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# The Impact of Knowledge Management on Absorptive Capacity

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# The Impact of Knowledge Management on Absorptive Capacity

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## Abstract

One of the most important driving forces for the competitive success of a firm as well as of the entire economy is innovation. Innovations which "can be defined as the successful implementation of creative ideas, tasks, or procedures" results from the exchange and combination of knowledge. In this respect, the absorptive capacity (ACAP) of a firm has been found an important factor. We propose that KM positively influences each of the four abilities of ACAP. At first, KM provides means to identify relevant resources by facilitating the identification and acquisition of relevant knowledge. Second, KM supports the assimilation of knowledge by building and organizing a firm's knowledge stock and finally KM encourages the transformation of knowledge comprising the combination of prior and newly acquired and assimilated knowledge by providing means to update and share knowledge. A theoretical model that links KM to ACAP is developed and quantitatively evaluated by using data from 224 German manufacturing firms. The results show that KM significantly and positively influences a firm's ACAP. Looking into more detail, the two potential ACAP abilities are positively affected whereas in terms of realized ACAP KM only effects the transformation but not the exploitation ability. The results build the basis for our further research which focuses on analyzing which kinds of KM systems are how effectively affecting the different ACAP abilities and which organizational settings need to correspond with the applied KM systems in order to achieve superior innovation success.

**Keywords:** Knowledge Management, Absorptive Capacity, Innovation

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## INTRODUCTION

One of the most important driving forces for the competitive success of a firm as well as of the entire economy is innovation. Innovations which “can be defined as the successful implementation of creative ideas, tasks, or procedures” (Cummings and Kiesler 2003) results from the exchange and combination of knowledge. In this respect, the absorptive capacity (ACAP) of a firm has been found an important factor (Lichtenthaler 2009). ACAP can be defined “as the ability to recognize the value of external information, assimilate it and apply it to commercial ends” (Eisenhardt and Santos 2002, p. 141). Zahra and George (2002) split ACAP into potential ACAP comprising the two abilities of acquiring and assimilating external knowledge and into realized ACAP referring to the two abilities to transform and exploit this external knowledge in combination with prior internal knowledge. Several studies showed the importance of ACAP for firm performance (Lane et al. 2001) and innovation (Tsai 2001), but surprisingly few studies have analyzed the antecedents of ACAP and if, they just focused on organizational structures and characteristics (Daghfous 2004; Jansen et al. 2005; Lane et al. 2006). Further, to the best of our knowledge, there are no publications investigating the impact of knowledge management (KM) on ACAP, although ACAP “depends on the organization’s ability to share knowledge and communicate internally” (Lane et al. 2006). We address this research gap by following the argumentation of Lane et al. (2006) who imply that ACAP is an outcome of a firm’s KM and investigate the impact of KM on ACAP.

We propose that KM positively influences each of the four abilities of ACAP. At first, KM provides means to identify relevant resources by facilitating the identification and acquisition of relevant knowledge. Second, KM supports the assimilation of knowledge by building and organizing a firm’s knowledge stock and finally KM encourages the transformation of knowledge comprising the combination of prior and newly acquired and assimilated knowledge by providing means to update and share knowledge. A theoretical model that links KM to ACAP is developed and quantitatively evaluated by using data from 224 German manufacturing firms.

The results show that KM significantly and positively influences a firm’s ACAP. Accordingly, the proposed but hitherto untested relationship can be confirmed. Looking into more detail, the two potential ACAP abilities are positively affected whereas in terms of realized ACAP KM only effects the transformation but not the exploitation ability. One reason is that exploitation is about harvesting what has been developed using the transformation ability. At this point, most problems related to the development and production e.g. of a new product are already solved and thus KM is of minor importance.

The results build the basis for our further research which focuses on analyzing which kinds of KM systems are how effectively affecting the different ACAP abilities and which organizational settings need to correspond with the applied KM systems in order to achieve superior innovation success.

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