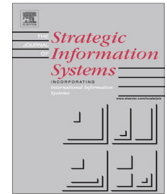




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Business value of social media technologies: Evidence from online user innovation communities

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ABSTRACT

Social media technologies allow user-generated content and provide new opportunities and challenges for firms to transform their business. In particular, more and more firms have started strategically using the online user innovation communities (OUICs) for open innovation initiatives. The extent to which firms are able to derive business value from OUICs, however, has not been systematically examined. Drawing on a multi-theoretical foundation from the framework of dynamic capabilities and the view of innovation value chain, we conceptualize two OUIC-enabled capabilities, which are, ideation capability related to collecting user-generated ideas about potential innovation from OUIC, and implementation capability related to selecting user-generated ideas for innovation development and introducing developed innovation via OUIC. Using a large-scale panel data set consisting of 1676 firm-day observations from Dell and Starbucks, we examine the impacts of OUIC-enabled capabilities on firm value. We find robust evidence that OUIC-enabled ideation capability actually does not influence firm value, whereas OUIC-enabled implementation capability increases firm value. Novel theoretical and managerial implications are discussed.

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“Generating lots of good ideas is one thing; how you handle (mishandle) them once you have them is another matter entirely.”
[Hansen and Birkinshaw, 2007, p. 123]

Introduction

With the advances in information technology (IT), social media technologies support a large volume of user-generated content that provides opportunities and challenges for business transformation (Jarvenpaa and Tuunainen, 2013; Kane and Fichman, 2009; Majchrzak, 2009). As firms increasingly leverage IT in various innovation activities (Dong, 2010; Dong and Yang, 2015; Joshi et al., 2010; Kleis et al., 2012; Pavlou and El Sawy, 2010; Tambe et al., 2012; Xue et al., 2012), they can use a particular social media technology—online user innovation communities (OUICs)—for open innovation by crowdsourcing the ideas about new products, services and processes (Di Gangi and Wasko, 2009; Di Gangi et al., 2010).

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In OUICs, users can post, comment on, and vote for new ideas about innovation. Firms select the pertinent ideas from OUICs for their innovation development to improve their products, services, and processes. OUICs can also help firms to diffuse developed innovation by posting the announcements on innovation launch in the marketplace. For example, a user “jervis961” posted his idea in Dell’s OUIC—IdeaStorm—entitled “Improve the look of Inspiron laptops by removing some of the rubber nubs from the screen”. Other users then left comments to extend this idea. Dell selected this idea and improved its design of Inspiron laptop by removing the ugly rubber nubs. After launching the improved Inspiron laptop to the marketplace, Dell made an announcement in IdeaStorm to let its users know this innovation.

This social media technology—OUICs—supports firms to strategically use IT for innovation.¹ Although firms’ use of OUICs is popular in practices with the assumption that it can create business value, the extent to which OUICs actually contribute business value to firms remains largely unclear. In particular, how firms can derive business value from their strategic use of OUICs has not been fully understood. Common belief often suggests that OUICs are valuable for crowdsourcing by enabling firms to collect large amount of user-generated ideas (Bayus, 2013; Huang et al., 2014). Less focus is put on the following stages of innovation development and diffusion. A better understanding of the ways in which firms increase their business value through the strategic use of OUICs has important implications on the business value of social media technologies, as recent studies on the business value of IT have switched the focus to the IT enablement of innovation (e.g., Aral and Weill, 2007; Bardhan et al., 2013; Tambe et al., 2012; Xue et al., 2012).

To fill the aforementioned gaps in the IS literature, we theorize two specific IT capabilities in the OUIC context and empirically examine their effects on firm value. Drawing on the framework of dynamic capabilities (Teece, 2007; Teece et al., 1997) and the view of innovation value chain (Hansen and Birkinshaw, 2007), OUIC-enabled ideation capability and OUIC-enabled implementation capability are conceptualized to characterize firms’ strategic use of OUICs. We define *OUIC-enabled ideation capability* as a firm’s ability to collect user-generated ideas such as posts and comments about potential innovation from its OUIC. Furthermore, we define *OUIC-enabled implementation capability* as a firm’s ability to select user-generated ideas from its OUIC for innovation development and then introduce the developed innovation to the desired users via its OUIC. In this study, we propose that collecting ideas and dealing with ideas by using OUICs reflects different capabilities, and the latter has long been ignored but is critical for creating business value. Although OUIC-enabled ideation capability supports a firm to collect a large number of user-generated ideas, it does not directly influence firm value; only a good idea converted to and introduced as an innovation by OUIC-enabled implementation capability can increase firm value. OUIC-enabled implementation capability allows a firm to select the pertinent ideas as the inputs to its innovation development in the organization and communicate with the desired customers about innovation launches in the marketplace. By using a large-scale, firm-day panel data set from Dell and Starbucks over a four-year period, we find robust empirical evidence that corroborates our theory.

Our study has three major contributions to the IS literature. *First*, we contribute to the IT capabilities literature by theorizing two innovation capabilities based on firms’ strategic use of social media technologies. Specifically, we conceptualize OUIC-enabled ideation capability and OUIC-enabled implementation capability by a multi-theoretical lens consisting of dynamic capabilities and the innovation value chain. OUIC-enabled ideation capability is useful for idea generation, whereas OUIC-enabled implementation capability is functional for idea conversion and diffusion. *Second*, we contribute to the literature on the business value of IT by explaining and testing distinct effects of OUIC-enabled ideation capability and OUIC-enabled implementation capability on firm value. To the best of our knowledge, this study is among the first attempts to examine the business value of firms’ strategic use of social media technologies in crowdsourcing. Our findings suggest that a firm’s OUIC-enabled ideation capability to collect ideas merely provides the potential of business value; a firm’s OUIC-enabled implementation capability to select and implement ideas can actually realize the business value. *Finally*, our study contributes to the emerging literature on IT and innovation. It broadens this research by exploring new insights on how firms could build digitally enabled dynamic capabilities through strategically using social media technologies. We find that firms’ use of OUICs enables idea generation, conversion and diffusion, which can generate new products, services, and processes.

The rest of the paper proceeds as follows. In the next section, we present our theoretical framework and hypotheses. We then report the methodology and empirical results. Finally, we conclude by discussing the theoretical and managerial implications of this study, as well as the limitations and directions for future research.

Theory and hypotheses

Dynamic capabilities and the innovation value chain

Dynamic capabilities are a solid theoretical framework that explains firms’ capabilities to innovate constantly in a fast-changing market environment to sustain competitive advantage (Eisenhardt and Martin, 2000; Teece, 2007; Teece et al., 1997; Winter, 2003). Therefore, it is particularly suitable as the theoretical foundation for innovation research. Dynamic capabilities refer to the organizational routines that change existing routines through innovation (Winter, 2003). Dynamic

¹ Aral and Weill (2007) defined four types of IT use: infrastructural, transactional, informational, and strategic. According to their definition, the strategic use of IT refers to IT use for innovation purposes by developing new products, services, or business models. Because OUICs are increasingly used by firms to develop new products, services and processes (Chesbrough, 2003; Nambisan, 2002, 2013), we focus on this technology to investigate firms’ strategic use of social media.

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