

ANALYSIS ON THE SATISFACTION DEGREE OF HOTEL SERVICES CONSUMERS IN ROMANIA

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ABSTRACT

The present paper analyzes a number of issues related to the quality of services and hotel services consumers' perception in Romania. It is based on a questionnaire given to hotel services beneficiaries during 2015. The questionnaire was sent by "snowball sampling", and its results were analyzed by means of the statistical software SPSS 21. The results led to the construction of a multiple linear regression model and the data were analyzed through the "stepwise method". The research results have an empirical perspective in order to support enterprises in the sector to improve their services and reach their customers' expectations. In this way, businesses will become more competitive and final consumers will be attracted by the quality of provided services.

KEYWORDS: *customer satisfaction, market shares, regression analysis, service quality.*

JEL CLASSIFICATION *C35, L83, Z32*

1. INTRODUCTION

Since 1940, quality has been defined as "customers' general impression on the relative inferiority and on the superiority of the organization as well as of its services" (Bitner & Hubbert, 1994, p.77). However, services' quality has lately represented a subject of great interest for a number of researchers in the hospitality industry (Kitapci & Sezen, 2007; Akbaba, 2006; Rao & Su, 2004; Carneiro & Costa, 2001). For a tourist accommodation unit to be successful on the market, Akbaba (2006) highlights the idea that we should not neglect the role of service's quality.

In Brady and Cronin's opinion (2001), the quality of services does represent customers' perception on one or more elements such as: (1) the technical and functioning quality of the enterprise furnishing the named service; (2) the service that is provided, the mode of supply and the environment where the service is provided; (3) the effectiveness, responsiveness, safety and all tangible elements with which the customers interact during the experience they have when benefiting from a particular service.

The link between the quality of service and consumers' satisfaction has been studied by various researchers from different fields such as air transport services, tourism, hospitality, retail, healthcare and so on.

Authors like Mazanec (1995), Mihail & Sorin (2013) and Kayaman & Arasli (2007), have stated the conclusion that the quality of service does have a positive and significant impact on enterprise's image, as well as on the satisfaction of the consumers in the hospitality industry. Busu & Morar (2015) have also focused on the relationship between image, service quality and satisfaction in the hospitality industry.

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The main purpose of the present paper consists in analyzing the perception of hotel services consumers; those consumers were accommodated at one of the hotels in Romania during 2015. Data were centralized by means of questionnaires sent to the respondents of the mentioned survey.

In the first part of our research, we are going to make a descriptive analysis of the sample and to study its representativeness while in the second part, we will analyze the factors influencing the perception of hotel services consumers.

2. THE DESCRIPTIVE ANALYSIS OF THE SAMPLE

2.1. The analyzed sample and the establishment of the sampling method

Because of the fact that the definition and delimitation of statistical population in time and space do represent significant issues, at the level of the present analysis, the research sample is represented by people who were accommodated last year at one of the hotels in Romania, regardless of its classification.

2.2. Determining the sample size and choosing the sampling method

A sampling method is defined as a procedure for selecting sample members from a given universe population. This method allows researchers and practitioners to draw conclusions at the level of the universe population, by studying only a part of this, a part which is named a sample. In terms of marketing research and not only in such a case, the quality of information got from the analysis is directly proportional with the accuracy corresponding to the manner of choosing the sample.

Depending on the nature of the research carried out, for determining the sample size, the researchers can appeal to both statistical and non-statistical methods. In the case of our research paper, we will use statistical methods for determining the sample, because we consider that they are able to ensure precision, rigor and accuracy when solving problems and last but not at least, they provide a solid scientific foundation.

Sampling helps us to draw conclusions at the level of the universe population, studying only a part of it which is named, as we have already mentioned, a sample. In this way, we are able to estimate different characteristics of the population noticing only a part of it.

2.3. Sampling method

Depending on the chosen method for drawing the sample, we can distinguish among two distinct categories of surveys: random or probabilistic surveys as well as non-random or non-probabilistic surveys which are also called "rational choice" surveys. The main non-random sampling methods are the following ones: quota sampling, itineraries sampling method, sampling "on the spot", voluntary sampling, sampling based on investigators' reasoning, snowball sampling.

In the case of the present study, we choose the quota sampling because this is the most used non-probabilistic sampling method, especially for quantitative market researches. This sampling method is based on the definition of some structures at the level of the given population in relation to certain characteristics. Thus, we are able to define a sample which will be a fair picture of the reference population, in relation to a number of significant criteria. In order to form our sample, we take into consideration as main characteristics the following ones: region, the number of arrivals and hotel classification.

2.4. Sample size

In the present research paper, where the volume of the sample is of 278 statistical units (persons who have stayed in the previous year in a tourist accommodation unit from the analyzed ones), we can state that the research results are guaranteed with a probability of approximately 95% and with a level of the maximum error admitted of 5% (with the observation that, for these values corresponding to the probability of guaranteeing the analysis' results and to the maximum error admitted, the sample should have involved 285 respondents).

3. DATA QUANTITATIVE ANALYSIS

For this research paper, in order to analyze the quantitative data, we used the statistical programme SPSS. Testing trust and data validity can be made by using Cronbach's Alpha Coefficient³, the „item-to-total” criterion⁴ as well as the exploratory factorial analysis. With their support, we are able to refine the analysis and last but not at least, to eliminate from the research the items (variables) which do not meet a minimum threshold of exigency.

3.1. Reliability and validity of scales used for measuring variables

In the table below, we are going to present our own calculations concerning the Cronbach's Alpha Coefficient.

Table 1. Values of Cronbach's Alpha Coefficient

Name of the latent variable	Cronbach's Alpha Coefficient	Number of items
Reception	.879	5
Room	.828	4
Restaurant	.845	4

Source: Author's own calculations based on the results got by means of the SPSS software programme

According to the table above, the internal consistency of the scales used for each variable is confirmed, the Cronbach's Alpha Coefficient being higher than 0.7 for all the latent variables, which will lead to a significant influence of the coefficient on these variables.

3.2. Hotel services overall quality

The questions within our questionnaire can be divided into three categories in order to assess consumers' perception regarding the quality of services specific to reception, rooms or restaurant.

Table 2. Codification of latent variables dimensions

Codification of the dimension	Name of the dimension
Rec	Reception
Room	Room
Res	Restaurant

Source: Author's own codification

Given that we opted for a multidimensional perspective of the quality concept, we have tested the reliability and validity for each sub-dimension of it.

Dimension 1: Reception

The tool used for measuring the dimension "Reception" was composed of five variables (items). First of all, we tested scale's reliability by means of Cronbach's Alpha test. The initial value of this coefficient was 0.879, which suggests that the variables regarding the environment where the hotel service is provided, do have a high reliability. Taking into account the fact that the elimination of a variable leads to the decrease of Alpha Coefficient, as it is seen in Table 4, we can state that after our analysis, we do not eliminate any variable.

³ Cronbach's Alfa Coefficient (α) is one of the most popular tests measuring the internal consistency of the used items. This coefficient eliminates from the analysis the variables that, by their variation, do not succeed to explain very well the studied phenomenon.

⁴ The „item to total” correlation is directly linked to Cronbach's Alfa Coefficient and it shows us the degree in which an indicator from the conceptual model is correlated to the sum of the other indicators within the given model.

Moreover, in order to establish the existence of different relationships between the variables, we inspected the correlation matrix. As can be noticed in Table 1, that of the inter-variable correlation matrix, all the values are positive and they do not exceed the recommended maximum values of 0,8 and 0,9; this issue highlights the fact that data analysis is not affected by multicollinearity.

Dimension 2: Room

The instrument used for measuring the dimension "Room" was composed of four variables (items). The initial value of the Cronbach's Alpha Coefficient was that of 0,828; this suggests that the variables related to the room environment where the hotel service is provided, do have also a high reliability.

From Table 5, we observe that, if a variable is eliminated, the value of Cronbach Alpha coefficient decreases. As a consequence of this fact, we are supposed to retain that we will not eliminate any variable.

Dimension 3: Restaurant

In terms of the instrument used for measuring the dimension „Restaurant”, this is formed of four variables. The initial value of Cronbach Alpha coefficient is 0,845; this suggests that, also in this situation, the variables referring to the room environment where the hotel service is provided, have a high reliability, too.

Table 6 shows the values of Cronbach Alpha Coefficient. If one of the variables is eliminated, this coefficient will be lower than its initial value, which means that, in our case, we will not eliminate variables at all. As a conclusion, all the component variables of Reception, Room and Restaurant, will be kept in the econometric model.

