# Chapter 2 Open Innovation and Organizational Capacities: Case Study of an SME

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#### **ABSTRACT**

Open innovation has gained popularity in recent years. But is the concept new or does it express old realities? The literature review of this case study found that the term "open innovation" is recent and that its development has been facilitated by technological innovations. The case study collected data over a period of eight months from an agrifood SME in Quebec, Canada. The aim was to go beyond the basic model of open innovation and integrate dynamic, absorptive and appropriative capacities into a new working open innovation model. Initial results show that components associated with the basic open innovation model such as intellectual property, joint R&D and co-product development are present as well as certain organizational capacities. The difficulty of applying the concept is due to its interactions rather than its components taken individually. The study concludes that further work is needed to extend the applicability and the foundations of open innovation.

# INTRODUCTION

The concept of "open innovation" has laid the groundwork for new perspectives on business innovation, starting first from case studies of major U.S. companies (Chesbrough, 2003). Chesbrough (2003), who first developed the concept, has high-

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lighted how some companies like IBM, Xerox and Intel have used the knowledge and expertise of other companies to (re)define their business model and reposition themselves in the market, thus becoming more competitive and profitable.

Until very recently, open innovation was essentially described in terms of technological innovation (Chesbrough, 2003, 2006; Chesbrough, Vanhaverbeke & West, 2006; Van der Meer, 2007)

and was geared primarily towards professionals and practitioners (Fredberg, Elmquist & Ollila, 2008; Lee, Park, Yoon & Park, 2010). The underlying theories have been little developed (Elmquist, Fredberg & Ollila, 2009; Stoyanov, 2008) and only a limited number of empirical studies have been published (Huang & Rice, 2009; Van de Vrande, de Jong, Vanhaverbeke & Rochemont, 2008, 2009; Van de Vrande, Vanhaverbeke & Gassman, 2010). However, with time, there has been an expansion of the original, more limited frame of reference. Indeed, some authors (Lichtenthaler & Lichtenthaler, 2009; Teece, 2007; Van de Vrande et al., 2009) have shown how some organizational concepts, especially in terms of dynamic, absorptive and appropriative capacities, can be usefully integrated into the concept of open innovation, providing a more solid foundation for the concept and facilitating its application. This expansion of the concept seems warranted, especially as these capacities had been largely overlooked until then (Chesbrough et al., 2006).

In light of the foregoing, the author has chosen to make a case study of a small company with fewer than 10 workers. The aim of the study was to describe the process of open innovation and validate the presence of organizational capacities. The research goal is, therefore, to empirically validate a model of open innovation which incorporates organizational capacities.

The research has been conducted using the basic model of open innovation (Chesbrough, 2003) and has integrated dynamic (Teece, 1982; Teece, Pisano & Shuen, 1997), absorptive (Cohen and Levinthal, 1990) and appropriative capacities (Bonnin, 2006; Kolk & Püümann, 2008). The author has worked out on various aspects of this new model with the owners of the SME over a period of eight months. The chapter discusses about the frame of reference, the research method that has been used, and the results, including the discussion on the results and the direction for future research before the conclusion.

### **BACKGROUND**

The current literature on open innovation provides little theoretical structuring (Van de Vrande et al., 2010). It first focuses on describing the contexts which show how some companies like IBM, Xerox and others¹ were able to make a comeback at a crucial point in their history (Chesbrough, 2003) in the United States. Then, the literature has moved forward to Europe (Lazzarotti, Manzini & Pellegrini, 2010; Lichtenthaler, 2008; Stoyanov, 2008) and other places around the world. Authors such as Chesbrough et al. (2006) have called open innovation a "new paradigm" as they have tried to define the economic realities associated with it. But open innovation itself remains as a question, what is it?

Open innovation (OI), largely defined as "a wider set of contributions into a funnel of corporate development" (Leadbeater, 2010), can be traced back to the 19th Century, sharing to some extent the label of *Collective Invention* (Allen, 1983). This term has been used to express how the Iron industry, as a collective unit, has worked out its development up the World War II, when the R&D laboratories have then emerged. In 20th Century, one has seen very close parallels to OI such as the R&D generations (Wang et Kleiner, 2005) and innovation networks (Julien, 2003).

From 2003 to 2008, OI has been essentially a description of a phenomenon related to innovation in a few large American organizations like IBM, Intel and Xerox (Chesbrough, 2003; Stoyanov, 2008) with a marketing label strong enough to open and strengthen imagination but without any strong scientific foundations (Watson, 2008). Although some organizational capacities such as dynamic, absorptive and appropriative capacities have been referred to in Chesbrough et al. (2006), they have not been yet integrated and validated in a working model. A logical next step is, therefore, to better elaborate the theoretical underpinnings of OI, so as to facilitate its application and further clarify its meaning. First off, the study looks at

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