

Strategic analysis of healthcare service quality using fuzzy AHP methodology

Gülçin Büyüközkan^{a,*}, Gizem Çifçi^a, Sezin Güleriyüz^{a,b}

^aIndustrial Engineering Department, Faculty of Engineering and Technology, Galatasaray University, 34357 Ortaköy, İstanbul, Turkey

^bIndustrial Engineering Department, Bartın University, 74100 Bartın, Turkey

ARTICLE INFO

Keywords:

Service quality
SERVQUAL
Healthcare quality
Fuzzy AHP

ABSTRACT

Managers in the service sector are under pressure to demonstrate that their services are customer-focused and that continuous performance improvement is being delivered. It is essential that customer expectations are properly understood and measured under the constraints that organizations must manage. The majority of the work to date has attempted to use the SERVQUAL (service quality) methodology in an effort to measure service quality. In this study, firstly the concept and factors of service quality are examined. Then a fuzzy AHP (analytic hierarchy process) is structured to evaluate the proposed service quality framework. A case study in healthcare sector in Turkey is presented to clarify the methodology.

© 2011 Elsevier Ltd. All rights reserved.

1. Introduction

In daily life, we are getting service in healthcare, education, finance, management, insurance, banking, retailing, consultancy, repairing and maintenance, communication, transportation (highway, seaway, airway and railway), restaurant, etc. areas every day. Some of them are introduced to us as service, some as product and some as mixing of both service and product. Its production may depend on either a physical product or not (Kotler, 2000).

Nowadays in most of the developed countries, service sector has a considerable portion in employment and this portion is increasing day by day. This increase is also accepted as a sign of being full-grown and the high quality of the life standards. In addition, service sectors are the main condition of the economy. As a result, without service sector, development of other sectors is not probable. Also competition is very considerable at the global world where the main purpose is the free circulation of the merchandises/services. It is very important to get the whip hand of competition by providing the congruity of the services to the expectations of consumers. By the meaning, the qualities of the services should be measured. For this reason in this study, service and the accompanying service quality are chosen to research and analyze. There are lots of ways to measure the service quality as statistical methods, benchmarking, servperf, etc. but the SERVQUAL (service quality) methodology (Brown, Churchill, & Peter, 1993; Cronin & Taylor, 1992; Parasuraman, Zeithaml, & Berry, 1985) is chosen in this study because it is the most used and preferred methodology.

Also companies realized that with the similarity of products and services, service quality will be the key role for success in

differentiating the products/services. Therefore, to measure and enhance the service quality become vital in recent times. In addition, service quality of healthcare sector is fairly variable. Healthcare quality is important because human health is in subject and it is crucial to provide healthcare service that meets or exceeds patients' expectations. Also that gives us the reason to choose this sector for implementation in such an increasing populated and developing country as Turkey. The aim of this study is to determine the main healthcare service quality factors and by using these factors to measure and evaluate hospital performances.

Since service industry contains intangibility, inseparability and heterogeneity, it makes people more difficult to measure service quality. Since the evaluation is resulted from evaluator's view of linguistic variables, it must be conducted in an uncertain, fuzzy environment. In order to overcome the issue, fuzzy set theory is invited into the measurement of performance. Fuzzy set theory aids in measuring the ambiguity of concepts that are associated with human being's subjective judgment. Nowadays, the fuzzy set theory (Zadeh, 1965) has been applied to many fields of management science, like decision making (Hsu, Chen, & Tzeng, 2007; Huang, Chu, & Chiang, 2008; Kahraman, Büyüközkan, & Ateş, 2007; Liu & Lai, 2009) however, it is scarcely used in the field of service quality (Bilsel, Büyüközkan, & Ruan, 2006; Tsaur, Chang, & Yen, 2002; Tseng, 2009a, 2009b).

Also, there is a need for an effective tool in identifying and prioritizing relevant criteria to develop a systematic service quality measurement process. The approach should also develop consensus decision making. Thus, AHP (analytic hierarchy process), a MCDM (multiple criteria decision making) theory proposed by Saaty (1980), is applied in the service quality measurement process. The summary view of this research can be seen in Fig. 1.

* Corresponding author. Tel.: +90 212 227 4480.

E-mail addresses: gbuyukozkan2003@yahoo.com, gulcin.buyukozkan@gmail.com (G. Büyüközkan).

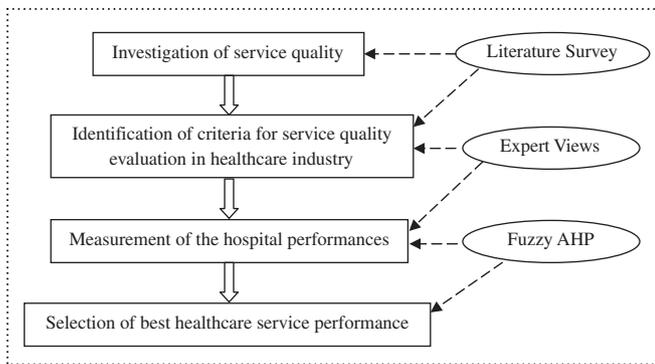


Fig. 1. The main steps of the evaluation framework steps.

