

## Service Quality in Private Hospitals in Turkey\*

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**Abstract.** As it is known, following health reforms realized in Turkey over the course of last several years the patients, who have social security, have started to benefit from private hospitals. How they are satisfied from the services given by private hospitals thus becomes an important issue. It is evident that more than half of private hospitals along the country are found in Istanbul. This leads, eventually, to a high level of competition among private hospitals in the level of Istanbul. It is a matter of fact that the customer satisfaction plays important role in the competition among private hospitals more than ever before in this city. Considering that reality this study emphasizes on the consumer satisfaction in the private hospitals found in Istanbul. Based upon a survey this study uses a dynamic model in determining the quality of hospital and the consumer satisfaction.

**JEL Classification Codes:** I10, I11.

**Keywords:** Patient satisfaction, service quality, private hospital, public hospital, Turkey.

### 1. Introduction

This study analyses a dynamic model of service performance and service quality in private hospitals in Turkey. After reviewing the relevant literature on service quality, we will use a dynamic model and then will analyse data generated from an empirical study. The study includes the findings, policy implications and suggestions for future research.

As it is well known, quality is accepted as being an important factor that determines the demand of goods and services as well as a main indicator that affects the competitive advantage of firms (Fitzsimmons & Fitzsimmons, 1994). There is a rich collection of research literature on service performance and service quality. The term of quality in the service

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sector seems to be different from the term in the goods market. Since the production in the service sector is generally an abstract term, evaluating service quality becomes more difficult than evaluating the quality of goods. Therefore, service quality measurements are, in general, made by means of using consumers' (patients) perception about the quality of the services.

Consumer's perception is the main indicator of quality in health care service (O'Connor, Shewchuk & Carney, 1994; Cronin & Taylor, 1992). According to some researchers, although true level of service quality can be quite low (or high) the main key is how consumers perceive the quality of service and the efficiency of the health care (Petersen 1988). Most of the researchers on that issue believe that there is a relationship between the perception of the consumers on the quality of the services and their satisfaction (Cronin & Taylor, 1994; McAlexander, Kaldenberg & Koenig, 1994).

Consumer satisfaction appears to be a major device in order to take critical decisions in the health care services (Gilbert, Lumpkin & Dant, 1992). Therefore, service providers, as a matter of fact, take the satisfaction of customers into account as a main goal of the strategies of their firms (Zeithaml & Bitner, 2000). There are many studies on measuring service quality in the health care sector that use satisfaction of consumers.<sup>1</sup> Service quality studies are mainly based on the satisfaction of patients or their judgment about service quality (Babakus & Mangold, 1992; Carman, 1990; Parasuraman, Zeithaml, & Berry, 1985; Parasuraman, Zeithaml, & Berry, 1988; Zeithaml, Berry, & Parasuraman, 1993; Reidenbach & Sandifer-Smallwood, 1990).<sup>2</sup>

Most of the service sectors consider that works quality is explained by perception and expectation. These studies usually use Parasuraman's SERVQUAL scale to measure service quality or consumers' overall satisfaction.<sup>3</sup> According to this scale, quality defines a gap between perceived expectations (E) and performance (P) and if the performance exceeds expectations the consumer will attain more satisfaction. (Kopalle &

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1. In the literature, *patient satisfaction* and *patient perception* are, usually, used synonymously.

2. For a detailed discussion on this issue see (Zeithaml, 1988; Boulding et al. 1999; Johnson et al. 1999).

3. Parasuraman and others developed PERVQUAL in 1988 and Parasuraman and others refined later in 1993.

Lehman, 2001). These expectations are based on one's own and others' experiences. Most service sector literature focus upon the static models (Parasuraman, Zeitham & Berry, 1985, 1988, 1993; Babakus & Mangold, 1992; Cronin & Taylor, 1992, 1994; Boulding, Kalra & Stealing 1993; Johnson & Ferstl, 1999). However, one needs to remember that there are also some researchers who work with a dynamic framework as well (Kopalle & Lehman 2001; Kara, Tarım & Zaim, 2003).

