Transportation Research Part E 45 (2009) 222–237

Contents lists available at ScienceDirect

Transportation Research Part E

journal homepage: www.elsevier.com/locate/tre

Service quality gaps of business customers in the shipping industry

Kee-Kuo Chen [a,*], Ching-Ter Chang [b,1], Cheng-Sheng Lai [a,2]

[a] Department of Shipping and Transportation Management, National Taiwan Ocean University, 2 Pei-Ning Road, Keelung 202, Taiwan, ROC
[b] Department of Information Management, Changhua 500, National Changhua University of Education, 1 Jin-de Road, Changhua, Taiwan, ROC

ARTICLE INFO

Article history:
Received 1 August 2007
Received in revised form 12 December 2007
Accepted 28 February 2008

Keywords:
Service quality
SERVQUAL
CFA
MANOVA

ABSTRACT

This paper extends the gaps model of [Zeithaml, V.A., Parasuraman, A., Berry, L. 1990. Delivering Quality Service: Balancing Customer Perceptions and Expectation. The Free Press, New York] from the service provider to the business customer side by examining two service quality (SQ) gaps. One is the SQ gap between types of business customers and the other is the SQ gap among employee statuses of business customers. Besides that, the five-factor SERVQUAL measure as the initial hypothesized model is also tested. The applicability of SERVQUAL to measuring the perceived SQ of customers in the shipping industry of Taiwan is rejected empirically. The existence of the two hypothesized gaps is verified by the method of MANOVA.

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1. Introduction

The "gaps model" of service quality (SQ) that views services in a structured, integrated way was developed by Zeithaml et al. (1990). They asserted that closing the gap between what customers expect and what they perceive is critical to delivering quality service. As seen, their model emphasizes the provider gaps occurring within the organization that provides the services. However, the gaps model is too simple to describe the SQ perceived by business customers. We believe that there exist SQ gaps between types of business customers and among employee statuses of business customers. This article will examine these two gaps with a sample of customers from an international line shipping company of Taiwan.

The inference reliability of an empirical research will not be accepted without using a scale that has been validated academically. SERVQUAL is designed to measure service quality perceived by the respondents. The basic model was that consumer perceptions of quality emerge from the gap between performance (perception) and expectations. When performance exceeds expectations, quality increases; on the other hand, when performance falls short of expectations, quality decreases. Thus, performance-to-expectation "gaps" on attributes that consumers use to evaluate the quality of a service form the theoretical foundation of SERVQUAL. Using factor analysis of several applications of the scale, Parasuraman et al. (1985, 1988, 1991, 1994) identified that the SERVQUAL scale has five perceptual dimensions, namely (1) tangibles, (2) reliability, (3) responsiveness, (4) assurance, and (5) empathy. The psychometric properties of SERVQUAL have been examined in many researches, however, the results have been mixed in the industrial setting (Brady et al., 2002; Cronin and Taylor, 1992; Durvasula et al., 1999; Teas, 1993). The need of further investigations for the validity of SERVQUAL has been called for by researchers (Durvasula et al., 1999). As a response to this, SERVQUAL will be used as the measurement scale in the current study. That is, we considered the five-factor SERVQUAL measure as the initial hypothesized model to be tested. The main

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[*] Corresponding author. Tel.: +886 2 24622192x3437; fax: +886 2 24631903.
E-mail addresses: kkchen@mail.ntou.edu.tw (K.-K. Chen), chingter@cc.ncue.edu.tw (C.-T. Chang), cclai@mail.moj.gov.tw (C.-S. Lai).
[1] Tel.: +886 4 7232105.
[2] Tel.: +886 2 24622192x3402.

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doi:10.1016/j.tre.2008.02.005

advantage of the scale is that it can assess the SQ along each of the service items and of the dimensions (Zeithaml et al., 2006) if the validity of the application can be verified empirically.

The first objective of this paper is to test the validity of applying the SERVQUAL to the shipping industry of Taiwan using confirmatory factor analysis (CFA). The second objective is to examine the hypothesized gaps using the method of factor structure invariance if the application of SERVQUAL to the shipping industry of Taiwan has been validated; otherwise the two gaps will be tested using multivariate analysis of variance (MANOVA). MANOVA will test the differences of the perceived SQ item by item.

