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# A specific knowledge culture: Cultural antecedents for knowledge sharing between project teams

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SUMMARY

Companies focus on knowledge management initiatives to fully derive business value from their employees' knowledge and foster organizational learning. Many companies organize their processes around projects; therefore, knowledge sharing between project teams becomes vital to organization-wide learning. The aim of this article is to investigate the cultural antecedents of knowledge sharing between project teams. In contrast to previous research that focused on cultural values for knowledge sharing between individuals, this study specifically examines new cultural elements that are important for knowledge sharing between project teams. The results of a quantitative survey indicate that time, structure, output orientation, and openness have positive effects on this specific knowledge process. These outcomes differ from existing studies that mostly focus on a general knowledge culture, leaving the potential for discovering differences for specific knowledge processes.



## Introduction

In today's knowledge society, companies regard knowledge and its management as key strategic assets (Grant, 1996; Kogut & Zander, 1992; Spender, 1996) and the successful sharing of that knowledge is critical to a company's success (Argote, Ingram, Levine, & Moreland, 2000; Eisenhardt & Santos, 2002; King, 2006; Mooradian, Renzl, & Matzler, 2006; von Krogh, 1998). Companies organize their specialized and knowledge-intensive work more and more around projects (Hobday, 2000; Sydow, Lindkvist, & DeFillippi, 2004; Turner, 2006). They use (semi-) permanent project teams with officially assigned members who interact regularly in order to achieve a set goal before a set deadline (Du Plessis & Hoole, 2006; Wang, 2001). As project-based organizations put the focus on organizing project teams, they concentrate on effective knowledge sharing within the team boundaries and foster individual knowledge sharing activities to achieve maximal results. However, they neglect knowledge sharing between their project teams (Bechky, 2003; Tagliaventi, Bertolotti, & Macri, 2010; Tagliaventi & Mattarelli, 2006). This gap is also reflected in knowledge management literature, which uses teams, departments, and networks only to show their enabling function for individual knowledge sharing (Wasko & Faraj, 2005) or to provide a closed setting for research (Cummings, 2004; Zárraga & Bonache, 2005), but provides little insight into what influences knowledge sharing between project teams (Wasko & Faraj, 2005).

In knowledge management literature, it is widely believed that organizational culture provides the basis for effective knowledge management and organizational learning (Choo, Bergeron, Detlor, & Heaton, 2008; Davenport, De Long, & Beers, 1998; Oliver & Kandadi, 2006; Schein, 1992). Corporate culture represents the source of values and beliefs that influence organizational behavior (Denison, 1990; Smircich, 1983) and consists of manifestations, basic assumptions, and shared values (Gagliardi, 1990; Sackmann, 1991; Schein, 1992). Corporate culture helps to understand patterns and orderliness of behavior within companies (Denison, 1990; Smircich, 1983). The common view in knowledge management literature is that cultural characteristics influence if and how knowledge is shared (De Long & Fahey, 2000; King, 2006; McDermott & O'Dell, 2001; Mueller, 2012a). As Alavi, Kayworth, and Leidner (2005) investigated, the organizational values influence knowledge management behaviors and therefore knowledge management outcomes. A knowledge culture supports knowledge processes and employees see knowledge sharing as a natural activity in their daily business (McDermott & O'Dell, 2001). However, studies dealing with knowledge cultures only analyze values of a knowledge culture ignoring that culture also includes manifestations. Furthermore, they do not focus on knowledge sharing between project teams, but instead on knowledge processes in general leaving out potentially distinct insights into different antecedents for specific knowledge processes.

Therefore, the aim of this article is twofold: First, the article will draw attention to the demands of a specific knowledge culture – the cultural prerequisites for sharing knowledge between project teams. Second, the quantitative study provides insights into which elements of a knowledge culture influence intra-organizational

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knowledge sharing between project teams and can generalize existing qualitative findings. Based on the qualitative study by Mueller (2012b) and a further literature review, we develop hypotheses concerning this relationship. We assume that the cultural manifestations "shared leadership", "structure", and "time" influence knowledge sharing between project teams, as well as the cultural values "employee orientation", "output orientation", "team orientation", "growth orientation", "learning orientation", and "openness". We test these hypotheses in medium and large project-based companies in German-speaking countries in Europe. The results of a PLS analysis show that certain cultural characteristics enable this kind of knowledge sharing. Although the empirical study shows some limitations due to the sampling, item construction, and small sample size, we keep our initial model. In doing so, we can show how to deal with these obstacles and report some new and contradictory results to existing knowledge culture research.

## Knowledge sharing between project teams and the knowledge culture

Knowledge sharing has received considerable attention (Eisenhardt & Santos, 2002) because it is vital for innovation, organizational learning, the development of new skills and capabilities, increased productivity, and maintaining a competitive advantage (Mooradian et al., 2006; von Krogh, 1998). Therefore, the skill of sharing knowledge is positively associated with superior organizational performance (Argote et al., 2000). Following the organic paradigm of knowledge management (Hazlett, McAdam, & Gallagher, 2005), we regard knowledge sharing as more than transferring information. Knowledge sharing is defined as "*the provision or receipt of task information, know-how, and feedback regarding a product or procedure*" (Cummings, 2004, p. 352), which indicates that sharing knowledge is a social, interactive, and complex process that includes tacit and explicit knowledge (Polanyi, 1966).

