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MODERN QUALITY MANAGEMENT IN HOTEL TOURISM

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Abstract: *Tourism is a rapidly growing industry that requires explosive reaction of management. In order to achieve or even exceed guests expectations, we must determine what are their expectations for quality of service. The employees are the heart of business. How do we integrate all the power of quality that we will become in the eyes of customers? This is the task of modern management in tourism. In this paper we present an analysis of quality in a casual sample of 333 guests in 42 different hotels in Slovenia and Croatia. Based on multipla linear regression analysis, we found that guests in the four-star hotels statistically ($F: 7.549$, $Sig.: 0.006$) are more satisfied with the quality of offers as guests in three-star hotels. Statistically significant differences between the three-stars hotels and four-star hotel is reflected in the satisfaction with the quality of food and drink and its quick service, the price of the service, friendliness of staff to guests, and the arrangement of the restaurant, reception and rooms.*

Keywords: *quality, tourism, management, satisfaction of guests, multiple linear regression.*

1. Introduction

Nowadays many people travel for various reasons. Clients for tourist products and services (in continuation guests) are becoming increasingly informed and educated about hotels product and service offers, thus increasing their demands, while adding new needs and wishes. Some factors, which used to count as added value or surprise, have now become an expected necessity. Modern management must follow this trend of thought in order to continue pleasing their customers and ensure satisfactory business results.

The purpose of this paper is to investigate whether and how three selected variables influence the dependent variable under study defined as Y-a (satisfaction of quests in hotels). The aim of the study is to contribute the understanding of how three independent variables (X_1 - a Dummy variable for sex; $X_1= 0$ for male; $X_1= 1$ for female, X_2 - a Dummy variable for number of stars of hotel; $X_2=0$ three-star hotel, $X_2=1$ four-star hotel, X_3 - a Dummy variable for a country of Slovenia or Croatia; $X_3=0$ for a country-

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Slovenia and $X_3=1$ for a country is Croatia) impact the Y variable based on linear regression models.

The main research hypothesis is that at least one independent of variables (X_1 , X_2 , X_3) is statistically significantly for explanation of variability in variable (Y-satisfaction of quests in hotels).

Additional research hypothesis states that independent variable (X_2) is statistically significantly for explanation of variability in variable (Y).

Research data has been acquired through use of a questionnaire. For data exploration using Excel, Megastat, IBM SPSS 20 and Gretl.

We used descriptive analysis, methods of multiple linear regression analysis and Anova test.

2. Literature Overview

Modern tourism can be defined as a set of people from all social classes, social relations, social rights and material well-being. Globally, tourism has become an activity with a number of economic effects, which develop new economic activities, enhance and modify the structure of production and consumption. "Concern for quality is one of the most important strategic goals in organizations, because research shows that 40% of users citing poor quality of services as the most important reason for the transition to a competitive tender, the price of services and only 8% "(Cevc, 2009, 374). Various studies have also shown how the close correlation in the services business success and the degree of customer loyalty. One of the basic finding is that even a tenth of unsatisfied customers not to complain, but to express their dissatisfaction in two ways: with 82% not return to their bad experience, on average, nine people aware, 13% dissatisfied or even 20 or more people (Cevc, 2009, 374). Also satisfied customers spread positive information about the organization that satisfies their expectations (Čočkaló, et al., 2011, 32). Caring for satisfied customers is an important task because it is easier to keep existing customers than acquire new customers. Guest relationships are a strategic asset of the organization (Gruen, et al., 2000, Guzzo, 2010) and customer satisfaction is the starting point to define business objectives.

Organized approach to studying the quality was not initiated until after 2 World War II in the U.S. (Vorina, 2008, 188). Zoran Lekić (2011, 25-26) split level development of quality management in the next stage of development:

- The first beginnings in the form of quality control (early 20th century),• statistical quality control (the period during and after World War II)
- Integrated Quality Control (sixties of the 20th century)
- total quality management (the nineties of the 20th century)
- the introduction and certification of quality systems (late 20th century and the beginning of the 21st century).

Stage of development of quality management, as defined Marolt, Gomišček, (2005, 13-16), are:

- I rate: QUALITY CONTROL (QC - Quality Control). It goes back to the early 20th century and up to about 1960. For the industrial mode of production is

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usually considered a factory production car Ford. Characterized by high division of labor and production of identical products in large quantities.

