International Journal for Quality Research 9(2) 265–278
ISSN 1800-6450

Marta Kadłubek [1]
Janusz Grabara

Article info:
Received 12.11.2014
Accepted 15.03.2015

UDC – 332.05

CUSTOMERS' EXPECTATIONS AND EXPERIENCES WITHIN CHOSEN ASPECTS OF LOGISTIC CUSTOMER SERVICE QUALITY

Abstract: *The article presents chosen aspects of logistic customer service quality. In the first part of the paper, the authors describe theoretical issues of logistics service quality and Servqual method. The reference of chosen theoretical aspects of logistic service quality in relation to Servqual method and their presentation and analysis afterwards on practical example is the main aim of the article. Customers' expectations and experiences towards the logistics customer serivce were examined as two fundamental areas which allow for recognizing the quality aspects of the customer service in commercial cargo motor transport enterprises. Evaluation of the level of customers' expectations and perception toward particular elements of logistic customer service offered to 294 customers by 147 Polish commercial cargo motor transport enterprises was realized.*

Keywords: *logistics customer service quality, customers' expectations, customers' experiences, Servqual method*

1. Introduction

The quality of customer service has grow to be a decisive aspect in facilitating enterprises to achieve a differential advantage over their competitive companies and consequently makes a considerable contribution to effectiveness and prosperity of the enterprises. Definitely customer service quality has developed into a fundamental area in a competitive business strategy.

The area of customer service quality can be understood as proposed by J.M. Juran (Juran, 1980), as the feature which results in customer satisfaction, or independence from insufficiency which avoids customer dissatisfaction (Bednar and Modrak, 2014). In other investigations it was precised that the customer service quality approach is an effort to recognize customer satisfaction from the viewpoint of the diversity between customer perceptions and actual service on a range of determinants (Cavana and Corbett, 2007; Gronross, 1991; Lehtinen and Lehtinen, 1991; Perez *et al.*, 2007).

The conception of customer service quality is compound, disperse, intangible – principally appropriate to the characteristic attributes of customers' perceptions and customer's experiences, as well as the specific area of the service. If customer service quality is considered from a consumer perception, it is often associated with the levels of customer satisfaction. In this regard Parasuraman, Zeithaml, Berry (Parasuraman *et al.*, 1988; Lee and Kim,

[1] Corresponding author: Marta Kadłubek
email: martakadlubek@wp.pl

2014; Witkowski and Wolfinbarger, 2002) defined perceived customer service quality as a universal verdict or approach comparative to the level of excellence or superiority of customer service.

Such an understating of the idea of customer service quality is related to spheres of expectation. Lewis and Booms (Lewis and Booms, 1993) identified customer service quality as a calculation of how satisfactorily the service delivered is equivalent to customers' expectations. Conceptions of expectation are directly associated with approach, and quality has also been deliberated from the standpoint of attitude.

In accordance to above mentioned views is logistic customer service quality (Huiskonen and Pirttila, 1998; Lambert and Stock, 1993; Rafele, 2004), regarding as the aspects of perceived customer service quality in logistics, as the aspects of experiences of the customers in accordance to the areas of logistics (Florez-Lopez and Ramon-Jeronimo, 2012; Kisperska-Moron, 2005; Panayides, 2007). Also the features of customer expectations and experiences in perspectives of a prioritization of the decisive factors are the basis for the Servqual method. The connection of both aspects of logistics customer service quality and Servqual method, their theoretical background and relation are presented in the article. The designation of chosen theoretical aspects of logistic service quality in relation to Servqual method and their presentation and analysis afterwards on practical example is the main aim of the article. Customers' expectations and experiences towards the logistics serivce were examined as two fundamental areas which allow for recognizing the quality aspects of the customer service in commercial cargo motor transport enterprises.

2. Theoretical aspects of logistics customer service quality in relation to Servqual method

The quality of customer service in logistics (Byrne and Markham, 1991; Fawcett and Cooper, 1998; Hazen *et al.,* 2014; Kisperska-Moron, 2005; Lambert and Stock, 1993) is viewed as a certain number of components, which are: the service obtained by the purchaser, the manner in which this service is obtained, and the purchaser's original expectations. According to J. Twarog (Twarog, 2005) this quality is expressed by the formula below:

$$Customer\ Service\ Quality = \frac{What\ the\ Customer\ gets + How\ he\ does\ it}{\text{Expectations}}$$

The customer's view of the service quite often is different than the customer's expectations. The concrete information about the customer's experiences and customer's expectations allow to recognize the difference, determined in various attributes, and place them on explicit level. In the interpretation of S. Abt and H. Wozniak (Abt and Wozniak, 1993), the customer service level as the aim of functioning of a logistic system applies as a „quality scale for distribution services rendered by an organization". An analogous explanation of this conception is proposed by J. Długosz (Dlugosz, 2000) by defining the logistic customer service level by the quality of the logistic customer service.

