

## Chapter 7.12

# Toward a Theory of IT-Enabled Customer Service Systems

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### ABSTRACT

As the use of customer service as a tool to create customer value and differentiation continues to increase, the set of customer services that surround the product rather than the product alone will increasingly become a source of competitive advantage and one of the most critical core business processes. However, there is a lack of a strong conceptual foundation for a service economy and a lack of theoretical guidance for optimal customer service systems design. In this chapter, the authors review past research around information systems facilitating customer services and identify the technical and social attributes of IT-enabled customer service systems, as well as the functionalities of

customer service systems enabled by these attributes. Moreover, given the key role of customers as co-producers of the customer service experience, the authors address the role of customers' characteristics in IT-enabled customer service systems. Finally, they identify existing research gaps and call for future research in these areas.

### INTRODUCTION

Customer service nowadays has become an essential part of product offerings in every industry (Levitt 1972), as it has emerged as a critical source of differentiation and competitive advantages (Bowen et al, 1989; Sheehan, 2006). While companies have realized the importance of customer service and implemented different service innovation processes

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to create competitive advantages, there is a lack of a strong conceptual foundation for their work (Chesbrough and Spohrer 2006). Therefore, there is a need to apply research findings in the appropriate management and organizational contexts related to service innovation, design and delivery, and the resulting customer satisfaction and business value. The information systems discipline is at the nexus of the service science literature and can bring a distinct integrative research perspective to this area of study, thus becoming a reference discipline for service science research (Baskerville and Myers 2002). Our main contribution in this chapter is the development of a theoretical framework that integrates the cross-disciplinary research on customer service systems. We draw theories from different disciplines, including information systems, marketing, operations management, and psychology, to abstract an overarching framework about IT-enabled customer service system.

This chapter is organized as follows: we first address the key concepts in the theory of IT-enabled customer service systems in the next section. Then, we present four major components of an IT-enabled customer service system (functionalities of the system, technical and social attributes of the system, and customers' characteristics) and the impact of these components on customer value. Finally, we address the research gaps that call for future research attentions.

## **BACKGROUND AND DEFINITIONS**

### **Customer Services**

We adopt a broad definition of customer service. Service is "a change in the condition of a person, or a good belonging to some economic entity, brought about as a result of the activity of some other economic entity with the approval of the first person or economic entity" (Hill 1977, p.318). This process changes the condition of the customers

with the objective of enhancing customer value. An important distinction is between core services and supplementary services. Sometimes, customer services represent the core benefits delivered to the consumer, such as consulting or teaching. Sometimes, the service is supplementary to the core value proposition and it enables it, such as providing product information on a car manufacturer's website (Lovelock 1994). In this chapter, we focus on supplementary services, because they apply to any industry, not just the service industry, and because they are increasingly IT-enabled.

### **IT-Enabled Customer Service Systems**

The deployment of information technologies in supporting customer service has a long tradition of research in information systems (Ives and Learmonth, 1984; Piccoli et al, 2001; Sawy and Bowles 1997; Ray et al 2005; Orman 2007). The customer service life cycle (Ives and Learmonth, 1984) maps customer needs as they emerge at different stages of the interaction between an organization and its customers.

Drawing from the socio-technical tradition (Bostrom and Heinen 1977), we define a customer service system to encompass both technical and social subsystems. We therefore define IT-enabled customer service systems as the collection of information systems that provide supplementary customer services to fulfill customer needs (Piccoli et al. 2004). This general definition that encompasses any customer service system, from simple ones like a website providing the menu of the local mom and pop restaurant, to complex global systems such as Hilton OnQ (Applegate, Piccoli and Dev 2008), enabling reservations, check-in, check-out, customer relationship management, etc. at over 3,000 hotels in the global Hilton Hotels chain.

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