Caltic to Measure Quality of Service in Bogota Hotels

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Abstract: Quality has become a key factor in the service sector and one of the most sensitive is the tourism sector. As they would comment [1] when evaluating tourism, the client takes into account a series of variables when making their choice, which is why the perception of quality is determinant and at present, it is impossible to ignore the technology in This process. The objective of this study is to measure the perception of service quality and customer satisfaction in the tourism sector, through the Caltic model [2]. However, for logistical issues, this measurement is performed (in a first phase) in the city of Bogotá. Finally, the results determined that the majority of the clients surveyed perceived a "Poor" quality and were "dissatisfied or very dissatisfied" with the service offered by hotels in Bogota, so that "No" would recommend it. Hotels must rethink their quality strategies.

Keyword: Quality of service, Caltic, Servqual, Hotel industry.

1. INTRODUCTION

In order to meet the objective of measuring the perception of quality of service and the degree of satisfaction of hotel clients in the city of Bogotá, the adaptation of the Caltic model [2] is used, which has its origin in the Known Servqual developed by [3] [4].

In this work the quantitative research methodology is used, to a sample determined by convenience due to the characteristics of the population and the circumstances of the study.

The work that is presented below is composed of the following sections: Review of the literature; Methodology; Results and Conclusions.

2. THEORETICAL FUNDAMENT

The Caltic is based on the Servqual with adaptation of important technological variables in the financial sector [5]. However, it is then considered important to refer to the Servqual to know its origin.

Service Quality Model (SERVQUAL)

The well-known SERVQUAL or Quality of Service (CALSERV) model, refers to a multi-element scale that measures the discrepancy between consumer perceptions and expectations, was created and improved over several years [6] [7] [8] Who were supported in previous studies [9] and [10].

These discrepancies of the Servqual model refer to the differences between "Perceptions and expectations". Understanding the perception of quality as the mismatch between the expected service and the perceived service. Thus, the creators of the model defined the "Expectations" as the desires of the clients and the "Perceptions", as the consumer beliefs related to the service received. With regard to perceptions [11] they developed a conceptual model that represented the different components of the quality perceived by the consumer that he called "attributes". In this way, the "perceptions" represented the different attributes valued by the customers of the service received, which could refer to intrinsic variables (related to the physical composition of the product) or extrinsic ones (although they are related to the product, they are not part of he).

It is important to note that the Servqual model was initially defined by ten criteria or general dimensions (grouped in 97 items), which were chosen from group sessions among clients, to judge the quality of the service. These ten dimensions or criteria were: tangible elements, reliability, responsiveness, professionalism, courtesy, credibility, security, accessibility, communication and user understanding. Subsequently, it received some criticism, forcing [11] to comply with a rigorous process to review the variables of the model and defend its validity finally establishing a scale of 22 items.

Thus, these five dimensions comprise the 22 items to which the model was reduced, which measure, on the one hand, the expected levels of service in general (the expectation that was created) and, on the other hand, the same 22 items but referred to Perceived level of service delivered by a particular service company (the actual perception of the customer about the stated characteristic).

The Servqual is widely known and has been studied and applied by experts in the field, for example [12] stated that by the year 1996 the Servqual had already been described in more than 100 articles and had been subject of doctorate of more than 20 Applied in different sectors. Opinion endorsed later by [13] who affirmed that it was a model quite used in sectors of services. For this reason, [5] makes an adaptation to the financial sector, using equally difference between the perception and the expectation as shown below:

$$CALTIC = \text{perception score} - \text{expectation score} \quad (1)$$

Likewise, the original dimensions of the Servqual are maintained, but technological variables are taken into account in the criterion "Tangible elements", due to the impact that ICTs have had in all areas in which the human being develops.

The Caltic has been applied in the financial and health sector, after the respective validation in each of them, obtaining interesting conclusions in its application. Thus, at the time of this research, to measure the perception of the quality of service in hotels, the adaptation and subsequent validation of the Caltic in the tourism sector [2] was taken to be applied in the hotels of the city of Bogota.

