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The interplay of decentralization, employee involvement and absorptive capacity on firms' innovation and business performance



Kaja Rangus, Alenka Slavec *

Faculty of Economics, University of Ljubljana, Kardeljeva ploščad 17, 1000 Ljubljana, Slovenia

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ABSTRACT

This paper investigates the relationship between organizational characteristics and firm's innovation and business performance. Specifically, we examine how decentralization, absorptive capacity, and employee involvement (in light of the open innovation literature) impact firm's innovation, which in turn affects business performance. We test the proposed model on a large sample of 421 manufacturing and service firms and find decentralization being positively connected to employee involvement, absorptive capacity, and firm's innovation performance. Moreover, the results show that employee involvement and absorptive capacity mediate the relationship between decentralization and firm's innovation performance. The results also suggest that firm's innovation performance positively influence firm's business performance. Implications for managers and future research are discussed.

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1. Introduction

Innovations play a vital part in firm's competitive advantage and can substantially influence firm's performance (Salomo et al., 2007). Several studies to date have examined the influence of external and internal mechanisms, which impact firm's innovation performance, ranging from environmental factors, such as market and technological uncertainty (e.g. Sainio et al., 2012; Uzkurt et al., 2012) to internal mechanisms, such as organizational structure (e.g. Chen and Chang, 2012; Damanpour and Gopalakrishnan, 1998), culture (e.g. Efrat, 2014; Hurley and Hult, 1998) and leadership (e.g. Sattayaraksa and Boon-itt, 2016).

Recently, several studies began analysing the influence of firm's absorptive capacity, i.e. the ability to identify, assimilate and commercially apply externally available information (Cohen and Levinthal, 1990), using larger sets of empirical data and showing its significant importance for firm's innovation performance (e.g. Kostopoulos et al., 2011; Murovec and Prodan, 2009). On the other hand, employees with their creativity and innovativeness play an important role in ideation as well as implementation of new and improved products and services (Nijhof et al., 2002).

Some of these internal and external factors have already shown its impact on firm's innovation performance either as separate factors or in connection with other internal and external factors. However, the investigation of the synergies and (in)compatibilities among internal and

external factors is still incomplete, because the research has not provided yet an optimal organizational combination of internal and external factors and resources that would predict greater innovation and firm performance (Hauser et al., 2006; Möller et al., 2015).

Decentralization, absorptive capacity and employee involvement positively influence firm innovation performance. Still, research that examines the interrelatedness among the three concepts is scarce. Thus, the aim of this study is to narrow this gap by conceptualizing and empirically testing a model that integrates the interplay of organizational aspects, such as decentralization, employee involvement and absorptive capacity, and their mutual impact on a firm's innovation and business performance on a sample of 421 companies of different sizes and from different industries.

The paper contributes to the literature in the field of innovation management, showing how decentralization and employee involvement positively influence a firm's innovation and business performance and in this way complements existing evidences on the effects of internal and external factors on innovation performance. When reviewing the innovation management literature, we pay special attention to the concept of open innovation as it is predicted to become fully integrated in the innovation management practices, i.e. will gradually replace the traditional way of innovation and lose its distinctiveness (Huizingh, 2011). This is already evident in cases of early adopters who have integrated open innovation into their existing innovation practices (not creating new ones) (Chesbrough and Crowther, 2006; Huizingh, 2011). Therefore, the insights from the paper are beneficial for the open innovation literature, explicating how to successfully manage internally and externally developed knowledge and ideas. Moreover, this study contributes to the literature on absorptive capacity by providing evidence

^{*} Corresponding author.

E-mail addresses: kaja.rangus@ef.uni-lj.si (K. Rangus), alenka.slavec@ef.uni-lj.si

on the antecedents of this capability, as well as dynamic capabilities perspective showing how different dynamic capabilities mutually affect a firm's innovation and business performance.

2. Literature review

Research on microfoundations of innovation performance stretch back to the early 1990s when researchers started to investigate new product development performance and to emphasize the importance of leadership, management support, team composition and formation (e.g. Ancona and Caldwell, 1992; Clark and Fujimoto, 1991; Zirger and Maidique, 1990). This stream of research was followed by research on the influence of organizational structure, culture and external environment on innovation performance (e.g. Damanpour and Gopalakrishnan, 1998; Hurley and Hult, 1998). In parallel, a new perspective on organizational learning and innovation, i.e. absorptive capacity, started to emerge (e.g. Cohen and Levinthal, 1990; Lane and Lubatkin, 1998; Wolfgang, 1996).

In the next decade, these two streams of research bridged and began examining the influence of organizational antecedents (e.g. corporate culture (Harrington and Guimaraes, 2005), coordination capabilities (Jansen et al., 2005), formalization and social integration (Vega-Jurado et al., 2008)) on absorptive capacity and consequently on innovation performance. Meanwhile, the research on open innovation started to receive substantial attention (Huizingh, 2011) emphasizing the importance of collaboration with external environment for sustainable innovation performance (Chesbrough, 2003). However, open innovation requires the development of internal organizational capabilities supporting its successful implementation (Lichtenthaler, 2011).

