ABSTRACT

This article reports on a study that investigates the knowledge transfer between an information systems/technology (IS/IT) department and non-IT departments during IT projects. More specifically, we look into the link between the knowledge management capabilities of the IT department and the effectiveness and efficiency of the knowledge transfer to a client department. Knowledge management (KM) capabilities are defined by Gold, Malhotra, and Segars (2001) as the combination of knowledge infrastructure capabilities (structural, technical, and cultural) and knowledge processes capabilities (acquisition, conversion, application, and protection). Data collected through a Web-based survey result in 127 usable questionnaires completed by managers in large Canadian organizations. Data analysis performed using partial least squares (PLS) indicates that knowledge infrastructure capabilities are related to the knowledge transfer success, and more specifically to its effectiveness whereas knowledge processes capabilities are only related to the efficiency of such transfer. Implications of our results for research and practice are also discussed.

Keywords: explicit knowledge; tacit knowledge; knowledge acquisition; knowledge transfer; user expectations; knowledge process

INTRODUCTION

Knowledge transfer (k-transfer) is a process through which one entity is affected by the knowledge of another (Argote, Ingram, Levine, & Moreland, 2000). K-transfer, a key element of KM research, has been shown to play a critical role in increasing a company’s productivity and helping it gain a competitive advantage (Argote & Ingram, 2000; Szulanski, 2000). From a market perspective, the transfer of knowledge between two groups establishes a provider-receiver relationship. As might be inferred from Lin, Geng, and Whinston (2005) interdepartmental transfer of knowledge allows for mutual benefits and represents the knowledge market within a firm.

Although the issue of intra-firm k-transfer has been addressed already (Gruenfeld, Martorana, & Fan, 2000; Gupta & Govindarajan, 2000; Hansen, 1999; O’Dell, 1998), there is a
lack of research in interdepartmental k-transfer, in particular during IT projects. This research gap is especially significant since most IT projects are cross functional and interdepartmental (Hoopes, 2001; Sharda, Franckwick, Deosthali & Delahoussaye, 1998). The present research attempts to narrow this gap by empirically investigating interdepartmental k-transfer success during IT projects. The most obvious knowledge asset of the IT department lies in the conception, development, and exploitation of IT applications that support the business processes, characteristically examples of tacit knowledge (Edvinsson & Malone, 1997). However, the IT-related managerial skills constitute knowledge that must be transferred to the client department (as explicit knowledge) during any project if IT is to contribute to creating and sustaining a competitive advantage (Mata, Fuerst, & Barney, 1995). This emphasizes the importance of investigating further how KM capabilities can be fostered to successfully conduct an IT project that suits the needs of another business unit.

A capability is the “firm’s capacity to deploy its assets” (Maritan, 2001, p. 514). KM capabilities characterize a firm’s ability to build upon its current knowledge to scan for and recognize the value of new information, assimilate it, and apply it in order to create new knowledge (Gold et al., 2001). More specifically, KM capabilities are developed through the processes of combining and exchanging knowledge to foster the creation of new ideas and resources. They are enabled by the presence of the knowledge infrastructure capabilities, which are leveraged by the critical knowledge processes capabilities (Gold et al., 2001).

The present research aims at answering the following research question: Are KM capabilities of an IT department related to the success of knowledge transfer to non-IT department during an IT project? Although different authors point out that various aspects of such capabilities are essential to achieving k-transfer success (Nonaka & Takeuchi, 1995; O’Dell, 1998), none of them have actually empirically tested interdepartmental knowledge transfer. Given that IT projects are knowledge intensive, it seems appropriate to assume that some form of deliberate management of knowledge should be present in both the development and the implementation processes of such projects.

This paper is structured as follows: first, the theoretical background is reviewed. Next, the research objectives, variables, hypotheses, and model are presented. The third section describes the methodology used for this research project. The data analysis is followed by a discussion of the results. The last section addresses the limitations and contributions of this study for practice and research and identifies future research avenues.

THEORETICAL BACKGROUND

Resource-Based View

Organizations can gain a sustained competitive advantage when they are capable of exploiting their valuable, rare, difficult to transfer, and not easily replicated internal resources and capabilities (Barney, 1995; Grant, 1991; Von Krogh & Grand, 2002). A resource corresponds to the input used during a production process (e.g., employee, skill, equipment), whereas a capability is the capacity for a set of resources to perform some task or activity that will be the main source of the competitive advantage (Grant, 1991). A key organizational capability is the ability to effectively manage the firm’s resources. For example, when an organization uses its technology to distinguish itself from its competitors, such technology is much more than just a set of IT functionalities; it becomes the firm’s IT capability (Henderson & Venkatraman, 1999).

It is recognized that a critical element for organizations to stay competitive lies in their ability to successfully manage and internally transfer their resources and capabilities, and more particularly their knowledge, which constitutes organizations’ most fundamental resource (Grant, 1996). New knowledge is valuable when it can be successfully leveraged in existing operations (Spanos & Prastacos, 2004). The resource-base view is therefore quite useful in investigating the link between
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