

## STATISTICAL MODELLING OF CONSUMER ATTITUDES IN BANAT TOWARDS HOSPITALITY SERVICES

VASILESCU, R[amona] - V[iioleta] & SAIERLI, O[livia] A[nne] - M[arie]

**Abstract:** In this paper we would like to analyze the link between the way in which consumers perceive hospitality, the importance of hospitality services and the quality of tourist services provided at home and abroad, by means of using the Fishbein-Rosenberg model. Data to be processed have been obtained from a questionnaire; the people who have responded to it are from the Banat region of Romania.

**Key words:** Fishbein-Rosenberg model, hospitality, tourism, Helmert test, z-test

### 1. INTRODUCTION

It is said that Romania is a beautiful country with a high tourist potential. 47% of the land area is covered with natural and semi-natural ecosystems. Our Carpathian Mountains are known for their unique species of animals, including chamois, bears, reptiles, birds and amphibians. About 5.18% of the area of Romania has a protected status: three biosphere reserves (Danube Delta, Retezat and Rodna), thirteen national parks (Domogled-Valea Cernei, Cheile Nerei-Beuşniţa, Semenic-Cheile Caraşului and Defileul Jiului), thirteen natural parks (Porţile de Fier – Iron Gates, Grădiştea Muncelului-Cioclovina, the Țara Haţegului dinosaur geo-park, the Mehedinţi Plateau geo-park), etc. The aforementioned examples are in the vicinity of the Banat region, where we have completed our study. In recent years, Romania has become a popular tourist target for many Europeans whose summer destinations are Black Sea resorts, such as Venus, Neptun, Olimp, Constanţa and Mamaia, and whose winter destinations are Valea Prahovei and Poiana Braşov.

According to a qualitative research done for a thorough study whose results have been published in a paper entitled “The effects of the global crisis of Romanian tourism” (Enea & Tănăsioiu, 2009), the number of holiday trips to nearby countries increased on account of their moderate prices and self transport – to the detriment of air departures. Turkey, Greece, Croatia, Bulgaria and Hungary will remain favourite destinations for Romanians.

Despite all these opportunities, tourism and hospitality in Romania have met with little success and popularity; the failures in these areas have been the subject of many debates and research, even this paper is part of a broader study. Unfortunately, the answers given so far have failed to elucidate the most common causes. The aim of this paper is to evaluate the consumer’s attitude to tourism and hospitality, using a complex scaling method based on the Fishbein-Rosenberg model in order.

### 2. MATERIAL AND METHODS

Starting from the data extracted from the National Statistics Institute, the 2008 Statistics Year Book regarding travels at home and abroad for holiday and business purposes, we would like to examine whether the targeted region – i.e. the Banat region, covering the Timis and Caras-Severin counties –

follows the same trend as the national regions. We have also aimed at evaluating consumer attitudes to hospitality services (room service, restaurant service, bar facilities, recreation facilities) both in our country and abroad. For this purpose we have used a questionnaire that includes consumer attitudes to these services, as well as the level of customer satisfaction. We wish to determine if the respondents have chosen their travel destinations according to the geographical location. The questionnaire also refers to trips made in the past two years, respondents indicating the percentage of people who have travelled at home and abroad. In order to determine the correct sample, we have used the data provided by the National Statistics Institute, the 2008 Statistics Year Book, with regard to the population of the Banat region. The sample has been computed by using the Decision Analyst STATSTM 2.0 software for a desired confidence level of 95%. Following this computation we have obtained a sample volume of 73 respondents. Within a week’s span, this questionnaire was answered by eighty-three people – 38.55% men and 61.45% women, aged 19-58 years.

### 3. RESULTS AND DISCUSSIONS

Out of all of the data provided by the National Statistics Institute, in Figure 1 we have highlighted the evolution of holiday and business trips at home and abroad.

In order to apply the Fishbein-Rosenberg model (Cătoiu & others, 2002), we have asked the respondents to range from 1 to 4 (1 being the best place) the importance attached to each hospitality service. The respondents also noted with scores between 1 and 10 the degree to which the services in our country and those from abroad respectively satisfied them. As the model uses a value subunit, we have processed the data so that they should meet two conditions:

- The importance attached by the consumer “k” to the service “i”, denoted by  $W_{jk}$ , must be a value between 0 and 1, and the sum of all services must be equal to 1.
- The degree of satisfaction offered by tourist service “j”, inside the country or abroad, to the respondent regarding the services “i” should have a value between 0 and 1, and is denoted by  $O_{ij}$ .

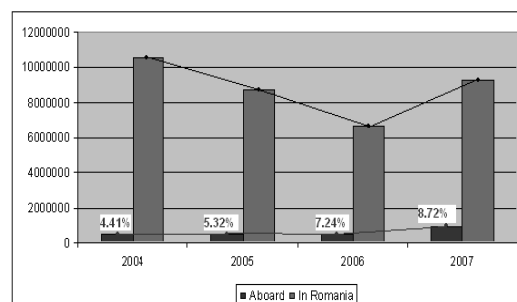


Fig. 1. The evolution of holiday and business trips at home and abroad

At the same time, in the paper entitled "A Statistical Analysis of Consumer Attitudes to Hospitality Services Abroad" (Saiarli, Vasilescu & Pater, 2010), we have used a Helmer test ( $\chi^2$ ) to determine if the classification of hospitality services, in terms of their importance to respondents, reflected the reality of the situation, with a confidence level of 95%.

