ANALYSIS OF ENVIRONMENTAL ATTITUDE OF TOURISTS ACCOMMODATED IN HOTELS IN BUCOVINA AREA

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Abstract
Tourism is one of the biggest industries, and it is an important economic instrument. However, it also has many negative effects on the environment. Hotels as one of the components of tourism industry have a significant environmental impact. Considering the topic approached, this paper analyses an important and current subject regarding the environmental attitude of the tourists in Bucovina area. Different entities noticed a continuous increase of the interest and of the concerns regarding this topic. In this study we developed some hypotheses which we tested with the help of SPSS statistical program. The tourists who were interviewed consider that tourist activities are the cause of depletion of natural resources and of multiplying waste.

Key words: *tourism; environment; environmental pollution; environmental attitude.*

JEL Classification: *Z30; Z32*

I. INTRODUCTION

Tourism is one of the biggest industries in the world, representing a significant source of income for most countries. The field of activity of tourism industry consists in travels, accommodation, food, meetings and recreation, with the purpose to meet people's needs and desires when travelling far from home (Walker, 2007). On the other hand, tourist activities have a strong environmental impact, contributing to its degradation. The research in the field indicates that tourism industry has a growing contribution to the power consumption, water pollution, air pollution, global warmth, multiplying waste, depletion of resources, and destruction of biodiversity. In the next 25-45 years, the use of resources by tourism industry will double (Gossling & Peeters, P., 2015). Consequently, the long-term development of tourism is strictly related to this capacity to manage the problems of environmental sustainability (Bramwell & Lane, 2008). At present, people are confronted with environmental problems including global climate changes, depletion of ozone layer, pollution, high consumption of resources, and increase of the amount of solid waste.

Lately, tourism industry has started to apply a growing number of ecological practices to reduce its negative environmental impact. Therefore, the sustainability approach became a major concern for tourism (Lee, Han, H., & Willson, G., 2011). The important actors of this sector are tourists, who should contribute to the preservation and improvement of natural resources and to the sustainable development of the region.

Tourists' awareness regarding the sustainability practices of the hotels increased. Consequently, hotel managers realise that active participation by ecological practices may contribute to the attraction of a growing number of tourists concerned with environmental preservation (Kim, Li, Han, & Kim, 2017).

The report released by Booking in April 2017 shows that 65% of tourists want to be accommodated in an ecological space, and 34% were accommodated in an ecological accommodation unit in 2016 (Booking.com, 2017).

Hotels and accommodation services, respectively, represent one of the most important aspects of tourism travel and industry. The accommodation service has a role of temporary residence, where tourists spend half of their holiday time. To meet the numerous consumption needs of the tourists accommodated in hotels, the accommodation service is made of a number of independent services offered to them during their stay. At the same time, the hotels have a high water and power consumption in their daily activities, which is a challenge for the managers of this type of tourist accommodation units. At present, the hotel managers adapt to these "green waves", offering ecological attributes to the services, and transforming their businesses in "green hotels" or "ecological hotels" (Verma & Chandra, B., 2016). The hotel sector may support the attractiveness of a tourist destination, or may contribute to its degradation.

Consequently, it is important that hotel managers use ecological practices and take into account the customers' opinions on these practices. The social media sites may be an efficient instrument for the hotels to communicate their ecological practices, and to motivate tourists to use them.

While international academic literature on different aspects of tourism is wide, studies dedicated to a specific hotel industry profile in the country are relatively scarce. Less studies are dedicated to hotel industry than to tourism sector as a whole. Consequently, the research analysis is focused on the environmental attitude of tourists accommodated in hotels in Bucovina area.

II. LITERATURE REVIEW AND CONCEPT DEFINITION

Environmental attitude

The environmental attitude is known as a psychological tendency characterised by emotional and cognitive assessment regarding nature and environmental problems (Kim and Weiler, 2013, Beaumont, 1999). The environmental attitude is also defined as a physiological tendency to assess the level of favouring or disadvantaging the environmental problems (Milfont and Duckitt, 2010). Weaver and Lawton (2004) highlighted that the ecological attitude of tourism should be taken into account and identified in the paradigm "sustainable tourism", because it might critically influence the sustainable development of the destination. In the last decades, there was a growing number of studies investigating people's environmental attitude, e.g. continuation of global warming, which symbolised the awareness of the relationship between modern industrialisation and natural environment (Dunlap, 2000).