The rest of the paper is organized as follows. The SERVQUAL scale and the gaps model are described briefly in Section 2. The two gaps of business customers will be explained in Section 3. The methodology is demonstrated in Section 4. Section 5 presents the empirical results. Discussion of the findings and the implications for the management and future research are detailed in Section 6. The final section contains the conclusion.

2. SERVQUAL and gaps model

The literature is very rich in terms of definition, dimensions, models and measurement issues in service quality (Asubonteng et al., 1996; Bitner et al., 1990; Dabholkar et al., 2000; Parasuraman et al., 1985, 1988, 1994), supported by a number of empirical studies from a variety of service-related application areas (Badri et al., 2005; Davis and Mentzer, 2006; Mohsin, 2005; Nadiri and Hussain, 2005; Peiro et al., 2005; Rohini and Mahadevappa, 2006; Seth et al., 2006). Some of the contemporary definitions of service quality from the literature were given in Seth et al. (2006). Among them, the SERVQUAL scale (Parasuraman et al., 1988, 1991, 1994) is designed to measure service quality perceived by the respondents from five different service categories: retail banking, long-distance telephone, securities brokerage, appliance repair and maintenance firm, and credit cards. In their original formulation, Parasuraman et al. (1985) identified 10 components of SQ from 97 service items. Subsequent empirical work involved exploratory research of these 10 components, which were collapsed into five dimensions: reliability, responsiveness, assurance, empathy and tangibles. These five dimensions along 22 service items yielded the SERVQUAL scale for measuring SQ (Parasuraman et al., 1988). While the SERVQUAL scale has been revised, refined and reformed, its primary content has remained unaltered (Parasuraman et al., 1991, 1994).

Many previous works on service quality have been developed around the SERVQUAL model (Davis and Mentzer, 2006; Johnston and Clark, 2001; Nadiri and Hussain, 2005; Parasuraman et al., 1988; Peiro et al., 2005). A detailed survey of the literature on the applications of SERVQUAL can be found in Badri et al. (2005). Unfortunately, the conceptualization and measurement of service quality using SERVQUAL are not bereft of controversy. The instrument's psychometric properties have been seriously questioned in many contexts (Asubonteng et al., 1996; Buttle, 1996; Durvasula et al., 1999; Gounaris, 2005; Badri et al., 2005). Cronin and Taylor (1992) argued for "Performance only" measurement of service quality and proposed a service quality measurement tool called SERVPERF. Teas (1993) addressed the measurement of expectations and presented the Normed Quality and Evaluated Performance model. Durvasula et al. (1999) found that the psychometric properties of the SERVPERF scores had better prediction ability than the SERVQUAL gap scores in the ocean freight services environment.

Despite the criticisms, Parasuraman et al. (1991, 1994) contended that the SERVQUAL scale using the expectation/performance gaps method is a much richer approach to measuring service quality. For developing the SERVQUAL scale, Zeithaml et al. (1990) proposed the "gaps model" of SQ viewing services in a structured, integrated way at the same time. The gaps model suggests that to understand and improve the SQ delivered by the company, the managers have to close the four provider gaps (see Fig. 2). However, the gaps model did not discuss the possible distinctions of SQ perceptions among business customers. The number and composition of service quality dimensions are likely to be dependent on how complicated the service settings are. The complexity of business customers having different objectives or of employees with different statuses will cause the SQ gap between types of business customers and among employee statuses of business customers. Extant research on business-to-business SQ had not mentioned these possible issues either (Carr, 2002; Durvasula et al., 1999; Gounaris, 2005). By attempting to examine the two hypothesized gaps, this article will extend the provider gaps in the model of Zeithaml et al. to the gaps of business customers.

3. SQ gap of business customers

3.1. SQ gap between types of business customers

A line company usually has two kinds of business customers – shippers and forwarders. There are at least two reasons that will make the perceived SQ of the shippers and the forwarders towards a line company different. On the one hand, although both the shippers and forwarders have business with the line companies, their motivations are different. Shippers require line company services for cargo delivery. Instead of contracting and booking the container berth directly with a line, shippers can employ a forwarder as their agents to take care of cargo delivery as shown in Fig. 1. Whether a shipper contacts directly a line or employs a forwarder as agent depends on the freight charges the shipper has to pay and the SQ the shipper perceived. Forwarders act as agents for the shippers to contract container berths with the lines for their own profit. The container handling and related services are still performed by the lines. In order to earn profit and reputation, the forwarders often ask the lines to provide extra services to their shipper customers. For example, the forwarders may sometimes ask

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