



## Renew or cancel? Drivers of customer renewal decisions for IT-based service contracts



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### ABSTRACT

Manufacturers increasingly integrate information and communication technologies into their products so that they can provide IT-based services. Organizations that formerly concentrated on transactional sales thus confront a new challenge associated with managing service usage—retention and extracting value from investments in smart technology. This study combines a marketing and an information systems perspective in a field study conducted jointly with a large European car manufacturer. Understanding the renewal decision for IT-based service contracts requires knowledge from both disciplines. The paper shows that combining behavioral predictor variables stemming from marketing research and technology-related perceptual variables stemming from technology acceptance research increases the explanatory power and prediction accuracy of forecasting models for customer renewal decisions. Specifically, the authors show that perceptions of usefulness become more important the longer customers use IT-based services and the more services they use within the service contract.

### 1. Introduction

Advances in information technology (IT) have led to changes in how organizations market their products and services (Rust & Espinoza, 2006; Rust & Huang, 2014). Companies use technology-based solutions for efficient customer relationship management (Chang, Park, & Chaui, 2010; Kumar, Bhagwat, & Zhang, 2015), reach customers through on-line and mobile channels (Herhausen, Binder, Schoegel, & Herrmann, 2015), and enhance the customer experience through location-based marketing activities (Fong, Fang, & Luo, 2015). Consistent progress in information and network technologies has enabled manufacturers to offer “intelligent products” that feature microchips, software, communication devices, and sensors (Lyytinen & Yoo, 2002; Porter & Heppelmann, 2014) and to provide “smart” services (Wunderlich, Wangenheim, & Bitner, 2013; Wunderlich et al., 2015). For example, car producers use GPS systems to offer location-based telematics services to customers, including regular maintenance and breakdown assistance services (Lenfle & Midler, 2009), as well as convenient access to mobile information and entertainment (Garretson, Howe, & Shuman, 2001).

Initially, firms provided these services at no cost, to increase customer commitment to and repurchase of the product. However, manufacturers increasingly aim to monetize those services through

extended service contracts (Wang, 2010). For telematics services in the automobile industry, consumers may acquire a basic service bundle with their initial purchase. When this complementary service contract ends, manufacturers and retailers try to sell customers an extension (Chen, Kalra, & Sun, 2010).

Predicting and preventing customer defection have been major challenges for contractual service industries (Bonfrer, Knox, Eliashberg, & Chiang, 2007). Organizations must retain existing customers (Grönroos, 1996), because acquiring new customers is costlier than retaining existing ones, considering the prices of advertising, searching for new customers, setting up new accounts, and initiating new customers (Parthasarathy & Bhattacharjee, 1998). Thus, understanding what drives customers' renewal decision and how to predict actual customer renewal behavior is crucial. However, research into consumers' contract renewal decisions for technology and technology-intensive services is sparse (e.g., Baron, Patterson, & Harris, 2006). Given that customer renewal decisions for such a system constitute a marketing (customer retention) or classic technology acceptance problem, determining whether variables from both literature streams have relevant and unique explanatory power for the renewal decision and whether those sets of variables interact is of interest.

Recent marketing literature has addressed the drivers of customer retention and contract renewal in the services field, identifying service

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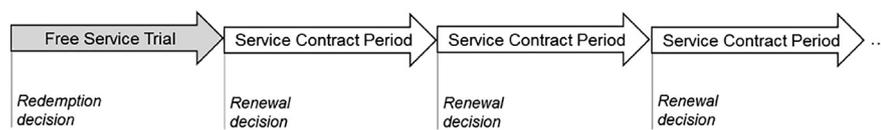


Fig. 1. A customer's decision process in a contractual service relationship.

characteristics such as quality, price, and past service usage behavior (e.g., Bolton, Lemon, & Verhoef, 2008; Fader & Hardie, 2007). The Customer Asset Management of Services (CUSAMS; Bolton, Lemon, & Verhoef, 2004) is a prominent framework for predicting customer retention based on three core dimensions of prior usage behavior: usage depth, breadth, and relationship length. While service providers often have difficulty collecting detailed information about these usage dimensions in traditional service contexts, IT-based service contexts help overcome this constraint by tracking usage dimensions and revealing customers' prior behavior on a very detailed level.

Information systems (IS) literature acknowledges the role of past behavior as a predictor of post-adoption behavior (e.g., Jasperson, Carter, & Zmund, 2005; Venkatesh, Speier, & Morris, 2002) but has not explored usage patterns in detail (Kang, Hahn, Fortin, Hyun, & Eom, 2006; Yoh, Damhorst, Sapp, & Laczniaik, 2003). Moreover, IS research identifies core characteristics that explain the continued use of new technologies based on the technology acceptance model (TAM; Davis, 1989), such as “perceived ease of use” (PEOU) and “perceived usefulness” (PU).