Hughes & Saunders (2005) explored the efficacy of on-site interpretation based on tourists' favourable attitude towards natural protection, and Paudel & Nyaupane (2013) investigated the influence of the tourist guide of ecological interpretation on tourists' ecological attitude.

A group of researchers analysed tourists' attitude while learning about the environment. With this study, tourists recreate, and at the same time they can learn how to protect the environment (Ballantyne et al., 2011). The recreation experience will positively influence tourists' ecological attitude in natural tourist destinations. Only a few articles try to assess the relationship between environmental knowledge and environmental attitude. Most of the time, mountain tourism activities have a negative impact on the environment, particularly on the landscape, by the sports practiced (ski, snowboarding). At the beginning of 1990, it was estimated that about 100 km^2 of wood were removed in the Alps for infrastructure development and for practising winter sports. This directly affected the wildlife by reducing natural habitats, also by reducing this natural barrier, increasing thus the probability of avalanches during winter, and landslides during summer (Swarbrooke, 2001).

Dembkowski and Hanmer-Lloyd (1994) have another approach of the concern regarding tourism effects on the environment, where the environmental concern is an element of the individual system of beliefs, values, and attitudes. In fact, the researchers study the sustainable tourism on three dimensions: cognitive, affective, and conative. The cognitive dimension is related to the individual's awareness of environmental problems. Granzin and Olsen (1991) show that those who are interested in their environment are the ones who spend more time learning and finding data on environmental problems. The affective dimension is based on the individual's feelings towards the environment, its deterioration, and its protection. This involves emotional reactions related to environmental problems. According to Fiorello (2011), the emphasis on environment is not necessarily a consequence of the rational idea about environmental protection and about finding a solution to these problems. Eventually, the conative dimension can be determined as the tendency to act and to contribute to the environmental protection. According to Fiorello, to express environmental concern is not enough. People should have the will and the desire to save their environment.

Considering the relevance of the environmental attitude of the tourists accommodated in hotels, the current study proposes to test the following hypothesis:

H1: By adopting an ecological behaviour during their travels, the consumers contribute to environmental improvement.

Air pollution - carbon footprint

According to World Health Organisation (WHO), the smoke from burning solid fuels is responsible for a high level of health damaging, causing approximately 1.6 million deaths annually in the less developed countries of the world (Robbins, 2001). Air pollution also affects the environment and the economies of these countries. The transport sector is mainly responsible for the rapid increase of car-generated emissions by using fuel and old vehicles (Lusaka Agreement, 2008).

The fourth climatic change assessment report of the Intergovernmental Panel on Climate Changes shows that the "residential commercial buildings" sector, like the hotel sector, has the highest impact on the increase of greenhouse gas emissions (Chen & Hsieh, 2011). There is a growing number of buildings erected in developing countries. Consequently, there is an increase of carbon footprint resulted from the activities of accommodation and catering within this type of enterprises (Rogerson & Sims, 2012).

Transportation is generating most of CO_2 emissions. Air transportation represents 40% of carbon footprint in tourism, followed by car transportation - 32%, and accommodation - 21%. These percentages are estimated to have a remarkable growth until 2035, especially for air transportation and tourist accommodation activities. Ignoring these aspects regarding air pollution and carbon footprint resulted from tourist activities may transform this sector in a developing initiator of greenhouse gas emissions in the near future (Michelle, 2015).

Thanh, Dong and Hai-Bang Ly (2019) conducted a research analysing the means of transportation preferred by tourists during their visits into the city Hue of Vietnam. Based on the result of the survey, tourists prefer to drive motorcycles during their visits, offering them opportunities to discover the visited area.

Taking into account that the use of the means of transportation leads to air pollution, the current study proposes to test the following hypothesis:

H2: The means of transportation used during travels is influenced by tourists' professional status.

Waste – an important source of pollution

Tourism industry is certainly very much based on the physical environment, because tourists travel to see the beautiful, clean, and unpolluted environment (Kasim, 2004). Consequently, the impact of waste generated by tourists cannot be ignored. Food waste represents a global and complex problem affecting each of the three pylons of sustainable development: natural environment, economic environment, and social environment (FAO, 2013).

According to Kasim (2004), there are two stages in which hotels have a negative environmental impact: the building stage, and the functioning stage. The activities specific to building a new hotel or those specific to the renovation of an existent hotel may lead to the destruction of the natural habitat, erosion of the land, and a growing demand of water and power supply (Kasim, 2006; Beccali et al., 2009). As most hotels are open during the whole year, the series of daily operations in the hotels will generate a high water and power consumption, and will produce tons of food and non-food waste, plastic receptacles, cleaning agents and non-recyclable packaging if they are not managed adequately (Alvarez Gil; Walker, 2007). The most visible environmental impact is represented by the waste deriving from human activities (Rahman et al., 2012). Hotel waste and food waste have a negative effect on the environment (Pirani &Arafat, 2014). Consequently, the tourist product consumer's behaviour cannot be ignored.

