Chapter 1
Knowledge Sharing in Open Innovation: An Overview of Theoretical Perspectives on Collaborative Innovation

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ABSTRACT

Open innovation has received an increasing amount of attention from innovation scholars and practitioners alike. As a specific type of open innovation, collaborative innovation combines knowledge inflows and outflows and is thus at the core of open innovation. To better understand this coupled process of open innovation, this chapter provides an overview of the theoretical perspectives on open collaborative innovation. In particular, knowledge sharing is considered as a main driver of successful collaborative innovation. Accordingly, the chapter reviews some of the main trends in practices and theories related to open collaborative innovation. The main purpose is to provide an overview of the main perspectives on collaborative knowledge sharing within established economic organization and strategic management theories. Thus, by providing a more solid theoretical basis for future work in open innovation, this chapter contributed to the theory behind open innovation, which in turn can be used to inform open innovation practices.

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INTRODUCTION

Open innovation has been proposed as a new paradigm that centers around opening up organizational boundaries in order to use and recombine internal and external knowledge to develop and commercialize valuable innovations (Chesbrough, 2003). At its core, open innovation is about “the use of purposive inflows and outflows of knowledge to accelerate internal innovation, and expand the markets for external use of innovation, respectively” (Chesbrough, 2006: 1). A particular and increasingly important area within open innovation, which combines knowledge inflows and outflows, is the collaborative development of innovation by multiple organizations (Bogers & West, 2010; Hagedoorn, 2002; Vanhaverbeke, 2006). According to Enkel et al. (2009: 313) this “coupled process” of open innovation “refers to co-creation with (mainly) complementary partners through alliances, cooperation, and joint ventures during which give and take are crucial for success.” Accordingly, as a coupled process, collaborative innovation combines the inbound and outbound processes of open innovation by allowing firms to jointly develop and commercialize innovation. The value of such collaborative innovation, both in terms of economic welfare and corporate competitive advantage, has grown tremendously in recent years (Verspagen & Duysters, 2004; West, Vanhaverbeke, & Chesbrough, 2006). Similarly, patenting, licensing and markets for technology have become more important as a means to appropriate the benefits from innovation (Arora, Fosfuri, & Gambardella, 2001; Granstrand, 2000, 2004b).

However, despite these trends, how to effectively manage knowledge sharing in open collaborative innovation is not yet fully understood (Enkel, et al., 2009; McEvily, Eisenhardt, & Prescott, 2004). To be successful in open collaborative innovation, firms and other organizations need to share valuable knowledge, while they, at the same time, keep the need to protect that same knowledge against unwanted spillovers (Grindley & Teece, 1997; Gulati & Singh, 1998; Murray & O’Mahony, 2007; Simcoe, 2006). To better understand the rationale and impediments of knowledge sharing in open collaborative innovation, this chapter presents a review of a number of key theoretical perspectives to derive the main opportunities and constraints of collaborative knowledge sharing.

PERSPECTIVES ON KNOWLEDGE SHARING IN COLLABORATIVE INNOVATION

This section provides an overview of some of the key perspectives on collaborative knowledge sharing. In particular, it reviews the main perspectives in economic organization and strategic management theory according to their main research questions, their main building blocks, and in particular their main explanations of (and implications for) collaborative innovation. In line with other investigations of collaborative efforts, specific attention will be paid to the perspectives of transaction cost economics and the resource-based view of the firm—arguably largely representing the economic organization and strategic management theories, respectively (e.g. Das & Teng, 2000; Hagedoorn, Link, & Vonortas, 2000b; Tsang, 2000). In addition, the dynamic capabilities approach, knowledge-based view and technology-based view are also presented as viable perspectives to explain open collaborative innovation (e.g. Eisenhardt & Martin, 2000; Granstrand, 2000; Kogut & Zander, 1992). Collectively, these theoretical perspectives provide an overview of the constructs and relationships that are relevant for studying and implementing collaborative knowledge sharing.