Available online at www.sciencedirect.com
ScienceDirect
Expert Systems with Applications 32 (2007) 822–831
Expert Systems with Applications
www.elsevier.com/locate/eswa

The impact of network service performance on customer satisfaction and loyalty: High-speed internet service case in Korea

Kwang-Jae Kim [a,*], In-Jun Jeong [b], Jeong-Cheol Park [c], Young-Jun Park [b], Chan-Gyu Kim [d], Tae-Ho Kim [e]

[a] *Division of Mechanical and Industrial Engineering, Pohang University of Science and Technology, Pohang, Kyungbuk 790-784, Republic of Korea*
[b] *IT Services Research Division, Electronics and Telecommunications Research Institute, Daejeon 305-700, Republic of Korea*
[c] *Consulting Division, LG CNS, Seoul 100-768, Republic of Korea*
[d] *Customer Satisfaction Management Group, KMAC, Seoul 150-869, Republic of Korea*
[e] *Quality Management Office, KT Corp., Seongnam, Kyunggi 463-711, Republic of Korea*

Abstract

The high-speed internet service has achieved a remarkable increase in penetration in recent years. In order to survive in this competitive market, companies should continue to improve their service performance. The high level of service performance is believed to be an effective way to improve customer satisfaction and loyalty. This paper aims to identify the causal relationship among network performance, customer satisfaction, and customer loyalty in the high-speed internet service context. Using the data collected from 51 current users of a VDSL service in Korea, this paper derives two types of the causal relationship models, namely, cross-sectional model and longitudinal model. The modeling results are discussed from both descriptive and prescriptive perspectives.
© 2006 Elsevier Ltd. All rights reserved.

Keywords: Network performance; Customer satisfaction; Customer loyalty; High-speed internet service

1. Introduction

The high-speed internet service, based on the ADSL (asymmetric digital subscriber lines) or VDSL (very high-speed digital subscriber lines) technology, has achieved a remarkable increase in penetration in recent years. For example, in Korea, the number of subscribers in the service increased from 3 million (households) in October 2000 to 4 million in December 2000, and to 7.8 million in December 2001, and to 10 million in November 2002. However, after this point of time, the rate of increase has been significantly lowered. There was an increase of only one million subscribers in 2003 (Korea National Statistical Office, 2004). The number of subscribers at the end of 2004 is estimated to be 12 million (Ministry of Information & Communication, 2004). This figure indicates that almost eight in every ten households are now subscribed to the service, and that this market has already entered a near-saturation stage.

Until recently (say, until 2002), the companies in this market believed their competitiveness comes from a fast acquisition of new customers, a typical characteristic of new telecommunication services. However, as this market gets saturated, customer retention has become more critical than new customer acquisition. Consequently, the service performance level that was considered good enough in the past is no longer adequate. In order to survive in this competitive market, companies should continue to improve their service performance effectively. In the high-speed internet service industry, as in any other service industry, the high level of service performance is a differentiator in competition, and in fact, an effective way to improve customer satisfaction and loyalty.

* Corresponding author. Tel.: +82 54 279 2208; fax: +82 54 279 2870.
E-mail addresses: kjk@postech.ac.kr (K.-J. Kim), ijjeong@etri.re.kr (I.-J. Jeong), jchpark@lgcns.com (J.-C. Park), joony@etri.re.kr (Y.-J. Park), kcg623@kmac.co.kr (C.-G. Kim), taehokim@kt.co.kr (T.-H. Kim).

0957-4174/$ - see front matter © 2006 Elsevier Ltd. All rights reserved.
doi:10.1016/j.eswa.2006.01.022

The service performance in high-speed internet service consists of two dimensions – network performance and customer-service performance. According to a recent study (Kim et al., in press), network performance is considered about four times more important than customer-service performance. The objective of this paper is to identify the causal relationship among network performance, customer satisfaction, and customer loyalty in the high-speed internet service context. It is generally accepted that customer satisfaction is a transaction-specific measure, while customer loyalty is formed by a customer's cumulative experience with the service over time. In this view, two types of the causal relationship models are derived in this paper, namely, cross-sectional model and longitudinal model. The cross-sectional model focuses on the interrelationship at a specific time point, while the longitudinal model explicitly considers the cumulative effects over time.