In order to determine the difference between the customer's experiences and customer's expectations towards the customer serivce, both the customer's expectations for the service level, and their fulfilment by a specific organization need to be examined at the same time (Nasim and Janjua, 2014; Pakdil and Aydin, 2007; Tseng and Hung, 2013). Identification of the customer's

expectations for the service level, and their fulfilment by a company, are two crucial steps which allow for recognizing the quality aspects of the customer service (Meybodi, 2012). Identification of these two areas is also the essence of the Servqual method for measuring customer service quality.

The Servqual method relies on assessing the differences that are recognized between the quality, as perceived by a customer, and the quality demanded by that customer from a specific service. As a result of numerous research works, the authors of the Servqual method have identified five gaps (Brown and Swartz, 1989; Chen *et al.*, 2009; Large and Konig, 2009) that may constitute the major causes of offering low quality services (Figure 1) (Karaszewski, 2001; Parasuraman *et al.*, 1995, 1988):

- Gap 1: the difference between the customer's expectations and the perception of these expectations by the organization's management;
- Gap 2: the difference between the perception of the customer's expectations by the managing staff and the physical features of the service (standardization);
- Gap 3: the difference between the specification of service quality and the quality of service provision;
- Gap 4: the difference between the quality of providing a service and the information on that service provided to the customer;
- Gap 5: the difference between the level of fulfilment of the customer's expectations and the customer's view of the service.

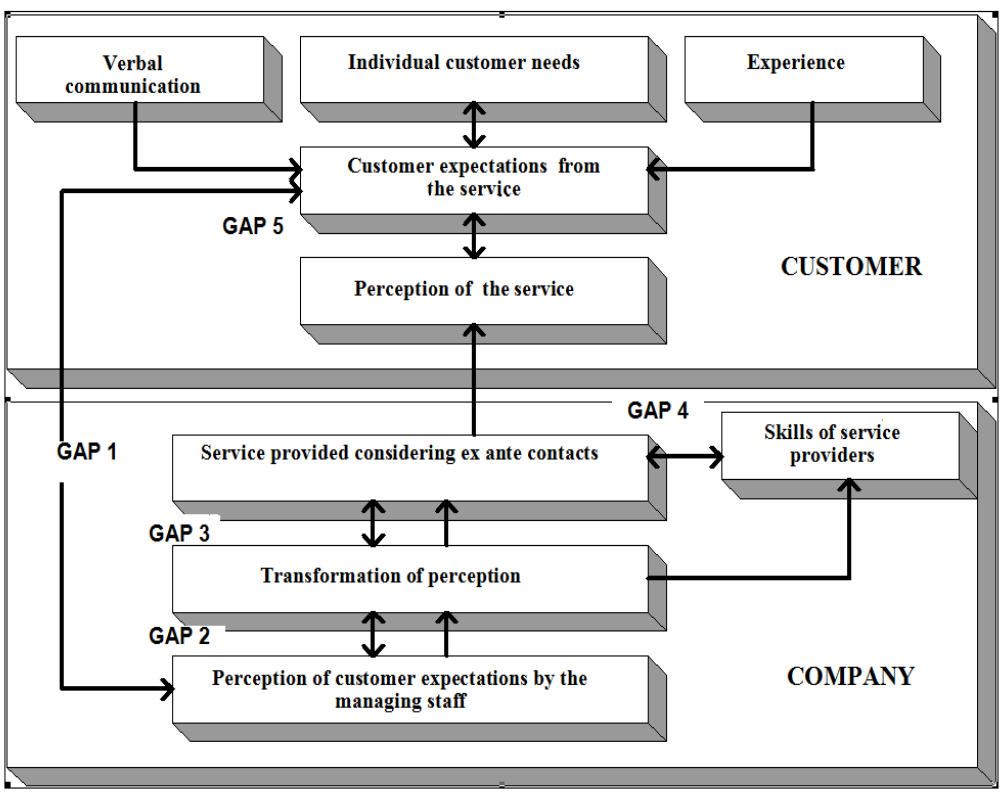

Figure 1. A conceptual model of service quality (Parasuraman *et al.*, 1985)

All gaps, in which a loss of quality occurs, can be measured; however, the most common practice is to measure Gap 5, that is considered the most important (Urban, 2007). For the purposes of measuring Gap 5, in a research process, the authors of the Servqual method have distinguished five attributes (dimensions) of quality (Grapentine, 1999):

- material dimension *(tangibles)* – the material framework of the service: the organization's equipment, machinery, and means of communication;
- reliability – the capability to fulfil the orders in accordance to the customer's requirements;
- response to the customer's expectations *(responsiveness)* – willingness to help the customer, the promptness of actions, and responding to the demands posed by the recipients of the services;
- professionalism *(assurance)* – assurance and reliability: the expertise of the staff and the ability to gain customers' confidence;
- empathy – identifying with the customer's needs, an individualized attitude, communicative skills, availability.

