545	0.345	-1.391	0.301
Value for money	E.v.a	23.002	0.002	-2.755	7	0.028	-0.62	0.225	-1.152	-0.088
	E.v.n.a			-2.489	3.575	0.075	-0.62	0.249	-1.345	0.105

Note: E.v.a.- Equal variances assumed; E.v.n.a.- Equal variances not assumed

The results of the t-test indicated that the average overall score of satisfaction and the average value for money score do not depend on the actions taken by the representatives of the accommodation units in terms of providing guests with information regarding local ecosystems, heritage, and culture, as well as visitor etiquette.

For the Water dimension, the authors analyzed whether the overall score and the value for money score are influenced by the following 4 variables: water-efficient toilets, water-efficient showers, the option to opt-out of daily room cleaning, option to opt-out of daily room cleaning (Table 7).

Table 7. Independent Samples Test for the score, value for money, and water dimension

			Levene's Test for Equality of Variances		*t-test for Equality of Means*						
Sustainable measures	*Tourist's perception*	*Variance*	*F*	*Sig.*	*t*	*df*	*Sig. (2-tailed)*	*Mean Difference*	*Std. Error Difference*	*95% Confidence Interval of the Difference*	
										Lower	*Upper*
Water-efficient toilets	Score	E.v.a	2.414	0.164	-1.126	7	0.297	-0.410	0.364	-1.271	0.451
		E.v.n.a			-1.073	5.053	0.332	-0.410	0.382	-1.389	0.569
	Value for money	E.v.a	20.366	0.003	-1.369	7	0.213	-0.395	0.289	-1.077	0.287
		E.v.n.a			-1.227	3.397	0.298	-0.395	0.322	-1.355	0.565
Water-efficient showers	Score	E.v.a	.219	0.654	-0.200	7	0.847	-0.083	0.416	-1.067	0.900
		E.v.n.a			-0.207	4.469	0.845	-0.083	0.402	-1.155	0.988
	Value for money	E.v.a	3.845	0.091	-1.235	7	0.257	-0.383	0.310	-1.117	0.350
		E.v.n.a			-1.666	6.692	0.142	-0.383	0.230	-0.933	0.166

Option to opt-out of daily room cleaning	Score	E.v.a	38.955	0	1.13	7	0.296	0.433	0.384	-0.474	1.34
		E.v.n.a			1.53	6.637	0.172	0.433	0.283	-0.244	1.111
	Value for money	E.v.a	3.514	0.103	0.871	7	0.413	0.283	0.325	-0.486	1.053
		E.v.n.a			1.101	6.963	0.308	0.283	0.257	-0.326	0.893
Option to opt-out of daily room cleaning	Score	E.v.a	38.955	0	1.13	7	0.296	0.433	0.384	-0.474	1.34
		E.v.n.a			1.53	6.637	0.172	0.433	0.283	-0.244	1.111
	Value for money	E.v.a	3.514	0.103	0.871	7	0.413	0.283	0.325	-0.486	1.053
		E.v.n.a			1.101	6.963	0.308	0.283	0.257	-0.326	0.893

Note: E.v.a.- Equal variances assumed; E.v.n.a.- Equal variances not assumed

The results of the t-tests indicated that there were no significant differences in averages between the overall score of satisfaction or the value for money score and the actions taken by the accommodation units to reduce water consumption.

CONCLUSIONS

The results of this study present the factors that influence the tourists' level of satisfaction regarding their sustainable travel. Firstly, the overall score of their satisfaction and the average value for money score were analyzed. On one hand, the overall score of tourists' satisfaction was influenced by the interaction with staff, the cleanliness of the rooms, the comfort, the Wi-Fi, and the facilities offered by the accommodation units (in a positive way) but also by the price per night in the off- season and the distance from the center (in a negative way). On the other hand, the value for money was mostly influenced by the interaction with staff, the cleanliness of the rooms, and the facilities offered by the accommodation units. Furthermore, the value for money perception strongly influences the overall score of satisfaction. Those results highlight the fact that investing in different facilities and maintaining a high level of cleaning could be the basis of ensuring a good perception in terms of tourists' satisfaction. Moreover, the accommodation units would have a lot to gain if they hire friendly staff who are empathetic and attentive to the needs of their clients. Even a simple training of existing staff could make the difference in terms of a pleasant accommodation.