We have some studies on the quality of the public health care sector in Turkey. It has been observed, through these studies, that the quality of the public health care sector is quite low and inadequate. Patients are dissatisfied with the level of service provided in the public hospitals (Kara, Tarım & Zaim, 2003; Dursun & Çerçi, 2004). The main reasons behind this might be such factors as overcrowding, and the lack of adequate manpower and equipment. At this point, private hospitals seem to be the alternative which is able to increase the satisfaction of consumers in Turkey.<sup>4</sup>

Indeed, over the course of last decades, comparable to other OECD countries, private healthcare has been increasing in Turkey. The number of private hospitals is in a tremendously increasing trend. While the number of private hospitals was 80 in 1980 it increased to 268 in 2005.<sup>5</sup> Economic liberalization of the country after the 1980s and incentives provided in this process stand as the major reason behind this increase (Savaş, 2002: 21). Also negative perception and belief found among Turkish consumers about the service quality of public hospitals seem to be another factor directing consumers to the private hospitals (Savaş, 2002; Kara, Tarım & Zaim, 2003). Private hospitals, in Turkey, have obtained their revenues from mainly three sources. These are out-of-pocket payments, government contracts and private insurance (Berman & Tatar, 2004).<sup>6</sup> Before July 2003 patients purchased these private care services by out-of-pocket payments only.<sup>7</sup> But after that, a great number of patients, in Turkey, who have social security under such organizations as Government Employee Retirement and Blue-Collar Public Sector Employee started to receive health services from private

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4. This is, indeed, similar to other developing countries. See Andaleeb (2001).

5. Nearly half of these hospitals (123) are located in Istanbul.

6. It is accepted that the level of pocket payments for health care is underestimated due to lack of National Health Account.

7. As a result patients who purchased the private health service paid double the amount for their healthcare.

hospitals.<sup>8</sup> Turkish government decided to make some new arrangements in order to decrease the costs of the contracts made between Ministry of Health and private hospitals in 2006. After these arrangements the share deferred to patients in the cost of care service has increased.

Despite some improvements allowing the purchase of private care services there are still fundamental problems in private health care services. In Turkey, the government always controls the private hospitals in respect of the quality of services and prices within the framework of contracts. But still it is believed that there are fundamental questions about quality, price and outcomes in private hospitals.

This study analyses the quality of private hospitals with respect to the services they give and the satisfaction of their consumers. By doing this the study will provide us the basis to understand and assess if the claim about fundamental questions with the quality, pricing and outcomes of private hospitals is accurate or not.

## 2. The Model

I will use a version of the model developed by Kara (2000). The basic feature of this model is as follows: Consider a service sector where a typical supplier provides a service, say  $x$ , to the customers. Let  $P_t$  be the *service quality* at time  $t$ , the measurement of which is based on a questionnaire given in Appendix A. Let  $R_t^p$  be the *repurchase intention* in the sector, which indicates the degree to which customers are willing to repurchase the service at time  $t$ .  $R_t^p$  depends on the relative price,  $P_t^r$ , of the service (i.e., the price relative to those of similar providers) at time  $t$ , the customers' income,  $M_t$ , at time  $t$ , and the *service quality*,  $Q_t$ , at time  $t$ ,

$$\text{i.e., } R_t^p = f(P_t^r, M_t, Q_t),$$

Let  $R_t^s$  be the suppliers' *resale intention* in the sector, which indicates the degree to which suppliers are willing to "re-supply" the service

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8. In 2003 the health transformation programme was put into practice in order to improve national partnership between state hospitals and private hospitals. The basic goal of this program was to transform the Turkish health sector from monopoly to a competitive market. This was done also to harmonize Turkish health sector in accordance with the EU framework.

at time  $t$ . Suppose that  $R_t^s$  depends on the *performance-based service quality*,  $Q_t$  and  $Q_{t-1}$ , at time  $t$  and  $t-1$ , and the relative price of the service,  $P_t^r$

$$\text{i.e., } R_t^s = g(Q_t, Q_{t-1}, P_t^r)$$

The service quality is a by-product of service performance, which is, in turn, based on a number of physical and human factors, their productivities and costs (Kara, 2000).