To estimate the service quality level within each of the aforementioned dimensions, three questionnaire forms were devised. Two questionnaires consist of z 22 items: the first one illustrates the service recipients' expectations towards a specific service, while the second contains questions concerning the assessment of the service of a given service provider. Using the seven-point Likert scale, the customers assign weights to respective statements: 1 means that the respondent totally disagree with a given statement, while 7 means that he/she totally agrees with it. The third questionnaire, on the other hand, is constructed in the form of statements aimed at identifying the importance of five leading service attributes to the customers, by dividing 100 scores among determinants at their own discretion.

The determination of the perceived quality of services involves the calculation of the difference between the perception of the service and the ideal (desired, expected) service level, which, at the same time, makes it possible to capture the gap that occurs between the expectations and the perception of services (Figure 2).

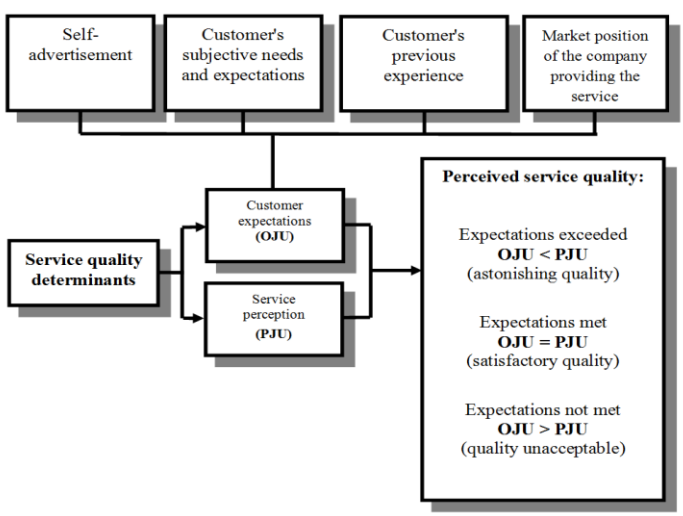

Figure 2. Peception of service quality (Parasuraman *et al.*, 1985)

Reference of above theoretical aspects of the chosen issues of logistic service quality in relation to Servqual method is presented below on practical example. Customers' expectations and experiences towards the logistics customer serivce were examined as two fundamental areas which allow for recognizing the quality aspects of the customer service in Poland in the Silesian Province's (Nowicka-Skowron *et al.*, 2014) commercial cargo motor transport enterprises.

3. Research methodology

Evaluation of the level of customers' expectations and perception toward particular elements of logistic service offered by the Polish Silesian Province's commercial cargo motor transport enterprises was realized in the article. The determination of the average level of discrepancy of the customers' expectations and experiences within particular aspects of logistic service quality allows then to asess the quality assessment of distinguished categories of logistic service and those of its attributes, in which a quality loss occurs. Thus, the levels of expectation fulfilment and the customers' perception of the service were examined as the first steps before defining the fifth gap of the Servqual method.

The survey questionnaire used in the study was constructed based on 22 logistic customer service determinants. The questionnaire form was composed of two sections: the first section illustrated the expectations of service recipients toward the logistic service, while the second section included items intended for the scoring of services rendered by a given service provider. Using the seven-point Likert scale, customers were asked to assign weights to respective statements: 1 meant that the respondent totally disagreed with a given item, while 7 – that he or she totally agreed with it.

Questionnaire forms were filled by 294 customers of 147 Silesian Province's (Poland) commercial cargo motor transport enterprises examined, i.e. two customers of each enterprise. Questionnaire forms were handed over directly to 38 respondents indicated as the customers of 19 enterprises, while with the remaining customers of 128 entities examined, telephone surveys were carried out.

Underlying the generalizations based on empirical data are chiefly partial results, because collecting this data from the general population (the full test), whose size in the test period amounted to 14 500 commercial cargo motor transport enterprises in the Silesian Province area in Poland, most probably would have been impossible. So, a partial test was carried out, while the test sample, i.e. a section of the general population, was selected intentionally. This means that the selection of tests entities was decided upon by the researcher himself, based on the „substantive knowledge of the research subject matter" (Zelias *et al.*, 2002).

Within the greater part of instances, survey forms were distributed to the respondents by traditional mail, which was 650 forms, 19 forms were provided to the respondents in person, whereas 330 forms were delivered by electronic mail. As about the results of return rate, very little number of filled questionnaire forms was achieved for the final stand for of delivery. The group of 34 represetatives of the enterprises sent away filled forms by electronic mail, of which, winning preface viewing, 7 forms were abandoned appropriate to the rawness or unpredictability of given data - the level of return rate of the questionnaire form return rate was of 8.18%. Through traditional mail, 136 forms were given back, and of which, winning preface selection for the rawness or untrustworthiness of indicated data, 31 forms were redundant - here the level of return rate of the questionnaire forms was of 16.15 %. The maximum return rate of filled questionnaire forms was achieved for their delivery attained for personal service: 17 representatives of enterprises properly filled

their forms and the level of return rate was of 89.47 %. In total, of the entire 999 delivered questionnaire forms, 149 full forms appropriate for following assessment were accepted, which built a whole questionnaire form return rate of 14.91%.