3.3. Socio-demographic characteristics of the surveyed population

For an overview of socio-demographic characteristics of the respondents participating at the present research study, we will take into consideration issues related to their gender, education, age, environment where they have the domicile, respectively the household income.

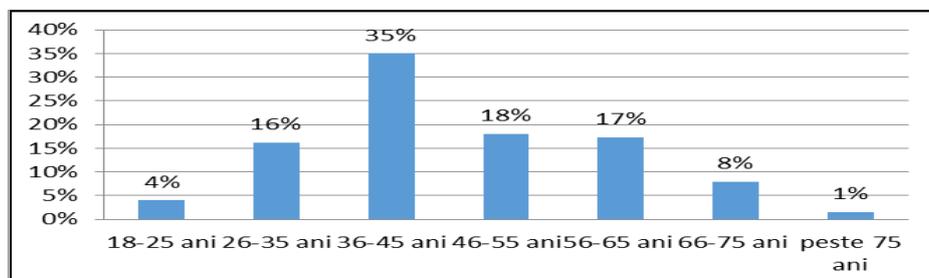


Figure 1. The structure of the surveyed population in terms of age

Source: Author's own results got on the basis of data in the questionnaire

Among the respondents, 52% are men while 48% are women. Moreover, 68% of the respondents live in urban areas and 32% in rural areas. Due to the subject researched, we could state that this division, even if it is not uniform, it is really a normal one. In general, people living and working in urban areas, are used to be accommodated in hotel-type tourist units, due to their work place and the income they receive and that is available for them. The following chart indicates the structure of the sample in terms of age.

The largest share of respondents is represented by people aged 36-45 (35%). They are followed by people aged 46-55 (18%) and, at a very little distance from them, we have the respondents aged 56-65 (17%).

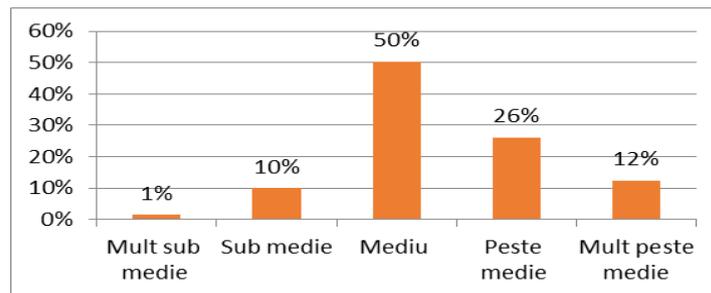


Figure 2. The structure of the surveyed population in terms of family's income compared to household income in Romania

Source: Author's own results got on the basis of data in the questionnaire

Regarding the income of respondents' families, compared to household income in Romania, 50% of them have an average income, 26% have an income above the average, while only 12% of them have an income significantly overcoming the average. Moreover, we notice that there are relatively few people getting salaries below average (10%) and far below the average income (1%).

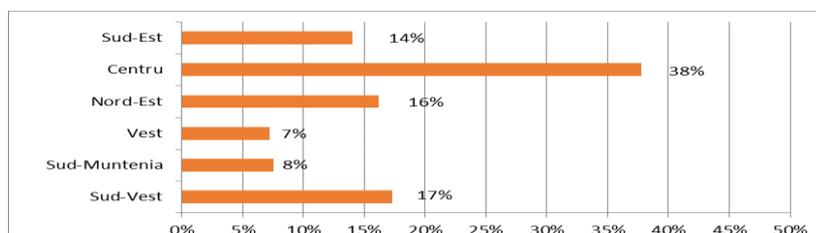


Figure 3. The geographical area where the hotels in the research study are located in

Source: Author's own results got on the basis of data in the questionnaire

From this chart, we observe that hotels and guest houses in our analysis lie mainly in the Center of the country (38%), then in the South-West (17%), North-East (16%) and South-East (14%), the fewest of them being located in South-Muntenia (8%) and in the West side (7%).

