

## Chapter 7

# Evaluating the Dimensions of Web-Based Software System Service Quality: An Empirical Study

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### ABSTRACT

*The purpose of this study is to evaluate Web-based service quality. First related literature is reviewed and then a survey is conducted to measure Web-based service quality which is provided by a Turkish firm. Study results have indicated six Web-based service quality dimensions; information quality, responsiveness, Web assistance, tangibles, empathy, and call-back. Average values of information quality and responsiveness dimensions are highest indicating that these are valued highly by respondents in determining the software firm's service quality. Also, average values of all dimensions being greater than 3, indicates that respondents evaluated service quality as good. Dimensions do not predict overall service quality, indicating that respondents independently evaluate each dimension and the overall service quality. Overall service quality and dimensions are found as distinct constructs and overall quality affected user satisfaction.*

### INTRODUCTION

Today, the percentage of service sector in national income is not very high in developing countries as in the developed ones. Service sector is relatively

labor intensive and investment cost is less. In addition, service sector productivity is low while cost and price are high.

Quality became a very powerful tool of competition for the firms in today's world (Smith 1995). While goods quality is tangible, service quality is

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abstract (Hoffman and Bateson, 1997). Because of the distinctive properties of service, customer perception quality is important for firms in addition to presented quality. Perceived service quality is viewed as the degree and direction of discrepancy between consumers' perceptions and expectations (Parasuraman, et al., 1988).

Information technology had significant effect on producing and delivering services. Using information technology some of the service characteristics were changed. The changes in information technology progressed from traditional business computing to mobile and pervasive computing (Okunoye, 2004).

**Web-based services** as well as Web-based service quality have gained a great importance in recent years. Web-based services have many properties such as to establish firm images, inform customers, provide interaction with customers, distributed service, effective and efficient online communication (Waite, 2006). These properties may be strategic tools to increase competitive power and become necessity for most of Web-based services. Therefore, beyond presenting high quality service upon competitors, higher level quality service should be provided to satisfy customers and increase the perceived service quality level which will bring in measuring perceived Web-based service quality, and accordingly to result correction and betterment on quality.

There is discrepancy between measuring **Web-based service quality** and traditional service quality. According to Tan, et al. (2003) such differences are Web-based service reach broad crew less cost, discrepancy of customer and customer profile is different. Kuo et al. (2005) study points out two differences between traditional service and Web-based services. Web-based service being more efficient than traditional one, and Web-based service customers are not passive. Li et al. (2002) study also mentions two differences between traditional service and Web-based services. First is the communication between service and customer being two ways and, second is Web-based

services no physical interaction so that non tangibles dimensions are more important.

The objectives of this study are (1) to determine Web-based service quality dimensions, and (2) to evaluate relationship between dimensions and overall service quality, and (3) to evaluate relationship between overall service quality and satisfaction. For this purpose; first, related literature is reviewed, second, a model developed (See Figure 1), and then the methodology applied.

## **BACKGROUND**

Parasuraman, Zeithaml, and Berry (1985), review the definitions of the service quality before defining servqual. New definition of service quality which is directed to consumer contains many of service quality definitions and also the source of their model.

Servqual which is developed by Parasuraman et al. (1988), for measuring service quality concentrates on perceived quality. Perceived quality refers to a consumer's judgment about a product's overall excellence (Zeithaml, 1987). Through research conducted with focus groups, the researchers asked about the characteristics a service provider should have in order to have high quality. They found out that consistently all of the members of the focus group had similar criteria. With these findings, they created 10 quality dimensions. Researchers found that some of these 10 dimensions overlapped and customers could only distinguish 5 dimensions. These dimensions are tangibles, reliability, responsiveness, assurance and empathy (Parasuraman et al., 1988).

**Web-based service** is different from the traditional one and this also results in some differences in dimensions. There has been considerable confusion in defining and interpreting service quality for Web-based services. The main reason is because there are various types of Web-based services, such as e-commerce, Web portals and

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