The service	$W_i$	$O_{i,abroad}$	$O_{i,country}$
The room	0.3	0.8	0.5
The restaurant	0.4	0.9	1.0
The bar room	0.2	0.7	0.6
The recreation	0.1	1.0	0.8

Tab. 1. The respondents' attitude regarding hospitality services, i.e., tourism at home and abroad, after having processed the data

In order to determine the attitude of respondent "k" for the tourism "j", at home or abroad, normalization has been performed by using the relation (1).

$$P_{jk} = \frac{\sum_{i=1}^h W_{ik} \cdot O_{ij}}{\sum_{j=1}^g \sum_{i=1}^h W_{ik} \cdot O_{ij}} \quad (1)$$

Thus, on the basis of the data in Table 1, here is a respondent's attitude to tourism in Romania and abroad respectively:

$$P_{country} = 0.47$$

$$P_{abroad} = 0.53$$

It follows that this respondent definitely favours foreign tourism.

We have proceeded along the same lines with all the other respondents and have obtained the following results:

- 20.55% of our respondents prefer tourism in the our country.
- 64.38% prefer to travel abroad.
- 8.22% feel that tourism at home country is equal to tourism abroad.
- 6.85% did not answer the questionnaire regarding these aspects.

To see if indeed we can say with a 95% that the hospitality services in our country are rated less than abroad will apply a test to compare the averages for two statistical populations. Thus, because the volumes of the two samples ( $n_1, n_2$ ) - regardless of the hospitality service that is taken into account - are higher than 30, we will apply the Laplace distribution function ( $z$ ) (Andrei & others, 2008; Şipoş & Preda, 2006). The volumes of the two samples taken into account, for each hospitality service, are different because not all respondents have evaluated all services. Next, we establish the statistical hypothesis that will be verified:

- $H_0: \mu_1 = \mu_2$ : The null hypothesis under which the average of the two services is equal.
- $H_1: \mu_1 < \mu_2$ : The left-sided hypothesis under which the average of the hospitality service from our country is below the average of the abroad service.

Then, we find out the computed value of the z-test using the formula (2):

$$z_c = \frac{|\bar{x}_1 - \bar{x}_2|}{\sqrt{\frac{\sigma_1^2}{n_1} + \frac{\sigma_2^2}{n_2}}} \quad (2)$$

Where, the population variances ( $\sigma_1^2, \sigma_2^2$ ) are unknown, but they can be computed based on the sample variances ( $s_1^2, s_2^2$ ) by the formula (3).

$$\sigma_1^2 = \frac{n_1}{n_1 - 1} \cdot s_1^2, \sigma_2^2 = \frac{n_2}{n_2 - 1} \cdot s_2^2 \quad (3)$$

	The room	The restaurant	The bar room	The recreation
In Romania	6.90	7.20	6.63	7.37
Abroad	8.68	8.86	7.87	8.98

Tab. 2. The notes average for the hospitality services in the country and abroad

From the statistical tables relating Laplace function for a confidence level of 95% ( $\alpha = 0.05$ ), we determine its critical value as  $z_\alpha = 1.96$ . Since  $z_c < z_\alpha$ , for each services of hospitality separately, then with a 95% probability the null hypothesis is rejected and we can say that the abroad hospitality service are better than those quoted in Romania.

#### 4. CONCLUSION

What might be the basis for success services in tourism? Is success guaranteed by the loyalty of its clients and suppliers or by their recommendations or by the quality of its services? We believe that the high standards provided, combined with a truly personalized service, are a quality sadly lacking in today's frenetic and careless world. The truth is that tourist services require high professional standards, a vast knowledge of all aspects in the holiday business and the dedication to offer customers the complete peace of mind that their holiday is going to be the best holiday ever. After checking the tourist information available on the Internet, we cannot help but notice an overwhelming preoccupation with increasing tourism at home by persuading more and more Romanian tourists to choose tourist destinations in our country. With this view in mind, interesting tourist programs have been initiated by the Ministry of Tourism and Regional Development; at times, these programs have emerged as a result of the Ministry's cooperation with tourist managerial agencies as for instance the "Free Holidays" program, and with travel agencies too - as for instance the "Holidays by Instalments" program. Unfortunately, in most cases, that is all we can say about the said preoccupation. As average tourists who have chosen to make most of our trips at home (90% of our trips, to be more precise), we, the two authors of the present paper, can vouch for the utter absence from all boarding houses, hotels and restaurants of tourist questionnaires on whether or not tourists have been satisfied with the services offered. We intend to pursue the study of tourism evolution in Banat region.

#### 5. REFERENCES

- Andrei, T., Stancu, S., Iacob, A. I. & Tuşa, E. (2008). *Introducere în econometrie utilizând EViews*, Editura Economică, 978-973-709-398-1, Bucharest
- Cătoi, I.; & others. (2002). *Cercetări de marketing*, Editura Uranus, 973-9021-76-X, Bucharest
- Enea, C. & Tănăsioiu, G. L. (2009). The effects of global crisis on the Romanian tourism. *Economia. Seria Management*, Vol. 12, Nr. 2/2009, 46-50, ISSN 1454-0320
- Saiarli, O., Vasilescu, R. & Pater, L. (2010). The Statistical Analysis of the Consumer Attitudes toward the Hospitality Services of Abroad. *Annals. Economics Science Series. Timișoara*, Vol. XVI, (2010), ISSN 1582-6333
- Şipoş, C. & Preda, C. (2006). *Econometrie*, Editura Mirton, (10) 973-661-941-9, Timișoara
- \*\*\* (2008) <http://www.insse.ro/cms/files/pdf/ro/cap20.pdf>, Accessed on: 2010-03-25
- \*\*\* (2008) <http://www.ziare.com/business/economie>, Accessed on: 2010-03-25
- \*\*\* (2010) <http://www.stiri-turism.com/?p=2167>, Accessed on: 2010-03-21