Secondly, the results of this study show that the tourists' perception regarding the value for money is not influenced by the sustainable travel measures, however, the overall score is the one that can be positively affected by these actions. Even though staff plays an important role in increasing the overall score and the value for money score, it seems that this factor is not perceived as being an important part of ensuring a pleasant sustainable trip. Thus, even if the employees provide guests with information regarding local ecosystems, heritage, and culture, as well as visitor etiquette, as part of supporting sustainable tourism, tourists do not consider this measure necessary in assessing their tourism experience. Also, their overall score of satisfaction is not influenced by the actions taken by the accommodation units to reduce water consumption.

Among the factors necessary to ensure sustainable travel that could influence the tourists' satisfaction, the following dimensions can be mentioned: nature, energy and greenhouse gases, and also waste. The results of this study highlight the fact that the overall score of tourists' satisfaction can be positively influenced by the following sustainable measures: ensuring a green space near the accommodation unit, offsetting part of the accommodation unit carbon footprint through various investments, providing more recycling bins, recycling waste, making efforts to reduce food wastage, and replacing all that disposable plastic objects with sustainable ones.

Thus, it is found that despite the efforts made by the accommodation units in ensuring sustainable travel, not all of them are appreciated by tourists. It seems that they are more focused on the accommodation facilities that offer them comfort, even if those facilities are not necessarily the most sustainable. This sad situation can also be explained by the lack of tourists' education in terms of sustainability and sustainable tourism. If the authorities manage to make some tv-spots or promotional materials that show the effects of sustainable tourism or the difference between sustainable and regular accommodation, maybe then tourists would appreciate more the investments made

by accommodation units that want to ensure sustainable travel. Thus, these units would be more motivated to implement more measures to offer tourists the experience of sustainable travel.

REFERENCES

1. Muhammad, S., Long, X., & Salman, M., "COVID-19 pandemic and environmental pollution: A blessing in disguise?", Science of The Total Environment, 2020, 138820.

2. Trends HRB, "Sustainable tourism: Principles and examples of good practice", https://www.trendshrb.ro/actual/turism-sustenabil-principii-si-exemple-de-bune-practici/, 2021, accessed December 5, 2021

3. Wall-street, "European Commission: Sustainability in tourism must become a priority. What is Europe doing to develop responsible tourism?", https://www.wall-street.ro/articol/Turism/239952/comisia- europeana-sustenabilitatea-in-turism-trebuie-sa-devina-o-prioritate-ce-face-europa-pentru-dezvoltarea- turismului-respons.html#gref, 2019, accessed December 5, 2021

4. Life&travel, "Sustainable tourism in Romania", https://www.lifeandtravel.ro/turism-sustenabil-in-romania/", 2021, accessed December 5, 2021

5. Foodwaste, "Romania spends and wastes more than France and other European countries", https://foodwaste.ro/2016/11/28/romania-cheltuie-si-risipeste-mai-mult-ca-franta-si-alte-tari-europene/, 2016, accessed December 11, 2021

6. Protv news, "The seaside is full of poorly-educated tourists. How this woman was filmed on the beach", https://vacantalamare.stirileprotv.ro/stiri/litoralul-e-plin-de-turisti-prost-crescuti-cum-a-fost-filmata- aceasta-femeie-pe-plaja.html, 2014, accessed December 5, 2021

7. Horeca, "New trends in hotel design", https://www.horeca.ro/hoteluri/6042-noi-tendinte-in-designul- hotelier.html, 2021, accessed December 8, 2021