Some studies show that hotel operations may have a negative impact on the environment. According to Radwan, Jones & Minoli (2012), hotel waste generation and elimination have the highest impact on the environment. Hotel waste can be classified as wet waste (food waste, cooking oil waste), and dry waste involving recyclable waste, e.g. metal (cans), plastic, paper, linen, and others (Singh, Cranage & Lee, 2014). It was established that, if hotel waste was not managed adequately, it could lead to high greenhouse gas emission in the environment. A hotel produces over 1 kg of waste per guest daily, which means tons of waste every month (Bohdanowicz, 2005).

Nevertheless, some studies indicate that there are differences regarding the waste coming from fruit and vegetables. In the research conducted by Juvanet et al. (2017), the higher or smaller amounts of waste were associated to tourists' main characteristics. The factors associated with higher food waste were the families with children who gather on their plates more than they can eat (Wansink & Johnson, 2015). The different customs regarding food waste, as well as the abundance of food, shows that the more food we can see, the more we want, and consequently we are more willing to waste it (Kuo & Shih, 2016).

The situation regarding multiplying food waste is a major world problem. For instance, European Union member countries generate approximately 100 million tons of food waste annually (Timmermans, 2015). Finland, Denmark, Norway, and Sweden threw away 30%, 23%, 20%, and 10-20% respectively of the purchased food (Gjerris & Gaiani, 2013). From a social point of view, 2.1 billion people are overweight or obese, while 800 million people are malnourished (UNWHO, 2017).

Considering that the highest impact of the hotels on the environment is waste generation and elimination, the current study proposes to test the following hypothesis:

H3: There is a relationship between multiplying waste and type of tourists.

Depletion of water and power resources

According to Zografakis et al. (2011), the hotels are among the major contributors of power consumers.

A study conducted by Dolnicar et al. (2017) offered to the customers the possibility to give up the daily cleaning service. Its benefits were substantial. In general, there could be savings of 1.5 kWh power, one hundred millilitres of chemical substances, and 35 litres of water. The guests did not consider this action as an environmental protection activity, instead they considered that it was a modality for the hotel to save money. To continue this experiment, the hotel manager decided to equally share with the customers the economic benefits. Consequently, 50% of the savings returned to the hotel, and 50% of the savings returned to the customers under the form of a voucher for drinks.

Unplanned tourist activities may lead to landscape degradation and loss of biodiversity by transforming the natural habitats in the coast areas, woods, coral reefs, and other ecosystems (Sitek, 2007). According to Panasiuk (2011), who agrees with this opinion, tourist activities also led to damages to sweet waters and ecosystems in Antarctic area.

In the accommodation units, an enormous amount of water, power and other non-sustainable goods are consumed as a result of the activities run in the laundry, kitchen, swimming pools, public toilets, and guestrooms (Chan et al., 2009).

A special attention must be paid to environmental attitude. The environmental impact of tourism, the sustainable development of tourism, together with the constant concern for nature should constitute new directions for action in tourism industry in general, and in hotel industry in particular (Petrovici A, 2014).

Taking into account that hotels are among the major contributors of most water and power consumers, this study proposes to test the following hypotheses:

H4: There is a strong relationship between water consumption in hotels and tourists' age.

H5: There is a strong relationship between electrical power consumption in hotels and tourists' professional status.

In hotels, service production and consumption take place simultaneously. Accommodated in a hotel, tourists only buy a right to use the services for a period of time. Tourists are consumers of resources, and they are responsible for their actions on the environment. Each tourist should be aware of this. The purpose of this study is to identify the environmental attitude of tourists accommodated in Bucovina.

III. RESEARCH METHODOLOGY

Description of research area

Bucovina is among the most attractive and frequented tourist areas in Romania. This area is famous nowadays in the entire world. In 1975 it was awarded the international award – "Pomme d'Or" by the International Federation for Journalists and Travel Writers. Architecture monuments with interior and exterior frescoes from this part of the country were included by UNESCO on the World Heritage List as outstanding universal art.

