

IT-ENABLED SERVICES AS COMPLEX ADAPTIVE SERVICE SYSTEMS: A CO-EVOLUTIONARY VIEW OF SERVICE INNOVATION

Research-in-Progress

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Abstract

One specific type of service innovation of particular interest to IT and business professionals is IT-Enabled Services (IES). Previous studies have suggested many roles for IT in service innovations. IT has proven a useful tool in service innovation. IT is an important component of most services in many industries, including healthcare, financial services, engineering, and management consulting. However, little work has been conducted in IESs. Thus, there is considerable potential for researchers in IS, operations, marketing, and economics to make contributions to the emerging debates and challenges in IESs and service innovation. Two topics are critically important in both IES research and practice: what IESs are and how such services emerge and evolve. This research-in-progress attempts to offer a novel perspective on these two topics. Drawn upon complexity theory, we conceptualize services (IESs) as complex adaptive service systems (CASS) with such properties and behaviors as emergence, self-organization, adaptive learning, and nonlinearity, and service development or innovation as a co-evolutionary process composed of variation, selection, and retention (VSR). From this perspective, IESs produce and are reproduced by the environment (or by wide business networks). Based on this complexity theory perspective, we also provide propositions regarding what IESs are, how they emerge and evolve, and what strategies are effective for IT-enabled eservice innovation. The last section offers a research plan for a longitudinal case study of Business Analytics (BA) as an IES to qualify the proposed theoretical perspective.

Keywords: Service Science, Service Innovation, IT-Enabled Services, Complexity Theory, Complex adaptive system, Co-evolution, Business Analytics, Case Study