The literature about knowledge sharing typically concentrates on the organizational level and the individual level (Eisenhardt & Santos, 2002). Research about the organizational level deals with knowledge sharing in strategic alliances (Darr & Kurtzberg, 2000; Panteli & Sockalingam, 2005). Partner similarity (Darr & Kurtzberg, 2000), expectations and trust (Panteli & Sockalingam, 2005), tie strength (Hansen, 1999), and differences of national cultures (Kostova, 1999) influence successful knowledge sharing in strategic alliances. The individual level focuses on knowledge sharing between individuals. This is a widely adopted view because individuals are assumed to be the actors who engage in this process (Argote et al., 2000). The challenges for knowledge management initiatives are finding solutions to people-centric problems, such as motivation and personality factors and creating organizational antecedents to ensure smooth knowledge flows (von Krogh, Roos, & Slocum, 1996).

Knowledge sharing can take place across organizational boundaries within a company, such as departments, functional units, professional groups, or project teams. Research discovered that important factors for cross-boundary knowledge sharing are "itinerant members", i.e., employees that work temporarily in other groups (Gruenfeld, Martorana, & Fan, 2000), and "boundary objects", i.e., abstract or concrete objects that are passed from one group to the other (Cacciatori, Tamoschus, & Grabher, 2012; Carlile, 2002; Swan, Bresnen, Newell, & Robertson, 2007). Furthermore, effective communication, a common basis, and operational proximity influence this process (Bechky, 2003; Tagliaventi & Mattarelli, 2006). Looking specifically at knowledge sharing between project teams, organizational learning literature found that project-based organizations face an inability to learn from projects because of the practice-based nature of learning (that might differ among different project teams), project autonomy, and the difficulties of knowledge integration (Scarbrough et al., 2004). Nevertheless, project-based companies try to implement strategies to ensure that the company learns from the project teams' experiences (e.g. by implementing project report databases or communities of practice (Cacciatori et al., 2012; Prencipe & Tell, 2001; Wenger & Snyder, 2000)).

To date, research about antecedents for successful knowledge sharing between project teams is rare. The reasons for the underrepresentation might be the same as discussed in organizational learning literature: because individuals act on behalf of the organization, some researchers find it paradoxical that knowledge about individual learning mechanisms are not enough to understand the higher order concept. However, group or organizational learning cannot be explained solely by the sum of individual action; instead, it is the interaction between individual learning with others' learning and the framework the company provides (Argyris, 1992; Argyris & Schön, 1978). Hence, we regard knowledge sharing between project teams as an activity that project team members conduct and that influences the group, while being influenced by the group.

One common antecedent in knowledge management research is corporate culture. Corporate culture helps to understand why different initiatives succeed or fail because it discovers patterns in organizational behavior (Denison, 1990; Smircich, 1983). According to the "dynamic perspective" (Hatch, 1993; Sackmann, 1991), corporate culture is defined as "*the basic beliefs commonly-held and learned by a group, that govern the group member's perception, thoughts, feelings and actions and that are typical for the group as a whole*." (Sackmann, 2003, p. 59). Therefore, corporate culture includes manifestations, basic assumptions, and shared values that influence employees' thinking, behavior, and feelings of (Gagliardi, 1990; Sackmann, 1991; Schein, 1992) that are in turn influenced by all company members (Golden, 1992). Shared cultural values can promote coordination, internal control, focus on common goals, motivation, and identification, which might positively influence the company's performance (Barney, 1986; Kotter & Heskett, 1992; Saffold, 1988). Consequently, knowledge management initiatives are only successful if they are in accordance with the company's cultural perceptions (Davenport et al., 1998). This tradition coined the terms "knowledge culture" (Oliver & Kandadi, 2006), "learning culture" (Schein, 1992), and "knowledge-friendly culture" (Davenport et al., 1998). They reflect the common view in knowledge management literature, i.e., that cultural characteristics influence if and how knowledge is shared (De Long & Fahey, 2000; King, 2006; McDermott & O'Dell, 2001).

In the following section, we develop hypotheses by combining insights of cultural antecedents with the specific process of knowledge sharing between project teams. It is not common for knowledge management literature to integrate cultural manifestations explicitly. However, as also corporate communication literature suggests, artifacts represent cultural and identity aspects (for an overview see Carey, 2008; Gagliardi, 1990) and knowledge management literature shows that knowledge processes are influenced by antecedents that we regard as manifestation, such as means for communication, incentive systems, top management commitment, a knowledge vision, IT infrastructure, and resource endowments (Al-Alawi, Al-Marzooqi, & Mohammed, 2007; Chen & Huang, 2007; Lin, 2006; McDermott & O'Dell, 2001; Moffett, McAdam, & Parkinson, 2002; Oliver & Kandadi, 2006). Therefore, we will take a holistic view and integrate values and manifestation into this study.

## Insights into knowledge sharing between project teams and its cultural antecedents

As stated before, not much literature deals explicitly with the cultural characteristics that influence knowledge sharing between