Chapter 6.6
Explaining Organizational Virtuality:
Insights from the Knowledge-Based View

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ABSTRACT

Despite a sizable body of literature on virtual organization, little attention has been paid to defining organizational virtuality and identifying factors that influence degree of virtuality in organizations. Based on virtual organization literature and the knowledge-based view of the firm, we develop a working definition of organizational virtuality. We do this by conducting a review of existing definitions of a virtual organization, and identify organizational knowledge-related factors that influence virtuality. More specifically, we propose that 1) an organization's need for knowledge exchange and ability to exchange knowledge jointly determine the level of organizational virtuality that develops in the firm; and 2) the higher the need for and ability to engage in knowledge exchange, the higher this level of resulting organizational virtuality. The contribution that this research makes to academia and managerial practice are also discussed.

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INTRODUCTION

In this century, there is a growing realization that the ways people live, work, communicate with each other, and organize their professional and personal activities are being subjected to an all-pervasive influence of information and communication technologies (ICTs) (Orlikowski & Barley, 2001). Within firms, one of the ways this influence finds expression is through creation and

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adoption of newer organizational forms such as the virtual organization. A virtual organization (VO) entails employees working outside of the physical central office (Kurland & Egan, 1999; Staples, Hulland, & Higgins, 1999; Neufeld & Fang, 2004), creating virtual teams to work across geographical and temporal boundaries (Lipnack & Stamps, 1996; 1997; Townsend, DeMarie, & Hendrickson, 1998), and working closely with other firms based on ICTs, in order to outsource a large portion of production process outside of traditional firm boundary (Boudreau, 1998; Kraut, Steinfield, Chan, Butler, & Hoag, 1999; Hoogeweegen, Teunissen, Vervest, & Wagenaar, 1999).

Research on organizing business activities in a virtual manner has its origins in the last decade (Davidow & Malone, 1992) and has been proliferating (Kurland & Egan, 1999; Martins, Gilson, & Maynard, 2004). Correspondingly, we have seen virtual modes of organizing being increasingly adopted in practice too. The Gartner Group estimates that between 2000 and 2010, a typical employee will notice the following shifts in the nature of his/her work: (i) time spent working alone will fall from 40% to 30%; (ii) time spent on working with others (who are based in the same location and thus also in the same time zone) will fall from 15% to 5%; (iii) time spent on working with others (who are based in a different location but in the same time zone) will rise from 15% to 25%; and (iv) time spent in working with others (who are based in a different location and a different time zone) will rise from 30% to 40% (Solomon, 2001). This suggests that there has been and will continue to be an increasing expansion of collaboration across space and time. Similar studies suggest that this change will occur not just in North America but across the world (Edwards & Field-Hendrey, 1996; Russell, 1996).

With proliferation of VOs, it has become fashionable to focus on this phenomenon as part of management research (DeSanctis & Monge, 1999). Yet, to date there has been little consensus not only on defining "virtual" but also with respect to identifying factors that contribute to creation of virtual organizations (Kraut et al., 1999). Extant research on VOs has been concerned mainly with understanding the managerial challenges and consequences that arise *after* such organizations are formed. Issues that have been examined in prior literature include: (i) management dynamics of VOs, such as communication processes (DeSanctis & Monge, 1999), metamanagement (Mowshowitz, 1994; Mowshowitz, 1997; Hoogeweegen et al., 1999), personal relationship on use of virtual networks (Kraut et al., 1999), risk mitigation (Grabowski & Roberts, 1999), network structure (Ahuja & Carley, 1999) and trustworthiness within VO (Kasper-Fuehrer & Ashkanasy, 2001); and (ii) consequences of VO, such as process improvement (Kock, 2000), flexible and reconfigurable structures (DeSanctis & Monge, 1999) and organizational performance (Davidow & Malone, 1992). With a few exceptions (Fang & Dong, 2006), there has been little research on assessing the circumstances and conditions that lead to creation of VO (i.e., its antecedents and facilitators). Given this backdrop, the following research questions motivate this chapter:

1. What is organizational virtuality?
2. What factors contribute to formation of virtual organizations?

The remainder of the chapter is organized as follows. First, we summarize the definitions of virtual organization based on a review of current literature. Using this summary, we define organizational virtuality. We then explore a plausible reason for why different organizations exhibit varying degrees of organizational virtuality, based on insights from the perspective of knowledge-based view of the firm (Grant, 1996; Spender, 1996). We propose that a potential reason why an organization goes virtual can be associated with related knowledge factors that affect its business and working. The research contributes to our scholarly understanding of determinants of

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