With an eye to the precision of conclusions for the entire population based on its section tested, the filled questionnaire forms were selected in respect of the number of people employed in entities and the amount of turnover for at least one of the last two turnover years, being the criteria distinguishing commercial cargo motor transport enterprises in terms of their size. Taking into account the structure of commercial cargo motor transport enterprises, as estimated based on the data from Central Statistical Office and the Ministry of the Infrastructure according to the size category (micro-entities accounted for approx. 76%; small-size enterprises, approx. 16.5 %; medium-size enterprise, approx. 5.5 %; and large entities, approx. 2 % of the whole population), a test sample with a similar distribution of the aforementioned attribute was constructed. After rejecting 2 randomly chosen questionnaire forms from the group of business entities employing 10 to 49 people and attaining an annual net turnover not exceeding the equivalent of 10 million euro, but larger than 2 million euro, a sample of 147 enterprises of the following structure was obtained: 76% of the whole population, that is 112 micro-entities; 16.5% of the whole population, that is 24 small-size entities; 5.5% the whole population, that is 8 medium-size entities; and 2% of the whole population, that is 3 large entities.

In order to determine the minimum test sample size, *n*, the following data were taken into the consideration:

- with the presumption that the overall population has a size of N = 14 500,
- with the assumed significance level of α = 5 %,
- with the statistic value, as red out from the normal distribution tables, of u_α = 1.96,
- with the desired estimation accuracy of d = 10 % = 0.1,

the subsequent formula was used:

$$n = \frac{u_\alpha{}^2 N}{u_\alpha{}^2 + 4(N-1)d^2},$$

where:

n – minimum test sample size,

N – general population size,

d – estimation accuracy,

α - significance level,

u_α - statistic value, as red out from the normal distribution tables.

4. Research results

4.1. Customers' expectations for the level of the elements of logistic customer service

The results of the measurement of the customers' desired level of logistic service offered to the customers are illustrated in Figure 3.

The diagram shown in Figure 3 represents the average level of customer expectations towards all of the 22 logistic service determinants, as broken down into expectations reported by the customers of micro-, small-size, medium-size and large enterprises. Using the seven-point scale for assessing the desired level of individual attributes of ideal logistic service, the polled customers assessed their expectations in total at 5.62 points.

The highest expectations towards the logistic service offered by transport enterprises were revealed by the customers of large business entities, assessing them at a level of 6.63 points. The highest requirements of the customers of large transport enterprises, expressed by the level of 7, were related to all attributes of logistic advisory quality, six attributes of the quality of services offered

by the entities, and one quality attribute, each of infrastructure, fleet, and the post-sale service of enterprises, i.e. modern infrastructural equipment, technologically advanced fleet, and admitting complaints and claims. The lowest expectations by this group of service recipients were related to the infrastructure meeting the environmental requirements, and round-the-clock service.