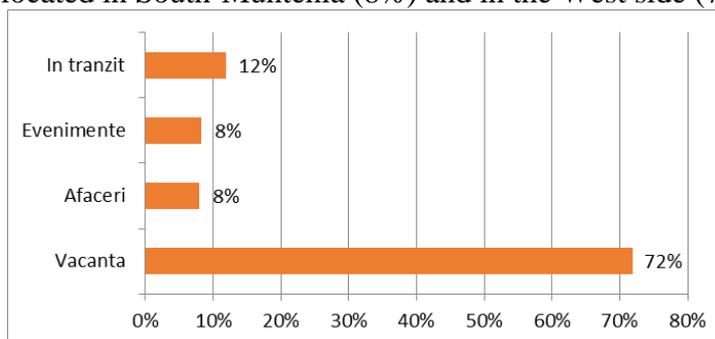


Figure 4. The structure of the surveyed population in terms of accommodation purpose

Source: Author's own results got on the basis of data in the questionnaire

The main purpose of the accommodation is the holiday itself, according to the answers got from more than 72% of the respondents. Among the respondents from the entire research sample, 12% answered that they were in transit, 8% for business and 8% for different events. This shows us that hotels in our analysis are designed mostly for people going on holiday.

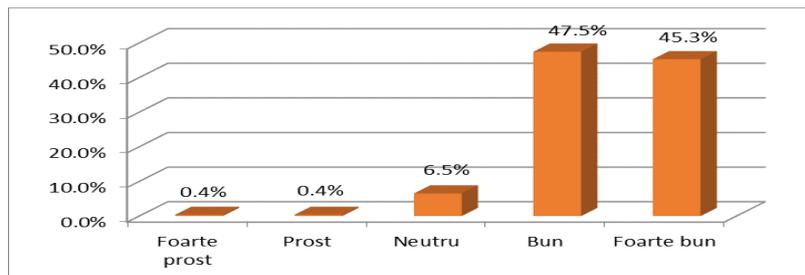


Figure 5. The quality/price ratio

Source: Author’s own results got on the basis of data in the questionnaire

The greatest part of the respondents consider that the quality/price ratio is a good one (47,5%) or even a very good one (45,3%). This shows that the quality/price ratio is considered a positive one among the respondents in the research sample.

Table 3. Hotel recommendation

Would you recommend the hotel or the guest house to your friends and relatives?	
Yes	269
No	9

Source: Author’s own results got on the basis of data in the questionnaire

Among the 278 surveyed persons, a number of 269 would recommend the hotel or the guest house in which they were accommodated to their friends or relatives. This means that the overwhelming majority of people in the present research analysis were satisfied with the accommodation conditions as well as with the ambiance of the hotel or that of the guest house.

3.4. Consumers’ perception

Next, we propose to identify the factors influencing consumers’ perception. These perceptions were divided into three categories such as:

- Perceptions concerning the ambiance of the hotel or guest house reception
- Perceptions concerning the rooms of the hotel or of the guest house
- Perceptions concerning the restaurant of the hotel or of the guest house

3.4.1. The econometric model and research hypothesis

In order to validate or to invalidate this hypothesis, we propose to build a **multiple linear regression model** in which the *endogenous variable* be the *perception concerning the overall quality of services provided in hotel units*, and the *exogenous variables* be selected among the different *perceptions concerning: hotel’s ambiance, spaces and their functions, service’s effectiveness, employees’ responsiveness and facilities offered to the consumers*. Thus, the initial *Multiple Linear Regression Model* is formed by the dependent variable named *Satisfaction Degree*, while the independent variables are those described previously.

According to the codification mode, the dependent variable could be:

- *The quality/price ratio - Rap,*

And the independent variables are divided into:

- *Descriptive variables – Purpose, Period, Gender, Domicile, Age, Income*
- *Variables concerning the ambiance of the hotel – Reception (Rec1, Rec2, Rec3, Rec4, Rec5), Room (Room1, Room2, Room3, Room4) and Restaurant (Res1, Res2, Res3, Res4).*

Because of the fact that the Cronbach Alpha Coefficient was higher than 0,7 for all the items of the variables that describe the ambiance of the hotel, none of them has been removed.

The aim of this paper, as well as the objectives of the research derives from the formulation of the following hypotheses:

H₁: The quality of food has a significant impact on perception concerning the overall quality of services provided in hotel units.

H₂: The comfort of the bed has a significant impact on perception concerning the overall quality of services provided in hotel units.

H₃. Geographical area of the hotel has a significant impact on perception concerning the overall quality of services provided in hotel units.