Suceava County –Bucovina region is in the north-east of Romania, bordered to the north by Ukraine, to the east by Botoșani County, to the south by Neamț and Mureș Counties, and to the west by Maramureș and Bistrița Counties. The county has a surface of 8553.50 km^2, representing 3.6% of the territory of the country. The big dimensions of the county explain the geological variety of the landscape, as well as the natural resources. Rarău Mountain, Suceava Valley, Moldova Valley with its tributary Moldovița Valley, Bistrița Aurie Pass, the secular woods of Slătioara are only a few spots of maximum tourist interest.

Bucovina developed a tourism accessible to all, from the people wishing a romantic adventure under the sky, to those seeking well preserved old cultures, or to those seeking an adventure in the whirling waters of mountain rivers, or in the paragliding flight over the peaks with a height of 1500 metres (Albu Cristina Elena, 2015).

Research method and sampling – pre-testing

The empirical research of pre-testing type considers testing the relationship between the variables included in the study, the investigation being based on five research hypotheses. Consequently, we proposed a questionnaire addressed to the customers of the hotels in Bucovina area, and we considered testing their environmental attitude, collected waste, depletion of water and power resources, and air pollution.

The current analysis used the quantitative method as research method. The technique of data gathering is direct, using the questionnaire as research instrument. The sampling is random and simple, choosing for the analysis the tourists accommodated in Bucovina. The questionnaire was applied in September 2019 to 39 tourists, obtaining 31 valid questionnaires, sufficient for a research of pre-testing type. The questions included in the questionnaire are in agreement with the research objective, and they were easily understood by the respondents.

Structure of the questionnaire

The questionnaire starts with a short description of myself, and of the purpose of the research. The questionnaire includes 26 items. The respondents of this questionnaire are women and men in a similar number. By applying the questionnaire, we noticed that most of the respondents were married, and aged between 31 and 50.

In addition, we could see that a high number of tourists included in this pre-testing visited Bucovina, and their professional status was of employees. Most of the respondents had a small average income, between 1300 and 2999 lei, and a small number of respondents had a high income.

The results obtained after the application of the questionnaire were processed, tested, and interpreted with the help of SPSS statistical program.

IV. RESULTS AND INTERPRETATIONS

To test the reliability of this work instrument, in table 1 we can see the results of calculating Cronbach's Alpha coefficient. According to the result, we will decide the removal, the recoding, and the improvement of the items.

Table 1 The value of Cronbach's Alpha coefficient

Question	Cronbach's Alpha Coefficient
Q11. How do you evaluate the effects of tourism industry on the environment?	0.832
Q12. What means of transportation did you use to get to Bucovina?	0.706
Q13. How do you evaluate the power saving practices on a scale from 1 to 5?	0.727
Q14. How do you evaluate the water saving practices on a scale from 1 to 5?	0.726
Q15. Express your agreement/disagreement towards the practices regarding prevention of multiplying waste.	0.060

Source: our own calculations using SPSS software

As we can see, for the question Q11, Cronbach's Alpha is 0.832, so Likert scale from 1 to 5 is validated for this question. The value of Cronbach' s Alpha coefficient is higher than 0.72 for the questions Q12, Q13 and Q14, which means that Likert scale is accepted and validated from 1 to 5 for these questions.

For the question Q15, the value of Cronbach' s Alpha coefficient is 0.06, so the scale is not validated. Consequently, the items corresponding to this question must be modified.

The important dependent variables within this study are multiplying waste, use of means of transportation, power consumption, and water consumption, and the independent variables are tourists' type, level of education, professional status, and income.

Statistical hypotheses

H_0: There are no significant associations between the two variables.
H_1: There are significant associations between the two variables.

If Sig value corresponding to Pearson Chi-Square coefficient is less than $\alpha = 0.05$, then there is a significant association between the two variables (H_0 is rejected). If Sig value corresponding to Pearson Chi-Square coefficient is higher than $\alpha = 0.05$, then there is no significant association between the two variables (H_1 is not rejected).

At the same time with the growth of tourist demand in the last decades, the practices regarding environmental protection in hotels are not uncommon anymore (Han, 2015; Rahman, 2018). Both tourists and hotel managers become increasingly aware and responsible regarding their environmental activities. In connection with this aspect, in the following we tested the five hypotheses proposed.

Taking into account the relevance of the environmental attitude of the tourists accommodated in hotels, we tested hypothesis H1.

H1: By adopting an ecological behaviour during their travels, the consumers contribute to the environmental improvement.

To test the hypothesis H1, we obtained the results included in table 2 with the help of Pearson Chi-Square coefficient, where the association between the dependent variable "are you willing to change your behaviour to protect the planet" and the independent variable "tourists' income" is verified.