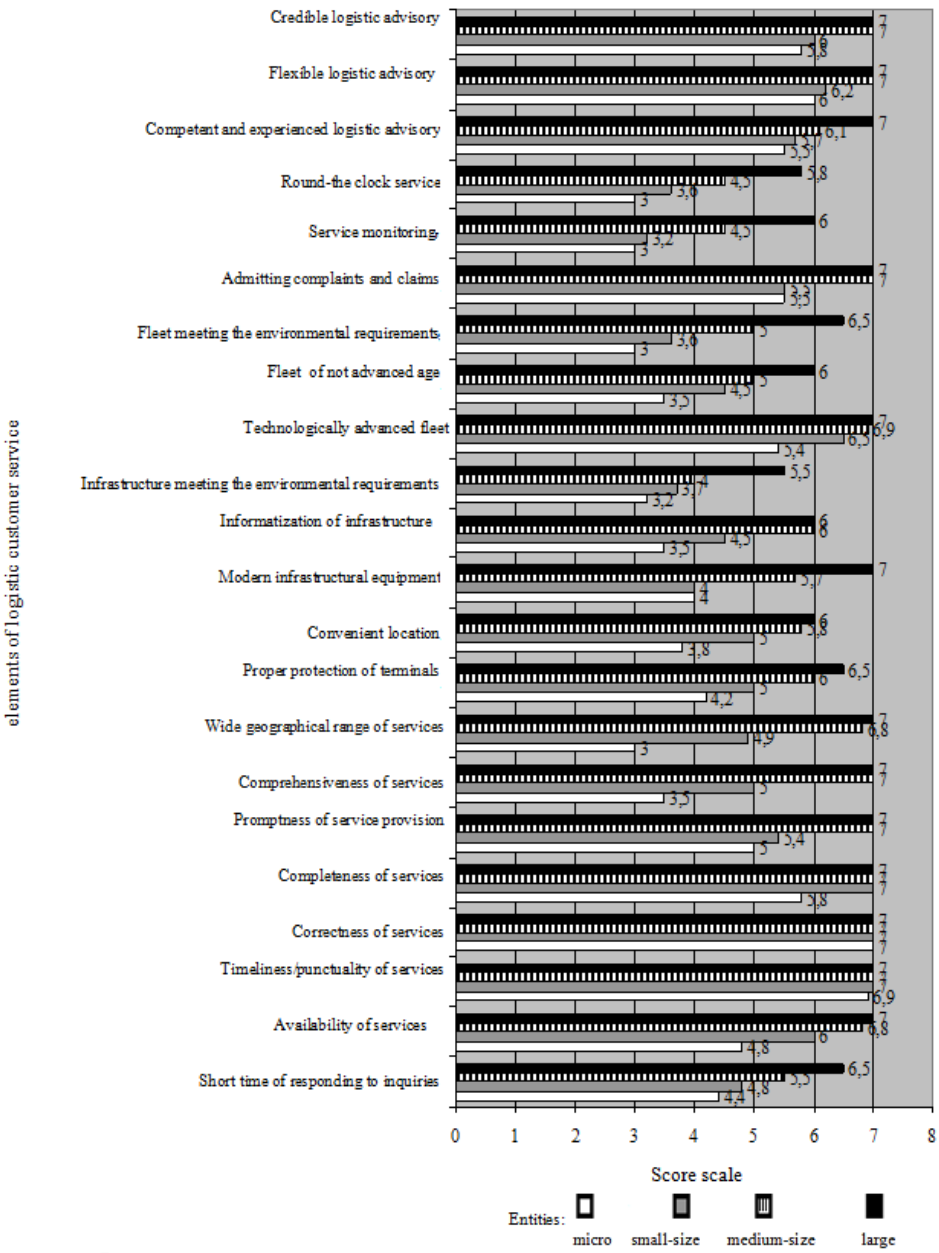

Figure 3. Customers' expectations for the level of the elements of logistic customer service offered by the Polish Silesian Province's commercial cargo motor transport enterprises

Not much lower than the logistic service requirements assessed above, as being placed at a level of 6.12 points, were shown by the customers of medium-size commercial cargo motor transport enterprises. The customers of this group had the highest expectations towards five attributes of service quality, two attributes of logistic advisory, and one attribute of post-sale service, i.e. recognizing customer complaints and claims by the business entities. At the same time, the service recipients expressed the lowest requirements for the infrastructure meeting the environmental requirements, round-the-clock service, and service monitoring.

A considerable difference, amounting to nearly 1 point, occurred between the customers of medium-size and small-size enterprises in the assessment of expectations regarding the ideal logistic service. The recipients of the services of small-size transport enterprises reported a desired logistic service level of 5.19 points. The lowered expectation threshold compared to the customer groups discussed above manifested itself in a small number of the highest scores awarded to the requirements for individual logistic service elements: 7 points were only related to the timeliness, correctness and completeness of services rendered by small-size enterprises. Service monitoring, round-the-clock service, the fleet and infrastructure meeting the environmental requirements were the logistic service attributes, towards which small-size enterprises' customers expressed the lowest expectations.

The lowest expectations towards the logistic service offered by transport enterprises were shown by the customers of micro-entities, assessing them at a level of 4.53 points. The highest requirements of transport micro-enterprises' customers, as expressed by the level of 7, were only related to the correctness of deliveries. The lowest expectations of this group of service recipients were related to the wide geographic range of services, the infrastructure and fleet meeting the environmental requirements, service monitoring, and round-the-clock service.

4.2. Customers' experiences for the level of the elements of logistic customer service

The data obtained from the customers of the examined Silesian Province's commercial cargo motor transport enterprises through the analysis of the second section of filled questionnaire forms reflected the customers' expectations with respect to the elements of logistic service offered them by the business entities under examination. The results of the measurement of the customers' perception of the level of logistic service offered to the customers are presented in Figure 4.

The diagram shown in Figure 4 shows the average level of customer experiences related to all of the 22 logistic service determinants, broken down by their perception, as reported by the customers of micro-, small-size, medium-size and large enterprises. Using the seven-point scale for assessing the perceived level of individual attributes of ideal logistic service, the polled customers assessed their experiences in total at 5.11 points.

The best experiences with the logistic service offered by transport enterprises were revealed by the customers of large business entities, assessing them at a level of 6.34 points. The attributes best perceived by the customers of large transport enterprises, expressed by the level of 7, related to the availability of services, the comprehensiveness of services, modern infrastructural equipment, and credible logistic advisory. The most poorly assessed experiences of this group of service recipients related to the completeness of services and the promptness of their provision, and the convenient location of the enterprise's infrastructure.

