Chapter II

If Managing Knowledge Is the Solution, Then What’s the Problem?

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Strategic theories of organizing are grounded in the notion that organizations should configure their internal resources and capabilities to address competitive opportunities and threats. The knowledge-based view suggests that knowledge may be the most enduring and strategic resource. This chapter presents a taxonomy for describing resources, capabilities and competitive environments in terms of four distinct yet related knowledge processing requirements or “problems”: complexity, uncertainty, equivocality and ambiguity. Each suggests a particular knowledge processing capability. The taxonomy is used to develop finer-grained distinctions regarding knowledge-based theories of the firm and the resource-based concept of inimitability.

INTRODUCTION

Strategic theories of organizing are grounded in the notion that organizations should configure their internal resources and capabilities to address competitive opportunities and threats (Andrews, 1971; Ansoff, 1965; Barney, 1991; Grant, 1991; Peteraf, 1993; Porter, 1985). Strategy is represented by the resources and capabilities an organization develops to meet its competitive requirements, and the environments it chooses to participate in given its capabilities. The basic organizing principle is to balance capabilities and requirements.

Knowledge-based views of the firm (e.g., Connor and Prahalad, 1996; Grant, 1996b; Kogut and Zander, 1992; Leibeskind, 1996; Spender, 1996) suggest that internal resources and capabilities and external opportunities and threats be described in information- and knowledge-based terms. For example, information-processing models of organizations describe the environment in terms such as...
complexity and uncertainty and the organization’s capabilities in terms of its information-processing capacity (Driver and Streufert, 1969; Galbraith, 1973; March and Simon, 1958; Thompson, 1967; Tushman and Nadler, 1978). The prescription is to configure an organization to provide an information-processing capacity sufficient to deal with the communication requirements generated by environmental complexity and uncertainty. Information-processing models are useful for understanding firm behavior in uncertain environments, where intellectual resources become strategically more important than property-based resources (Miller and Shamsie, 1995).

Organizations, however, are built not only on a foundation of exchanging information, but on creating, sharing, integrating and applying knowledge as well (Demsetz, 1988; Grant, 1996a; Kogut and Zander, 1992; Penrose, 1959; Spender, 1996; Teece, 1980). While information-based models of the firm provide a useful starting point, they fall short of a true knowledge-based view. They assume the exchange of well-formed messages based on shared understanding, rather than recognizing the diversity of knowledge, perspectives, values and interests that may actually exist within a firm. They focus on locating and sharing good answers rather than collectively surfacing and formulating good questions. They do not address how to manage knowledge when the firm doesn’t understand its problems, know what questions to ask or even agree on what it knows.

The knowledge-based view of the firm, on the other hand, recognizes that knowledge is not unidimensional. This perspective, in fact, is based on identifying characteristics of knowledge that make its creation, integration and exchange more appropriate via firms rather than markets (Connor and Prahalad, 1996; Grant, 1996b; Kogut and Zander, 1992; 1996; Magrem, 1961; Spender, 1996; Teece, 1980). For example, knowledge has been differentiated in terms of explicit vs. tacit, individual vs. collective and common vs. context-specific (Demsetz, 1988; Polanyi, 1966; Spender, 1996). Tacit, collective, context-specific knowledge is difficult to create, transfer or integrate via markets and thus provides a rationale for firms. The resource-based view similarly suggests that this type of knowledge, if valuable and unique, may provide a competitive advantage because it is less imitable (Barney, 1991). Firms, then, are offered as a solution for creating, managing and exploiting tacit, collective, context-specific knowledge. And like information-processing models, organizations would be expected to perform more effectively when their environmental knowledge-processing requirements and internal knowledge-processing capabilities are in balance. A firm’s intellectual resources should support that capability today, and its ability to learn should maintain it over time (Lei, Hitt and Bettis, 1996).

What is required to advance this view, however, is some discussion of why firms or collectivities process knowledge in the first place, and how various knowledge-processing problems, threats or opportunities map to the internal knowledge-processing resources and capabilities of the firm. Advancing knowledge-based theories of the firm will require a more fine-grained description of the “knowledge problems” to which firms are offered as a solution.

This chapter describes a taxonomy of knowledge problems. It has direct implications for understanding the role of firms vs. markets in dealing with various knowledge-processing problems, for understanding competitive advantage via imitability of knowledge-based resources and for configuring a firm’s organizational
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