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Synthetic Measure of the Quality of Service Taking into Account the Client’s Perspective in the Hotel Industry

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Summary – 1. Introduction – 2. Research Methodology and Primary Results – 3. Synthesis of Primary Results and Hotel Hierarchy – 4. Conclusion and Future Research

Abstract

We suggest a simple method to aggregate tourist opinions, measured on a scale from 1 to 10, relatively to 14 criteria considered to be the most important. We are taking into consideration the tourists’ opinion regarding the importance of criteria and the synthetic result obtained lead to a hierarchy of the hotels where the research has been made, from the point of view of the quality of services provided. The results obtained can make the managers aware about the situation of the unit they manage and they can signal to them the characteristics which must be improved in order to obtain a better position in the guests’ opinion.

Keywords: quality of service, hotel industry, aggregation, weight

1 – Introduction

The quality of services means, on one hand, the coping with the quality standards of the supplier and, on the other hand, the meeting of the quality standards of the client. These two sides regarding the quality of services are treated independently, meaning that the goal is to achieve the client satisfaction, an objective accomplishable by meeting some conditions by the supplier. The suppliers’ standards deal with the material grounds and the personnel, regarding the competence and the behaviour. Another way of approaching divides the quality of services into technical quality services and functional quality services.

Unlike material goods, the quality of services is connected to all the performing stages and requires the so called “permanent qualitative performance” (Jivan, 1998).

A service supplier has in view the constancy of clients which means the setting of a durable relation with them. This relationship is achieved through obtaining and maintaining the clients' trust.

The clients evaluate the quality of the services according to a series of parameters, which have more or less importance varying with each person. These are: “the degree of trust and safety provided; receptivity; competence; accessibility; understanding; client knowledge; physical features; facilities” (Rondelli & Cojocariu, 2004).

A way to ensure the concordance between expectations and the quality provided is a permanent market research, the knowledge of needs and expectations of the consumers and the coherent and complete communication with them. The emphasis placed by the consumers on certain parameters of quality of tourist services differ varying with: culture, education, tourist experience, income, information degree and others.

Though not very studied, in the field of the quality of tourist services (especially hotel services) there have been approaches regarding the identification of new parameters.

We are quoting in this view a work which has the merit of suggesting, based on the research performed, new parameters regarding the evaluation of the quality of tourist services from the tourists' perspective. The authors (Ramsaran-Fowdar, 2007) manage to fill in the SERVQUAL scale regarding the appreciation of the quality of services, with new parameters.

These are: “accommodation benefits” (silence, relaxation, entertainment, interior design etc.) and “the technology provided by the hotel” (Internet access etc.) as well as others.

In a recent work (Benitez, Martin & Roman, 2007) the time evolution of the quality of services provided by three important hotels is studied and a synthetic indicator is suggested to establish a hierarchy of these. Due to the fact that some criteria cannot get exact answers, the theory of fuzzy sets is required to overcome this problem.

2 – Research Methodology and Primary Results

Research methodology:

- The paper is based on a questionnaire (made by Ban O., Tomescu A., 2005) applied in three hotels (of six researched) in Neptun resort during 28 July - 4 August 2005. Approximately 100 tourists answered the questions regarding the classical evaluation criteria of the quality of services;
- In this stage of the research the profile of the questioned was not taken into account;

- There have been taken into account only the answers from two questions: “4. Which criteria regarding the quality of services are important for you? Please mark them from 1 to 10, 10 points for the most important. The marks can be repeated.
- How would you appreciate the following aspects at this hotel? Give points from 1 to 10, 1 point for the worst criterion compliance with.”
- We started from the premise that there were no major differences among the tourists’ perception of the three hotels regarding the importance of the quality criteria suggested.
- The results obtained are presented in Table 1. The importance of each criterion was calculated as being the arithmetic average of the points given by the tourists at question⁴, no matter the hotel where they were accommodated. The mark obtained for a certain criterion and a certain hotel was calculated as the arithmetic average of the points given by the tourists accommodated in that particular hotel, at question 5. The data presented as such in Table 1 are valuable because they allow a direct comparison between the importance given by the clients to different evaluation criteria and the marks given to hotels by the clients to the particular criteria.

Table 1. Importance of evaluation characteristics of service quality from the point of view of tourists and the marking of the units observed according to these characteristics

Evaluation criteria of services	Importance in the client’s perspective (out of a maximum possible of 10)	Appreciation of the quality of services provided by the observed units (out of a maximum possible of 10)		
		Romanța H.	Terra H.	Clăbucet H.
Interior and exterior aspect	6,736	5,947	4,768	6,873
<i>Modernity of the building</i>	6,000	5,684	5,012	5,765
<i>Modern equipment facilities</i>	6,105	5,052	5,432	3,878
<i>Ambient</i>	6,578	5,736	6,004	4,982
<i>Cleaning state</i>	8,736	8,105	7,963	6,436
<i>Using computer-based systems for registering tourists and taking</i>	7,947	6,052	5,987	6,006
<i>Well trained personnel</i>	6,631	7,368	7,145	6,072
Personnel’s availability to serve	7,631	6,736	6,261	5,673
<i>Promptness in serving clients</i>	8,736	6,421	5,989	5,558
<i>Communication skills</i>	8,368	7,736	6,876	6,112
<i>Kindness</i>	8,842	8,473	7,635	6,987
<i>Enthusiasm and good-humoured</i>	7,631	5,947	4,987	5,823
Capacity of dealing and solving problems	6,842	7,526	7,567	6,889
Capacity of task fulfilling	7,210	5,842	6,885	7,993

3 – Synthesis of Primary Results and Hotel Hierarchy

In order to provide a global indicator of the quality of services in a hotel and to be able to compare thus the quality of services in different hotels, we aggregate the results obtained at question number 5. Due to the fact that the criteria do not all have the same importance from the clients’ point of view, we must weight the criteria contribution in the aggregation operator (10 points given by a tourist for the “Modernity of construction” means less than 10 points given for “Politeness”, as it results from Table 1).

