Factors of stickiness in transfers of know-how between MNC units

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ABSTRACT

The effective sharing of organizational knowledge is particularly relevant for multinational corporations, where firm-specific tacit knowledge (know-how) is considered a source of competitive advantage for subsidiaries participating in a global strategy. To that end, multinational corporations (MNCs) are asking their IT departments to support both the exploitation of existing knowledge and the unit-to-unit transfer of new know-how derived in units from exploration. Nonetheless, new know-how derived from exploratory research, development and experience in one unit can be difficult to transfer to units that can exploit that know-how to commercial ends. The factors that impede the transfer of new know-how have been conceptualized as "factors of stickiness". In this paper, we present a theoretical model of organizational factors that can cause (or conversely mitigate) stickiness in the flow of new know-how between MNC units. To test the six hypotheses of the model, we used meta-analytic structural equation modeling (MASEM) of 31 empirical studies, representing 10,432 cases of new know-how transfer between units. The result of MASEM shows that the factors of receiving units' potential absorptive capacity and transmission channel in form of social capital that is enacted through its three dimensions (i.e., embedded social ties between units, institutional shared vision of units, and interorganizational trust of units) affect recipient subsidiaries' capability to exploit new know-how in practice (i.e., realized absorptive capacity), thus effectuating its transfer. Based on our findings, we propose research directions within the context of agile information systems development, distributed software projects, and management of information systems functions in MNCs.

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1. Introduction

Organizations use codification and/or personalization knowledge management strategies to compete (Hansen et al., 1999). A codification strategy enables companies to store organizational explicit knowledge in databases for transfer to anyone in the organization. A codified body of knowledge typically has multiple indexes that allow users to efficiently localize and retrieve existing knowledge (e.g., via database queries). In contrast, a personalization strategy is based on person-to-person interaction embedded within a social context (i.e., social capital) to enable the transfer of tacit knowledge. It is tacit knowledge that enables companies to coordinate and combine their resources and capabilities in innovative ways (i.e., new know-how) (Earl, 2001). It develops from experience and is embedded in complex organizational routines (Earl, 2001; Hansen, 1999; Teece et al., 1997; Zack, 1999). Consequently, unlike many explicit knowledge resources such as databases, tacit knowledge is specific to the organizational context and cannot be simply purchased from the marketplace in a ready-to-use form. Because tacit knowledge is a firm-specific knowledge resource, it is an important source of competitive advantage for organizations (Teece et al., 1997). Management of tacit knowledge enables companies to coordinate and combine their traditional resources

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and capabilities in new and distinctive ways, providing more value for their customers than can their competitors (Earl, 2001). Our focus in this paper is on organizational factors that can cause difficulties or "stickiness" (Szulanski, 1996) in the transfer of tacit knowledge (i.e., new know-how) between multinational corporation (MNC) units. Transfer of new know-how is of particularly strategic importance for multinational corporations (Earl, 2001; Hansen et al., 1999) that constitute an intracorporate network (Inkpen and Tsang, 2005). An intracorporate network consists of a group of organizations operating under a unified corporate identity in which the headquarters (or "parent") of the network has ownership interest in subsidiary business units. Extant literature on the multinational corporation contends that a primary strategic advantage of MNCs compared to markets is the diverse knowledge resources of MNCs (Hansen et al., 1999; Foss and Pedersen, 2002), which should be transferred effectively throughout the organization to generate improved products and services. Therefore, our focus in this paper is on the transfer of new know-how between units of intracorporate MNCs.

