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Tourism service quality begins at the airport

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Abstract

This work analyses the level of service of Gran Canaria airport facilities as an approximation to evaluate the service quality given to tourism. Through a linear programming model we will determine the level of service established in a check-in service at this airport. The relevance of this parameter is related to the leisure time available for tourists in the airport terminal building. Therefore, it gives us an indirect measure of their perceived satisfaction of the service.

Keywords: Quality; Airport; Tourism; Level of service

1. Introduction

Tourism service is a commodity whose quality depends on the aspects that are intrinsic attributes of several activities related with this kind of service: activities that happen from tourists' arrival till their departure. Airport infrastructure is the first and last point of tourists' contact in their holiday destination; thus, it constitutes the mobility axe of tourists. These activities have to be "processed" through airport in an efficient way to minimize travel time and to enjoy shopping and leisure time in the commercial area of the airport at the end of their holidays. Because of that, it is relevant to evaluate airport facilities quality as a factor of tourism service commodity.

Section 2 points out the influencing airport quality service factors. Next, through a simple queues analysis, the level of service for a check-in mechanism at Gran Canaria airport is estimated. The last section presents the conclusions of this work.

2. Quality perception of tourism service

Tourist satisfaction is crucial in the sense that it affects expectations and intentions for the next destination purchasing decision. Thus, tourist destination considers customer satisfaction as one of the most important sources of their competitive advantage (Fuchs & Weiermair, 2004). Some authors suggest that service quality is a vital antecedent of customer satisfaction and, concretely, some relevant aspects of quality perception as promptness of service and on-time programming (Getz, O'Neill, & Carlsen, 2001).

Several activities related to tourism service like, for instance, transport infrastructure have to be provided in an efficient way to guarantee a high level of tourism service quality. For transport services, reliability becomes the core of service quality.

Airport infrastructures are the first contact point for tourists when they arrive at their holiday destination. Therefore, airport facilities give them the first impression they will have about the expected quality of their holiday time. When passengers are processed by airports they use several services such as, check-in, passport and security controls in departure, and baggage claim service and passport control when arriving.

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If an airport cannot attend to all these services efficiently, airport service quality will be low and tourist perception of the airport facilities becomes negative. For instance, in departure, once the process has ended, passengers go to a boarding area where they can enjoy a leisure area, do last-minute shopping and use some other services like restaurants. Time spent by passengers at ticket counters and other controls limits their time to enjoy airport leisure areas. If the level of service is low and passengers spend too much time in these controls, their perception of the airport service quality will perhaps decline.

There are several methodologies to evaluate the quality of tourism services. Research instruments have been developed over the years to evaluate the concept of quality and consumer satisfaction (Hudson, Hudson, & Miller, 2004). Some of them are based on questionnaires that ask people about some attributes of these services.

These results are subjective and may be used as an approximation to estimate customer satisfaction; however, there is a need to make valuations about the level of airport services through a more objective approach according to normally accepted standard parameters. This can be done using mathematical techniques (Muller & Gosling, 1991).

The next section develops a valuation of the *check-in* mechanism at Gran Canaria airport using the queues theory, and the results will be compared with the international standards established by IATA. If the satisfaction perceived by tourists keeps within the interval considered, the level of service can be considered satisfactory.

3. Evaluating check-in service level for Gran Canaria airport

The quality and conditions of a functional component or group of functional components, as experienced by passengers in an airport, constitute the service level. Factors such as waiting time, processing time, crowding and availability of passenger amenities for comfort and convenience are measures of the service level components. Many of these factors can be evaluated in a subjective manner or remain difficult to measure; however, there are mathematical techniques that can be used to evaluate some of these factors. A simple queues theory to measure waiting time and level of crowding, as a proxy to evaluate service level, in an airport is used.

3.1. Check-in process and mechanism design

As long as passengers arrive at the ticket counter, handled by a single agent, at a rate no greater than the rate at which they can be served, there will be no queue and no waiting for a service. However, if more passengers arrive, the queue may begin to grow and if the rate of arrivals stays higher than the service rate, the queue can keep growing and the service level can decline because of the increase in waiting time and crowding. Many services inside the airport building can be modeled by queuing theory. Some hypothesis about the components of the process is required.

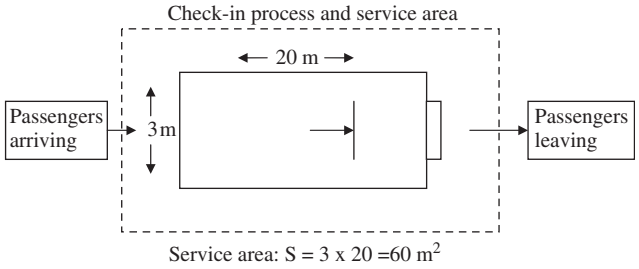

Fig. 1. Check-in process and service area.

Assume that there is a single ticket counter handled by one agent. The ticket counter has a $60\,m^2$ queue waiting area and is equipped to handle baggage and full ticketing of passengers. Let us suppose that passengers arrive alone at the counter area so that only passengers with a few pieces of luggage are keeping queue. The number of passengers who arrive to require service is infinite[1] and the first to arrive are the first to leave. The mechanism is shown in Fig. 1.

3.2. Queue model for check-in service

Passengers who arrive at some known rate "λ" are given service at some rate "μ", generally assumed to be fixed at some average time, and move to the next element of the system. Queues are formed if arrival rate exceeds service rate. The queue length, expected total service time, including any waiting in a queue, and time for queues to clear may be calculated. These parameters depend on the underlying mathematical distribution of arrival and service times assumed to be applied.

If passenger arrivals are assumed to be random, the Poisson process may be used. With service times assumed to be described by an exponential model, average waiting time at the processing point, total time in commercial area and average number of people waiting for service (queue length) are calculated as follows:

T_c	average waiting time: $T_c = \lambda/2\mu(\mu - \lambda)$
T_F	time of check-in service: $T_F = 1/\mu$
L_c	average number of passengers waiting (queue length): $L_c = \lambda^2/\mu(\mu - \lambda)$

[1]The hypothesis of a finite size of population generates many analytic complications because the number of passengers in a queue determines the potential number of passengers out of the system.