ELSEVIER

Journal of Retailing 87 (2, 2011) 194–206

Journal of Retailing

Assessing the Self-service Technology Encounters: Development and Validation of SSTQUAL Scale

Jiun-Sheng Chris Lin[a,*], Pei-Ling Hsieh[b]

[a] Department of International Business, National Taiwan University, 1, Sec. 4, Roosevelt Rd., Taipei 10617, Taiwan
[b] Department of Marketing Management, Takming University of Science and Technology, 56, Sec. 1, Huanshan Rd., Taipei 11451, Taiwan

Abstract

Self-service technologies (SSTs) have enhanced the role technology plays in customer interactions with firms, yet instruments that systematically measure the service quality of SSTs from the perspective of customers remain underdeveloped. Based on psychometric scale development approaches, this study conceptualized, constructed, refined, and tested a multiple-item scale that examined key factors influencing SST service quality. Through qualitative and quantitative studies in four separate phases, a 20-item seven-dimension SSTQUAL scale was developed that includes functionality, enjoyment, security, assurance, design, convenience, and customization. The scale demonstrates sound psychometric properties based on findings from various reliability and validity tests as well as vigorous scale replications across industries and consumer traits using several different samples. The utility of the proposed scale is discussed for implications, limitations and future research.

© 2011 New York University. Published by Elsevier Inc. All rights reserved.

Keywords: Self-service technology; Service quality; Scale development; Validation

Introduction

Consumers' experiences with service firms range from full service delivered by service personnel to self-service co-produced by customers. Rising labor costs have encouraged companies to explore more self-service options that allow customers to perform services for themselves. Information technology advancement has further enhanced self-service delivery and revolutionized the service landscape, allowing companies to use a variety of self-service technologies (SSTs) that increase customer participation. From bank transactions to supermarket self-checkouts, service providers are now employing a wide range of SSTs that engage customers in service co-production electronically in lieu of interaction with service employees.

SSTs are "technological interfaces that enable customers to produce a service independent of direct service employee involvement" (Meuter et al. 2000, p. 50). The types of SSTs currently employed by firms include kiosks, Internet, interactive voice response, and mobile services (Castro, Atkinson, and Ezell 2010; Meuter et al. 2000; NCR 2008, 2009). As consumers have grown more comfortable using technology in recent years, the demand for SSTs has risen tremendously (NCR 2009). Prior research indicates that, through customer involvement in service co-production, SSTs can lower labor costs, enhance efficiency, improve productivity, and increase corporate performance (Bitner, Zeithaml, and Gremler 2010; Dabholkar 1996). Customers enjoy services with increased independence and freedom from time/space constraints through more channels (Meuter et al. 2000; Oliver, Livermore, and Farag 2009). Within the context of technological innovation, such customer co-production and value co-creation through SSTs are expected to become a key criterion for long-term business success (Bolton, Grewal, and Levy 2007).

With the growth of multi-channel marketing (Grewal and Levy 2009), companies are providing a combination of SST channels for seamless customer service delivery (NCR 2008, 2009; Retail Merchandiser 2009). For example, airline customers can reserve and pay for tickets online, check-in through the Internet or mobile phones, pick up boarding passes at airport kiosks, and receive flight updates on mobile devices. Banks offer services through Internet, interactive phone systems, ATMs, and mobile channels. Healthcare providers enable patients to schedule appointments and fill out paper work online, check in and validate insurance information via portable tablets in the doctor's office, and receive information via mobile devices. Consumers have valued the ability of service providers to offer

---

[*] Corresponding author. Tel.: +886 2 3366 9732; fax: +886 2 3366 9732.
E-mail address: jlin@management.ntu.edu.tw (J.-S.C. Lin).

0022-4359/$ – see front matter © 2011 New York University. Published by Elsevier Inc. All rights reserved.
doi:10.1016/j.jretai.2011.02.006

multiple SST channels for anywhere/anytime convenience (NCR 2008). Nevertheless, existing technology-based service quality measurement research is limited solely to the Internet. Instruments that systematically measure service quality of SSTs as a whole still remain underdeveloped (Verhoef et al. 2009). As the integrated SSTs differ in the mode of communication from traditional human-interaction-based and virtual-Internet-based services (Hoffman 2003; Murphy 2008; Sousa and Voss 2006), a strong need, therefore, exists for both researchers and practitioners to examine customer expectations of SST service quality in the emerging context. This study aims to fill this important research gap by developing a psychometrically sound instrument, SSTQUAL, for customer–technology interaction based service quality measurement across contexts. To enhance generalizability, we further replicated the scale across industries and consumer traits.

In the remainder of this paper, we first discuss theoretical background of technology-based service quality. Second, we present a qualitative investigation that produces an initial pool of scale items. Third, the scale is refined through substantive and empirical considerations, increasing confidence in the factor structure. Fourth, we present various reliability and validity tests as well as replications across industries and consumer traits with new samples. This article concludes with a discussion of the implications and applications of the scale.