For analytical purposes, we will assume that the repurchase and resale intentions have the following forms:

$$\ln R_t^p = \alpha_0 + \alpha_1 \ln Q_t + \alpha_2 \ln M_t + \alpha_1 \ln P_t^r$$

and

$$\ln R_t^s = \beta_0 + \beta_1 \ln Q_t + \beta_2 \ln Q_{t-1} + \beta_3 \ln P_t^r$$

To theorize about the movements over time (i.e., the dynamic trajectory) of service quality, we will make the following reasonable assumption, which is compatible with the logic of the market process: It is the relative strength (or magnitude) of the repurchase intention compared to the resale intention that provides the impetus for the quality to be adjusted upwards over time.

Formally,

$$Q_{t+1} / Q_t = (R_t^p / R_t^s)^k, \text{ where } k \text{ is the coefficient of adjustment.}$$

Taking the logarithmic transformation of both sides, we get:

$$\ln Q_{t+1} = \ln Q_t + k (\ln R_t^p - \ln R_t^s).$$

We will call this the dynamic adjustment equation. Substituting the functional expressions (forms) for  $\ln R_t^p$  and  $\ln R_t^s$  specified above, setting the values of income and relative price to their average values  $M^{avr}$  and  $P^{avr}$  respectively, and rearranging the terms in the equation, we get,

$$\ln Q_{t+1} + (k\beta_1 - k\alpha_1 - 1) \ln Q_t + (k\beta_2) \ln Q_{t-1} = k[\alpha_0 - \beta_0 + \alpha_2 \ln M^{avr} + (\alpha_3 - \beta_3) \ln P^{avr}]$$

which is a second order difference equation, the solution of which is provided in Kara (2000).

The solution in question shows that the intertemporal equilibrium quality,  $Q^*$ , is:

$$Q^* = e^{[\alpha_0 - \beta_0 + \alpha_2 \ln Mavr + (\alpha_3 - \beta_3) \ln Pravr] / [(\beta_1 + \beta_2) - \alpha_1]} .$$

To determine the empirical value of the intertemporal equilibrium quality in the context of our case study, we need to empirically estimate the parameters of the model. This is done in the following section.

### 3. Empirical Analysis

The original Parasuraman's SERVQUAL method consists of mainly five dimensions and it has 22 statements with a seven-point Likert scale ranging from 1 (strongly agree) to 7 (strongly disagree).<sup>9</sup> Carman (1990), Cronin and Taylor adopted the SERVQUAL scale for the health care sector and they deleted some statement and added some new statements to the original SERVQUAL scale. We use the new version of the SERVQUAL scale having 34 statements and consisting of following dimensions: Tangibility (physical facilities, equipment and appearance of personnel), assurance (courtesy and knowledge of staff and their ability to inspire trust and confidence), responsiveness (willingness to help customers and provide prompt services), reliability (ability to perform the expected service dependably and accurately), and empathy (caring, individualized attention provided to customers). At the end of the scale there are three general questions on overall satisfaction and on the willingness of patients to repurchase the service from the same hospital and to recommend it to others.

The sample is based upon 100 randomly selected patients from 4 private hospitals (B category hospitals) in Istanbul. There are no gender and age variables in the questionnaire. Patients were invited to participate in the study before hospital discharge. Patients hospitalized at the specific ward for at least 3 days and who were mentally stable and capable of verbal communication were approached for consent. Upon agreement, they were provided an information and consent form. They were assured of the confidentiality of the information collected.

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9. Some researchers use a five-point Likert scale, to prevent reluctance of respondents and to encourage the participation of the respondents.