The best known and used aggregation operator is defines a (actually the weighted arithmetic average MAP):

$$MAP_{\omega}(x_1, \dots, x_n) = \sum_{i=1}^n \omega_i x_i, \quad (1)$$

where $\omega = (\omega_1, \dots, \omega_n)$ is the weights vector, $\omega_i \in [0,1]$, $\forall i \in \{1, \dots, n\}$ and verifies $\sum_{i=1}^n \omega_i = 1$.

A natural choice of the weights vector in the case observed is given by:

$$\omega_i = \frac{k_i}{\sum_{i=1}^{14} k_i}, i \in \{1, \dots, 14\}.$$

where k_i represents the number on position i form the second position of Table 1, that is the average of the marks obtained as a result of tourists expressing their opinions at criterion “ i ” of question 4 of the questionnaire we are referring to.

For $k_1 + k_2 + \dots + k_{14} = 103.993$ we get

$$\omega_1 = \frac{6.736}{103.993} = 0.065 \quad (2)$$

$$\omega_2 = \frac{6.0}{103.993} = 0.058 \quad (3)$$

$$\omega_3 = \frac{6.105}{103.993} = 0.059 \quad (4)$$

$$\omega_4 = \frac{6.578}{103.993} = 0.063 \quad (5)$$

$$\omega_5 = \frac{8.736}{103.993} = 0.084 \quad (6)$$

$$\omega_6 = \frac{7.947}{103.993} = 0.076 \quad (7)$$

$$\omega_7 = \frac{6.631}{103.993} = 0.064 \quad (8)$$

$$\omega_8 = \frac{7.631}{103.993} = 0.073 \quad (9)$$

$$\omega_9 = \frac{8.736}{103.993} = 0.084 \quad (10)$$

$$\omega_{10} = \frac{8.368}{103.993} = 0.081 \quad (11)$$

$$\omega_{11} = \frac{8.842}{103.993} = 0.085 \quad (12)$$

$$\omega_{12} = \frac{7.631}{103.993} = 0.073 \quad (13)$$

$$\omega_{13} = \frac{6.842}{103.993} = 0.066 \quad (14)$$

$$\omega_{14} = \frac{7.210}{103.993} = 0.069 \quad (15)$$

A synthetic indicator of service quality in the chosen hotel (named S_{hotel}) is calculated with the help of the aggregation operator defined in the formula (1), where $x_i, i \in \{1, \dots, 14\}$ represents the quality level of criterion i for the hotel observed (position I in the column corresponding to the hotel), and $\omega_i, i \in \{1, \dots, 14\}$ is calculated above. In the case of Romanța Hotel we get

$$\begin{aligned} S_{Romanta} = MAP_{\omega}(x_1, \dots, x_{14}) &= 0.065 \cdot 5.947 + 0.058 \cdot 5.684 + 0.059 \cdot 5.052 + 0.063 \cdot 5.736 \\ &+ 0.084 \cdot 8.105 + 0.076 \cdot 6.052 + 0.064 \cdot 7.368 + 0.073 \cdot 6.736 + 0.084 \cdot 6.421 + 0.081 \cdot 7.736 \\ &+ 0.085 \cdot 8.473 + 0.073 \cdot 5.947 + 0.066 \cdot 7.526 + 0.069 \cdot 5.842 = 6.701. \end{aligned}$$

Using the data in Table 1 corresponding to Terra and Clabucet hotels and the weights calculated in the relations (2)-(15) we get analogously:

$$\begin{aligned} S_{Terra} &= 6.384, \\ S_{Clabucet} &= 6.112, \end{aligned}$$

therefore the hierarchy (descending) obtained is Romanta, Terra, Clabucet.

We mention that the results are viable only to reflect the situation in the period observed, thus taking into consideration the opinions of the tourists accommodated at the time in the hotels.

4 – Conclusions and future research

In this paper, we have suggested a simple method to classify the hotels from the point of view of the quality of services based on the answers provided by the tourists accommodated in these hotels.

In aggregating the primary results, we took into account the tourists’ opinions regarding the importance of criteria connected to the quality of services. We have used a simple aggregation operator; in another paper we will use more complex aggregation operators.

For instance, there are aggregation operators taking into consideration criteria subsets too, not only criteria used individually, as it happens with the MAP operator. For instance, we can accept that simultaneously very good results for “well trained personnel” and “politeness” contribute in a higher extent to the value of the synthetic indicator than very good scores for the same criteria considered separately.

In the questionnaire implemented, we have requested the respondents to express their opinions through marks. We have in view the use of the fuzzy mathematics instruments to aggregate the answers when these contain a certain irresolution or uncertainty (using, for example, the Likert scale). Regarding the option for the Likert scale or points, we agree that the linguistic appreciations allow obtaining results which are more faithful to the reality.

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