Open innovation and company culture: Internal openness makes the difference

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ABSTRACT

There is a common agreement that innovation is driven by the people that form the heart of any company's innovation activity. Still, people perform innovation in a special institutional environment characterized by rules and regulations that might support or impede innovation. The open innovation paradigm expects companies to engage in external relationships for innovation; however companies often neglect the actual internal openness of employees, which is an absolute must before partnering with external partners. The article finds that company innovation culture comes in five main forms: closed innovation (driven by internal capabilities); doing, using, interacting (ad hoc processes, no link to knowledge providers); outsourcing innovation capabilities; extramural innovation, no matching internal culture/procedures and proactive innovation (match of internal and external openness). The empirical analysis shows that the closed innovation behavior is by far the most widespread among Russian companies whereas proactive innovation behavior remains an exception in the overall sample.

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1. Introduction

The term "open innovation" (OI) has been discussed in the literature for over a decade. This term encompasses the most important changes in company innovation activities, which can be characterized as more distributed, multidisciplinary, trans-border, cross-institutional and inter-temporal processes than in the 20th century, all contained in one conceptual framework (Bianchi et al., 2011; Chiaroni et al., 2011; Dahlandera and Gann, 2010; Huizingh, 2011). This framework postulates that innovation is significantly beyond R&D activities alone, instead it views innovation as a result of the smart and targeted combined use and application of knowledge and competences with special emphasis on the willingness to integrate third parties' knowledge and abilities into one organizations' activities (Vanhaverbeke and Cloodt, 2014). In such a broad sense the main understanding of 'open innovation' implies that innovations result from the sharing of competences between different players along and beyond the value chain, with deep implications for a company's external relationships (Chesbrough, 2003; Chesbrough et al., 2006). In particular, new forms of complements between private and public research arise as a result of the need to reconcile speed in the commercial exploitation of new ideas on highly competitive global markets with continuous investments and long lead-times to develop radical innovation capabilities. Therefore, innovators need to accumulate competences and resources to exploit the opportunities that arise from multi-faceted demands.

Although the required knowledge increases exponentially, the opportunities for innovative responses to more diverse demands have grown even more rapidly (Ferrary, 2011). This, however, requires different competences and perceptions of innovation by innovators, which share the common features of complex underlying user needs and the respective application (market knowledge) and technological knowledge. In this respect, the open innovation paradigm emphasizes a two-directional knowledge and technology transfer by simultaneously opening the innovation process inward and outward instead of either in-source knowledge and technologies (inward) or the use of multiple exploitation paths for innovation, knowledge and technology, and thus inventions (Brunswicker and Vanhaverbeke, 2015). However, it is important to recall the basics features of almost any kind of innovation: this means the combination of knowledge and technologies that exist or are developed and generated for special purposes (Cohen and Levinthal, 1990; Doz et al., 2004). Knowledge and technology in turn are developed and generated by people, which highlights the centrality and importance of the human factor within the innovation process and hence for innovation management. Innovative efforts are typically executed using a project-management approach, with teams as the organizational nucleus (Griffin, 1997; Leenders et al., 2007). Like other crucial organizational outcomes, innovative outcomes of the teams stem not only from overall firm strategy and access to resources but, more fundamentally, from the minds of the individual employees who, with others, carry out the work on a daily basis (Amabile et al.,

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2004; Kratzer et al., 2008). The extent to which they will produce innovative – novel and useful – ideas during their everyday work depends not only on their individual characteristics, but also mainly on the work environment around them (Amabile et al., 2004; Gavrilova et al., 2014; Miles, 2011; Perry-Smith and Shalley, 2003; Reiter-Palmon and Illies, 2004).

"Innovation culture" and "innovation openness" are crucial for teams when it comes to striving for innovation. Although many papers have been written on open innovation and the importance of human resources for innovation activities, a significant gap in the understanding of soft factors, hence company innovation culture and openness, remains. The paper therefore attempts to deliver empirical evidence of the features of company innovation culture and openness, which intends to explain how open innovation is implemented at the operational level. With this the paper aims to synthesize research efforts in theorizing on human resources and studies that describe practical methods.