3. METHODOLOGY

In this section, a series of steps are carried out: selection of the methodology, determination and selection of the sample, the process of collecting the information and finally the collection of the information.

In this work a quantitative research is done, in order to use the Caltic model adapted to the tourist sector and to be able to know the perception of the quality of service and satisfaction of the hotel clients. For reasons of time and logistics it was necessary to limit the research and chose Bogotá in order to make a modest contribution to the sector and to be used later in other environments.

In principle, stratified random sampling was established where each hotel (119 chosen) corresponded to one stratum. Seven surveys were carried out at each of these hotels and given that the expected responses were not obtained, the survey was subsequently published in social networks and personal surveys were conducted for three days at El Dorado Airport, in order to finally obtain a sample of 180 surveys Thus obtaining a ratio of 8.18 surveys per item which according to [14, 16], allows to obtain valid results for the study.

4. RESULTS

To calculate the Caltic the following steps are performed:

1. Calculate the difference between the scores assigned by the clients to the different pairs of declarations, that is, the difference between the perception score and the expectation score for each client, which gives rise to the deficiencies.

2. The model allows to calculate the Caltic unweighted or Caltic weighted: by means of the unweighted Caltic qualification an overall measurement of the quality of the service can be obtained in an average way, obtained by summing and dividing by five (the five criteria) without Take into consideration the relative importance that customers attribute to the different criteria. In this investigation the Caltic weighted score is calculated since the weighting allows to know the deficiency in each of the criteria due to the importance that their clients give them, in order to better adjust to the different importance or value that the customers or users give them in reality when they qualify a service globally. That is to say, that previously the clients attribute a certain "weight" to each criterion according to the importance that for them has each criterion. The process for obtaining this Caltic rating is explained below (calculations will be performed with customer 1.

For each client, calculate the average Caltic score for each of the five specified criteria and divide the total by the number of statements that correspond to that criterion. In this step the following results are obtained

Table 1
Calculation of the Caltic score for customer number 1

Standard	Standard 1	Standard 2	Standard 3	Standard 4	Standard 5
Mean	−1.600	−2.500	−1.250	−1.250	−0.600

For each client, multiply the Caltic score of each criterion (obtained in step 1) by the weight (relative importance) assigned by the customer to that dimension (the weight or relative importance simply represents the points that the customer assigned).

For each client, add the weighted Caltic score (obtained in step 2) from the five criteria and obtain a combined weighted Caltic score (Table 2).

Table 2
Calculation of the Caltic weighted score of the five for the client 1

POND1	POND2	POND3	POND4	POND5	CALTICPON
−3.200	−5.000	−2.500	−2.500	−1.200	−2.88

Thus, the application of the Caltic model will analyze the key variable of this research: "Quality Perception". The model uses a seven-point Likert scale. Because the highest score that can be given to both perceptions and expectations can be 6 and the lowest 0, the Caltic scores can range from -6 to 6 as well Table 3 below shows the minimum and maximum values obtained in each Caltic score. In addition, some descriptive statistics are included for the 22 Caltic scores, as are the mean and standard deviation that will allow some analysis of the sample.

Table 3
Caltic Scores

	N	Mínimo	Máximo	Media	Desviación estandar
CALTIC6	180	–6	4	–.74	1,474
CALTIC7	180	–5	2	–.66	1,145
CALTIC8	180	–5	2	–.58	1,152
CALTIC9	180	–3	2	–.31	866
CALTIC10	180	–5	4	–.51	1,126
CALTIC11	180	–5	4	–.38	879
CALTIC12	180	–4	3	–.36	850
CALTIC13	180	–4	3	–.38	880
CALTIC14	180	–5	3	–.43	992
CALTIC15	180	–5	4	–.35	1,049
CALTIC16	180	–4	3	–.41	883
CALTIC17	180	–3	3	–.38	813
CALTIC18	180	–3	2	–.39	855
CALTIC19	180	–4	3	–.34	929
CALTIC20	180	–4	3	–.37	846
CALTIC21	180	–4	4	–.37	915
CALTIC22	180	–5	3	–.40	989
CALTIC24	180	–6	6	–.63	1,394
CALTIC25	180	–5	3	–.34	911
CALTIC26	180	–5	3	–.48	1,049
CALTIC27	180	–5	2	–.50	1,000
N valido (por lista)	180	–4	2	–.45	9,29

