Measurement and evaluation of the quality of services through customers' satisfaction

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Abstract: The article deals with the measurement and evaluation of quality of service through the define criteria. These criteria characterize the important areas for customer in the frame of providing of service and have a direct impact on the overall perception of quality from the view of customer. The measurement was carried out through questionnaires with 5-point Likert scale evaluation. Due to the fact that the customer is the person, who decides on the success of the enterprise on the market, based on his satisfaction, respectively dissatisfaction, the research results are important basis for management - for the decision-making process or for processes, which can improve the quality of services.

Key words: process quality management, quality of services, quality evaluation, customer satisfaction

INTRODUCTION

The main aim of the organizations which provide services is to gain and maintain the customers. Ultimately all the activities of an organization have to be aimed at the customer, his traditional and new needs connected with the development of the sociality in all the areas. This development is necessary to sense, to accept and gradually incorporate it to the internal structure and activities of the organization and to the innovation of the services.

Services are intangible products, because large shares of customers' satisfaction create indirect factors, especially the person providing the service - his education, expertise, experiences, willingness, culture, manners, the way of communication and the ability of an individual approach to the customer. The quality of the exterior and interior of any company creates the atmosphere and customer satisfaction, too; not only material and technical equipment, but also the cleanness of the rooms and areas, the amount of greenery, lighting and other factors depending on the specification of service. Just these characteristics (criteria) are the object of our research which is aimed at the quality of the car services. The individual values of monitored quality characteristics (criteria) enable the management of company the improvement just in those criteria, which do not achieve adequate evaluation from the side of customers, what will be subsequently reflected in an increase in overall customers' satisfaction. Monitoring of the customers' satisfaction is important not only from the point of the disposable establish of the reality in a certain moment, but more important is monitoring the trend of the development of the needs. The reached results can be used by senior management as the information for the examination processes of the Quality Management System (QMS) effectiveness in the organization. It is very important that QMS fit exactly to the requirements of the organization.

MATERIAL AND METHODS

The basic reason for the evaluation of customers' satisfaction through satisfying the requirements is to obtain information that allow the management of the company to make a good decision to maximize customer satisfaction, and thereby maintain it. Carry out a thorough evaluation of customers' satisfaction and subsequently the internal communication of research results with all employees is very important for further increasing of customers' satisfaction.

The literature divides procedures for evaluation of customer satisfaction to objective and subjective. Within subjective methods, it can be used implicit and explicit evaluation procedures of the customer. Explicit evaluation method was used in our research. ***Explicit procedures*** *determine directly the degree of satisfaction.* Requirements for the following marketing steps can be deduced directly from the results of the investigations. If the satisfaction is investigated directly, it is necessary to explain the question - how a feeling of satisfaction, respectively dissatisfaction arises. Customers take individual partial performances of consumed product differentiated. So they are able to feel a partial satisfaction which is mentally aggregated into the overall satisfaction with the consumed product (output).
Then we can formulate the satisfaction with the company's output (product) as follows *(Mateides, Dado, 2000):*

$$GZ_{ij} = f(EZ_{ij1}, EZ_{ij2}, ..., EZ_{ijn})$$
[1]

GZij - total customer satisfaction i from the view of output j
EZijk - partial satisfaction of the customer i with the characteristic k (k = 1, ... n) of output j
Overall satisfaction stems from the single partial satisfactions.

The basic aim of the research is to evaluate overall customers' satisfaction with the provided services. It is necessary to meet the partial objectives of the research:
- to determine the level of customers' satisfaction of individual characteristics and overall satisfaction,
- to establish the strategic measures (steps) necessary to improve the quality of services.

Proposal of questionnaires for measurement of customers' satisfaction

Questionnaires are the most widely used tool of the application of feedback principle. It is the most preferred, in the case of products as services, to complete questionnaires directly on the place of consumption, what allows the obtaining of a high rate of return. To make the system of evaluation of customer's satisfaction more efficient, we need to select the relevant criteria for the measurement.

We achieve it through the respecting of following rules of measurement:
a) we measure these criteria that are relevant for the organization's mission,
b) we measure these criteria that contribute to the customer satisfaction.

We have compiled a questionnaire with 5 point Likert-type scale resulting from the fact that every respondent has a possibility of multi-level (scale) evaluation in order to determine the strength of his attitude. One limit state (degree of satisfaction) expresses **completely positive perception** (5 p.), the other **absolutely negative perception** of

a customer (1 p.). The evaluation of research results were processed through the graphical and statistical methods.

It was used demographic questions in the questionnaire as age and gender of the customers, too, to specify the single criteria. To research the quality of services we have selected 22 evaluated characteristics (criteria) that are presented in the table 1 with the research results. The characteristics concern particular fields that play role in the complete perception of the quality of services. The questionnaires were placed in the in the customers' centre and customers fill them while waiting for the maintenance services during two months. 350 questionnaires were included into the analysis what represents 5 % of the total annual number of customers.

RESULTS AND DISCUSSION

Table 1 presents the evaluation of the results through the statistical indicators (average, maximum and minimum value, standard deviation, median). Although the average value has the general denouncing ability, in some case it can leads to the distorted conclusions. Because of this fact it is appropriate to use other statistical indicators as well.