- II rate: QUALITY ASSURANCE (QA - Quality Assurance). It was launched in 60 year. They found that quality issues can't be satisfactorily solved only with the control pre-made products (passive approach). Requires an active approach - the main concern regarding the quality should be given to prevention, to avoid unsuitable products. Quality becomes a concern for all. Quality assurance is not only technical, but primarily organizational in nature. To standardize the quality approach has been made a special international standards (best known as ISO 9000) to systematically determine the responsibilities of individual departments and functions in relation to quality.
- III rate: continuous quality improvement (CQI - Continuous Quality Improvement). The first two stages are focused on the product or service. In the 90 years commencing on the issue of quality to look through the process. This level supports the focus on improvement of all processes within the organization, t. i. process approach to quality, which should lead to greater efficiency and effectiveness of the organization. That is achieved through a greater satisfaction of all those who are in any way connected with the organization, team work, innovation and cost reductions. It is interesting that in today released during the term quality control. Not only in the titles of the developmental stages, including the names of organizations that are professionally concerned with the quality (no more EOQC - European Organization for Quality Control, ASQC-American Society for Quality Control, but only the ASQ and EOQ), but also what is Of course the most important in the approach to quality (Lekić, 2011, 26).

"Quality management systems should be upgrading of existing such a way that will allow the management of creativity, which is a prerequisite for innovation, which can achieve the quality required for successful operation of the organization" (Trebar, 2010, 12). "Quality must be built like a house slowly, with clear objectives and real-time controls and continuous improvements" (Vorina, 2011, 59).

Nowadays one of the biggest challenges for managers in the hotel industry is to provide and sustain customer satisfaction. Customer requirements for quality products and service in the tourism industry has become increasingly evident to professionals (Lam & Zhang, 1999; Yen & Su, 2004, Guzzo, 2010).

SERVQUAL model is still the most established model of service quality. He is also known under the name "model five steps" (The Five Gap Model), American author Parasuramana, Zeithamlove and Berry. Customers evaluate service quality service, this is the result of the comparison of their expectations regarding the quality of service and the actual experiences and feelings of the services received. The model has been designed to measure the experienced (percipirano) quality of service. As its name suggests the model is to address any gaps or gaps that may exist in the service process (Parasuraman, Zeithaml, Berry, 1996).

Grönroos model (2007, 79) tries to explain how consumers perceive the quality of certain services. The model is based on the evaluation process for the duration of service. Perception (perception of) the quality of customer service is the result of comparing the expected and actually experienced. The model attempts to define the activities and resources of the service provider, both internal and external that affect the client host assessment of quality of service (Haller, 2012, 71).

How do we know that we are absolutely non-quality? How do we know that the hotel offers the absolute non-quality service? We know this when the hotel does not have more guests. It is therefore necessary to measure guest satisfaction in hotels and other tourism organizations. Only by measuring guest satisfaction can improve the quality of business (Vorina, 2012).

3. Exploratory Data Analysis

Main results, findings and future research should be presented. We chose to investigate the population – guests in hotel in Slovenia and Croatia of all ages. Occasional sample consisted of 333 respondents in 42 various hotels.

The study included 172 (51.7%) men and 154 (46.2%) women, 7 (2.1%) did not respond by sex, 81 (24.3%) three-stars hotel and 168 four-stars hotel (50.5%), 84 (25.2%) did not respond the number of stars of hotel and 312 guest in Slovenia hotels and 21 guest in Croatia hotels.

The questionnaire consisted of 16 claims or questions which have been divided into two sections. The first set consisted of three demographic data (sex, country, number of stars in the hotel), and the second set consisted of thirteen factors about guest satisfaction. Interviewing was conducted from 03.01.2012 to 03.15.2012.

Guest satisfaction was measured by the following of thirteen factors as the sum: Guests have access to information via computer (e-access); The hotel offers the possibility of trips and visits other sites in the city; The hotel offers enough additional money (entertainment, sports facilities, entertainment ...); Arrangement of parking spaces; Arrangement of corridors and common areas; Arrangement of reception; Price of services (accommodation, food, drink ...); Willingness of employees in hotels, to help our guests; Friendly and quick service food and beverage; Arrangement of restaurant; Friendliness of staff to guests; Arrangement of rooms and Quality food and drink.

