

Chapter 67

Exploring the Role of Open Innovation Intermediaries: The Case of Public Research Valorization

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ABSTRACT

In the era of open innovation, companies that want to innovate can no more remain isolated, they have to interact and collaborate with diverse actors of the innovation process. The rise of open innovation practices resulted in an increase of intermediaries for innovation. This chapter aims to better understand why innovative companies use the services of such intermediaries. Two distinct types of open innovation intermediaries have been identified, whose roles are significantly different; while the first type help companies to reduce transaction costs related to open innovation, the second type may be implicated directly in the creation, transfer and diffusion of knowledge. This chapter illustrates both roles in the case of public research valorization and distinguish clearly “Technology Transfer Organizations” (TTOs), whose role is to reduce transaction costs related to technology transfer from “Research and Technology Organizations” (RTOs) that are actively involved in knowledge creation and transfer processes.

INTRODUCTION

In line with open innovation, innovative companies can no longer remain isolated. They have to interact and collaborate with other stakeholders in the innovation process (Chesbrough, 2003; West and Bogers, 2014). Forms of open innovation are multiple (Pénin *et al.*, 2013). It may be, for example, formal collaboration agreements in R&D, informal knowledge exchanges, commercial technology exchanges

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(“licensing-in and out”), establishing “patent pools”, standards, collaboration with communities of users and / or open source, crowdsourcing, etc.

The terms of open innovation can be classified depending on the objective of the company, which can be to acquire technologies (“outside-in”), to transfer (“inside-out”) or both (“coupled”, Gassman and Enkel, 2004); depending on whether the interaction is more or less formal and commercial; depending on whether the access to knowledge is more or less open; depending on whether the interactions are more or less frequent and important, etc. Jullien and Pénin (2014) suggest, for example, a categorization based on the distinction between “outside-in” and “inside-out” and the more or less important degree of interaction and use of ICT (see Table 1). In particular, they distinguish open innovation 1.0 from open innovation 2.0 that better mobilizes ICT and is often much more interactive and community-oriented.

Among all these terms, which are very different from each other, at least one element of recurrence seems to emerge (particularly regarding open innovation 2.0): the use of an intermediary structure. While in some cases the development of ICT has reduced the need for intermediaries (we especially think of the networks peer-to-peer), this is not the case for open innovation practices. It seems that to open up its boundaries is not necessarily natural for organizations. It is thus often necessary to use intermediaries to smooth the difficulties that may arise in the process of opening.

For example, markets for technology where companies buy and sell technologies, generally through patent licenses (Arora *et al.*, 2001), are based on the presence of patent brokers such as *Yet2.com* or *TechTransferOnline* (Benassi and Di Minin, 2009). The valorisation of public research in most countries passes very often through “Technology Transfer Offices” (TTOs). The practice of crowdsourcing is also based on the use of an online platform such as Innocentive or Hypios (Pénin *et al.*, 2013). Lego, a company globally recognized for its ability to mobilize its user communities, has created a platform named *Lego Ideas*. The formation of patent pool and the aggregation of patents also pass through intermediaries (e.g. *France brevet* or *Intellectual Venture*) (Merges, 2001).

The objective of our paper is thus to better understand the different reasons for using these intermediary companies. In particular, we distinguish between intermediaries whose objective is to reduce transaction costs (Coase, 1937; Williamson, 1975; Williamson, 2000), and intermediaries whose aim is to help create and disseminate knowledge (Kogut and Zander, 1992; 1996; Spender, 1996; Amin and Cohendet, 2004). Knowledge is indeed difficult to share by means of anonymous, instant commercial contracts, particularly when it is tacit. These difficulties limit the scope of intermediaries whose main role is to secure the transaction’s legal framework. The specific nature of knowledge can thus justify the presence of more sophisticated intermediaries which will actively be involved in the research process and thus help to disseminate knowledge in their environment (which can pass through very diverse activities, ranging from consulting to delivery service, etc.). These intermediaries are truly involved in the

Table 1. Terms of open innovation

	Open Innovation 1.0	Open Innovation 2.0
“Outside-in”, Pure	Licensing-in, Spin-in	Crowdsourcing
Partnership (mix of “outside-in” and “inside-out”)	Co-design, Co-development, Research consortium, Research joint venture	Innovation with communities / open source
“Inside-out”, Pure	Licensing-out, Spin-out	Places of online markets / eBay ideas (Yet2.com)

Source: Jullien and Pénin (2014).

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