

Acta Technologica Agriculturae 1  
Nitra, Slovaca Universitas Agriculturae Nitriae, 2016, pp. 24–28

## EVALUATION OF SERVICE QUALITY IN BREWERY USING IMPORTANCE-PERFORMANCE ANALYSIS

Manuela INGALDI<sup>1\*</sup>, Katarína Lestyánszka ŠKŮRKOVÁ<sup>2</sup>

<sup>1</sup>Czestochowa University of Technology, Institute of Production Engineering, Czestochowa, Poland

<sup>2</sup>Slovak University of Technology in Bratislava, Faculty of Materials Science and Technology in Trnava, Slovak Republic

Because of its specificity, service quality is difficult to assess, especially since there is no materiality in it, it cannot be seen. Usually the gap between the expectations of customer and their perceptions in relation to a particular service is observed. This article aims to evaluate the quality of catering services offered by one of the breweries (restaurant) in Silesia. The importance-performance analysis, which is often underestimated, was used in order to show its advantages. The survey was conducted among 137 customers of the selected brewery in Czestochowa. The average values of evaluations of all individual questions from both parts of survey were calculated. Then, average values for the pair of statements (performance; importance) were placed in the importance-performance map. The analysis revealed that the service quality of the research brewery is placed in quadrant II, i.e. the area of reasonable property of needs. This means that the improvement of service quality is not necessary.

**Keywords:** quality; service; restaurant; importance-performance map; improvement

Service can be defined as an activity undertaken in order to meet a specific need (or needs) of the customer and implemented with the participation of the customer. Service in economic terms is a useful immaterial process, which is produced by human labour in the production process by influencing the structure of the specified object (Kozłowska and Czajkowska, 2007).

Service quality is very often defined as a comparison of customer expectation towards service with its performance, e.g. reality. Therefore, service quality evaluation is the evaluation of how well a delivered service conforms to customer expectations.

Lots of scientists working with service quality decide to use some typical methods, such as Servqual, Mystery shopping or critical incident technique (CIT), while the importance-performance analysis (IPA), which is sufficiently easy to conduct and is not time-consuming, is often skipped.

Beer is the oldest and most widely consumed alcohol in the world (Arnold, 2005). Brewing tradition on the Polish territory dates back to ancient times, the history of the Slavic peoples and the beginnings of the Polish State. The beer is the most popular alcoholic beverage among the Slavs (Lis and Lis, 2009). Poland is the fourth in the world in terms of beer consumption per capita (Fałat et al., 2002). Especially small, local breweries offering unique types of beers have been very popular lately. The Polish people like to meet in a pub or restaurant with beer and snacks.

This article aims to evaluate the quality of catering services offered by one of the breweries (restaurant) in Silesia. The importance-performance analysis, which is often underestimated, was used in order to show its advantages.

The survey was conducted among 137 customers of the selected brewery in Czestochowa. The study helped to indicate where on the importance-performance map the research company is, how customer expectations are correlated with the actual implementation of the services offered by the company, and which statements for the model and the research brewery were evaluated as the highest.

### Material and methods

The importance-performance analysis is a simple method used to measure the quality of services. This method is designed to determine the validity of service characteristics and their evaluation by customers. Martilla and James, who were the authors of this method, designed a measurement of expectation, and the significance of factors and variables affecting the quality of services from the point of view of purchasers (Martilla and James, 1977).

The IPA has been widely used in service industries such as travel and tourism, education, hospitals, and other sectors (Wong et al., 2011).

Customers responding to two types of scaled questions make a double evaluation of the same dimensions of service quality (which are the evaluation criteria from the point of view of customers) – for the first time because of their importance in the process of service delivery and for second time in terms of the level of implementation of these dimensions. This means that the first group of questions concerns the importance of each feature of offers in customers' selection decisions (expectation according

to Servqual method), while the second group refers to the same features, but in relation to one specific offer of a service provider (perception according to Servqual method) (Stoma, 2012).

The results obtained with this analysis are summarised in the form of the importance-performance map. In this way, two evaluations of parameters mentioned earlier can be used. The closer to the diagonal of the map the point is located, the more its performance is correlated with the needs of customers.

The two-dimensional IPA model is divided into four quadrants with performance on the x-axis and importance on the y-axis. The model of IPA form of importance-performance map is presented in Figure 1.