Although there is a long history of research on microfoundations of innovation performance, the evidence on microfoundations of open innovation, which highlights the relationship with external partners and involves all employees in the innovation process, is still scarce (Naqshbandi and Kaur, 2011; Vanhaverbeke et al., 2014). Therefore, the aim of this study is to connect previously unconnected microfoundations of innovation and relate them to the emerging topic of open innovation by integrating the construct of employee involvement and emphasizing the collaboration with external environment. What follows is the theoretical background that presents the basis for hypotheses development.

3. Theoretical background and hypotheses development

Throughout existing scholarship and practitioners' evidence there is a strong view that the interplay of an organization's idiosyncratic assets and capabilities impact the overall organizational performance (e.g. Huston and Sakkab, 2006; Tsai, 2001).

In order to remain competitive in the turbulent environment, resources must constantly evolve and develop (Ambrosini and Bowman, 2009), which is the prominence of the theoretical background for our model, i.e. the dynamic capabilities perspective. Dynamic capabilities identify, shape, and seize technological and market opportunities (Teece, 2007) and are defined as the "firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly changing environments" (Teece et al., 1997:516). Following this reasoning, an important microfoundation of dynamic capabilities is decentralization, as it enables companies to quickly respond to changing technological, customer and market needs through its flexibility (Teece, 2007). Centralization/decentralization influences innovation performance in dynamic environments (Miller, 1983).

The second possible source of a firm's competitive advantage are employees who can search the outside world for potentially useful ideas and connect them with internal capabilities (Chesbrough, 2003; Whelan et al., 2011). Employees present an important part in the sustainment of dynamic capabilities (Teece, 2007) as they possess capabilities to identify, integrate, and combine externally acquired knowledge and technology that backs innovation outcomes (Knudsen,

2007). Additionally, an important dynamic capability of a firm is absorptive capacity which enables firms to acquire, assimilate, transform and exploit knowledge to sustain a competitive advantage (Zahra and George, 2002).

Although decentralization, employee involvement, and absorptive capacity are seen as traditional organizational aspects, they can also reflect the principles of open innovation. Organizational change presents a major concern in the implementation of open innovation, as adopting open innovation sometimes means doing things in an opposite way than it was traditionally practiced in the past (Mortara et al., 2009). Open innovation requires internal mechanisms that stimulate internal and external collaboration and integration of internal and external knowledge and technology. This may be established through decentralized and relaxed atmosphere, giving employees more freedom, flexibility and stimulation to all of them to participate in the idea generation and implementation processes. Such orientation is in contrast to traditional highly controlling and commanding organization (Dodgson et al., 2006).

We present the proposed theoretical model in Fig. 1. In this model, we suggest that decentralization activates innovation performance. This is done directly as well as indirectly through employee involvement and absorptive capacity. The model is grounded in the dynamic capabilities perspective, innovation literature and prior research on absorptive capacity. The processes in the model are triggered when decentralization is activated, which empowers employee involvement and absorption of external knowledge. Decentralization thus regulates organizational efforts for successful innovation performance. We suggest that decentralization leads to increased innovation performance directly (path Hypothesis 1 in Fig. 1) and indirectly (path Hypothesis 7/ Hypothesis 8 in Fig. 1) through employee involvement and absorptive capacity. Moreover, we propose that innovation performance (path Hypothesis 10 in Fig. 1) positively influences a firm's business performance. Below we review the theoretical arguments that take each proposed path in the model into consideration.

3.1. The relationship between decentralization, employee involvement, absorptive capacity and firm's innovation performance

Competitive and innovative cultures positively affect organizational performance, as they are decentralized and less structured, which enables them to be more flexible to external environment (Ogbonna and Harris, 2000). Decentralized processes of decision making and enhanced communication strengthen an organization's ability to quickly respond to changing conditions (Zammuto and O'Connor, 1992). Through decentralized structures organizations faster respond to changing technological, customer and market needs (Teece, 2007) which consequently influences their innovation performance (Miller, 1983). Open innovation requires organizational structure which enables smooth knowledge flows within and between organizations in order to boost their innovation process (Chesbrough, 2003). Therefore, we propose:

Hypothesis 1. There is a direct positive relationship between decentralization and innovation performance of a firm.

Attitude of employees can strongly influence the open innovation process (Lichtenthaler, 2011), therefore company has to leverage also the knowledge and initiatives of employees who are not involved in R&D (van de Vrande et al., 2009). Open innovation processes require significant cultural change leading to more decentralized R&D structure and internal openness that enables effective communications between unrelated groups in the company (Dodgson et al., 2006). The shift towards an open approach to innovation requires a shift of organizational structure that stimulates collaboration with other companies and increased intensity of internal networks through rotational assignments and cross-functional working (Mortara et al., 2009). Creating a relaxed atmosphere by giving employees more freedom and flexibility may

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