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Performance effects of IT capability, service process innovation, and the mediating role of customer service

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ABSTRACT

Few academic studies have investigated how information technology (IT) capability and service process innovation can create performance gains for firms through customer service. We propose that customer service is a significant mediator through which IT capability and service process innovation influence the performance of a firm, and that IT capability is also a critical factor that facilitates service process innovation. Empirical support for our argument was derived from data collected from 174 firms in the Taiwan IT industry. The results suggest that managerial initiatives should be directed at developing IT capability and service process innovation and leveraging them to facilitate customer service to attain superior firm performance. Furthermore, greater IT capability would lead to a higher degree of service process innovation.

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Introduction

The impact of information technology (IT) on firm performance is best measured through intermediate-level contributions such as marketing and operations effectiveness. This has been the subject of considerable interest among information system (IS) research, marketing academics, and practitioners, spurred by the original work of Sambamurthy et al. (2003). Due to the ever-increasing importance of customer service in customer satisfaction and loyalty, a number of IS – customer relationship management (CRM) research scholars (e.g., Albert et al., 2004; Lankton and Wilson, 2007; Luo and Seyedian, 2003; Mithas et al., 2005; Jayachandran et al., 2005) have begun to examine how to identify and use IT to manage customer service activities. At the same time, special attention has been

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given to electronic CRM (e-CRM; Jukic et al., 2002; Pan and Lee, 2003). This increased emphasis on IT may enable firms to change the way they interact and coordinate practices with customers, reflecting an appropriate implementation of IT. This, in turn, could create more competitive services and serve as a strategic resource that facilitates major changes in competitive behavior, marketing, and customer service. Nonetheless, there is limited empirical research on how customer service may lead to superior firm performance and how IT may be exploited to facilitate customer service (Levenburg and Klein, 2006). Thus the relationships among these factors remain incomplete and unclear. Furthermore, the fundamental elements of customer service are not well understood. Thus, this article fills this void by applying a resource-based view (RBV) to investigate the effects of IT capability on firm performance due to the intervening role of customer service.

The demands of customers concerning the quality and innovativeness of products and services put firms under pressure. Together with the rising pressure to reduce service costs, this may require firms to redesign their organizational structure. One possible solution is to focus service innovation practices on the processes of service delivery. While many essential service processes that support customer service are invisible to firms, understanding how innovative service processes can facilitate competitive customer service is essential to attain superior firm performance. Despite substantial IS-CRM and e-CRM research on IT applications for customer service, there is a lack of studies demonstrating the potential benefits and pitfalls of service innovation practices. In particular, there is little information on the roles and contribution of service process innovation in managing and facilitating customer service. Furthermore, from the RBV, to maintain a competitive advantage, it is imperative for firms to possess rare and valuable resources (Barney, 1991). Interacting with customers is critical for firms to share resources and capabilities and develop new products/services, which in turn lead to competitive customer service. Firms should understand that customer value can be generated by (re) designing or innovatively utilizing resources and capabilities that may be embedded in service processes. Accordingly, developing a deeper understanding of service process innovation is but one of many challenges facing firms that attempt to redesign service processes and develop innovative service delivery methods.

Our approach examining how IT capability and service process innovation impact firm performance via customer service is consistent with the research of Brynjolfsson et al. (2000), who studied information technology, organizational transformation, and business performance. This suggests complementarity between the factors of organizational structure and IT, indicating that firm performance is greatest when both IT and organizational structure are emphasized. We consider service innovation a type of organizational structure and a crucial factor that affects firm performance. Although there is a wealth of evidence indicating a positive relationship between innovation and firm performance (e.g., Akgün et al., 2009; Fallah and Lechler, 2008; Irwin et al., 1998), specific analyses on the relationship between service process innovation and firm performance are still relatively rare. In this respect, we argue that IT capability and service process innovation support customer service activities, and therefore the impacts of these factors on firm performance should be assessed where the customer service effect is expected to be realized. In addition, we examine the relationship between IT capability and service process innovation.

Our research is based on Brynjolfsson et al.'s (2000) suggestion and was motivated by a desire to demonstrate from a service-orientation perspective how IT capability (i.e., IT factor) and service process innovation (i.e., organizational factor) enable customer service to yield gains in performance, and how IT capability enables service process innovation. Specifically, we addressed the following questions: How does IT capability impact customer service and service process innovation? How does service process innovation enable customer service? What are the performance consequences of IT-enabled and service process innovation-enabled customer service for firms? The remainder of the paper is organized as follows. In the sections Literature review and Model hypotheses, we synthesize research constructs from a literature review and develop hypotheses. In the section Research methodology, we present our research methodology and describe how the constructs developed in the section Literature review were operationalized into a survey instrument used to survey 174 IT managers in Taiwan. Statistical analyses of the data are presented in the section Data analysis and results. The paper concludes with a discussion of the findings as well as directions for future research in the section Discussion and conclusions.

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