Through the aims given above, in the rest of this study,

- (1) First the conceptualization of service quality delivery in the literature, including the major criteria that consumers use to evaluate service quality is discussed.
- (2) Next, the way that academic and practitioner researchers have measured service quality is described.
- (3) After by researching and analyzing all the models and dimensions, a new multiple-item scale for measuring service quality for healthcare sector is developed, and the model is measured in sector by the aid of a MCDM technique.
- (4) Finally, results are evaluated and the study is concluded with focusing on the research that is needed to learn more about it.

2. Theoretical issues

2.1. Service concept

The definition of service concept is a fundamental part of the strategic advantage seeking processes of service design, service development and service innovation (Goldstein, Johnston, Duffy, & Rao, 2002; Stuart & Tax, 2004). Because it is different from physical goods, it is more difficult to define service. Services are spread into a lot of areas; like services given in beauty salons or services given from insurance companies. And also because they comprise a lot of heterogeneous activities, services become more complex and defining the services becomes more and more difficult. Although the difficulties mentioned today, it can be seen that the concept of service is defined by many researchers (Devebakan, 2005).

Service is a product which occurs to satisfy consumer needs and it does not have material characteristic. At the same time it is possible to define service as an economical activity which obtains time, place, shape and psychological benefits. Edvardsson and Olsson (1996) see a service concept as a detailed description of what is to be done for the customer and how this is to be achieved. While Goetsch and Davis (1998) see service as to execute a work for someone else, Collier see service as a work or an action, a performance, a social event which is consumed at the place where it is produced (as cited in Uyguç (1998)). In another definition, service is a social activity that is a required to make dialog between customer and a person offering the service or foundation (Tarım, 2000). Goldstein et al. (2002) see it as the mix of physical and non-physical components that combine to create the service package. According to Liu, Bishu, and Najjar (2005), a service is a result that customers want. Definitions of service concept are of value to service managers in understanding what a service concept should be.

There is widespread academic acknowledgement that the articulation of service concept is a central component in designing services. And as it is seen, there exists many service concept definitions according to authors; however, they all actually originated from the same matter: customers. The perceptions of customers and management of that are critically important in services, also as Edvardsson and Olsson (1996) state “what the customer does not perceive does not exist”.

2.2. Service quality concept

Quality is a multidimensional concept, meaning different things to different people. Service quality is an abstract construct that is difficult to define and measure. There is no value in a product or service until it is in the hands of its consumer. Usually, consumers purchase products and evaluate them through their experience of using them. If they decide to purchase the products again, because of their positive experience, they then tell others of the qualities of the products. Therefore the image of the products may be established during the consumer's usage, evaluation and word-of-mouth advertising. For this reason, service quality is an elusive and indistinct construct (Parasuraman et al., 1985). But in the service area, the quality is more superficial and subjective, and thus it is difficult to evaluate precisely or control the service.

One common notion of service quality is that a form of attitude, related but not equivalent to satisfaction, which results from the comparison of expectations with performance (Bolton & James, 1991; Parasuraman, Zeithaml, & Berry, 1988). In specific terms, expectations can be seen as a belief in future performance of the product or service. This is actually based on customers' belief probabilities of the service performance and it reflects customers' desires and wants. Service quality can thus be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs.

According to Parasuraman et al. (1985), examination of early literatures on services suggests three basic underlying themes:

- Service quality is harder for the consumer to evaluate than goods quality.
- Service quality perceptions result from comparison of customer expectations and actual service performance and quality evaluation are not made solely on the out-come of a service.
- Service quality also involves evaluations of the process of service delivery.

In a review on similarities and differences between service and manufacturing industries in quality efforts, Gummesson (1992) expresses about two common biases exist today. While manufacturing people think that service quality can be handled the same way as goods quality, service people think that service quality is more difficult to assess than goods quality and that goods quality is no problem as everything is tangible and measurable. Essentially, it is true that service performance is not as easy to measure as in manufacturing. But this reason did not prevent quality efforts from being taken; service quality has been studied by many researchers since the early 1970s. Even though there are many measurement concepts of perceived service quality, the researches of Parasuraman et al. (1985, 1988) in SERVQUAL can be traced.

SERVQUAL provides a technology for measuring and managing service quality. The SERVQUAL instrument and its adaptations have been used for measuring service quality in many proprietary and published studies. Many researchers have studied SERVQUAL to evaluate service quality of several sectors (Brady, Cronin, & Brand, 2002; Caro & Garcı'a, 2008; Coulthard, 2004; Cronin &

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات