

APPLICATION OF THE CUSTOMER SATISFACTION INDEX (CSI) TO TRANSPORT SERVICES

APLIKÁCIA INDEXU ZÁKAZNÍCKEJ SPOKOJNOSTI (CSI) NA DOPRAVNÉ SLUŽBY

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Anotace: Predložený príspevok sa zaoberá možnosťou využitia hodnotenia dopravnej služby pomocou indexu zákaznickej spokojnosti (CSI), nakoľko tento index je v zahraničí často využívaný práve na hodnotenie kvality služieb, čo je pri takomto produkte náročnou záležitosťou.

Klíčová slova: Zákaznícka spokojnosť, index zákaznickej spokojnosti, kritériá kvality, spokojnosť, nespokojnosť.

Summary: This submission deals with a possibility of transport service evaluation using the customer satisfaction index (CSI), because this index is abroad often used just for the quality of service evaluation, what is for this product difficult problem.

Key words: Customer satisfaction, customer satisfaction index, quality criteria, satisfaction, dissatisfaction.

INTRODUCTION

Customer satisfaction and retention are key issues for organizations in today's competitive market place. A customer satisfaction with a provided service achievement is clearly difficult task. By those service providing where the quality criteria are not clearly defined is the board of customer's satisfaction defining greater problem.

As such, much research and revenue has been invested in developing accurate ways of assessing consumer satisfaction at both the macro (national) and micro (organizational) level, facilitating comparisons in performance both within and between industries. [2]

In the field of public mass transport where is a lot of different customers situated whose expectation and vision about quality of service that they want to use, are not forward specified, their demands create a great aggregate. Each of us, users of these services, is able to define own expectations alone, but the expectation of occupant could be considerably different.

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1. THE CUSTOMER SATISFACTION INDEX

With the aim of quantification of customers' views for their needs or expectations level of performance with providing service (with the target of constant improvement) is possible to use so-called Customer Satisfaction Index – CSI. There is necessary to define what we will understand under “the quality”.

The CSI model consists of a number of latent factors, each of which is operationalised by multiple indicators. Customer satisfaction can be defined as an overall evaluation of a firm's post-purchase performance or utilization of a service. It is at the core of the CSI framework and is encased within a system of cause and effect running from the antecedents of overall customer satisfaction - expectations, image, perceived quality and value – to the consequences of overall customer satisfaction – customer loyalty and customer complaints. The obvious strength of this approach is that it moves beyond the immediate consumption experience and facilitates the study of the causes and consequences of consumer satisfaction. In fact, the primary objective of this structural approach is to explain customer loyalty. [2]

Customer satisfaction index is also called the voice of the customer. There were developed a number of national policies and approaches to the calculation of the index.

Simplified approach can be used individually for each carrier that has an interest in assessing the quality of their product - transport services.

Example of calculating the index of customer satisfaction is shown in Fig. 1.

HOW WELL DOES YOUR COMPANY DO FOR CUSTOMERS ON A 1 -10 SCALE.
(Ranking of the eight criteria, and their possible weighting, will differ by business type.)

Enter Each Customer's Name →	John at ABC	Sue at .com	Dick at OTW	Gina at XYZ	George at OMG	Bobbie at FAI	TOTAL SCORES
KEY CRITERIA:							
1 - On-time Delivery	10	9	10	10	9	10	58
2 - Works 100%	9	10	9	9	10	10	57
3 - Great Experience	9	9	10	9	9	9	55
4 - Easy Find/Buy	10	10	9	10	10	10	59
5 - Psychic/Validation	9	9	10	9	10	9	56
6 - Options / Choices	9	8	9	9	9	8	52
7 - Easy Support	9	9	9	9	10	9	55
8 - Price / Value	8	6	7	8	7	7	43
TOTAL SCORES =	73	70	73	73	74	72	9.1 CSI

INSTRUCTIONS:

- 1 - With your management team, decide what eight items, in order, are the most important to your customers.
- 2 - Change the row labels to correspond with the important aspects for YOUR customers!
- 3 - Ask your customers to score you on each aspect for the last time you provided them products or services.
- 4 - Enter the scores in the light green boxes above for your weighted average CSI (customer satisfaction Index).
- 5 - Do this customer survey at least once a quarter, then track your CSI's on a Trailing 4-Quarter Chart - see below!
- 6 - Most importantly, get your Management Team to review the surveys frequently and DO SOMETHING to be better