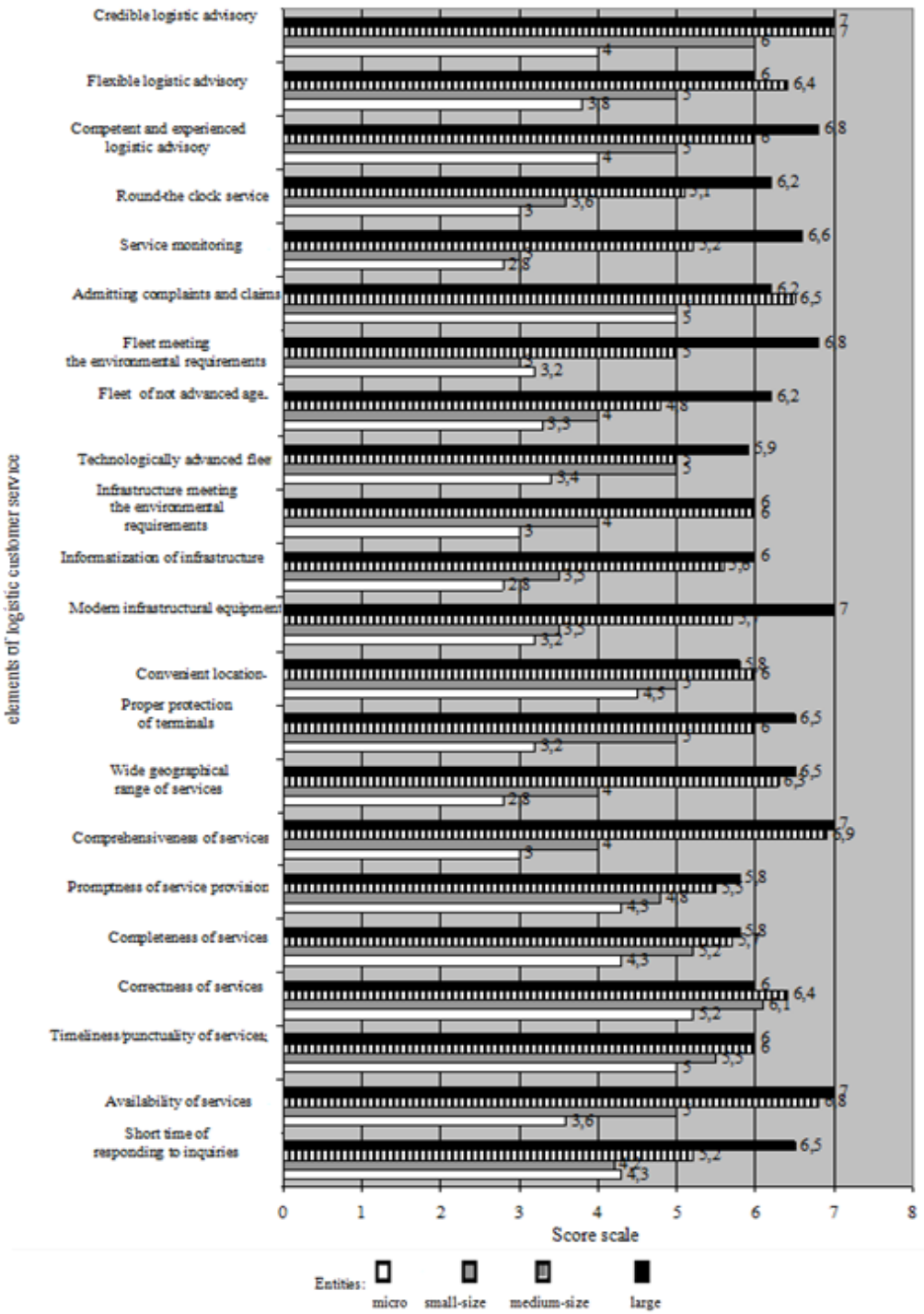

Figure 4. Customers' experiences relating to the level of the elements of logistic customer service offered by the Polish Silesian Province's commercial cargo motor transport enterprises

No much lower than the logistic service experience assessments mentioned above, as being placed at a level of 5.87 points, were shown by the customers of medium-size commercial cargo motor transport enterprises. The customers of this group highest perceived only the credible logistic advisory. At the same time, the service recipients lowest assessed their experiences with the fleet age, round-the-clock service and service monitoring.

A large difference, amounting to 1.35 points, occurred between the customers of medium-size and small-size enterprises in the assessment of their experiences with the logistic service encountered. The recipients of small-size transport enterprises' services reported a perceived logistic service level of 4.52 points. The lowered experience threshold compared to the customer groups discussed above manifested itself in a small number of the highest scores awarded to the perception of individual logistic service elements: 7 points were not related to any service attribute, and the highest scores remained 6.1 points awarded to the correctness of services provided by small-size enterprises, and 6 points awarded to the credibility of logistic advisory. Service monitoring, the fleet meeting the environmental requirements, the informatization of infrastructure and modern infrastructural equipment were the logistic service attributes with which small-size enterprises' customers had poorest assessed experiences.

The lowest perception of the logistic service offered by transport enterprises were shown by the customers of micro-entities, assessing them at a level of 3.71 points. The best experiences of transport micro-enterprises' customers were assessed at a level of 4.7 points, and related to the convenient location of the enterprises. The poorest experiences of the service recipients of this group were associated with the geographical range of offered services, the informatization of infrastructure and service monitoring.

