



Using knowledge management systems: A taxonomy of SME strategies



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ABSTRACT

The paper aims to highlight the degree of diffusion and the intensity of use of knowledge management systems (KMSs) among small and medium enterprises (SMEs) and to propose a taxonomy that synthesises the strategies of using KMSs on the part of SMEs. Starting from a literature review on KMSs used by SMEs and from a focus group with consultants/researchers operating in the field of information technology in SMEs, an empirical investigation was designed, developed and conducted through semi-structured interviews involving 61 selected SMEs operating in high tech industries. The paper highlights three main issues regarding the use of KMSs. Firstly, SMEs adopt and use more intensively traditional tools (KM-Tools) rather than new and more updated ones that are generally cheaper and easier to use. Secondly, SMEs adopt and make more intensive use of practices (KM-Practices) that do not exclusively focus on the knowledge management process, but seek to adapt practices they already know to the requirements of knowledge management. Finally, the paper points out that there is a relationship of reciprocity between KM-Tools and KM-Practices: one reinforces the other and vice versa. The paper proposes a taxonomy bringing together SME strategies for using KMSs. Specifically, four strategies are identified: guidepost, explorer, exploiter, and latecomer.

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1. Introduction

A wide range of literature highlights the pivotal role now played by knowledge management (KM) in the competitiveness of large firms and small and medium enterprises (Al-Mutawah, Lee, & Cheung, 2009; Cerchione, Esposito, & Spadaro, 2016; Dyer & Hatch, 2006; Esper, Ellinger, Stank, Flint, & Moon, 2010; Gottschalk, 2000; Gunasekaran & Ngai, 2007; Lakshman & Parente, 2008; Lee, Wang, & Lin, 2010; Samuel, Goury, Gunasekaran, & Spalanzani, 2011). Regarding the introduction of knowledge management in small and medium enterprises (SMEs), practitioners and academics agree that SMEs follow in the wake of large companies in developing KM practices. This is reflected in the literature on the topic, where little research and, most notably, few empirical studies have been carried out on SMEs. Nevertheless, papers on the topic have been increasing in recent years, and the scenario is rapidly evolving (Durst & Edvardsson, 2012).

Within this scenario, Information and Communication Technologies (ICTs) are playing a vital role in the development

of knowledge management (Bolisani & Scarso, 1999; Benbya, Passiante, & Belbaly, 2004; Chua, 2004; Adamides & Karacapilidis, 2006). On the one hand, the literature highlights that ICTs are reducing the weight of the human and financial barriers hindering the spread of knowledge management (Milosz & Milosz, 2010; Nunes, Annansingh, & Eaglestone, 2006). This issue is crucial, as nowadays the technological and innovation trend in ICTs is driving the development and the introduction of new knowledge management systems, which are creating new opportunities for SMEs as they are cheaper, more user-friendly and more effective than the traditional ones (Antonelli, Geuna, & Steinmueller, 2000; Esposito & Mastroianni, 2001; Garrigos-Simon, Lapiedra Alcami, & Barbera Ribera, 2012; Matlay & Westhead, 2005). On the other hand, the literature on KM in SMEs shows that small and medium enterprises are not simply a scaled-down replica of large firms (Egbu, Hari, & Renukappa, 2005; Desouza & Awazu, 2006; Sparrow, 2001; Wong & Aspinwall, 2005; Wong, 2005). Nevertheless, it is not clear what makes the SME different. It seems that the SME is an entity without a strategy of its own for addressing the processes of knowledge management, and furthermore it is not clear what knowledge management systems they use.

Within this context, the paper has a dual aim. Firstly, to identify an exhaustive taxonomy of knowledge management systems used by SMEs, evaluating how intensively they are used, and secondly, to

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