Chapter 1.3
Virtual Corporations

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INTRODUCTION

At the end of the 20th century, many authors tried to predict what new structures companies would be likely to adopt in the 21st century. Now, in the 21st century a clear tendency is emerging: the virtual organization (Agrawal & Hurriyet, 2004; Alsop, 2003; Bekkers, 2003; Camarinha-Matos & Afsarmanesh, 2005; Heneman & Greenberger, 2002; Lee, Cheung, Lau, & Choy, 2003; Talukder, 2003; Vakola & Wilson, 2004). This type of organization offers the most promising response to an increasingly complex business reality. In this respect, current organization theory is beginning to change its focus to new, flexible, and virtual organizational forms.

This article is organized as follows: The background section defines different concepts of virtual organization. The first model equates the virtual corporation to a temporary network of firms that quickly comes together to exploit temporary market opportunities. The second model focuses on the manufacture of virtual products by means of stable and trusting relationships with suppliers and customers. The third model of virtual corporation tries to turn the fixed workforce costs into variable costs. The third section points out the shared characteristics of this type of organization and the role of the manufacturing function, information and information technology, the network structure, and a new type of worker. The final sections discuss future trends and our conclusions.

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BACKGROUND

The term *virtual corporation* was coined by Jan Hopland, an executive at Digital Equipment Corporation at the end of the 1980s, to describe firms that can marshal more resources than they actually possess by means of both internal and external collaborations (Fitzpatrick & Burke, 2001; Weisenfeld, Fisscher, Pearson, & Brockhoff, 2001). The term can be traced to the computing concept of *virtual memory*, which describes how a computer can behave as if it had much more processing power than it really has.

The expression virtual corporation has been used in the literature to refer to concepts ranging from simply using teleworking and outsourcing intensively (Buhman, 2003; Coates, 2005; Matthews, 2004) to the wholesale restructuring of the firm. However, three approaches predominate in the literature: (1) virtual corporation as a temporary network of firms that rapidly forms to exploit temporary opportunities appearing in the market (Alsop, 2003; Beckett, 2003; Chalmeta & Grangel, 2003); (2) virtual corporation as a firm that produces virtual products, and which develops strong and stable links with its suppliers and customers (Biondi, Bonfatti, Monari, Giannini, & Monti, 2003; Lee et al., 2003; Mo & Zhou, 2003); and (3) a final model which considers that the virtual firm is an organization whose costs are essentially variable, only being generated when the firm is sure that it will recover them by selling the product or service (Matthews, 2004; Talukder, 2003).

The virtual corporation can also be defined by what it is not. The virtual corporation is not a takeover or merger between firms, nor is it a temporary employment agency, nor a "hollow" firm seeking to cut costs by closing down factories in one country and opening them up again in another one with lower labor costs.

CHARACTERISTICS OF VIRTUAL CORPORATIONS

As we mentioned in the previous section, there are three different perspectives of the concept of virtual corporation. Among the characteristics shared by these three models of virtual corporation, we would stress: excellence, technology, trust, opportunism, and absence of borders:

- **Excellence:** Since each member contributes its core competencies (Mo & Zhou, 2003), it is possible to create an organization with the best of each of them, so that every process of the virtual corporation can be the best in its class, something that no one firm could achieve on its own.
- **Technology:** Information technology—and more specifically, communications networks—will facilitate the transfer of knowledge and technologies between firms and will allow firms and workers to work together (Helling, Blim, & O'Regan, 2005; Heneman & Greenberger, 2002; Im, Yates, & Orlikowski, 2005; Kovacs & Paganelli, 2003).
- **Trust:** This type of relationship makes firms more dependent on others, and hence requires a much greater trust than would normally be the case between firms that are just partners (Camarinha-Matos & Afsarmanesh, 2003; Clases, Bachmann, & Wehner, 2003; Gallie & Guichard, 2005).
- **Opportunism:** In the first and third model, firms will come together to exploit a very specific market opportunity, disbanding as soon as the opportunity disappears. In the second model, the opportunity to form a virtual corporation is brief. Once a firm adopts a virtual corporation structure, other firms have less chance of doing the same.
- **Absence of Organizational Borders:** The close cooperative ties established between competitors, suppliers, and customers will