

Chapter 10

Competitive Advantage of Knowledge Management

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INTRODUCTION

Knowledge management has been proposed as a fundamental strategic process and the only sustainable competitive advantage for firms (Grant, 1996; Davenport, 1998). A key to understanding the success and failure of knowledge management efforts within organizations is the ability to identify the relevant knowledge to manage and to extract value out of this knowledge. In the last decade past research has focused heavily on defining what knowledge is and on using different typologies (e.g., tacit vs. explicit knowledge, individual vs. collective) to characterize the different types of knowledge available to firms (e.g., Polanyi, 1967; Spender, 1996). In addition, researchers have described the processes through which knowledge is created, developed, retained, and transferred in firms (e.g., Argote, 1999; Nonaka & Takeuchi, 1995), and the role played by leadership (Bryant, 2003; Vera & Crossan, 2004)

and decision-making styles (Kalling, 2003) in influencing these processes. Unfortunately, despite the growing interest in knowledge management, little specific has been said about the mechanisms firms use to identify key knowledge areas and to gain competitive advantage out of knowledge management investments. The recognition of the important knowledge resources for a firm is critical, because the effectiveness of knowledge and learning can only be assessed on the basis of its utility in guiding behavior relative to the firm's relevant domain (Crossan, Lane, & White, 1999; Cepeda, Galán, & Leal, 2004; Zack, 1999). Knowledge for the sake of knowledge is not useful to firms.

We define knowledge management as the formalized, integrated approach of managing an enterprise's articulated and tacit knowledge assets. Knowledge assets include systems, documents, policies, and procedures, as well as unarticulated expertise and experience across the individuals, groups, organizational, and inter-organizational domains. We discuss how a knowledge management infrastructure enables the generation, acquisition, use, and transfer of knowledge, and

most importantly, the identification of the critical knowledge areas for a firm. Moreover, we argue that competitive advantage consists of two dimensions: the value created to the customer and the ability to differentiate (through cost, innovation, or both) from competitors. The framework describes specific mechanisms through which knowledge management contributes to these two processes. Building on a resource-based view of the firm (Barney, 1991, 1995, 2001) and the knowledge management and organizational learning literatures (Grant, 1996; Hall, 1992, 1993; Spender, 1996), we develop a framework to address how critical knowledge areas can enable competitive advantage sources through customer approach and competitor approach.

This article integrates knowledge management and strategic management fields by taking a fine-grained look at the connection between knowledge resources and competitive advantage. We are explicit about how firms can identify key knowledge areas that impact competitive advantage, and how they can implement market (value creation) and competitor (differential capabilities) mechanisms that are instrumental in obtaining competitive advantage. Our integrative approach provides a fresh perspective on knowledge management from which we generate important insights for management practice. Only relevant and available knowledge impacts competitive advantage, thus top management needs to proactively engage in identifying this knowledge and extracting value out of it.

BACKGROUND

The relevance and importance of knowledge is becoming increasingly critical in business as we transition from an industrial era into an information and knowledge era.

With the arrival of the knowledge and information age as well as the service economy, the importance of effective knowledge and manage-

ment has been emphasized by several scholars and industry analysts (Quinn, 1992; Toffler, 1990; Nonaka, 1991; Glazer, 1991; Leonard-Barton, 1992; Bohn, 1994; Klein & Prusak, 1994; Winslow & Bramer, 1994; Davis & Botkin, 1994; Peters, 1992). Drucker (1994) argues that the world is witnessing a great transformation, which he calls the "post-capitalist society," in which the basic economic resources will no longer be the traditional production input factors, but that the primary resource for both organizations and the economy will be knowledge.

Organizational knowledge management (KM) as a source of competitive advantage is now widely recognized (Nonaka, 1991; Bohn, 1994; Davis & Botkin, 1994). KM holds key implications for virtually all industries. Research indicates that knowledge and knowledge work has infiltrated deep into the value chain of most businesses (Quinn, 1992). Some of the reasons for this infiltration, such as product differentiation, creating "best in class" capabilities, and setting high entry barriers, provide important insights in the area of organizational knowledge and its impact on core business processes and functions. According to Quinn (1992) the majority of all public and private organizations are rapidly shifting to become repositories and coordinators of knowledge-based activities.

As we transition from an industrial/manufacturing economy to a more service-driven economy, we see the emergence of knowledge-intensive service organizations emerging alongside the more traditional capital-intensive and labor-intensive organizations (Bonora & Revang, 1993). Examples of knowledge-intensive service organizations include consulting, software engineering, law firms, and health care.

Actually, the challenge posed to contemporary businesses, particularly knowledge-intensive firms, is to remain competitive in a highly volatile and competitive knowledge environment in which markets quickly shift, technologies rapidly proliferate, competitors multiply, and products

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