Quadrant I (high importance / low performance)	Quadrant II (high importance / high performance)
Quadrant III (low importance / low performance)	Quadrant IV (low importance / high performance)

**Figure 1** Importance-performance map  
Source: Stoma, 2012

Quadrant I is labelled as 'Concentrate Here'. Attributes that fall into this quadrant represent key areas that need to

be improved with top priority. Quadrant I is called 'the area of urgent needs'. It is very important that the provider will focus special attention on them.

Quadrant II is labelled as 'Keep up the Good Work'. All attributes that fall into this quadrant are the strength and pillar of organisations, and they should be the pride of organisations. Quadrant II does not require from the service provider any serious action, only those necessary to maintain the current level of services. It is called 'the area of reasonable property of needs'.

Quadrant III is labelled as 'Low Priority'. Thus, any of the attributes that fall into this quadrant are not important and pose no threat to organisations. Quadrant II is called 'the area of the improvement of service properties'.

Quadrant IV is labelled as 'Possible Overkill'. It denotes attributes that are overly emphasised by organisations; therefore, organisations should reflect on these attributes, instead of continuing to focus on this quadrant, they should allocate more resources to deal with the attributes that reside in quadrant I. Quadrant IV is often called 'the area of quality excess' (Wong et al., 2011).

The importance-performance analysis was modified many times, which can be exemplified with a SWOT analysis (Urbaniak, 2013). Model technique is a way to study the factors that affect the quality of the offer perceived by customers in the face of competing offers (Radkowski, 2005).

In the research presented in this paper, 137 customers of the chosen brewery/restaurant took part. The research was

**Table 1** Statements in surveys on customer expectations

No	Statements
1	The model brewery is conveniently located and has easy access
2	The building of the model brewery is attractive, encourages people to enter
3	Close to the model brewery, there is a parking with an appropriate amount of parking spaces
4	During the spring-summer time, the model brewery has a summer garden
5	The interior of the model brewery is attractive and well equipped
6	The model brewery has attractive dishes, which creates a unique atmosphere
7	The model brewery has comfortable, clean toilets, also adapted to disabled people and mothers with newborns
8	The offer of the model brewery is updated
9	The opening hours of the model brewery are convenient for customers
10	The model brewery offers the possibility of organising various events
11	The staff of the model brewery looks neat
12	The staff of the model has adequate knowledge about the offered services
13	The staff of the model brewery is polite
14	The staff of the model brewery responds quickly to customer requests
15	The staff of the model brewery brings customer orders fast
16	In the model brewery, service always complies with the order
17	In the model brewery, a bill always complies with the order
18	The staff of the model brewery always provides customers with help
19	The staff of the model brewery devotes much attention to customers
20	The staff of the model brewery understands the specific needs of customers
21	The staff of the model brewery is communicative

**Table 2** Scale of evaluation in the survey

Totally disagree with the statement				Totally agree with the statement		
1	2	3	4	5	6	7

conducted in the form of an Internet survey responded by customers after using the services offered by the research company. The electronic form provides greater anonymity and at the same time facilitates data collection and sorting of results.

At the beginning, customers were supposed to evaluate their expectations for restaurant services offered by the brewery, taking into account 21 statements (Table 1). These evaluations are 'importance'. Then, they were supposed to evaluate actual service on the basis of these same statements, but in relation to the research brewery, which is Performance. The measurement of service quality was made with a seven semantic rating scale (Likert scale), where the lowest level of the scale is 'weak' and the highest is 'excellent' (Table 2). In contrast to the Servqual method, statements were not divided into different groups, and respondents did not have to share points to indicate the dominant determinant group. Therefore, it took less time for customers to complete the survey.

The average values of evaluations of all individual questions from both parts of survey were calculated. Then, average values for the pair of statements (performance; importance) were placed in the importance-performance map.

The research brewing company is a unique brewery. It is located in Czesochowa and is the only active brewery in this area. The beer is produced in front of guests, guaranteeing a unique atmosphere and builds a unique climate.

At the end of the 20<sup>th</sup> century, economic changes caused that a warehouse appeared in the place of the brewery. At that time, the building began to fall, to the point where at the beginning of the 21<sup>st</sup> century the brewery and restaurant appeared. The brewery is able to produce approximately 500 hl of beer per year. For the beer production, only malt, yeast, hops and water of high quality are used. Brewing is performed using

the craft method in accordance with good brewing traditions. Apart from the pleasure to drink beer in this place, the catering services, special events, concerts, people may take the beer home in specially prepared bottles with the logo of the brewery.

