

## Return on quality: Simulating customer retention in a flight firming project

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### A B S T R A C T

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The paper presents a return on quality model designed to assess projects of service quality that can help airlines in retaining passengers. Such models can enable carriers simulate scenarios and assist management in decision-making processes, identifying the elements of performance that can lead to rejection or approval by passengers. An application of the methodology considers the flight firming project of a major airline company that had the target of improving the service quality offered in the business class booking and refunding processes, reducing at the same time the amount of denied boarding due to overbooking.

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### 1. Introduction

Quality management can lead a company to success only if related strategies are supported by apposite investments. Projects of this kind are generally perceived as resource-consuming even if they produce a substantial reduction in risks and create a virtuous circles of improvement. To break this common situation, particularly when short term results are not expected, a detailed cost/benefit analysis is often needed.

In particular, airlines face a highly dynamic market where any evolution requires a quick response with a detailed evaluation of their achievable performance. Low cost companies, high-speed railways, shift in the most profitable routes, as well as the continuous opening of new routes and time slots, are recent changes in the regulatory environment that are radically modifying the profile of customer requirements. Appropriate service quality projects can allow companies to reach and maintain excellence, ensuring, at the same time, market share and resilience to uncertain events.

### 2. Return on quality

The quest to identify a robust relation between airlines performances and passenger requirements, perceptions and expectations has led to the development of dedicated evaluation models. There are two streams to this: to define the most recognized quality dimensions of airline services (Wang et al., 2011) and to test dedicated model that could support decision-making (Erdil and Yıldız, 2011). But many questions remain unsolved: e.g. is it

possible to identify a relation between quality performances and market share? To what extent do profits come from quality? Is there a direct cause–effect relation? Can quality be measured in financial terms?

The financial benefits of quality can come from either increased revenues or reduced costs. Organizations can increase service quality in terms of perceptions, satisfaction and loyalty of passengers to stimulate the demand, but actions in this direction are generally costly and investments have to be directly related to the achievable targets. Success includes the attraction of new passengers and the retention of the old ones through the reduction of the gap between perceived and expected quality. Critical issues are mainly related to estimating the level of customer retention, due to the interactions among tangible and intangible elements that affect consumer satisfaction. Quality performance can also derive from greater process efficiency and effectiveness: improvements and process reengineering can increase productivity while reducing the resources needed.

In terms of what we know, Ball (2006) and Schiffauerova and Thomson (2006) present a set of best practices to assess quality projects. All these models generally have an error of 20–30% with peaks of 50% mainly due to difficulties in identifying long term effects and to the lack of benchmarking studies (Freiesleben, 2004). Legacy airlines invest in service quality, in terms of route structure, timing of flights and frequent flier programs, because competing on price is often insufficient to allow cost recovery (Dolnicar et al., 2011).

Fig. 1 presents a model based on the ISO 10014:2006 standard<sup>1</sup> that integrates service quality, customer retention and financial

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<sup>1</sup> [http://www.iso.org/iso/catalogue\\_detail?csnumber=37263](http://www.iso.org/iso/catalogue_detail?csnumber=37263).