Section 2 constructs the research hypotheses after a brief review of the related literature. Section 3 describes the research methodology with a focus on the data collection issues. Section 4 presents the results of the cross-sectional model. Then, Section 5 extends the cross-sectional model to the longitudinal model. The interpretation and utilization of the results, from both the cross-sectional and longitudinal models, are discussed in Section 6. Finally, concluding remarks are given in Section 7.

2. Theoretical background and research hypotheses

2.1. Service performance, customer satisfaction, and customer loyalty

Service performance is defined as the level of a service, and can be categorized into two critical aspects: *operational* and *relational* performance (Stank, Goldsby, & Vickery, 1999). Operational performance is related with the physical features of the service, while relational performance is concerned with the service delivery process. In the high-speed internet service case, network performance and customer-service performance correspond to operational performance and relational performance, respectively.

Customer satisfaction is defined as a customer's overall judgment on disconfirmation between the expected and perceived service performances (Anderson & Sullivan, 1993; Ramaswamy, 1996). If the perceived performance meets or exceeds the expectation, the customer is satisfied; otherwise, dissatisfied. Customer satisfaction is a transaction-specific measure. This means that a customer evaluates his/her perception of performance relative to expectation in each service encounter, independently of the other occasions (Bitner, 1990; Bolton & Drew, 1991; Parasuraman, Zeithaml, & Berry, 1988; Ramaswamy, 1996).

Customer loyalty is defined as a customer's attitude to the service (Ramaswamy, 1996; Stank et al., 1999). It is formed by a customer's cumulative experience with the service over time, not by a specific service encounter. It is widely accepted that customer loyalty has a strong relationship with customer satisfaction, and that it is an antecedent of financial outcome (Anderson, Fornell, & Lehman, 1994; Anderson & Sullivan, 1993; Fornell, 1992; Innis & La Londe, 1994; Reichheld & Sasser, 1990).

To date, many studies have been conducted to investigate and understand the relationship among service performance, customer satisfaction, and customer loyalty in various service sectors, including hotel service (Choi & Chu, 2001; Gundersen, Heide, & Olsson, 1996; Kim & Cha, 2002; Lemmink, Ruyter, & Wetzels, 1998), tourism service (Baker & Crompton, 2000; Vogt & Fesenmaier, 1995), medical service (Raju, Lonial, Gupta, & Ziegler, 2000; Raju & Lonial, 2002; Thomas, Wan, Lin, & Ma, 2002), and telecommunications service (Gerpott, Rams, & Schindler, 2001; Kim et al., in press; Kim, Park, & Jeong, 2004). Most of these studies have shown that there exist significant causal relationships in a sequential linkage from service performance to customer satisfaction, and then to customer loyalty.

2.2. Research hypotheses

This paper aims to identify the causal relationship among network performance, customer satisfaction, and customer loyalty in the high-speed internet service context. As mentioned earlier, service performance in high-speed internet services consists of network performance and customer-service performance. In this service sector, network performance is considered about four times more important than customer-service performance (Kim et al., in press). That is, customer satisfaction (or dissatisfaction) is determined primarily by network performance. Hence, this paper focuses on network performance.

As the measures of network performance, "download speed", "upload speed", "packet transfer delay", and "packet loss rate" are employed in this paper. (For a detailed description on these measures, see Table 1 in Section 3.1). Based on a review of the existing studies mentioned in Section 2.1, the following hypotheses are constructed:

(H_1) The download speed positively affects customer satisfaction;
(H_2) The upload speed positively affects customer satisfaction;
(H_3) The packet transfer delay negatively affects customer satisfaction;
(H_4) The packet loss rate negatively affects customer satisfaction;
(H_5) Customer satisfaction positively affects customer loyalty.

Note that the download speed and the upload speed are larger-the-better-type measures, while the packet transfer delay and the packet loss rate are smaller-the-better-type measures. The structural equation model constructed based

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