**a) Estimation of the parameters:** To estimate the parameters in the model, we collected data on relative prices, incomes and quality in a subset of the private health care institutions in Turkey, and estimated the following equations:

$$\ln R_t^p = \alpha_0 + \alpha_1 \ln Q_t + \alpha_2 \ln M_t + \alpha_3 \ln P_t^r + u_t$$

and

$$\ln R_t^s = \beta_0 + \beta_1 \ln Q_t + \beta_2 \ln Q_{t-1} + \beta_3 \ln P_t^r + v_t$$

where  $u_t$  and  $v_t$  are disturbance terms. Two points, noted for a particular case in Kara (2000), are also relevant to the empirical case under examination: (1) Since the prices of services provided by similar suppliers are close to one another,  $P_t^r$  is close to 1, and hence  $\ln P_t^r$  is close to zero, and as such it could be conveniently left out of the analysis, (2) Since the minimal values of the independent variable in the equations induce minimal repurchase intention and resale intention,  $\alpha_0 = 0$  and  $\beta_0 = 0$ . The regression results are as follows:

a. Repurchase Intention:

$$\ln R_t^p = 0.881 \ln Q_t + 0.159 \ln M_t$$

(8.079)                      (1.108)

$R^2 = 0.92$ . t-statistics are given in parentheses. Thus,

$$\alpha_1 = 0.881$$

$$\alpha_2 = 0.159.$$

**b. Resale Intention:** Following the structure of the model, officials of selected hospitals are asked questions, the answers of which are designed to give the values of the elasticities of resale intention with respect to the present and past quality. The elasticities are as follows:

$$\beta_1 = 0.75$$

$$\beta_2 = 0.25.$$

Given the values of the parameters above, and using the results of our calculations yielding a particular value for the coefficient of adjustment,

which is roughly equal to 1, we can now determine the value of intertemporal equilibrium quality, which is;

$$Q^* = 4.29.$$

It is slightly above the mediocre level of quality.

There are a number of policy options that could increase the intertemporal quality. To calculate the effects of one such policy suggested by Kara (2006), suppose that, through competition-enhancing measures increasing the health care options, the elasticity of repurchase intention with respect to quality has increased by 1 %. Such an increase in the elasticity in question will increase the intertemporal equilibrium quality from 4.29 to 4.8.

#### **4. Conclusion**

It seems that patients prefer private hospitals due to their belief that private hospitals provide qualitative health service in Turkey.<sup>10</sup> But this does not mean that they encounter sufficient services. On the contrary, a large number of patients complain about services given by private hospitals. The complaints are mainly about the length of the time that they wait for treatment and the consultation time given to them. It seems that the consultation time per each patient has decreased from 30 minutes to 10 minutes. The lack of physical and human capacities of these hospitals seems to be the main reasons behind the quality of their service.

Despite these problems in private health care services the demand for private health care service is expected to increase, especially after the Social Security and General Health Insurance Law.

As a result, this study indicates that satisfaction of the patients seem to be the most important factor for the private health care providers. As we know patients have alternative hospital choices. If they are not satisfied with one they can easily choose another provider. Therefore, we can say that there will be strong competition among private hospitals. In order to succeed in this competition private health care provider should take the opinion of their customers into account. Otherwise they will not be able to keep their existing patients and to recruit new patients.

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10. According to Kara, Tarım and Zaim (2003) the patient satisfaction level in public hospitals is very low (2.61).

**APPENDIX A: Factors and Scele Items*****Expectation (E<sub>t</sub>)***Tangibility:

1. They should have up to date equipment& technology.
2. Their physical facilities should be visually appealing.
3. Bathroom should be very clean.
4. Room should be clean.
5. Meals should be attractive.
6. Food should have right temperature.
7. Nurses should respect privacy.
8. Room should be quiet.
9. Parking should be convenient.

Assurance:

10. Food should be delivered by a certain time.
11. When staff of the institutions promise to do something by a certain time, they should do it.
12. They should keep patients' records accurately.
13. Hospital charges should be accurate

Responsiveness:

14. They should be expected to tell their customer exactly when services will be performed.
15. Patients who will be discharged should expect prompt service from employees of the hospital for the discharging operations.
16. Patients should expect prompt services from nurses when the patient needs to them.
17. Patients who come to hospital should expect prompt service from employees of the hospital for the admission operation.
18. Employees of the hospital should always be willing to help their patients.
19. Employee of the hospital should address customers' questions appropriately about the discharging process.
20. Employee of the hospital should address customers' questions appropriately about any procedure.
21. Treatment should be explained to the patient very clearly.
22. Discharge should be explained to the patients' family.

