

# Chapter 9

## IT-Driven Business Model Innovation: Sources and Ripple Effects

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### ABSTRACT

*Information technology enables disruptive innovations, causing paradigm shifts in how companies do business. IT allows companies to break with traditional business models and management thinking. This article explores IT-driven business model innovations empirically by examining how 343 Danish companies use IT to innovate their existing businesses. This systematic review of extant literature using the Business Model Canvas as an analytical framework to answer the research question; how does IT drive business model innovation? Through an exploratory factor analysis this article observes the underlying structure of IT-driven business model innovation, identifying three innovation sources: customers, infra-structures, and supply chains. The three sources demonstrate where and how innovation is most likely to occur, and how it may spread to other parts of the business model. This paper presents a framework for understanding the impact of IT on business models, providing researchers and practitioners with empirically based knowledge on how to leverage IT for business model innovation.*

### 1. INTRODUCTION

The rapid development of Information Technology (IT) has changed the way companies do business, putting pressure on traditional business models. The Internet has been a catalyst for globalization, disrupted markets, and changed established rules of competition and trade (Lee, 2001). New technology is being developed at an ever-increasing pace, resulting in transformation of existing markets and entire industries. Transactions are becoming simple and convenient, and competition is intensifying (Veit et al., 2014). As a result of the breaking IT wave, new business concepts have been introduced with “e-

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business” and “e-commerce” being used synonymously for the digitization of business models (Zwass, 2003). Companies are forced to adapt their business logic and behavior to new and rapidly changing conditions in order to stay competitive let alone survive. However, despite a growing number of on-line stores and persistent attempts to adapt to new circumstances, many companies have gone out of business. Why do some companies fail while others thrive? There is no simple answer, and the history books are littered with examples of companies that have risen and fallen during economic booms and busts—Apple and Kodak being prominent examples (Osterwalder & Pigneur, 2013). Nevertheless, the concept of business models may help us answer such complex questions (Veit et al., 2014). In addition, Information Systems (IS) research may help companies better understand how technology can drive and support the development of new business models (Osterwalder & Pigneur, 2013).

Consequently, the concept of business models has attracted the attention of researchers and practitioners alike, and there is a growing interest in business model innovation across academic fields. However, state-of-the-art knowledge on IT-driven business model innovation is still very limited, and extant literature is primarily conceptual in nature, e.g. Osterwalder et al. (2005). Similarly, empirical evidence of IT-driven business model innovation is anecdotal and stems from case studies—Apple being the most prominent example (Osterwalder & Pigneur, 2010). Such case studies are useful in exploring a new phenomenon, but the generated knowledge is limited by the small number of cases. Amit and Zott’s (2001) study of 59 e-business cases is, however, an exception. As of now, knowledge of how business models are impacted by IT is limited, for example with regard to how IT Influences the relationship between building blocks of business models. Consequently, this article investigates how IT drives business model innovation, and the goal is to identify key sources of innovation and their impact on business models. Moreover, the article seeks to broaden our understanding of so-called “ripple effects” (see below). Previous studies have argued for an interdependency between a business model’s building blocks, but have neglected to uncover the sources of IT-driven business model innovation. We present empirical evidence of “ripple effects” across building blocks and describe where they are most likely to occur. The overall research question guiding our study is: How does IT drive business model innovation?

First, we present the analytical framework—Osterwalder & Pigneur’s (2013) Business Model Canvas—driving our investigation, and we define the business model concept. Second, the review methodology is described followed by a presentation of state-of-the-art knowledge of IT-driven business model innovation. Third, the measurement model is described as well as the empirical research approach. Fourth, we present our findings in terms of how IT drives business model innovation. Finally, we discuss our results, the implications for practitioners, and future directions for research.

## **2. ANALYTICAL FRAMEWORK**

The business model concept is rather young, and despite an evident lack of consensus regarding definitions of the concept, it is still useful for the purpose of studying the impact of IT on businesses (Osterwalder, Pigneur, & Tucci, 2005; Veit et al., 2014). Existing studies have pointed in different directions. Osterwalder et al. (2005) and Zott (2011) aim at understanding and clarifying the concept, whereas others (e.g. Morris et al. 2005) use it in case analyses to describe different competitive strategies (Casadesus-Masanell, 2007). Timmers (1998) is one of the first scholars to define the business model concept by attempting to identify all its constituting elements. Amit and Zott’s (2001) focus on value creation and business opportunities share several similarities with Timmer’s definition with respect to structure and content.

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