5. Conclusions and direction for future research

After determination of above data, the next step in the procedure of Servqual method should be measuring the differences existing between the quality of individual elements of logistic service as perceived by the customers of the Polish Silesian Province's commercial cargo motor transport enterprises examined, and the quality expected by the customers from the service. The discrepancy which occurs between the expected and the perceived logistic customer service is pointed in the Gap 5 of the Servqual method. The content of this gap is assembled from the collective deficits established in each of the previous four enterprise gaps. Identification the intensity of this discrepancy is more than just calculation the metrics of Gap 1 throughout 4, as in many instances the cumulative result on customer perceptions of logistic customer service are larger than the sum of the components.

The benefits of achieving the measurements as used in the research are:

- Recognizing customers' expectations towards logistic customer service quality. It may be helpful for the enterprise's executives to discover the deficit areas, which are necessary to be recovered and to check the dynamics of logistic customer service quality over time. The enterprise's executives can find out the expectations for each imperative field, as well the perceptions of present state, and build up strategies to increase customer satisfaction by lowering their expectation;
- The possibilities for exaggerated evaluation in measurement of different, separated determinants of logistic customer service, which may possibly associate with mistaken conclusions, is much

inferior than in measuring not separated determinants but only one field;
- The response inaccuracy is rather low.

Measures instructiving the gaps which exist between the level of perceived and actual logistic customer service performance are decisive in orienting the logistic customer service strategy of the enterprises. Once the gaps have been measured, company's executives can initiate the procedures of focusing resources to satisfy intended improvements in processes and operational performance of logistics area. Due to the directions, the continuation of the research is planned for the future in the another article.

The determination of the perceived quality of services involves the calculation of the difference between the perception of the service and the ideal (desired, expected) service level, which, at the same time, makes it possible to capture the gap that occurs between the expectations and the perception of services (Rudawska and Kiecko, 2000). By defining:

OJU – customer expectation,

PJU – service perception,

we obtain (Witkowska, 2007):

when

OJU = PJU – the customer expectations are satisfied, and the quality is satisfactory;

OJU < PJU – the customer expectations have been exceeded, and the quality is astonishing;

OJU > PJU – the customer expectations have not been met, and the quality is unsatisfactory.

The authors of the Servqual method pointed out that enterprises providing services should themselves assess its suitability and possibly verify the set of statements being analyzed. They emphasised, at the same time, that Servqual might also prove to be a useful means of acquiring the knowledge of the market (Mazur, 2001). In particular, the following applications of the method were suggested (Parasuraman *et al.*, 1990):

- determining the average level of discrepancy between the purchasers' expectations and experiences in particular aspects of service quality;
- determining the enterprise's service quality level relating to each of the features;
- setting the weighted service quality level by considering both gaps between the expectations and experiences, and the importance of individual features to the customers;
- identifying any changes in expectations and experiences in time, concerning both individual features and the cumulative assessment.

Individual researchers often perceive a number of basic criteria used by purchasers for assessing services, which is different than assumed by the Servqual method. This difference is primarily due to the features of the business under study and the specific service provider. In the conditions of a considerable difference existing between detailed expectations and experiences, researchers tend to distinguish relatively many assessment criteria. Whereas, in a situation, where the gap between expectations and experiences within numerous issues is small, as a rule, the number of features regarded as the basic selection criteria is reduced. So, the Servqual method appears to be rather a general construction that requires modification to be adapted to a new type of tasks, considering the local conditions and the nature of given services.

References:

Abt, S., & Woźniak, H. (1993). *Podstawy logistyki*. Gdansk: Wyd. Uniwersytetu Gdańskiego.

Bednar, S., & Modrak, V. (2014). Mass customization and its impact on assembly process' complexity. *International Journal for Quality Research, 8*(3), 417–430.

Brown, S. W., & Swartz, T. A. (1989). A gap analysis of professional service quality. *Journal of Marketing, 4*, 92–98.

Byrne, P. M., & Markham, W. J. (1991). *Improving quality and productivity in logistics process – Achieving customer satisfaction breakthroughs.* Council of Logistics Management. USA: Oak Brook.

Cavana, R. Y., & Corbett, L. M. (2007). Developing zones of tolerance for managing passenger rail service quality. *International Journal of Quality & Reliability Management, 24*(1), 7–31.

Chen, K. K., Chang, C. T., & Lai, C. S. (2009). Service quality gaps of business customers in the shipping industry. *Transportation research Part E, 45*, 222–237.

Długosz, J. (2000). *Relacyjno-jakosciowa koncepcja logistyki w zarzadzaniu*. Poznan: Wyd. Akademii Ekonomicznej w Poznaniu.

Fawcett, S. E., & Cooper, M. B. (1998). Logistics Performance Measurement and Customer Success. *Industrial Marketing Management, 27,* 341–357.

Florez-Lopez, R., & Ramon-Jeronimo, J. M. (2012). Managing logistics customer service under uncertainty: An integrative fuzzy Kano framework. *Information Sciences, 202*, 41–57.

