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Inter-InnoLab collaboration: An investigation of the diversity and interconnection among Innovation Laboratories

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ABSTRACT

The objective of this paper is twofold. The paper initially, based on the findings drawn from in-depth expert interviews with Innovation Laboratory (InnoLab) facilitators in field settings, explores the structural and functional diversity of existing InnoLabs. As a result, a service-based taxonomy of InnoLabs and a catalogue of their differentiating characteristics are constructed herein. Subsequently, the paper builds theory towards the inter-InnoLab collaboration. In this context, at first, the potential benefits of inter-InnoLab collaboration for the participating InnoLabs and their customers are determined. Successively, a roadmap of inter-InnoLab collaboration is constructed encompassing the various possible degrees of mutual integration of InnoLabs.

1. Introduction

Innovation intermediaries have been widely recognized as an important source of assistance for business organizations in dealing with the challenges of an often times complex and uncertain innovation process (Dalziel, 2010; Haakanson et al., 2011). Essentially, innovation intermediaries are understood to enhance the innovation capacities of organizations by serving as the agents or brokers of information exchange (Haakanson et al., 2011; Smedlund, 2006), technology transfer (Hargadon and Sutton, 1997) or network formation (Batterink et al., 2010) between two or more organizations. Recently, however, the concept of innovation intermediaries is extended to also include the dedicated innovation structures that facilitate the innovation process by offering the mediating services directly to a client on a one-to-one basis where no third party is involved (Howells, 2006). An emerging type of such innovation intermediaries providing one-off services to organizations are 'Innovation Laboratories', hereafter referred to as InnoLabs.

In the literature, the concept of InnoLabs has been attributed with varying terminologies dependent on the author that vary in their focus and approach. Scholars have elaborated the concept as the type of structures consisting of a creative physical space (Magadley and Birdi, 2009) and group of people (Gey et al., 2013) providing innovation support and enabling the configuration of the new innovation projects (Lewis and Moultrie, 2005) through the provision of mediating services and necessary resources (Memon et al., 2014). Although the concept of InnoLabs has gained much attention in the economic markets over the last two decades, it has largely remained scientifically unexplored and unstructured (Burger and Hermann, 2010). The concept is often discussed abstractly (e.g. Gey et al., 2013; Schmidt, 2009) or based on experiences specific to a particular case study (e.g. Lewis and Moultrie, 2005; Magadley and Birdi, 2009). Increasingly, the findings from recent studies (e.g. Memon et al., 2014; Meyer et al., 2015; Schmidt, 2009) advocate that the InnoLabs as a concept does not have a defined meaning and convictions and therefore the existing InnoLabs

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can be distinguished along several dimensions. Nevertheless, owing to the self-interpretive nature and limited focus, these studies only suggest an abstract catalogue of InnoLab characteristics without the description of possible field configurations. Thus, the extant literature on InnoLabs is somewhat fragmented and lacking a general and conclusive consensus on what the term 'InnoLab' may refer to? And what diversity do they exhibit in terms of their structural and functional manifestations?

Accordingly, the first and foremost objective of this paper is to undertake a comprehensive investigation of existing InnoLabs in field settings and thereby disseminate a conclusive description of their diversity with respect to their structural and functional aspects. In this esteem, employing the in-depth expert interviews with InnoLab facilitators with concurrent observation of their working environment, we formulate a well-refined definition of an InnoLab, establish a service-based taxonomy of InnoLabs, and construct a catalogue of their differentiating characteristics with real field configurations for their comparison within and across categories. The identified structural and functional diversity among existing InnoLabs reveals that albeit the overall goal of all InnoLabs is to enable the innovation process, they target different innovation challenges and therefore offer varying kinds of services and possess different types of skills, competencies, and other resources. As a result, a certain InnoLab is only capable of supporting a part of innovation process and accordingly all the innovation assistance that their customers might need in course of an innovation process remain dispersed in hands of different InnoLabs. As such, the second objective of this paper is to build theory towards inter-InnoLab collaboration. In doing so, we initially spot the incentives that the inter-InnoLab collaboration could bring to the participating InnoLabs, their customers, and innovation environment as a whole. Successively, we recognize the possible degrees of integration among InnoLabs and thus construct a roadmap for inter-InnoLab collaboration encompassing the different states of interconnection that an InnoLab may exhibit while transiting from a non-collaborating state to a collaborating state.