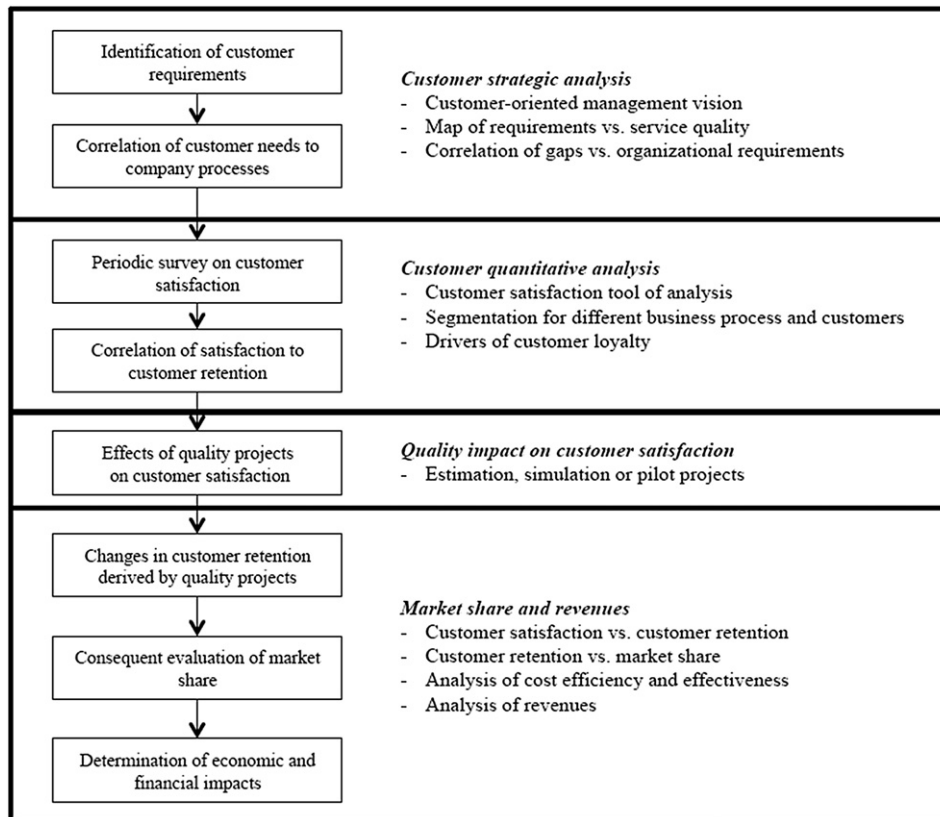


Fig. 1. Return on quality approach.

measures. Combining surveys on customer behavior with internal scorecards of performances and market competition, we identify opportunities and gain insights into the financial implications of quality projects.

The core of the methodology is the definition of the relation that exists between customer retention, and revenues or market share (Zeitham et al., 1996). Long-term relationships tend to increase profitability. Pleased passengers are more likely to buy additional services, spread favorable word-of-mouth and recognize a value in maintaining the relation: companies may be able to serve them more efficiently, due to experience curve effects, and to charge higher prices. On the other side, attracting new passengers is generally expensive and often unprofitable for the first period of time after their acquisition: advertising, promotion and sales costs have to be covered as well as start-up operating expenses.

According to the perceived level of service quality, the passenger–supplier relationship is strengthened or weakened, and behaviors thus affected. Customers that prefer one airline and recommend its services over others, express the intention to repurchase or agree to pay a price premium are increasing their retention. Those that complain or reduce their flights on a particular carrier give signals they are likely to switch to competitors.

### 3. Customer experience of overbooking and denied boarding

The increasing number of airline passengers exposed to cancelations and no-shows is becoming a critical issue; about 10–15% of travelers with confirmed reservations do not show at the check-in (Suzuki, 2006). Overbooking is the natural commercial response by the airlines, although this is a stochastic process based

on prior experiences and can cause issues with passengers when calculations go wrong and denied boarding ensues. Compensation has to be paid, based on what denied boarders will accept and increasingly influenced by regulations in places like the EU and US. The portfolio of compensations varies but generally includes items such as; rebooking on the first available flight, a free fax or telephone call, meals, hotels and transportation costs of waiting for the next flight, financial compensation or a voucher for future flights and compensation for “downgrade”.

Customer satisfaction can be affected by these procedure and the annual Airline Quality Rating 2011 includes the number of “denied boarding” among the four criteria with the highest weight, as well as for “passenger complaints” for overselling seats (Bowen and Headley, 2011). In particular, experiences of denied boarding can have an effect on loyalty. Although this is generally negative, how the situation is handled by the airline can affect its magnitude. For example, a prompt reaction by a carrier, with an adequate level of information and compensation that is seen as reasonable, can significantly mitigate any potentially adverse effects, whereas failures to deal with the situation can add to perceptions of poor service quality.

Here we focus on evaluate, prior to its implementation, a project of flight firming. It consists in implementing an informative tool to support the cancellation of non-reliable reservations, the rebooking and compensations due to denied boarding procedures, the release of unused capacity on partially loaded flights and the knowledge of high value passengers' behaviors. The scope of the analysis is limited to the business class of intercontinental flights, raising passenger retention while reducing no-shows and preventing malpractices. By monitoring the overbooking profile, reactive and proactive actions can be implemented for an accurate and

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