Table 2 The relationship between the variable "are you willing to change your behaviour to protect the planet" and "tourist's age".

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.850[a]	12	.716
Likelihood Ratio	10.499	12	.572
Linear-by-Linear Association	.172	1	.678
N of Valid Cases	31		

Source: our own calculations using SPSS software

Since Sig value associated to Chi-Square test is 0.716, higher than the value of 5% acceptable risk, we do not reject the null hypothesis. Consequently, there are no significant associations between "are you willing to change your behaviour to protect the planet" and "tourist's age".

H2: The means of transportation used during travels are influenced by tourists' professional status.

To test the hypothesis H2, we performed Pearson Chi-Square correlation test, and the results are included in table 3, reflecting associations between the variables "means of transportation" and "professional status".

Table 3 The relationship between "means of transportation" and "professional status".

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.399[a]	4	.663
Likelihood Ratio	3.492	4	.479
Linear-by-Linear Association	1.512	1	.219
N of Valid Cases	31		

Source: our own calculations using SPSS software

Since Sig value associated to Chi-Square test is 0.663, higher than the value of 5% acceptable risk, we do not reject the null hypothesis. Consequently, there are no significant associations between "means of transportation" and "professional status".

H3: There is a relationship between multiplying waste and the type of tourists.

To test the hypothesis H3, we obtained the results included in table 4 with the help of Pearson Chi-Square coefficient, where the association between the dependent variable "multiplying waste" and the independent variable "type of respondents" is verified.

Table 4 The relationship between "multiplying waste" and "type of respondents"

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.085[a]	2	.352
Likelihood Ratio	2.479	2	.290
Linear-by-Linear Association	1.771	1	.183
N of Valid Cases	31		

Source: our own calculations using SPSS software

Since Sig value associated to Chi-Square test is 0.352, higher than the value of 5% acceptable risk, we do not reject the null hypothesis. Consequently, there are no significant associations between "multiplying waste" and "type of respondents".

H4: There is a strong relationship between water consumption in hotels and tourist's age.

To test the hypothesis H4, we obtained the results included in table 5 with the help of Pearson Chi-Square coefficient, where the association between the dependent variable "water saving practices" and the independent variable "tourist's age" is verified.

Table 5 The relationship between "water saving practices" and "tourist's age"

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.363[a]	18	,770
Likelihood Ratio	13.443	18	,765
Linear-by-Linear Association	.056	1	,813
N of Valid Cases	31		

Source: our own calculations using SPSS software

Since Sig value associated to Chi-Square test is 0.770, higher than the value of 5% acceptable risk, we do not reject the null hypothesis. Consequently, there are no significant associations between "water saving practices" and "tourist's age".

H5: There is a strong relationship between electrical power consumption in hotels and tourists' professional status.

To test the hypothesis H5, we performed Pearson Chi-Square correlation test, and the results are included in table 6. The correlation between the dependent variable "power saving practices" and the independent variable "professional status" is verified.

Table 6 The relationship between the variable "power saving practices" and the variable "professional status".

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.315[a]	4	.177
Likelihood Ratio	6.388	4	.172
Linear-by-Linear Association	1.677	1	.195
N of Valid Cases	31		

Source: our own calculations using SPSS software

Since Sig value associated to Chi-Square test is 0.177, higher than the value of 5% acceptable risk, we do not reject the null hypothesis. Consequently, there are no significant associations between "power saving practices" and "professional status".

V. CONCLUSIONS

The relationship between hotel activities and environment is of reciprocal conditioning. A clean, unaltered environment cannot exist without practising a quality tourism. Tourism is essentially based on the capitalisation of tourist resources, and the level and intensity of this capitalisation produce in time and space a series of negative effects on the natural environment, e.g. depletion of natural resources, multiplying waste, and biodiversity destruction, tensions regarding water resources, land degradation, air pollution, water pollution. The tourists interviewed consider that tourist activities are responsible for the depletion of natural resources, and for multiplying waste. Consequently, everybody should be interested in environmental problems and should be informed in their regard and how they can be involved in its protection.

In conclusion, by this pre-testing we identified the environmental attitude of the tourists accommodated in Bucovina hotels, as well as their vision regarding their education for the decrease of environmental degradation. Making a bigger sample and improving the pre-tested questionnaire represent a future direction of research, with the purpose of testing tourists' opinion regarding environmental problems generated within tourist activities. In addition, we will consider the performance of a model of good practices based on tourists' behaviours and attitudes.

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