Using Information Technology To Enhance Industry Effectiveness: The Case Of The Textile Industry

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Executive Summary

This case examines the impact of information technology adoption within the textile industry. The textile industry provides a rich environment for the study of technology adoption since it is comprised of a wide variety of different industries ranging from small firms to large multinational corporations. Firms also vary in technological sophistication. While each firm in the textile industry may benefit from an organized approach to technology adoption, most firms make individual decisions to adopt.

Recognizing the need to provide an organized forum for the industry, a major association in the textile industry formed a technology board to review new innovations and technologies. The need for electronic exchange of information was examined and made a priority for the board. The technology board was confronted with the problem of how to serve the members in the organization equitably without regard to company size, technological sophistication, or position in the supply chain.

The textile industry can be classified into retailers, product manufacturers, and fabric, fiber, and yarn manufacturers. According to the technology board, the electronic link between manufacturers and retailers is somewhat formalized; however, much work must be done to facilitate linkages between the suppliers and manufacturers. This is not surprising due to the lack of size and sophistication of some suppliers within the industry.

Background

Information technology (IT) has often been useful in providing competitive advantage for individual organizations. However, with the advent of interorganizational systems (IOS) that electronically link a number of individual trading partners, the role of information technology must be
Several studies have examined electronic data interchange (EDI) and interorganizational systems from a variety of perspectives. Factors that influence EDI adoption include senior management support (Grover, 1993), sophistication of technology, financial benefits (Iacovou, Benbasat, and Dexter, 1995), power (Hart and Saunders, 1996), and competitive advantage (Sokol, 1989; Venkatraman and Zaheer, 1990). While most studies have examined EDI using firm-level perspectives, there is growing awareness that issues such as power and politics between trading partners need to be examined (Hart and Saunders, 1996).

Firms do not diffuse EDI without trading partner considerations. Each partner in the IOS has separate management, standards, technology, and ways of conducting business. Hart and Saunders (1996) studied EDI adoption use from the standpoint of IOS relationships. They identify several power and trust related factors that impact electronic relationships between organizations.

It is important for all firms involved in a partnership to exploit and benefit from the use of this technology. Organizations such as industry associations or other groups of trading partners play a useful role in managing information technology. The textile industry provided an exciting setting for the study of interorganizational systems and their roles in enhancing industry effectiveness.

The Textile Industry

In 1994, the textile industry could be broadly classified into retailers, product manufacturers (apparel, home furnishings, and industrial), and fabric, fiber, and yarn manufacturers. The structure of the industry and the supply chain is depicted in Figure 1. In the textile industry, fiber is supplied to yarn manufacturers (woven and knit) who in turn supply fabric manufacturers. Fabric is used by product manufacturers to make products such as home furnishing, apparel and industrial products.

Figure 1: Supply Chain Components and Structure of the Textile Industry