Grapentine, T. (1999). The history and future of service quality assessment. *Marketing Research, 10*(4), 5–20.

Gronross, C. (1991). Scandinavian management and the Nordic school of services – contributions to service management and quality. *International Journal of Service Industry Management, 2*(3), 17–26.

Hazen, B. T., Boone, C. A., Ezell, J. D., & Jones-Farmer, L. A. (2014). Data quality for data science, predictive analytics, and big data in supply chain management: An introduction to the problem and suggestions for research and applications. *International Journal of Production Economics, 154*, 72–80.

Huiskonen, J., & Pirttila, T. (1998). Sharpening logistics customer service strategy planning by applying Kano's quality element classification. *International Journal of Production Economics, 56-58*, 253–260.

Juran, J. M. (1980). *Juran on leadership for quality: an executive handbook.* New York: Free Press.

Kabir, G., & Hasin, M. A. A. (2011). Customer perceived quality improvement of synthetic fiber using fuzzy QFD: a case study. *International Journal for Quality Research, 5*(2), 75–87.

Karaszewski, R. (2001). *TQM – teoria i praktyka*. Torun:TNOiK.

Kisperska-Moron, D. (2005). Logistics customer service levels in Poland: changes between 1993 and 2001. *International Journal of Production Economics, 93-94*, 121–128.

Lambert, D. M., & Stock, J. R. (1993). *Strategic Logistics Management*. USA: Homewood.

Large, R. O., & Konig, T. (2009). A gap model of purchasing's internal service quality: Concept, case study and internal survey. *Journal of Purchasing & Supply Management, 15*(1), 24–32.

Lee, H., & Kim, C. (2014). Benchmarking of service quality with data envelopment analysis. *Expert Systems with Applications, 41*(8), 3761–3768.

Lehtinen, U., & Lehtinen, J. (1991). Two approaches to service quality dimensions. *The Service Industries Journal, 11*(3), 287–303.

Lewis, R., & Booms, B. (1993). The marketing aspects of service quality. In: L. Berry, G. Shostack G. & Upah (Eds.), *Emerging Perspectives on Services Marketing.* Chicago: American Marketing Association.

Mazur, J. (2001). *Zarzadzanie marketingiem uslug*. Warszawa: Difin, 86.

Meybodi, A. R. (2012). Measuring service quality using Servqual model: A case study of brokerage ofices in Iran. *International Journal for Quality Research, 6*(1), 55–61.

Nasim, K., & Janjua, S. Y. (2014). Service quality perceptions and patients' satisfaction: A comparative case study of a public and private sector hospital in Pakistan. *International Journal for Quality Research, 8*(3), 447–460.

Nowicka-Skowron, M., Stachowicz, J., & Voronina, L. A. (2014). *Rozwoj organizacji i regionu wyzwaniem dla ekonomii i nauk o zarzadzaniu.* Torun: TNOiK.

Pakdil, F., & Aydin, O. (2007). Expectations and perceptions in airline services: An analysis using weighted SERVQUAL scores. *Journal of Air Transport Management, 13*(4), 229–237.

Panayides, P.M. (2007). The impact of organizational learning on relationship orientation, logistics service effectiveness and performance. *Industrial Marketing Management, 36*(1), 68–80.

Parasuraman, A., Zeithaml, V., & Berry, L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), *12–40.*

Parasuraman, A., Zeithmal, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing, 49,* 41–50.

Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1990). *Delivering quality service*. New York: The Free Press.

Perez, M. S., Abad, J. C. G., Carrillo, G. M. M., & Fernandez, R. S. (2007). Effects of service quality dimensions on behavioural purchase intentions. *Managing Service Quality, 17*(2), 134–151.

Rafele, C. (2004). Logistic service measurement: a reference framework. *Journal of Manufacturing Technology Management, 15*(3), 280–290.

Rudawska, E., & Kiecko, R. (2000). Servqual – metoda jakosci uslug i jej praktyczne zastosowanie. *Marketing i Rynek, 5*, 23–28.

Tseng, S. C., & Hung, S. W. (2013). A framework identifying the gaps between customers' expectations and their perceptions in green products. *Journal of Cleaner Production, 59*, 174–184.

Twaróg, J. (2005). *Mierniki i wskazniki logistyczne*. Poznan: Instytut Logistyki i Magazynowania.

Witkowski, T. H., & Wolfinbarger, M. F., (2002). Comparative service quality: German and American ratings across service settings. *Journal of Business Research, 55*(11), 875–881.

Zelias, A., Pawełek, B., & Wanat, S. (2002). *Metody statystyczne*. Warszawa: PWE.

Marta Kadłubek
Czestochowa University
of Technology
Faculty of Management
ul. Armii Krajowej 19 B
42-200 Czestochowa
Poland
martakadlubek@wp.pl

Janusz Grabara
Czestochowa University
of Technology
Faculty of Management
ul. Armii Krajowej 19 B
42-200 Czestochowa
Poland