Implementing e-business through organizational learning: An empirical investigation in SMEs ☆

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Abstract

This paper examines the relative importance and significance of the four learning processes introduced by Huber (knowledge acquisition, knowledge distribution, knowledge interpretation and organizational memory) on four different levels of e-business (null, external, relational and internal), through an empirical investigation of 130 SMEs in the Spanish telecommunications sector. This was conducted by using a multinomial logistic model, validated by factor analysis. Our results support that in order to implement e-business, companies need to provide the acquisition, interpretation and storage of knowledge as prior steps. Then, to consolidate e-business, companies need to support the distribution of the knowledge learnt during previous phases. Our findings further suggest that knowledge acquisition is necessary to progress from relational level to internal level.
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1. Introduction

Competition is increasingly knowledge-based as firms strive to learn and develop capabilities faster than their rivals (Lane & Lubatkin, 1998; Teece & Pisano, 1994). In this context, a firm's competitive advantage flows from its unique knowledge and how this knowledge is managed (Spender, 1996). Because of this, the knowledge creating process has become a key element for companies seeking to adapt and anticipate environmental changes through the implementation of new technologies. To adapt to continuously changing business conditions and to generate innovations, companies need to acquire new market knowledge,

administer it, make their knowledge stock explicit and share knowledge across organizational entities (Schlegelmilch & Penz, 2002). However, the development of innovations is not easy and requires the promotion of several processes from knowing what customers want to the development of new products or services that companies could use in their commercial transactions. Information technology allows companies to obtain, process, store and exchange information. One emerging share market for companies comes from e-business. Nowadays, for many firms, ignoring e-business means losing an opportunity to gain competitive advantage (Czerniawska & Potter, 1998). E-business allows companies to make transactions with customers or suppliers without personnel presence. The adoption of information technology, and especially of e-business applications, by large enterprises has been linked to organizational learning (e.g. Robey, Boudreau, & Rose, 2000). Organizational learning takes place when an organization acquires knowledge recognized to be successful to the organization.

The starting-point of this paper is the idea that the success of e-business depends on a company's ability to develop an organizational learning process that could feed the company with customer knowledge and development solutions and offer new products and services through e-business. Considering this, we suggest that organizational learning provides insights for helping e-business to achieve a competitive advantage. The purpose of this paper is to analyze the relationships between organizational learning and e-business in small and medium enterprises (SMEs), which are frequently forgotten in relevant literature. Thus, the paper begins by studying the process of learning. The paper then shifts focus, to examine the concept of e-business and the role that it plays in the organizational learning process. After the analysis and results, we develop specific conclusions and managerial implications for companies.

2. Learning in organizations

The technological revolution that has been shaping markets has brought more changes in management practices than in any other previous period. In this case, managers have seen that knowledge is the source of power and that this knowledge is broadly distributed around the company. In spite of this relevance, no theory or model of organizational learning is widely accepted (Fiol & Lyles, 1985). The diversity has contributed to the rapid advance of the field by cultivating the simultaneous developments of specialized areas of inquiry that investigate different aspects of organizational learning and knowledge management (Argote, McEvily, & Reagans, 2003). Although knowledge management could be understood as the process of capturing a firm's knowledge and using it to foster innovation through a spiral of organizational learning (Nonaka & Takeuchi, 1995), the differences between knowledge management and organizational learning are not completely obvious. Moreover, there is a growing recognition that the two communities share similar underlying concepts and problems, even though they may still be using somewhat different language to express these issues (Easterby-Smith, Crossan, & Nicolini, 2000). In any case, organizational learning could be defined as the process of understanding and gaining new insights within an organization (Fiol & Lyles, 1985). This process implies the development of insights, knowledge, and associations between past actions, the effectiveness of those actions, and future actions. Huber (1991) defined organizational learning as a change in the range of an organization's potential behaviors. Consequently, organizational learning is the development of new knowledge and insights that have the potential to influence an organization's behavior. It occurs when associations, cognitive systems, and memories are shared by members in an organization (e.g. Schulz, 2001).

Organizational learning within the organization allows the acquisition, distribution, interpretation and storage of new knowledge that permits the organization to understand and censor new information systems (IS) as to their eventual use to the organization (Harrington & Guimaraes, 2005). Literature has not used the same number and nomenclature of organizational learning processes (e.g. Argyris & Schön, 1978; Crossan, Kane, & White, 1999; Day, 1994; Huber, 1991; Schlegelmilch & Penz, 2002; Slater & Narver, 1995). Huber (1991) describes four processes or constructs that contribute to organizational learning; namely, knowledge acquisition, information distribution, information interpretation and organizational memory. Knowledge acquisition is defined as the process in which knowledge is acquired or obtained. Information distribution is the process by which information is shared. Information interpretation involves attempting to develop one or more common interpretations of distributed knowledge. Organizational memory is defined as knowledge that is stored for use.