Chapter 5.2
Coordination, Learning, and Innovation:
The Organizational Roles of E-Collaboration and Their Impacts

Lior Fink
Ben-Gurion University of the Negev, Israel

ABSTRACT

This article develops an organizational view of the roles and impacts of e-collaboration. Drawing upon the dynamic capabilities perspective, e-collaboration is conceptualized as a change-oriented capability that enables a firm to identify, integrate, and apply its knowledge assets to meet competitive demands. Therefore, e-collaboration potentially has three organizational roles—coordination, learning, and innovation—that are associated with either efficiency impacts or competitive impacts. The main argument of this article is that firms in less dynamic business environments need e-collaboration for operational purposes, emphasizing the coordination role, whereas firms in high-velocity business environments need e-collaboration for strategic purposes, emphasizing the learning and innovation roles. An analysis of the way in which business environment characteristics interact with media characteristics serves to demonstrate the importance of strategic characteristics—in addition to media and task characteristics—in determining the success of e-collaboration.

INTRODUCTION

Firms are increasingly adopting electronic communication tools to facilitate collaboration among individuals and groups, both within and beyond organizational boundaries. This trend is driven by the motivation of firms to take advantage of the collaborative potential of such tools as discussion boards, instant messaging, and groupware for facilitating communication and coordination without the limitations of time and place. To promote theory development and to provide practical guidelines, substantial research has been conducted to identify the conditions under which certain collaboration tools and practices are more productive than others (e.g., Daft & Lengel, 1986; Dennis & Valacich, 1999; Dennis, Wixom, & Vandenberg, 2001; McGrath, 1984; Nunamaker, Dennis, Valacich, Vogel, & George, 1991; Short, Williams, & Christie, 1976; Zigurs & Buckland, 1998). This research tends to focus on the direct consequences of e-collaboration in group contexts. Less research has been conducted on the importance of organizational conditions.

This article conceptually addresses two research questions: (1) What are the differences between the roles of e-collaboration in dynamic versus static business environments? (2) What are the implications of role differences for the implementation of e-collaboration? To answer these questions, this article develops an organizational view of e-collaboration by conceptualizing e-collaboration as a dynamic capability. The article draws upon three strategic management theories—the resource-based view of the firm, the knowledge-based view of the firm, and the dynamic capabilities perspective—to describe how specialized knowledge assets can be integrated through e-collaborative processes to create and sustain a competitive advantage. This conceptualization is then used as a platform for defining the organizational roles of e-collaboration and the potential impact of each role on organizational performance. Thus, the conceptualization suggests that different roles of e-collaboration should be emphasized in different business environments. Finally, the implications of the proposed organizational view are discussed by demonstrating the relationship between business environment characteristics and communication characteristics previously established in e-collaboration research.

TOWARD AN ORGANIZATIONAL VIEW OF E-COLLABORATION

The Strategic Value of Knowledge

The resource-based view of the firm (Barney, 1991; Grant, 1991; Wernerfelt, 1984) argues that heterogeneity and immobility of firm resources can provide the basis for superior competitive performance. Firm resources that are strategically valuable, because they enable the implementation of strategies that exploit opportunities or neutralize threats in the business environment, and that are heterogeneously distributed, enable firms to outperform the competition. However, such a competitive advantage cannot be sustained if competitors can acquire strategically equivalent resources to implement the same valuable strategy. Therefore, for a firm to sustain its competitive advantage, its valuable and rare resources should not be open to imitation or substitution.

The knowledge-based view of the firm (Grant, 1996; Kogut & Zander, 1996; Nonaka & Takeuchi, 1995) extends the resource-based view by defining organizational knowledge as a valuable subset of the firm's resources that is capable of generating and sustaining a competitive advantage. The knowledge-based view perceives a firm as a knowledge-creating entity; it argues that the capability to create and utilize knowledge is the most valuable source of the firm's sustainable competitive advantage (Nahapiet & Ghoshal, 1998; Nonaka, Toyama, & Nagata, 2000; Spender, 1996). Specialized, firm-specific knowledge resources are those that are valuable, scarce, and difficult to imitate, transfer, or substitute. By utilizing such resources in the attainment of organizational goals, a firm could gain an advantage in its markets that competitors would find