The p_values resulted from the analysis of the econometric model will help us conclude whether these research hypotheses are validated or not.

3.4.2. The estimation of the econometric model

Both the dependent variable and the independent ones were introduced in SPSS and, by means of the *stepwise-method*, we had 5 valid models.

Table 4. Model Summary^f

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.464 ^a	.215	.212	.585	
2	.568 ^b	.323	.318	.545	
3	.600 ^c	.360	.353	.531	
4	.616 ^d	.380	.370	.523	
5	.629 ^e	.396	.384	.517	1.763

a. Predictors: (Constant), Rec4

b. Predictors: (Constant), Rec4, Res2

c. Predictors: (Constant), Rec4, Res2, Room4

d. Predictors: (Constant), Rec4, Res2, Room4, Res1

e. Predictors: (Constant), Rec4, Res2, Room4, Res1, Area

Among the five valid models resulting from our estimation, we will analyze the one for which the value of the determination coefficient is the highest one, namely Model 5.

3.4.3. The estimation of regression parameters

The regression model which was got is described in the table 5.

Table 5. Regression parameters

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
5 (Constant)	.725	.324		2.241	.026		
Rec4	.345	.060	.306	5.779	.000	.818	1.223
Res2	.156	.057	.179	2.731	.007	.530	1.887
Room4	.203	.054	.195	3.751	.000	.850	1.177
Res1	.138	.050	.178	2.768	.006	.554	1.806
Area	-.051	.019	-.129	-2.658	.008	.970	1.031

a. Dependent Variable: Rapport

The tables above help us to test, one by one, both the significance degree of the seven variables described previously and the hypotheses of the linear regression model.

The hypotheses of a linear regression model are the following ones:

- *Hypothesis 1. Residual variables have a zero mean.*
- *Hypothesis 2. Residual variables are not inter-correlated (there is not an autocorrelation of errors).*
- *Hypothesis 3. The variation of residual variable is constant (homoscedadicity).*
- *Hypothesis 4. Independent variables are not correlated with the residual variable (multicollinearity).*
- *Hypothesis 5. There are no measurement errors.*
- *Hypothesis 6. Independent variables are linearly independent.*
- *Hypothesis 7. Residual variable is normally distributed.*

i) *The normal distribution of errors. Residual variables are heteroscedastic.*

For a linear regression model to be valid, one of the necessary conditions is that errors have a normal distribution. For this, we are supposed to identify the theoretical distribution of residues and to compare it with the normal distribution.

From the analysis of the two charts above, we notice that errors are approximately heteroscedastic. In other words, they are independent and normally distributed. As a consequence of this fact, we can state that *the third as well as the seventh statistical hypothesis* are both valid.

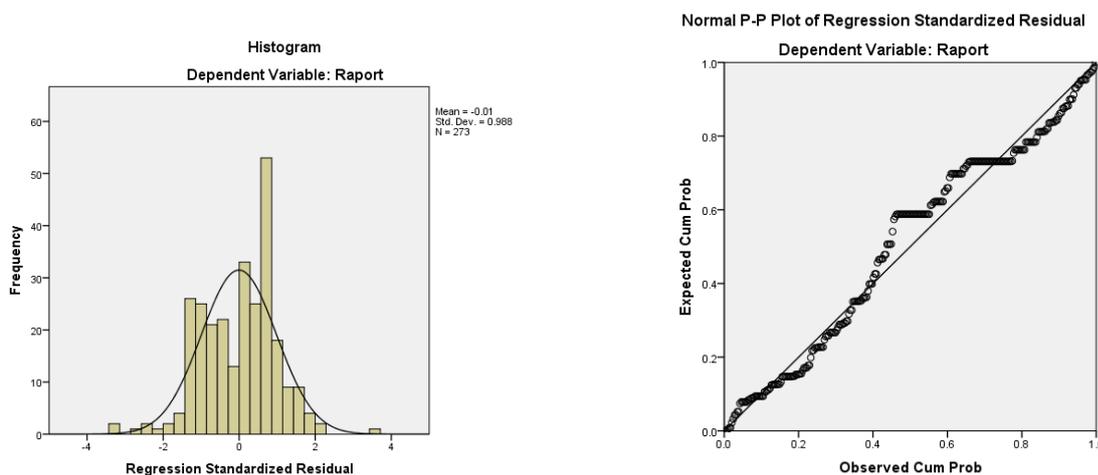


Figure 6. Plot: Regression standardized residuals vs. Predicted

ii) *Errors autocorrelation: Durbin Watson Test*

Checking the existence of an errors' autocorrelation, can be generally realized by means of *Durbin Watson Test*. If the returned value of this test is very close to 2, we consider that errors are not autocorrelated.