As can be observed in the previous results, each Caltic score has negative and positive scores within the sample, emphasizing that none of them obtains the maximum possible value (6), that is, that no client had an expectation of 0 and a perception of 6. On the other hand, it is observed that the averages of all Caltic scores are negative. By observing the standard deviation that is the measure of the dispersion of the values (the more distant the data of its mean are, the greater its standard deviation), it is emphasized that the highest is in the Caltic 23 score, that is, where The values are further away from the average, resulting in a large dispersion in customer responses in the item that refers to "services suitable for all its customers."

When calculating the model, the following results were obtained:

Table 4
Caltic Quality Perception

	Frequency	Percentage	Valid percentage	Accumulated percentage
Deficient	115	63,9	63,9	63,9
Acceptable	42	23,3	23,3	87,2
Good food.	23	12,8	12,8	100,0
Total	180	100,0	100,0	

The results reveal that 115 respondents perceive a "Poor" quality; 42 respondents perceived an "Acceptable" quality and 23 respondents perceived a "Good" quality.

By analyzing the "Satisfaction" variable, the results are shown in Table 5.

Table 5
Satisfaction

	Frequency	Percentage	Valid percentage	Accumulated percentage
Very unsatisfied	5	2,8	2,8	2,8
Dissatisfied	3	1,7	1,7	4,4
Neither satisfied nor dissatisfied	15	8,3	8,3	12,8
Satisfied	79	43,9	43,9	56,7
Very satisfied	78	43,3	43,3	100,0
Total	180	100,0	100,0	

There is no evidence of the expected association between Celtic and Satisfaction, so the Pearson Square Chi Test and Haberman's Residuals (Table 6) apply.

Table 6
Chi Square Test AND Haberman waste

Chi Square Test	Value	Degrees of freedom	Asymptotic significance (bilateral)
Pearson's Chi-square	23,175	8	,003
N of valid cases	180		

Haberman waste		CALTIC		
		Deficient	Acceptable	Good
Satisfaction	Very unsatisfied	,8	−1,3	,5
	Dissatisfied	,1	−1,0	1,1
	Neither satisfied nor dissatisfied	1,9	−2,2	,1
	Satisfied	2,7	−2,3	−,9
	Very satisfied	-4,0	4,2	,5

According to Table 5, the results show that indeed Caltic and Satisfaction are related but in observing the corrected residues in Table 6, it is evident that the perception of "Poor" quality is associated with "Satisfied" and "Acceptable" quality with "Very satisfied". The perception of "Good" quality is not associated with any level of satisfaction. For this reason, it is recommended for future studies to review the suitability of the scale used to measure the degree of satisfaction.

5.   CONCLUSIONES

- Bogotá is a capital with particular characteristics that make it interesting to study the quality of service offered by its hotels.

- 63.9% of clients surveyed perceived a "Poor" quality; 23.3% perceived an "Acceptable" quality and only 12.8% perceived a "Good" quality.

- Although the majority of respondents perceive a "Poor" and "Acceptable" quality, they evaluate their satisfaction level very much, contrary to what was expected. This may be because people tend to be politically correct in their responses and it would be worthwhile to study this aspect in future studies.

- The results of the Caltic application reveal that very few respondents perceive a "Good" quality of service, which is why the hotels evaluated in this work must rethink the service strategies to improve the quality offered

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