The results of this study should contribute to the literature in explaining the concept and variety of existing InnoLabs and extending the discussion into the direction of inter-InnoLab collaboration that has not been taken into scientific debate yet. In addition, the research results should provide meaningful implications for innovation managers in understanding the different kinds of innovation support that they could solicit at the existing InnoLabs for addressing their individual innovation challenges, and InnoLab facilitators in motivating them towards collaborating with their peers and successively identifying the activities that they can undertake mutually in order to attain the higher levels of inter- InnoLab collaboration.

The remainder of the paper is structured as follows. First, in Section 2, we collate the background information on the relevant aspects in order to synthesize the theoretical perspectives and identify the relevant knowledge gaps that shape the rationale for undertaking this study. Next, in Section 3, we elaborate the methodological approach and research instruments of the study. Afterward, we discuss our research results regarding the concept and variety of InnoLabs in Section 4 and build theory by analysis on the incentives and possibilities of inter-InnoLab collaboration in Section 5. Finally, the paper concludes with a discussion of the implications, limitations, and directions for future research in Section 6.

2. Theoretical background

2.1. Collaborative innovation and innovation intermediaries

The innovation process is essentially an uncertain and complex process (Jalonen, 2011) with high risk and reward factors attached to it (Demirbas et al., 2011). Accordingly, its successful undertaking demands intertwined processes of ideation, creation, design and delivery, supported by an appropriate managerial infrastructure to balance risks against rewards. Research shows that despite of their best intentions of giving structural attention to innovation, organizations encounter several endogenous (internal to the organization) or exogenous (external to the organization) innovation barriers (Madrid-Guijarro et al., 2009); such as the difficulties in obtaining resources (technological information, raw materials, and finance), assessing markets (customers' needs, demands and perceptions), and lack of internal resources (funds, technical expertise or management time) (Hadjimanolis, 1999). Therefore, nowadays the issue for many organizations is not a question of whether or not to innovate but rather how to do it successfully (Prajogo and Ahmed, 2006).

Consequently, for enabling the best possible value creation and fostering and developing the innovation potential, the context in which organizations operate and organize innovation has changed. In previous years organizations would keep the innovation process solely in-house, nowadays, however, the organizations are looking toward opening their innovation process to the external parties (Chesbrough, 2003, 2006) in order to combine different knowledge and assets (Jørgensen and Ulhøi, 2010) into the innovation process that they do not hold themselves. As a result, currently in addition to in-house designed innovations, the innovative solutions and products are being created also cooperatively through an entire value chain with several organizations involved (Coombes et al., 2009; Coombs et al., 2003; Meyer and Thieme, 2010) selected according to their comparative advantages (MacCormack et al., 2007). In this new model of innovation, known as open innovation model, organizations open up their innovation process to a diversity of actors across hierarchies and organizational boundaries (Corley and Gioia, 2011; Nambisan, 2008), and thereby the actors are integrated into the innovation cycle (idea generation, selection, implementation, and diffusion) from the earliest stage onwards (Bommert, 2010).

Whilst there is a substantial evidence of the benefits of tapping into the vast innovation assets across organizational boundaries towards the quantity and quality of innovations (e.g. Ahuja, 2000; Goes and Park, 1997; Pittaway et al., 2004; Willoughby and Galvin, 2005), engaging in effective and successful collaborative alliances is a challenging task for the organizations. An effective open innovation strategy demands substantial efforts in determining what external assets are required (Want), what are possible sources(Find), which source's assets are superior and how to access them (Get), and how to coordinate and integrate those assets to meet the objectives (Manage) (Witzeman et al., 2006). Accordingly, the success of such alliances highly depends on the adequate