# A pilot survey for the assessment of the quality of services provided by airlines

Maria Grazia Bellizzia\*, Laura Ebolia, Gabriella Mazzulla

<sup>a</sup> University of Calabria, Ponte P.Bucci, Cubo 46/B, 87036 Rende, CS, Italy

## Keywords

Customer satisfaction survey, pilot survey, airline service quality, survey design.

## **Problem statement**

Nowadays the assessment of service quality plays an important role in all public transport systems. In particular, service quality has a certain amount of influence on the users' choices. Therefore, knowing the users point of view is essential. In this context, Customer Satisfaction Surveys (CSS) are used to collect users' evaluations about the quality of provided services. In the literature related to road and rail public transport, many studies about service quality measurement are based on data collected throughout CSS (Eboli et al., 2018; Allen et al. 2019). In the last few years, this topic received a relevant interest also in the field of air transport (Lim and Tkaczynski, 2017; Bellizzi et al., 2018).

Air transport industry consists of a wide variety of services, that can be differentiate into services provided on the land side and services provided on the air side. The different management of services distinguishes one side to the other one. Services provided on the land side are in the interest of the airport management company; services provided on the air side are managed by the airlines. In this work, we want to focus on the latter. The airlines regularly carry CSS. The competition that has been established between the airlines is certainly the reasons behind this practice. In fact, the airlines marketing strategies increasingly consider customer satisfaction as an opportunity to improve the service and attract new users. Through CSS questionnaire, the airlines try to understand what users have appreciated (or not) about the service received during their travel experience. From the analysis of some airlines' questionnaires, service aspects are commonly divided in aspects relating before (e.g. flight booking and check-in procedure), during (e.g. seat comfort and cabin cleanliness) and after (e.g. landing procedures and luggage delivery) the flight. In addition, questions related to airport services not directly managed by the airlines, can be also found (e.g. security controls and terminal comfort). Regarding the evaluation scales, all analysed previous studies use only one evaluation scale for expressing a judgement on the different service aspects. As an example, Tsafarakis et al. (2017) asked passengers to express a level of satisfaction with the total trip experience answering on an ordinal qualitative scale with five levels; on the contrary, Li et al. (2017) asked passengers to evaluate each item of in-flight services expressing a rate on a five-point scale anchored from 1 (very low) to 5 (very high). Based on these findings, we designed a Revealed Preference (RP) survey for collecting the perception of the users about the different service aspects provided by the airline of the flight they experienced most recently. More specifically, we decided to collect perceptions about the service through two different evaluation scales: a numerical scale for requesting to users a judgement about the investigated service aspects, and an ordinal qualitative scale for collecting the satisfaction level with the same service aspects.

## Research objectives

The general objective of this paper is to define how the design of a CSS questionnaire addressed to air passengers was conducted. Two additional specific research objectives are: (1) discover the difference between the above mentioned evaluation scales (if it emerges); (2) identify which evaluation scales is best understood by the interviewees. From authors' point of view, investigating on these specific topics is fundamental because in the literature review the concepts of service quality assessment and customer satisfaction are often confused within CSS. In other words, not always to a good assessment of service quality corresponds a high level of customer satisfaction. It could happen that a user expresses a bad judgment related to a service aspect but, at the same time, he/she considers to be satisfied with it (and vice versa). To bring out this potential difference, we decided to include in the questionnaire the two different evaluation scales. Specifically, for each service aspect the interviewed user has to provide a judgement in terms of rate on a scale ranging from 1 to 10, and to

<sup>\*</sup> Corresponding author. E-mail address: mariagrazia.bellizzi@unical.it

express a level of satisfaction with the same service aspect according to a 5-point scale ranging from "not at all satisfied" to "extremely satisfied".

#### Methodology

For a survey that requires a large number of participants, spending time and money in the most efficient way is fundamental. Pilot Survey (PS) are carried out just for this purpose. PS is just a step of the more complex design process of a CSS, consisting of several stages (dell'Olio et al., 2017), conducted before the real survey. Therefore, before starting PS, the drawing up of the questionnaire needs to be completed. The design of the questionnaire is certainly the most sensitive stage; for this aim, a deep study of the literature review and an analysis of airlines questionnaires is important to comprehend the service aspects to be considered in the analysis of service quality, and to define the evaluation scale. In order to collect suggestions and impressions by people specialized in the research field object of study, we decided to send a first draft of the questionnaire to a panel of experts. Specifically, the panel was composed by 30 people including academics, researchers and employees in transport companies. The collection and the analysis of the received comments helped us to refine the questionnaire. Afterwards, PS was launched and addressed to a sample of 41 users.

## **Expected results**

The variety of services provided by the airlines, in all the phases characterizing a trip by air (before, during and after the flight), makes difficult to design the questionnaire for a CSS. Moreover, choosing the best evaluation scale could become a very complex issue. Firstly, the feedback received from the panel of experts was helpful especially for checking if the questions were easily understood and addressed to all the service aspects. Regarding the choice to adopt two different evaluation scales, most of experts found interesting discover the perceptions of the users through both a rate and a level of satisfaction. The refined questionnaire was used to conduct the PS. A sample of 41 users of air transport system was contacted by email to fill out the questionnaire. The sample is made up of more females (59%) than males, and 37% of users are aged from 31 to 40, 39% of the sample travels by air several times a year and 34% flies at least once a year. After a preliminary analysis, we found that the respondents were confused when their travel was made by more than one flight (maybe provided by more airlines) and check-in procedure is not strictly linked to the flight they focus on for the service quality evaluation; a similar inconvenience can occur for the luggage delivery procedure evaluation. Interesting results emerge from the analysis of the judgements expressed by the users according the two different adopted scales. We registered in some cases not foregone results concerning the relation between the judgement in terms of rate and the level of satisfaction. As an example, some users feel very satisfied while expressing a low rate (5); on the contrary, it was also found that users who express a high rate (8) feel not very satisfied with certain service aspects. In addition, we found that the differences in perceptions are mainly related to users' socioeconomic characteristics.

## References

Allen, J., Eboli, L., Forciniti, C., Mazzulla, G., Ortúzar, JdD. (2019). The Role of Critical Incidents and Involvement in Transit Satisfaction and Loyalty. Transport Policy, 75, 57-69.

Bellizzi, M.G., Eboli, L., Forciniti, C., Mazzulla, G. (2018). Air Transport Passengers' Satisfaction: an Ordered Logit Model. Transportation Research Procedia, 33, 147-154.

dell'Olio, L., Ibeas, A., de Oña, J., de Oña, R. (2017). Public Transportation Quality of Service. First Edition. Elsevier.

Eboli, L., Forciniti, C., Mazzulla, G. (2018). Spatial variation of the perceived transit service quality at rail stations. Transportation Research Part A: Policy and Practice, 114, 67-83.

Li, W., Yu, S., Pei, H., Zhao, C., Tian, B. (2017). A hybrid approach based on fuzzy AHP and 2-tuple fuzzy linguistic method for evaluation in-flight service quality. Journal of Air Transport Management, 60, 49-64.

Lim, S.S., Tkaczynski, A. (2017). Origin and money matter: The airline service quality expectations of international students. Journal of Hospitality and Tourism Management, 31, 244-252.

Tsafarakis, S., Kokotas, T., Pantouvakis, A. (2018). A multiple criteria approach for airline passenger satisfaction measurement and service quality improvement. Journal of Air Transport Management, 68, 61-75.