The performance of MNCs depends on their ability to coordinate geographically dispersed knowledge resources. To this end, MNCs are confronted with paradoxical challenges of exploiting existing knowledge resources and exploring new ones (He and Wong, 2004). Exploration implies firm behaviors characterized by search, discovery, experimentation, risk taking and innovation. Exploitation, in contrast, implies firm behaviors characterized by refinement, implementation, efficiency, production and selection. For example, Information Technology (IT) Centers of Excellence (CoEs) are special units used by MNCs to pool strategic IT expertise across the globe (Moore and Birkinshaw, 1998; Sia et al., 2010). These units often do not have operational responsibilities but they serve as strategic resources that focus on designing and developing new solutions (i.e., new know-how). To this end, Galliers (2007) contends that "while exploiting an organization's key human, technological, and informational assets are key components, so are the more exploratory components associated with knowledge sharing, informal information collection, cross-project learning, and human interaction" (p. 8). The contention is that sharing codified (i.e., explicit) knowledge can be supported through information and communication technologies such as enterprise systems and knowledge management systems (Hansen et al., 1999). However, focusing merely on exploiting explicit capabilities through such systems may not result in a sustainable source of strategic advantage. Therefore, to compete effectively, firms should also explore and share unique tacit knowledge through informal communication among the actors who can use it to improve products and services (Earl, 2001).

It is the IT organization (IT CoE) that is expected to take up the challenge: "CEOs today are asking their CIOs and IT organizations to play bigger roles in the growth agenda by providing the tools for collaborative innovation; by participating in innovation initiatives of all kinds; by building an integrated platform of business processes, information systems and technology; and by sharing their experience and expertise" between units (Cash et al., 2008, p. 92). Thus, IT departments are expected to play a major knowledge management role in enterprises that are increasingly confronted with paradoxical challenges of exploiting existing explicit knowledge resources and exploring new tacit knowledge. Such a knowledge creation and sharing infrastructure within the context of organizational know-how can provide organizations with the requisite agility to respond to the dynamic nature of organizations' business imperatives (Galliers, 2007). In addition to facilitating exploration and exploitation throughout the organization, the IT CoE is concerned with exploration in the form of information systems development and software development that needs to be subsequently exploited by other MNC units. Within the context of information systems development (ISD), for example, agility is concerned with (1) improving the sensing and response capabilities of ISD that result from the need for organizations deploying IS to obtain their applications faster, or to discover and quickly adopt new types of IS applications and (2) swiftly sensing and adopting innovations that either enable quicker delivery of ISD or offer an opportunity to change the IS discovery and delivery mechanisms (Lyytinen and Rose, 2006). Software development, that is increasingly globally distributed, requires swift transfer of new know-how between subsidiaries (Lee et al., 2006).

Notwithstanding its importance, MNCs find transfer of new know-how between actors in different units challenging. For instance, Galbraith (1990) reports that many firms find intra-firm transfer of new know-how much more difficult than expected and Gupta and Govindarajan (2000) describe how expectations for the transfer of new know-how into a unit from other MNC units (i.e., unit-to-unit) are often unmet. The reason is that when know-how is first created (e.g., in an IT CoE) it is closely tied to its originating context (Dennis and Vessey, 2005). To use it in a different context, the new know-how must be "contextualized" to fit the new environment. This entails deconstructing the new know-how, putting it into a general form (explicit knowledge/know-that), and then reconstructing it in a new context (Dennis and Vessey, 2005). Deconstruction and reconstruction across different units of MNCs are difficult because actors must understand how to modify the knowledge to fit their own context. Recipient units might be unable to exploit outside sources of knowledge; that is, they may lack absorptive capacity. Such capacity is largely a function of recipient unit's pre-existing stock of knowledge (i.e., potential absorptive capacity) and it becomes manifest in the ability to value, assimilate and apply new knowledge to commercial ends (i.e., realized absorptive capacity, that is the dependent variable in our research model). In the absence of such ability, initial difficulties during the assimilation and application of received know-how may become an excuse for discontinuing its use and, in some cases, reverting to the previous status quo. The difficulty associated with transfer of new know-how between MNC units is related to its stickiness nature (Jensen and Szulanski, 2004). Stickiness pertains to the degree of perceived difficulty in transferring new know-how in organizations, which, in turn, refers to the extent of problems (e.g., communication difficulties, unmet expectations) and the extent of eventfulness (e.g., the escalation of disruptive, transfer-related problems) (Jensen and Szulanski, 2004).

MNCs have complex internal environments, with spatial, cultural, and organizational distance; language barriers; interunit power struggles; and possible inconsistencies and conflict among the interests, values, practices, and routines used in