## Results and discussion

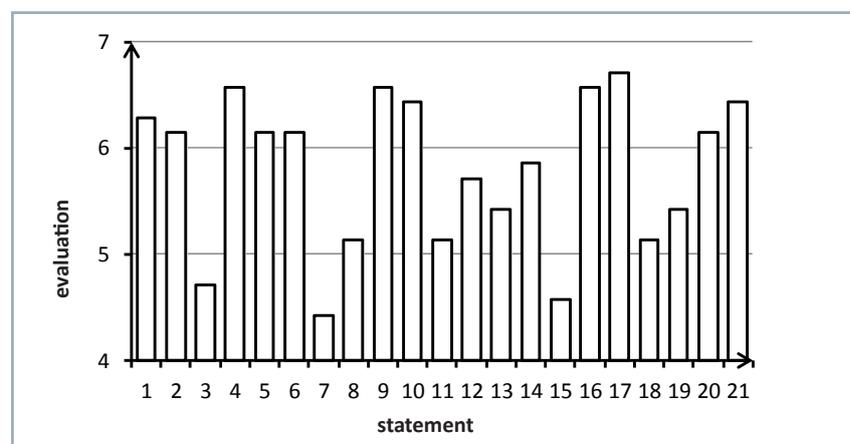
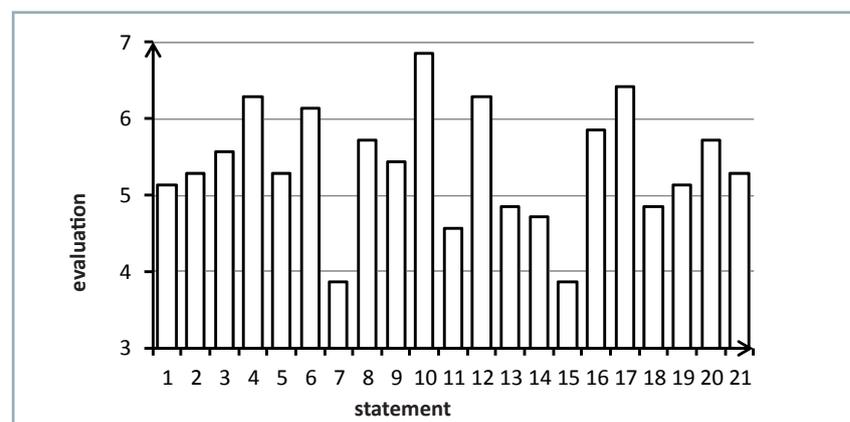
The average values of evaluation of individual statements for 'importance' and 'performance' are presented in Figs 2 and 3.

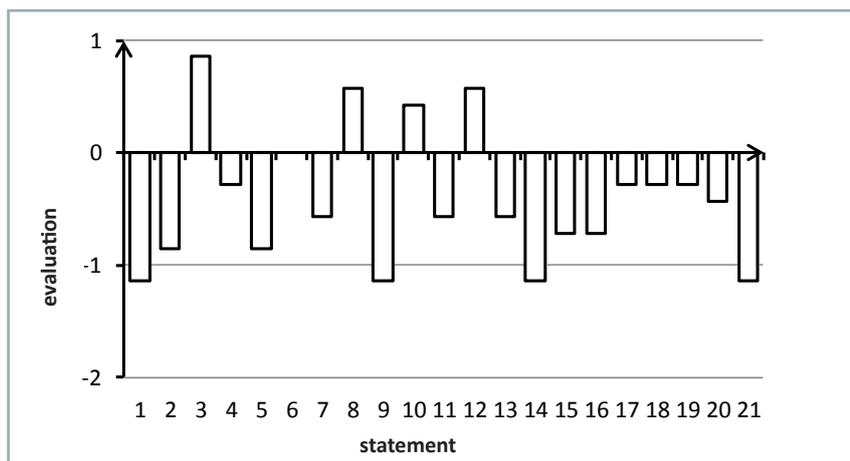
It should be emphasised that customer expectations in relation to the model brewery were evaluated above 4, and more than a half of the statements was evaluated more than 6. This means that customers have some idea of such places and manner of

spending time there. They can express their expectations.