2. Innovation culture and openness

Labor mobility and widely dispersed knowledge across multiple public and private organizations force companies to reconsider the spectrum of innovation activities they can deliver independently, and rather consider the need to engage in alternative innovation practices. However, the opportunities for innovation from teams depend on overcoming obstacles. First, competition within teams about an individual's knowledge advantage is important. Human resource (HR) strategies often place a special emphasis on knowledge generated and used by individuals, which in the long term does not support knowledge sharing. Simultaneously, HR strategies formulate incentive schemes to encourage knowledge sharing between team members. Second, team members' educational and professional backgrounds are important. Successful teamwork involves integrating complementary knowledge and competences to leverage the innovation potential from teams with diverse community backgrounds (Doz et al., 2004). But the difficulty of integrating diverse kinds of knowledge remains a challenge because the complementary elements between different knowledge communities are not guaranteed; on the contrary, a mismatch is likely (Fallick et al., 2004). Communities can vary in terms of the degree of formalization, openness, and mechanisms employed for operations and communities' strategic intentions, thus, corporations tend to create and influence communities according to their interests and ambitions (Almirall, 2008; West and Lakhani, 2008). In a broader community sense, it can be argued that suppliers are becoming ever more important not only as sources but also contributors to innovation and commercial success (Chiaroni et al., 2011; Dahlandera and Gann, 2010; Harison and Koski, 2009; Huizingh, 2011; Lee et al., 2010; Van den Biesen, 2008). Consequently, although the innovation process of combining knowledge and information towards use and application may initially seem easy to manage, it becomes more complex when integrating market and customer knowledge.

Accordingly, quite recently, intra-company innovation processes show a shift from stage gate to 'probe and learn' processes (Gassmann et al., 2010) which lay the ground for inward and outward knowledge transfer. Still, the transfer of knowledge and technology is only one part of innovation activity embedded in the overall management of knowledge and innovation (Abd Razak et al., 2016; Gokhberg and Meissner, 2013). The latter develops in a more challenging and complex manner, especially when it comes to a remote market and technological knowledge, because the need arises to transfer and incorporate knowledge into the place (location) and the team (or individual), which are removed from the place of origin (Bondarenko, 2015; Cooke, 2005; Döring and Schnellenbach, 2004; Fritsch and Franke, 2004; Kotsemir and Meissner, 2013; Kuemmerle, 1997; Simmie, 2003; Spithoven et al.,

2010). In such situations, knowledge holders with different educational, professional and cultural backgrounds must be brought together by adjusting individuals' knowledge to the specific institutional and local environments, which is a time-consuming yet necessary process and hence must be incorporated into any innovation project from the very beginning (Kesidou and Szirmai, 2007).

The described features of innovation management impose additional challenges to the abilities and qualifications of people by also stressing soft skills for management of the activities. These soft skills can be considered a reasonable determinant of the company innovation culture. However, although thought to have a reasonable impact on the innovation performance of individuals, teams, departments and organizations innovation culture remains a broad and vague term (Mancusi, 2008). Furthermore, it requires a more systemic understanding and approach towards the company's internal framework conditions including incentive systems, innovation culture and an organization supportive of innovation.

The main challenges in building and developing an innovation culture are the changes in the organization's mindset, in mobilizing organizations as teams to bring new products and services to the market quickly, and in bringing an organization together to translate product and service initiatives into sustained results (Angel, 2006). The underlying challenge is that companies need to incorporate a view on innovation shared not only by the company leaders but also by employees (Carayannis and Meissner, 2016; Gershman and Kuznetsova, 2012). However, making innovation 'alive' in employees' mindsets risks making innovation misunderstood: employees may be enthusiastic about generating ideas and engaging in innovation related projects but they may lose sight of the end goal of the project to apply the innovation in multiple ways. This implies that innovation culture has to span the full innovation process, emphasizing especially the use and application of original ideas formulated by the company's employees regardless of the ideas' source (Kotsemir and Meissner, 2013). Furthermore, cultural thinking is strongly associated with peoples' behavior and attitudes, which are important elements in shaping a corporation's work culture and innovation culture and therefore make the innovation process 'open'. By that definition, 'openness' includes the corporations' openness towards employees' attitudes about innovation, frequently expressed as innovation culture and the institutional openness towards external relationships and partnerships.

To make the term 'innovation openness' more clear, we argue that the following features are reasonable for describing and eventually measuring innovation culture and openness:

1. *Risk feature*
   It's a commonly understood fact that innovation is inherently risky especially at the early stages, e.g. financial risks, technical risks and the risk of rejection by the market. Therefore, we argue that corporate openness needs to provide opportunities for employees to perform risky projects which aim at innovation.

2. *Belief feature*
   Successful innovation projects require strong beliefs of the people involved in the project and recognition in the organization. Accordingly, management needs to encourage individuals to find ways to solve non-standard problems.

3. *Exchange and share feature*
   In line with the ever-increasing scope and complexity of science, technology and innovation, challenges arise to detect special competences and knowledge that need to be aligned and focused on a solution and application. Since these abilities are often also of a rather tacit nature, the exchange and sharing of knowledge between individuals, units and the outside world is essential for sustainable innovation performance. Knowledge and information sharing is done voluntarily instead of by management order.