This study answers the call for integrative research (Maklan, Peppard, & Klaus, 2015; Yadav & Pavlou, 2014) by merging the viewpoints derived from TAM-related research with relationship marketing efforts. Drawing on a unique dataset that combines survey and behavioral data, this study proposes a model that explains IT-based service contract renewal decisions according to the main and interaction effects of perceptual technology-related variables from the TAM and behavioral customer relationship marketing variables from the CUSAMS concept. Survey variables such as PEOU and PU are more difficult and costlier to obtain than usage variables, and therefore conducting surveys offers additional informational value.

We show that both perceptual and behavioral drivers are useful predictors of renewal decisions and that the interactions of the technology perceptions and behavioral variables add value to explaining and predicting customer contract renewal decisions. In contrast with prior findings on IS usage (Venkatesh, 2000), this study shows that for contract renewal decisions, perceptions of usefulness become more important the longer consumers use IT-based services and the broader the range of services is. With these results, managers can increase customer retention for their IT-based services by gaining a better understanding of what drives customers' renewal decision.

## 2. Literature review

The following sections bring together two literature streams that pertain to customers' renewal decision in IT-based service contracts. First, we highlight research from the marketing area that focuses on predicting customer behavior in contractual relationships, such as free-trial redemption, contract renewal, and churn. Second, we focus on technology-related perceptions of IT-based service usage stemming from TAM research.

### 2.1. Drivers of customer behavior in contractual service settings

Service contracts are offered across industries and sectors. While in B2B settings service contracts mainly exist within insurance/maintenance contexts, in the end-consumer context they are offered for different types of services that consumers frequently use, such as cable channel services, anti-virus services for personal computers, or local gym service offerings.

Innovation diffusion theory (Rogers, 2003) describes a two-step

process toward adoption: early experience during trial usage and a final “confirmation” stage after consumers decide whether to continue or discontinue their use of the innovation (DeLone & McLean, 1992). A frequently used promotional technique to acquire new customers based on the two-step adoption assumption is to offer a free-trial period before they are required to renew the contract for a fixed fee (Foubert & Gijbrecchts, 2016).

Fig. 1 illustrates a typical customer's decision process in a contractual service relationship in the presence of a free-trial service. The customer must first decide on whether to redeem or waive the free service trial. After the free-trial period and every additional contract period, the customer then must decide on whether to renew or cancel the contract.

Studies on customer decision making in contractual settings show that redemption and renewal decisions are mostly cognitive evaluations. Before consumers decide on whether to redeem or waive a free service offer, they weigh the risks and benefits associated with the use as well as the provider's reputation (Laochumnanvanit & Bednall, 2005). Ngobo (2005) shows that when theatergoers move from occasional ticket buying to ticket subscriptions, the subscription decision is based not only on service satisfaction and quality perceptions but also on individual characteristics such as age.

In B2B settings, key drivers of contract renewal decisions are price/cost considerations and the service experienced during the prior contract period (Stremersch, Wuyts, & Frambach, 2001). The most common event that makes customers switch from their service providers is a service failure (Keaveney, 1995). Bolton, Lemon, and Bramlett (2006) show in the context of high-technology systems that if a company has experienced extremely favorable support service encounters, it is more likely to renew a service contract. Moreover, satisfaction with the prior service usage experiences (Bolton, 1998) and service quality evaluations (Boulding, Kalra, Staelin, & Zeithaml, 1993) positively affect renewal decisions in B2B service contracts. Bolton et al. (2008) indicate that even modest improvements in service quality can have a relatively large, positive effect on the likelihood that the firm will upgrade.

Service experience is also reflected in customers' usage patterns during the service contract period. Studies on IS implementation and acceptance indicate a direct impact of prior usage behavior on post-adoption behaviors (e.g., Venkatesh et al., 2002). Marketing research also recognizes the relevance of prior usage for customer retention. Sophisticated models relying only on prior service usage patterns as predictor variables for churn can predict customer behavior in contractual settings (e.g., Schweidel, Fader, & Bradlow, 2008).

One concept to identify key service usage patterns is the CUSAMS concept (Bolton et al., 2004), which distinguishes the breadth, depth, and length of customer relationships. The main purpose of CUSAMS is to use those characteristics to predict customer lifetime value (CLV). Yet usage breadth and depth also are well suited to predict customer retention, a key aspect of CLV (Larivière & Van den Poel, 2007). Research shows that the differentiation among depth, breadth, and relationship length also has particular relevance for IT-related study contexts such as telematics (Scherer, Wunderlich, & Wangenheim, 2015), mobile technology (Bonfrer et al., 2007), and financial services (Liang & Chen, 2009).

First, the CUSAMS breadth dimension in customer relationships depends on the extent to which customers buy add-ons or cross-buy (i.e., the number of additional and different service purchases from a company over time) (Bolton et al., 2004). For IT-based services, customers can choose among various services, such as automatic installations of updates or intensive emergency shooting. Scherer et al. (2015)

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