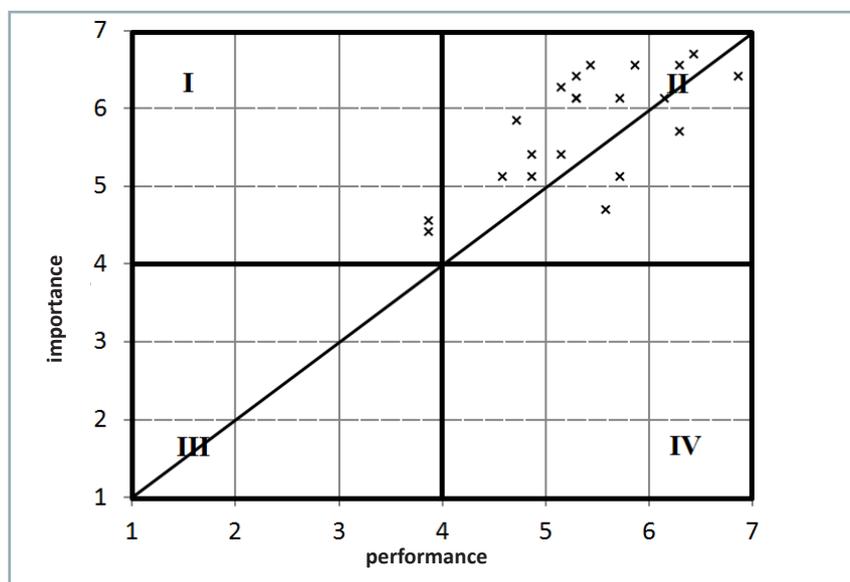
The highest average expectation was noted in case of statement 17 (In the model brewery, a bill always complies with the order). It is the customer who wants to decide whether the service provider would get a tip, and does not want to be forced to do it. Customers have also high expectations to statement 4 (a summer garden during the spring-summer time), statement 9 (convenient opening hours), statement 16 (service complies with the order), statement 10 (possibility of organising individual events), and statement 21 (staff communicative skills).

Customers also decided which features (statements) of the model brewery are not too important for them. The lowest evaluated statements were: comfortable, clean

**Figure 2** Aggregated results for 'importance' in relation to the model brewery**Figure 3** Aggregated results for Performance in relation to the research brewery



**Figure 4** Difference between the expectations of customers in relation to the model brewery and performance in relation to the research brewery



**Figure 5** Importance-performance map for the research brewery

toilets, also adapted for disabled people and mothers with newborns (statement 7), fast delivered orders (statement 15), and a parking with an appropriate amount of parking spaces (statement 3).

The brewery is a place where people do not take too often small children because of its atmosphere. Going out with family, friends, colleagues, we do not want too quickly leave this place, so we do not care about the quick service. In the brewery, the beer is the most orderable drink; therefore, people rarely go there by car.

Analysing Figure 3, it can be concluded that two statements regarding the research brewery were evaluated below 4. These are: comfortable, clean toilets, also adapted for disabled people and mothers with

newborns (statement 7), and fast delivered orders (statement 15).

The respondents evaluated the following statements as the highest: the possibility of organising individual events (statement 10), a bill always complies with the order (statement 17), a summer garden during the spring-summer time (statement 4), adequate knowledge of the staff about the offered services (statement 12), and attractive dishes, which creates a unique atmosphere (statement 6).

Figure 4 shows the difference between the expectations in terms of the model brewery and the perception of actual services. This figure will be used in the conclusions to highlight the usefulness of the importance-performance analysis.

As can be seen in Figure 4, only in case of four statements the perceptions of services in relation to the research brewery were higher than the expectation of service in terms of the model brewery. They were: parking with an appropriate amount of parking spaces (statement 3), updated offer (statement 8), neat look of the staff (statement 12), and the possibility of organising individual events (statement 10). It should be emphasised that the expectations in case of statements 3, 8 and 12 were low evaluated, which means that they are not so important for customers. While statement 10 connected with the possibility of organising individual events is important for customers, it has also been the highest evaluated in case of the research company.

In other cases, customer expectations in relation to the model brewery were higher than the actual perception of services of the research brewery. The highest negative differences were noted in the case of statements: convenient location and easy access (statement 1), convenient opening hours (statement 9), quick response of the staff to customer requests (statement 14), and staff communicative skills (statement 21). It can be concluded that the research brewery should implement improvements in these areas.

The pairs of statements (performance; importance) were placed on the map and presented in Figure 5.