Source: <http://www.ceotools.com/software/476039.pdf>

Fig. 1 – An example of CSI calculation

In the most of Slovak transport enterprises there is no systematic approach to explore attitudes, complaints or compliments of the passengers. The complaints are individual solved like a necessary activity that's duty is required activity, which obliges directly Consumer Protection Act, registration or recognition of praise with their causes completely absents. As an example is possible to introduce Dopravný podnik mesta Žilina, a. s., what is creating a database of complaints, but compliments or awards does not register. The database of complaints is created by the themes list like:

- Auditor and the procedure for inspection.
- Tickets, their use and claims a deduction, if necessary, malfunctioning machines.
- Driver behavior towards passengers, conflict solution.
- Complaints about the inaccuracy of exit vehicle stops.

In the next section, view the following procedure to calculate the CSI index applicable for the road transport sector.

2. THE PROCEDURE FOR CALCULATING THE INDEX CSI

The procedure to find out the customer satisfaction index in the mass transport can be divided into several logical steps:

1. To better know the views of customers

This step is a thorough market analysis. As was already mentioned, in the field of passenger transport it is more complex role. There are missing records and databases. Although it is possible to seek the views of customers in terms of the survey expected quality of service provided, but their subsequent satisfaction survey is in our conditions virtually impossible.

2. Identify the services that customers have an interest and in which we identify customer satisfaction index

This step should be incorporated as part of marketing policy in the company. Of course, it is possible to determine the CSI for all services provided, but in terms of efficiency, it is appropriate to focus first on major products.

3. Define the characteristic features of service quality

Based on the survey of customer views is therefore necessary to specify the characteristics of services, which are regarded as components (criteria) the quality of service provided, including characteristics of the staff if necessary, properties to characterize the company image.

4. Identify the actual level of defined criteria of quality services

5. Identify elements and links in the existing quality management system, which will be used to resolve a customer satisfaction index

6. To quantify the views of customers to solve the index as following:

$$CSI = \sum_{i=1}^n CSI_i * w_i \quad (1)$$

Where:

- CSI - Customer Satisfaction Index,
- CSI_i - individual Customer Satisfaction Index for a defined concrete service,
- w_i - weight (importance) of a concrete service.

7. To determine the separate indices of customer satisfaction for specific services.

$$CSI_i = \sum_{j=1}^n CSI_j * w_j \quad (2)$$

Where:

- CSI_j - partial Customer Satisfaction Index for the -j property of considered services,
- w_j - weight (importance) of the -j property (quality criteria) of considered services.

Partial indexes are defined like the relative perceived values of the properties and expected performance that customer needs and often does not know precisely determine.

It is sufficient if the ration down to the present scale:

- for positive traits:

$$CSI_j = \text{perceived} / \text{expected} \quad (3)$$

- for negative traits:

$$CSI_j = \text{expected} / \text{perceived} \quad (4)$$

To use the customer satisfaction index is necessary to know the views of customers on their importance.

There is used variety of scales, for example. grading, scoring, respectively, percentage for concretization of satisfaction. We recommend using a scale which allows to express also a pleasant surprise, while expected value may not be in the middle of the scale. [1]

8. Using the customer satisfaction index is aimed on the gradually improving by reducing the difference between expectations and perceptions of product characteristics.

This procedure is referred to can be successfully applied in the field of road transport for assessing the quality of the carrier.

As a concrete example might be a specific transport company, which operates at the regional level and provides public passenger transport services.

As quality criteria, which we consider serving the will use the criteria put forward by the international standard EN 13816 Public transport people.

Tab. 1 – Quality criteria and their sub-criteria

Quality criteria - parameter	Partial criteria
Availability	Tickets procurement
	Links to other transport systems
Access	Geographic accessibility
	Time accessibility
	Frequency of services
Information	Availability of services
	Customer care
	Sign at stops
	Travel fees
Time	Accuracy of arrivals / departures
	Frequency of departures
	Travel time
Customer Service	Addressing complaints / suggestions
	Answering questions
	Marketing
	Personnel Access
Comfort	Protection against weather
	Stop cleanliness
	Noise at the stop
	Vehicle cleanliness
	Style of starting off / braking
Safety	Driving style
	Lighting
	Monitoring of area
	Ride elements
	Supervision of policeman/driver
Environment	Used energy source
	Emission class
	Vehicle noise
	Odor and dust production

This standard provides the following quality criteria for evaluating the quality of services in passenger transport:

- Availability,
- Access,
- Information,
- Time,
- Customer Service,
- Comfort,
- Safety,

- Environment.

