Information Systems, Organizational Mechanisms and Innovation Success

Innovative outcomes, predominantly in the form of product/service and process innovations, and the environment leading to those outcomes, are central tenets of research since the work of Schumpeter (1934). Innovation is also central to managerial considerations as staying innovative is an ever-present challenge of companies. Namely, in developed economies such as Germany, companies may, for example, choose to compete by differentiating from competitors ("being a premium supplier") which typically encompasses being at the innovative edge, or even leading in innovation. Consequently, quite a number of approaches have been adopted to address the issue of competing by innovation such as Open Innovation (Chesbrough, 2003), the Stage-Gate model (Cooper, 2008), and transformational leadership models. Furthermore, information systems such as project management tools, knowledge databases, idea management systems, and social media platforms have been introduced. Still, the challenge of being and staying innovative remains unchanged.

Many studies have investigated antecedents of innovation and consistently show that knowledge exchange and combination from firm-internal sources but also from firm-external sources is very important. In this respect, Cohen and Levinthal (1990) point to the importance of absorptive capacity (ACAP), "the ability to absorb knowledge from outside the firm and apply it to commercial ends".

Although ACAP-related research produced insights into, e.g., the role of channels of communication and organizational form, Lane et al. (2006, p. 857) contend that "very few studies have examined drivers within the firm". There are only a few exceptions such as the study by Van den Bosch et al. (1999) dealing with formalized coordination mechanisms that are conducive to integration and application of knowledge. However, although, e.g., coordination may be greatly enhanced by information systems, interestingly the impact of information systems on ACAP and innovation success seems to be a gap (Volberda et al., 2010) which is also reflected by a recent review revealing that "there have been few detailed investigations of the relationship between IT and absorptive capacity" (Roberts et al., 2012, p. 640).

Considering that "information systems exert their influence on the firm through complementary relationships with other firm assets and capabilities" (Wade and Hulland, 2004, p. 109), it seems promising to investigate the complementary effects of information systems and organizational mechanisms designed to coordinate and control (Cardinal, 2001) innovation activities.

Considering the work of prior literature regarding innovation success, ACAP, and organizational coordination and control mechanisms, this research projects sets out to answer the following research question:

How are information systems and organizational mechanisms related to absorptive capacity and innovation success?

Answering this question, we expect to highlight which combination of type of information system and organizational mechanism will render an effect on which component of ACAP and eventually innovation success. We expect, e.g., to clarify the effect of a certain type of information system on the ability to acquire new external knowledge in a setting where clan control and coordination through socialization prevails.

To answer the research question, a theoretical model has been developed that draws on the literature on absorptive capacity (Zahra and George, 2002), combinative capabilities (Van den Bosch et al., 1999), different types of control modes (Kirsch, 1997) and information systems (Pavlou and El Sawy, 2010). Building on that model, case studies have been carried out to gain deeper insights into the phenomenon under study. In 2013, the next step will be a survey to test the research model.

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