From the table above, we observe that the value got after applying the Durbin Watson Test is 1,763; this means that errors are not autocorrelated and thus, *the Statistical Hypothesis 2* is confirmed.

iii) *Multicollinearity: the exogenous variables are not autocorrelated*

For testing the existence of a multicollinearity in our model, we used the VIF analysis (*Variance Inflation Factor analysis*). In the case in which we get $VIF > 3$, then we consider that we do have a multicollinearity relation at the level of our model.

From the table, we observe that, for the 21 independent variables, all the VIF values are between 1,031 and 1,887. As these values are lower than 3, it results that the independent variables are not collinear and thus, *the Hypothesis 4* is also confirmed.

3.4.4. The analysis of econometric results

The regression analysis above reveals that, among all the factors which were analyzed, those which have the highest statistical significance in terms of their influence on the satisfaction degree of hotel services users are the following ones:

- Diversity of menu (Res1)
- Quality of food (Res2)
- Accuracy of bill (Rec4)
- Bed comfort (Room4)
- Geographical area of the hotel (Area)

Thus, the multiple linear regression equation we get, is the following one:

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \varepsilon$$

Where,

- y - Rapport
- x_1 - Res1
- x_2 - Res2
- x_3 - Rec4
- x_4 - Room4
- x_5 - Area

After estimating the regression equation parameters, the equation above can be written as:

$$\text{Rapport} = 0.725 + 0.345 \text{ Res1} + 0.156 \text{ Res2} + 0.203 \text{ Rec4} + 0.138 \text{ Room4} - 0.051 \text{ Area} \quad (1)$$

From this equation, we notice that, the satisfaction degree is directly proportional with the following variables: *diversity of menu in the restaurant, quality of food in the restaurant, bill accuracy, the comfort of bed in the hotel room* and inversely proportional with the variable *geographical area of the hotel*. The value of the determination coefficient (R^2) is of 0,396. This means that 39,6% of the variation of the dependent variable is explained by the variation of the independent variables. The *P-value* (Sig.= 0.000) is lower than 0.05 which shows us that the model is statistically significant. The statistical hypotheses have been validated and therefore, we can state that this model is a significant one.

Moreover, as the independent variables: *quality of food in the restaurant, the comfort of bed in the hotel room* and *geographical area of the hotel* are all statistically significant in the Multiple Regression Model (Sig. > 0.05), we conclude that all three research hypothesis are valid at the 95% level of confidence.

4. CONCLUSIONS

The statistical and the econometric analyses reveal that the respondents in our survey are very satisfied with the conditions and services provided by the hotel units in the research sample. Thus, with only one exception, all the respondents said they would recommend the hotel to their friends or relatives.

Moreover, the quality/price ratio is considered a good one and also a very good one, as long as a significant percentage of the respondents mentioned this fact.

From a practical perspective, the tests we applied give us the opportunity to sustain that there is a uniform continuity of answers from the respondents in our research sample, as we have just noticed a series of similarities. From a managerial perspective, we can state that it is necessary to quantify

the effects on hotel services customers in order to foresee the needed investments in the area. Therefore, we consider that managerial strategies in this field should be designed in relation to market evolution.

However, the main limitation of the present paper is linked to the sampling process. On the one hand, given the absence of a sampling frame, we had to proceed to a non-probability method, namely the snowball method. The main weakness of this method consists in decreasing sampling representativeness. On the other hand, another limitation of our research study is linked to the financial issue as well as to unavailability of the respondents. All these facts contributed to the diminution of completed questionnaires.

In terms of expected future research directions, we intend to analyze more deeply all geographic regions in Romania in order to assess tourists' satisfaction degree as well as to establish if there are variations or not of this degree corresponding to the tourists from a particular area to another. Moreover, we plan to conduct a marketing research for measuring hotel services customers' personal values as well as the relationships between those values. Last but not at least, we would like to assess the extent of tourists' perceived values in order to build a more detailed hotel services customer profile.

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