Reliability:

23. Customer should be able to trust nurses of the hospital.
24. Patient should be positive that they have recovered well before they are discharged.
25. Patient should be able to trust billing.
26. Patients should be able to feel safe in their transactions with these institutions' employees.
27. Patients should be able to feel safe that nurses are knowledgeable.

Courtesy:

28. Employees should be polite during admissions procedure.
29. Employees should be polite during housekeeping process.
30. Nurses' behaviour should be very polite to customers.
31. Nurses should be cheerful.
32. Visitors should be treated well.

Empathy:

33. Patients should expect employees to know what they need from them.
34. Patients should expect nurses to give them their personal attention.

***Performance (Pt)***Tangibility:

1. .... Hospital has up to date equipment& technology.
2. Physical facilities in .... Hospital are visually appealing.
3. Bathrooms are very clean in ..... Hospital.
4. Rooms of the .... Hospital are very clean.
5. Meals are attractive in ..... Hospital.
6. Food has right temperature in ... Hospital.
7. Nurses of the .... Hospital respect privacy.
8. Rooms are quiet in .... Hospital.
9. Parking is convenient in ..... Hospital.

Assurance:

10. Food are delivered by a certain time in ..... Hospital
11. When staff of the ... Hospital promise to do something by a certain time, they do it.
12. They keep patients' records accurately in ..... Hospital.
13. Hospital charges are accurate in . ..... Hospital

Responsiveness:

14. They tell their customer exactly when services will be performed.
15. Patients who will be discharged have prompt service from employees of the ..... Hospital for the discharging operations.
16. Patients are delivered prompt services by nurses when it is needed.
17. Patients who come to hospital get prompt service from employees of .... Hospital for the admission operation.
18. Employees of .... Hospital are always willing to help their patients.
19. Employees of ... Hospital answer customers' questions appropriately about the discharging process.
20. Employees of ... Hospital answer customers' questions appropriately about any procedure.
21. Treatment is explained to the patient very clearly in .... Hospital.
22. Discharging process is explained to the patients' family.

Reliability:

23. Customers trust nurses of ..... Hospital.
24. Patients are sure that they have recovered well before they are discharged.
25. Patients trust the billing in .... Hospital.
26. Patients can feel safe in their transactions with ... Hospitals' employees.
27. Patients can feel safe that nurses of .... Hospital are knowledgeable.

Courtesy:

28. Employees of ... Hospital are polite during admissions procedure.
29. Employees of ... Hospital are polite during housekeeping process.
30. Nurses' behave politely to customers.
31. Nurses are cheerful.
32. Visitors are treated well in ... Hospital.

Empathy:

33. Employees of ... Hospital know what the needs of their patients are.
34. Nurses of ... Hospital give personal attention to their patients.

**Other Measurements:**

1.  $R_t^p$ : the degree to which you would be willing to repurchase the service next year)

1                    2                    3                    4                    5                    6                    7

2.  $R_t^s$ : The degree to which the supplier would be willing to re-provide the service next year (question to the supplier).

1                    2                    3                    4                    5                    6                    7

3.  $S_t$ : My feelings towards ... Hospitals' services can be best described

1                    2                    3                    4                    5                    6                    7

4.  $Q_t$ : The overall quality of ... Hospital

1                    2                    3                    4                    5                    6                    7

5. The price of the service relative to other private hospitals (1: very low,...7: very high)

1                    2                    3                    4                    5                    6                    7

6. The price of the service relative to public hospitals (1: very low,...7: very high)

1                    2                    3                    4                    5                    6                    7

7. Customer's income

1: 0YTL-999YTL

2: 1000YTL-1999YTL

3: 2000YTL-2999YTL

4: 3000YTL-3999YTL

5: 4000YTL-4999YTL

6: 5000YTL-5999YTL

7: 6000YTL-above

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