Because we have developed a measuring instrument- a questionnaire alone, we have to test the quality of the measurement instrument or reliability of selected indicators to measure the research variables. We chose Cronbach's alpha test, which measures the reliability of the measurement instrument and indicates whether the selected indicators measuring the same latent variable. "Reliability of the scale is exemplary, if the Cronbach's alpha coefficient greater than or equal to 0.8" (Tominc, 2008, 33). The reliability of a questionnaire, which measure guest satisfaction is Cronbach's alpha 0.870 (Tables 1 and 2), which means a lot or exemplary reliability of measurement.

Table 1: Case Processing Summary

	N	%
Valid	307	92,2
Cases excluded	26	7,8
Total	1282	100,0

Source: SPSS 20, Author's creation

Table 2: Reliability Statistics

Cronbach's Alpha	N of items
0,870	13

Source: SPSS 20, Author's creation

A depend variable is a guest satisfaction, which was measured by the thirteen factors, mentioned above. Independent variables are: X_1 - sex; X_2 – number of stars of hotel; X_3 – country is Slovenia or Croatia.

4. Multiple Linear Regression Models

In general, multiple regression allows the researcher to ask (and hopefully answer) the general question "what is the best predictor of ...". Of course, limitation of all regression techniques is that one can only ascertain relationships, but never be sure about underlying causal mechanism. For testing the first research hypotheses a **multiple linear regression analysis** using software Megastat, Excel, SPSS 20 and Gretl was applied. The general multiple linear regression population Model applied (1) is:

$$y_i = \beta_0 + \sum_{j=1}^k \beta_j x_{j,i} + e_i, \quad i = 1, 2, \dots, n \quad (1)$$

Regression parameters are estimated using minimum least squares (OLS) method. The Model with the OLS estimated parameters (2) is:

$$\hat{y}_i = \hat{\beta}_0 + \sum_{j=1}^k \hat{\beta}_j x_{j,i}, \quad i = 1, 2, \dots, n \quad (2)$$

The random error term (3) is estimated using:

$$\hat{e}_i = y_i - \hat{y}_i \quad (3)$$

The most important limit of the regression method is that only probable relationships are assumed, and one may never be sure about the true causal mechanism that lies behind. Regression diagnostics was conducted using coefficient of determination R^2 , the t -test for testing the significance of each of the independent variables, and F -test in testing for overall regression. Results for two multiple regression models are given in Tables 3, 4 and 5. The two multiple OLS regression models were analysed, for studying the following:

Model I- Impact of $K=3$ regressors on depend variable Y , ($n=231$). The linear multiple regression Model I (4) with estimated parameters is:

$$(\hat{Y} = 44.5 - 0.866 * X_1 + 2.92 * X_2 - 0.824 * X_3) \quad (4)$$

$n = 231$, R -squared = 0.040, Adjusted R -squares =0.027, Standard Error=7.16

In **Model I** (Table 3) 4 % of total sum of squares are explained by the estimated model. Variables X_1 (p-value = 0.3634), X_3 (p-value = 0.0615) are not statistically significant. In additional Model II, we excluded the variable X_1 and X_3 .

Table 3: Regression Model I: K=3, n=231

	Coefficients	Standard Error	t Stat	P-value
Intercept	44.5	4.27	10.42	5.09e-021
X ₁	-0.866	0.95	-0.910	0.3634
X ₂	2.92	1.01	2.904	0.0040
X ₃	-0.824	1.64	-0.501	0.6165

Source: Megastat, Gretl, Author's creation

Model II (Table 4 and 5) - Impact of K=1 regressors on depend variable Y, (n=236). The linear multiple regression Model II (5) with estimated parameters is:

$$\hat{Y} = 43.11 + 2.71 * X_2 \quad (5)$$

(3.66) (0.99)

n = 236, R-squared = 0.031, Adjusted R-squares =0.027, Standard Error=7.117

F (1, 234) =7.54, P - value=0.006.

Table 4: Regression Model II: K=1, n=236

Predictors: (Constant), Number of stars of hotel

Dependent Variable: Sumsatisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
II	0.177	0.031	0.027	7.118	1.271

Source: Gretl, SPSS 20, Author's creation

Table 5: Regression Model II, F-test

Model II	Sum of Squares	df	Mean Square	F	Sig.
Regression	382.427	1	38.427	7.549	0.006
Residual	11854.705	234	50.661		
Total	12237.131	235			

Source: SPSS 20, Author's creation

In **Model II** 3.1% of total sum of squares is explained by the estimated model. Variables X₂ (p-value=0.006) is statistically significant at 5 % significance level.