As mentioned before, the closer to the diagonal of the map the point is located, the more its performance is correlated with the needs of customers. Analysing the importance-performance map for the research brewery, it was noted that only once the expectation (importance) was equal to the perception (Performance). This concerned statement 6: attractive dishes, which creates a unique atmosphere.

It should be noted that most of the pairs of evaluations marked as points in Figure 5 were above the diagonal. This means that in these cases the expectations were higher than the real services. We have to remember that lately customers know their rights and have high expectation to each service, because they know that in the market

economy the customer, not the producer, decides about purchase.

Most of the points (pairs of evaluations) were placed in quadrant II labelled as 'Keep up the Good Work', with high importance / high performance. This means that the characteristics of the services offered by the research brewery were located in the area of reasonable property of needs. The management of the brewery should not worry about the level of its services, despite the large differences between customer expectations for brewery service and its actual perception. As described earlier, this area does not require from the service provider any serious action, only those necessary to maintain the current level of services.

### Conclusion

In the article, the quality analysis of the service offered by the brewery in Czestochowa was conducted. The importance-performance analysis was used to do so. The analysis revealed that the service quality of the research brewery is placed in quadrant II, i.e. the area of reasonable property of needs. This means that the improvement of service quality is not necessary.

As the result of research conducted using the importance-performance analysis, some positive characteristics can be pointed out. An important element of the importance-performance analysis is a shorter time needed to complete the survey by respondents in comparison with the most common Servqual method. The survey has no mandatory division into different group determinants, although this method does not exclude it as an additional element of the research. The calculation of the average value and different factor is not necessary, not like in the Servqual method. The survey is filled by a larger number of people, not like one or a few people, like in the case of the Mystery shopping. There is also no need of segregation of the events described in the survey, like in the case of the CIT method (Stoma, 2012; Ingaldi and Wywiál, 2015; Kadłubek, 2011).

Perhaps it is worth to consider whether conducting research with use of the Servqual method, the same time not to use additionally the importance-performance analysis. The data used in the Servqual method can be

analysed using the importance-performance analysis. What is important, this analysis can show whether the changes are really necessary, and the Servqual method will show what changes should apply at first.

### References

- ARNOLD, J. P. 2005. Origin and History of Beer and Brewing: From Prehistoric Times to the Beginning of Brewing Science and Technology. Cleveland : BeerBooks, 2005.
- FAŁAT, Z. – GÓRSKA, R. – PLINTA, P. – SADOWNIK, A. – WOJTALA, D. 2002. Przewodnik piwosza. Bielsko-Biała : Pascal, 2002.
- INGALDI, M. – WYWIÁL, S. 2015. Ocena jakości usług przewozowych z wykorzystaniem metody Servqual. In Kardas, E. – Warzecha, M. (Eds). Wybrane zagadnienia technologii procesowych w przemyśle. Czestochowa : Wyd. IPiTM PCz, 2015. pp. 133–142.
- KADŁUBEK, M. 2011. Servqual jako metoda badania jakości obsługi w logistyce. In Logistyka, vol. 5, 2011, pp. 681–684.
- KOZŁOWSKA, A. – CZAJKOWSKA, A. 2007. Jakość obsługi klienta w Urzędzie Miejskim. In Stofkova, J. – Borkowski, S. (Eds). Praktyka zarządzania jakością wyrobów i usług. Sosnowiec : Ofic.Wyd. Humanitas, 2007. pp. 63–68.
- LIS, A. – LIS, P. 2009. Kuchnia Słowian. O żywności, potrawach i nie tylko.... Kraków : Libron, 2009.
- MARTILLA, J.A. – JAMES, J.C. 1977. Importance-performance analysis. In Journal of Marketing, 1977, January, pp. 77–79.
- RADKOWSKI, K. 2005. Metody i techniki badan jakości w sferze usług. In Rynkowe mechanizmy kształtowania jakości. Rzeszów : Wyd. URz, 2005.
- STOMA, M. 2012. Modele i metody pomiaru jakości usług. Lublin : Q&R Polska Sp. z o.o. 2012.
- URBANIĄK, A.M. 2013. Zastosowanie metody SERVQUAL do oceny jakości usług rekreacyjnych. Poznań : Zeszyty Naukowe Uczelni Vistula, 2013.
- WONG, M.S. – HIDEKI, N. – GEORGE, P. 2011. The use of importance-performance analysis (IPA) in evaluating Japan's e-government services. In Journal of Theoretical and Applied Electronic Commerce Research, vol. 6, 2011, no. 2, pp. 17–30.