Conceptual background

The role of SSTs in service delivery can be traced back to early research on self-service emphasizing the significant advantages of customer co-production (Chase 1978; Lovelock and Young 1979; Mills, Chase, and Margulies 1983). Customers take a participative role as co-producers, contribute to the process of service delivery, and become an important source in service production (Bitner, Zeithaml, and Gremler 2010). Self-service delivery has been enhanced by technology, namely SSTs (Meuter et al. 2000), empowering customers to co-produce services and co-create value electronically (Bitner, Zeithaml, and Gremler 2010). While the seamless integration of multiple SSTs becomes a major trend in service delivery (NCR 2009), appropriate measurement of SST service quality remains underdeveloped. Although SERVQUAL (Parasuraman, Zeithaml, and Berry 1988) serves as a global template for service quality measurement in the customer–employee interaction context, research has indicated that the customer evaluation process of new technologies significantly differs from traditional customer–employee interactions (e.g., Parasuraman, Zeithaml, and Malhotra 2005). Given this new context, conventional measures of service quality need to be redeveloped in a customer–technology interaction context (Wolfinbarger and Gilly 2003). Currently, no instrument adequately captures the service quality of SSTs. A number of studies have empirically developed scales to measure service quality of Internet/website services, yet these measures are Internet specific (see Table 1), which is insufficient and inappropriate for the current trend toward integrated SSTs. The limited scope of application (website and online shopping) and the resulting context-specificity significantly reduce the utility and generalizability of these scales for SST contexts. Consequently, there is an urgent need to develop a scale that systematically and psychometrically measures the quality of SSTs, serving as a measurement foundation for customer–technology interaction based service settings, as SERVQUAL does for human interplay. Academic research in different fields has attempted to identify criteria customers use in evaluating technology-based services. On the basis of a synthesis of existing literature, these criteria are reviewed as follows.

Consumers are predisposed to technologies perceived as trouble-free (Davis 1989) and of low complexity (Stevenson, Bruner, and Kumar 2000). An easy-to-understand-and-operate service is attractive to customers (van Dolen, Dabholkar, and de Ruyter 2007), while enhancing commitment (Zeithaml, Parasuraman, and Malhotra 2002). Customers feel comfortable with technology that is easy to use, which in turn improves perceptions of SSTs (Kim and Stoel 2004). It is also true that customers expect SSTs to deliver services instantaneously and respond to inquiries promptly, reducing service time (Yang and Jun 2002). Accordingly, responsiveness is a critical issue for consumers using IT services (Parasuraman, Zeithaml, and Malhotra 2005). Quick service delivery and prompt response enhance customers' perceived service quality toward SSTs (Dabholkar 1996). On the other hand, new technological services often raise fears of malfunctions (Davis 1989). Thus, reliability, driven by the SSTs' correct functioning and accurate service delivery, has been cited as important in technology-based service quality (Wolfinbarger and Gilly 2003). When SSTs perform reliably, appraisal of service quality improves (Zeithaml, Parasuraman, and Malhotra 2002).

Intrinsic motivation plays a key role in technology usage (Montoya-Weiss, Voss, and Grewal 2003), indicating enjoyment is a crucial characteristic of IT service quality (Chen, Clifford, and Wells 2002). Such motivation enhances customer perceptions of service quality (Dabholkar 1996) through entertainment/pleasure as well as perceived control of the SST co-production experience (Auh et al. 2007; Bendapudi and Leone 2003). Similarly, state-of-the-art technology and design help to execute and fulfill a firm's promise to its customers (Licata, Weber, and Reed 1998). Attractive design and layout reflect the tangible aspects of SSTs (Zeithaml, Parasuraman, and Malhotra 2002), creating aesthetic and ergonomic values for customers and enhancing quality perceptions (Creusen and Schoormans 2005; Mathwick, Wagner, and Unni 2010; Schmidt, Liu, and Sridharan 2009; Windharto, Setiawan, and Prabowo 2008). Moreover, consumer decisions to use SSTs are often influenced by assurances (Kovar, Burke, and Kovar 2000) derived from firm reputation and competence (Trocchia and Janda 2003). Such confidence and trust in a firm has been found to be a major driver of SST evaluation (Kim and Stoel 2004).

Customers value issues that speak to their personal concerns when using SSTs. Security and privacy are considered critical to technology-based service evaluation (Parasuraman, Zeithaml, and Malhotra 2005), serving as an inhibitor to SST usage (Lee and Turban 2001). Perceptions of risk and uncertainty negatively impact customers' attitudes and evaluations of SSTs (Pan and

دریافت فوری ← **متن کامل مقاله**

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