The regression coefficient β₂ shows that if X₂, number of stars of hotel, would increase, without changing the level of variable X₁ and X₃, the regression value of satisfaction of guests would also increase.

In Table 6 we see (F: 4.37 - 35.83, Sig.: 0.000 - 0.030) that there are statistically significant differences in satisfaction between the hotel guests with three and four stars. Differences exist in satisfaction with: quality food and drink, friendly and quick service food and beverage, price of services (accommodation, food, drink ...), friendliness of staff to guests, arrangement of reception, rooms and restaurant.

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Table 6: Anova, guest's satisfaction

Satisfaction...		Sum of Squares	df	Mean Square	F	Sig.
quality food and drink.	Between Groups	8.653	1	8.653	17.544	0.000
	Within Groups	119.853	243	0.,493		
	Total	128.506	244			
friendly and quick service food and beverage.	Between Groups	2.806	1	2.806	4.737	0.030
	Within Groups	144.559	244	0.592		
	Total	147.366	245			
price of services (accommodation, food, drink ...).	Between Groups	28.683	1	28.683	35.835	0.000
	Within Groups	195.301	244	0.800		
	Total	223.984	245			
friendliness of staff to guests.	Between Groups	4.189	1	4.189	7,044	0.008
	Within Groups	145.706	245	0.595		
	Total	149.895	246			
arrangement of reception.	Between Groups	6.982	1	6.982	13.114	0.000
	Within Groups	130.443	245	0.532		
	Total	137.425	246			
arrangement of restaurant.	Between Groups	5.021	1	5.021	9,477	0.002
	Within Groups	129.272	244	0.530		
	Total	134.293	245			
arrangement of rooms.	Between Groups	5.634	1	5.634	8,590	0.004
	Within Groups	160.013	244	0.656		
	Total	165,646	245			

Source: SPSS 20, Author's creation

5. Conclusion

For 236 hotel guests in Slovenia and Croatia, regression analysis of dependent variable Y- satisfaction of guests in hotels was conducted. Three independent variables considered are: X_1 - sex; X_2 - number of stars in hotel; X_3 - country is Slovenia or Croatia. All data are based on author's research. Multiple linear regression Model I, with $n=231$ and $K=3$ regressors, indicated that only variables X_2 was statistically significant. Model II, with $n=236$ and $K=1$ regressors, indicated that variables X_2 is statistically significant at 5 % significance level. The F-test with F-statistics = $F(1, 234) = 7.54$ and P-value=0.006 shows that overall regression is statistically significant at 5 % significance level.

Finally, in this research, the first hypothesis was accepted: the main research hypothesis, which stated that at least one independent of variables (X_1, X_2, X_3) is statistically significantly for explanation of variability in variable Y- satisfaction of guests in hotels). The additional hypothesis, that that independent variable (X_2) is statistically significantly for explanation of variability in variable Y- satisfaction of guests in hotels was also accepted.

In further research would be interesting to include in the linear regression model other independent variables such as, (age and education of guest...).

Modern management in the tourism industry should ensure the satisfaction of guests and employees.

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MODERAN MENADŽMENT KVALITETA U HOTELSKOM TURIZMU

Rezime: Turizam je brzo rastuća grana, što zahteva eksplozivne reakcije menadžmenta. Da bi dostigli ili čak premašili očekivanja gostiju, moramo utvrditi kakva su njihova očekivanja kada se radi o kvalitetu usluga. Zaposleni su srce svakog preduzeća. Na koji način treba povezati sve snage u preduzeću, kako bi postali kvalitetni u očima gostiju? To je u stvari zadatak modernog menadžmenta u turizmu. U referatu analiziramo kvalitet turističke ponude na slučajnom uzorku od 333 gostiju u 42 različita hotela u Sloveniji i Hrvatskoj. Na osnovu multivariantne linearne analize smo utvrdili da su gosti u hotelima sa četiri zvezdice statistički (F: 7,549; Sig.: 0,006) zadovoljniji kvalitetom ponude u odnosu na goste u hotelima sa tri zvezdice. Statistički važne razlike između hotela sa četiri i tri zvezdice se izražavaju u zadovoljstvu kvalitetnom hranom i pićem, brzom uslugom, cenom usluga, ljubaznošću osoblja prema gostima te uređenosti restorana, recepcije i soba.

Ključne reči: kvalitet, turizam, menadžment, zadovoljstvo gostiju, multiplitarna linearna regresija,