Tab. 1 The evaluation of organisation performance – statistical evaluation

	Criteria (characteristics) of quality	Average	Standard deviation	Min.	Max.	Median
1.	Customers' service booking	4,417	0,759	2	5	5
2.	Opening hours	4,167	0,840	2	5	4
3.	Number of parking places	3,567	1,116	1	5	3
4.	Waiting time	3,900	0,889	1	5	4
5.	Number of seats	4,533	0,670	3	5	5
6.	Willingness of the staff to help	4,283	0,661	3	5	4
7.	Qualification and knowledge of staff	3,950	0,865	2	5	4
8.	Interior equipment in the waiting room	4,200	0,678	3	5	4
9.	Children's corner	4,650	0,524	3	5	5
10.	The level of offered services and products	3,833	0,898	1	5	4
11.	Price of services and products	3,767	1,023	1	5	3
12.	Quality of servicing	3,850	1,123	1	5	4

(Source: own processing)

The five highest rated quality criteria with which are customers most satisfied include: children's corner with evaluating 4.65 points, the number of seats 4.53, customers' service booking, willingness of the staff to help and interior equipment in the waiting room. Conversely, we ca include among the worst rated quality criteria: the number of parking spaces, price of services and products, the level of offered services and products and quality of servicing. Just these criteria form the basis

of inspection services; therefor it is very important that management began to deal priority with them. Recognition of low-rated characters (criteria) allows the management to focus just on those critical areas. Their determination is important for the organization, because customers respond to their changes
most sensitive.

Higher values of the standard deviation (more than 1) occur in three cases. These are just criteria that are among the worst rated. Customers have different views, what can be due to the individual requirements and experiences or the actual situation, for example during parking. The high variance in prices of inspection services can be due to different customers' solvency. Customers are agreed in the evaluations when it is a low value of variance. It is necessary to respond to identified situation, especially when the organization performance has low valuation.

The figure 1 presents the average obtained values of quality criteria in order of table 1. The missing area to the limit of 5 points is a scope to improve the quality of individual criteria.
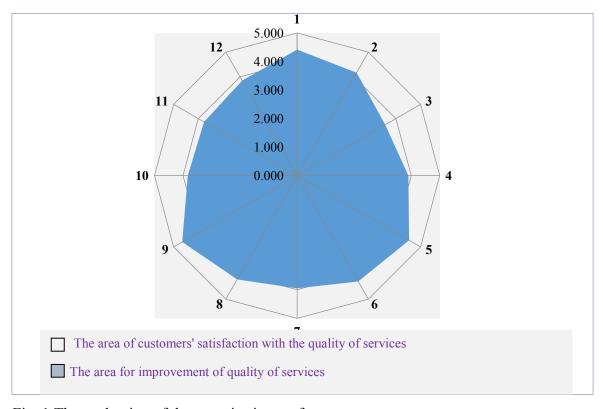

Fig. 1 The evaluation of the organisation performance *(Source: own processing)*

The analysis of the achieved results is important for the organization from the view of follow-up steps and their timing by the improvement of the quality of individual criteria, and thereby increasing customers' satisfaction. The individual characteristics of services hide a number related and ongoing processes in the organization, which are more or less visible for customers. These are particularly the processes of direct inspection services, which the customer does not take part, but he leaves his property (car) in the service company. Therefor it is important the building of trust with the customers. Management of service must to identify and manage numerous related activities for the efficient and effective functioning of the organization. It has to encourage the acceptance of process approach to improve the quality of services based on standards ISO 9000.

CONCLUSION

The aim of the activities of any organization is a satisfied customer. Increase of his satisfaction can be achieved through systematic continual changes, which lead the organization to a higher level. Realization of changes and innovations is based on communication with customers and feedback, because the customer, his needs and requirements are the right impulse to innovations and stimulations of processes in enterprises of services. Their implementation leads to higher customers' satisfaction and improve the financial performance of the company. The evaluation of the individual criteria has ranged from 3.57 for the number of parking spaces to the value of 4.65 for the children's corner. The average value is of 4.09 points. The area for improvement of evaluated services is almost 20 % after the conversion to percentage value. The improvement of the key criteria is essential for the selected monitored car service. These key criteria are connected directly to the quality and cost of maintenance services.

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Streszczenie: *Pomiar i ocena jakości usług na bazie zadowolenia klienta.* Artykuł dotyczy pomiaru i oceny jakości usług na podstawie zdefiniowanych kryteriów. Kryteria te charakteryzują ważne dla klienta obszary w ramach świadczenia usług i mają bezpośredni wpływ na ogólne postrzeganie jakości przez użytkownika. Pomiary przeprowadzono za pomocą kwestionariusza w 5 -punktowej skali Likerta. Ze względu na fakt , że klient jestosobą , która decyduje o sukcesie przedsiębiorstwa na rynku, w oparciu o jego zadowolenie bądź niezadowolenie, wyniki badań są ważne dla gospodarki – w działaniach które mogą poprawić jakość usług.

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