For each referred to as a quality criterion can be established sub-criteria, and their determination is a highly individual matter and is up to each carrier, which sub-criteria will want to evaluate. The Table 1 shows the basic criteria and sub criteria, which we consider in our example.

Subsequently, the individual customers - passengers submitted with the application referred to the criteria of evaluation. The passenger has to determine the importance of the sub-criteria and level with which transport company meets this criterion, and a range of 1 after 10

1-10 scale of importance is the range from very low to very important to highly important criterion, and the like and for assessing the quality - from very low quality to very high quality. Number 10 is thus used to indicate 100% quality and importance.

Procedure, which is apparent from the following table 2, are then calculated under partial CSI indices for evaluating the various criteria of quality transport service. The resulting CSI index is then the result of averaging each sub-CSI.

Tab. 2 – Calculation of CSI in concrete transport company

Quality criteria - parameter	Partial criteria	Weighting	Score	Weighting (avg. of 1)	Weighting * Score
Availability	Tickets procurement	10	10	1	10,00
	Links to other transport systems	10	5	1	5,00
	Average	10,00	7,50		7,50
Access	Geographic accessibility	8	9	0,96	8,64
	Time accessibility	9	9	1,08	9,72
	Frequency of services	8	8	0,96	7,68
	Average	8,33	8,67		8,68
Information	Availability of services	10	9	1,08	9,73
	Customer care	8	2	0,86	1,73
	Sign at stops	9	8	0,97	7,78
	Travel fees	10	10	1,08	10,81
	Average	9,25	7,25		7,51
Time	Accuracy of arrivals / departures	8	8	1,09	8,73
	Frequency of departures	5	5	0,68	3,41
	Travel time	9	8	1,23	9,82
	Average	7,33	7,00		7,32
Customer Service	Addressing complaints / suggestions	10	10	1,29	12,90
	Answering questions	10	9	1,29	11,61
	Marketing	1	1	0,13	0,13
	Personnel Access	10	7	1,29	9,03
	Average	7,75	6,75		8,42
Comfort	Protection against weather	9	2	1,23	2,45
	Stop cleanliness	6	4	0,82	3,27

	Noise at the stop	5	3	0,68	2,05
	Vehicle cleanliness	8	9	1,09	9,82
	Style of starting off / braking	8	10	1,09	10,91
	Driving style	8	8	1,09	8,73
	Average	7,33	6,00		6,20
Safety	Driving style	10	10	1,00	10,00
	Lighting	10	9	1,00	9,00
	Monitoring of area	10	9	1,00	9,00
	Ride elements	10	10	1,00	10,00
	Supervision of policeman/driver	10	7	1,00	7,00
	Average	10,00	9,00		9,00
Environment	Used energy source	1	10	0,36	3,64
	Emission class	1	10	0,36	3,64
	Vehicle noise	8	10	2,91	29,09
	Odor and dust production	1	10	0,36	3,64
	Average	2,75	10,00		10,00
	Total CSI				8,08

For this calculation it is evident that the resulting customer satisfaction index was at 8.08. Consequently, the transport company, which investigated the CSI index, reflecting on the various sub-indices and set themselves goals for the future, in which sub-indicators should be improved.

It is clear that serious surveys is not possible to calculate the index of customer satisfaction on the floor statement of one passenger, but it is necessary to reach a larger research sample in order to say "voice of the customer".

3. CONCLUSION

Customer Satisfaction Index is in addition to financial indices of one of the most comprehensive results of effort of quality professionals. No using of this index proves the formality of quality management. Its essence is to quantify the views of customers for products and services provided for the purpose of improvement in five main groups:

- Better understanding of the customers,
- Greater enforcement of customer expectations in the specifications,
- Better products and services realization,
- Better visibility and less hype,
- Growing sense of customers for the products and services. [1]

This index can be successfully used in the field of improving the quality of public passenger transport.

Described progress makes it possible to quantify and determine the level that the carrier would like to achieve a particular future.

LITERATURE

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