8. The Tourism Sustainability Group, 2007, Action for more Sustainable European Tourism, http://www.ernestproject.eu/coalap/ernest/other_docs/10072009160632789_tsg_final_report_en.pdf, accessed December 10, 2021

9. Niedziolka, I., "Sustainable Tourism Development", Regional formation and development studies, 2014, 8(3), 157-166.

10. Smith, J., Transforming Travel. Realising the potential of sustainable tourism, Series: Cabi Concise, 2017, Publisher: CABI

11. Lozano, R. & Huisingh, D., "Inter-Linking Issues and Dimensions in Sustainability Reporting", Journal of Cleaner Production, 2011, 19(2), 99–10

12. Voinov, A., & Smith, C . , "Dimensions of sustainability", Online: www.uvm. edu/giee/AV/PUBS/DS/SustDim.html, 2008, accessed December 8, 2021

13. Mitra, A., Steps towards Sustainable Tourism: Explore, Don't Exploit, Cambridge Scholars Publishing, 2018

14. Jasrotia, S.S., Kamila, M.K., & Patel, V.K., "Impact of Sustainable Tourism on Tourist's Satisfaction: Evidence from India", Business Perspectives and Research, 2021, 22785337211043960

15. Awang, Z., Yusnita, Y., & Afthanorhan, A., "Sustainable Tourism: The Moderating Effect of Tourists' Educational Background in the Relationship Between Green Practices and Customer Satisfaction", International Journal of Engineering & Technology, 2018, 7(4.34), 21.

16. Barbu, A., Fleacă, B., Militaru, G., "The Mediating Role of Organizational Culture on the Relationship between Investments in Green Technology and Customer Satisfaction. Evidence from Romania", Conference: 31st International-Business-Information-Management-Association, Conference Location: Milan, Italy, April 25-26, 2018, Innovation Management and Education Excellence through Vision 2020, Vols IV-VI, pp. 2516-2524, Published: 2018, ISBN:978-0-9998551-0-2.

17. Styles, D.; Schönberger, H.; Galvez Martos, J.L., "JRC Scientific and Policy Report on Best Environmental Management Practice in the Tourism Sector", European Commission, Joint Research Centre, 2013, Luxembourg: Publications Office of the European Union

18. David-Negre, T., Almedida-Santana, A., Hernández, J. M., & Moreno-Gil, S., "Understanding European tourists' use of e-tourism platforms. Analysis of networks", Information Technology & Tourism, 2018, 20(1-4), 131-152.

19. Booking.com, "Booking.com Launches First-of-its-Kind Travel Sustainable Badge to Lead Industry in Showcasing a Wider Variety of Sustainable Stays", https://globalnews.booking.com/bookingcom-launches-first-of-its-kind-travel-sustainable-badge/, 2021, accessed December 8, 2021

20. Constanta County Directorate of Statistics, "Constanta County Directorate of Statistics", https://constanta.insse.ro/, 2021, accessed December 8, 2021

21. Moraru, A.D., Duhnea, C., Barbulescu, A., Juganaru, M., & Juganaru, I.D., "Residents' Attitude toward Tourism—Do the Benefits Outweigh the Downsides? The Case of Constanta, Romania", Sustainability, 2021, 13(2), 882.

22. Romania Tourism, "Constanta", https://romaniatourism.com/constanta.html, 2021, accessed December 8, 2021

23. National Institute of Statistics, "Turism", http://statistici.insse.ro:8077/tempo- online/#/pages/tables/insse-table, 2021, accessed December 8, 2021

24. Covenant of Mayors, Constanța Sustainable Energy Action Plan, https://mycovenant.eumayors.eu/docs/seap/19812_1488543200.pdf, 2016, accessed December 8, 2021

[i] Andreea Barbu is Assistant Professor at the Department of Entrepreneurship and Management at University POLITEHNICA of Bucharest (Romania), where she teaches Financial Management, Business Research Methods, Technological Entrepreneurship, and Risk Assessment Techniques. She has a Ph.D diploma, her Ph.D. thesis title is "Research on improving organizational performance of industrial services".