The Strategic Importance of E-Commerce in Modern Supply Chains

Peter R. Gibson, University of Wollongong, Australia
Janet Edwards, Loughborough University, UK

ABSTRACT

Considering some aspects of the motor industry as an example, this paper outlines strategic opportunities for e-commerce-enabled supply chains and, hence, greatly improved responses to customers. The authors demonstrate that there will be resulting strategic advantage for firms that become enabled to take a further step of making changes to their much wider manufacturing process philosophies. The developed knowledge associated with these changes will not be easily copied by competitors, and as such, provides the basis for a sustainable competitive advantage for those firms that are able to lead the way with the enabling technology of e-commerce in supply chains. However, leadership and change management are identified as key issues requiring further investigation.

Keywords: B2B; build to order; change management; e-commerce; strategic importance of e-commerce in modern supply chains; supply chain.

INTRODUCTION

This paper discusses the importance of e-commerce with respect to supply chains. It outlines the present imperative for supply chain managers to recognise a strategic opportunity for Internet-based technology in establishing cooperative partnering relationships and collective decision making amongst cooperating supply chain players. This provides a view of mutual strategic benefit to all supply chain players with enhanced customer service and is illustrated in terms of, for example, reduced work in progress, faster response times and enhanced customisation (e.g., greater potential for “Build to Order” in the motor industry). The paper has the objective of demonstrating that a supply chain view of e-commerce can be beneficial from an overall business-wide and business-to-business point of view, rather than the somewhat narrower context sometimes presented elsewhere. E-commerce-enabled supply chains require cultural changes. For example, adversarial
relationships that currently offer more powerful players short-term gains can be transformed into a collective strategic advantage for committed supply chain partners. Some of the elements of this change are introduced as areas requiring further research.

Supply Chain Management (SCM) is becoming an increasingly strategic issue in manufacturing and service industries across the world. Major multinationals, for example motor manufacturers, are beginning to realise that real competitive advantage can be obtained by achieving improved effectiveness from local and international supply chain business relationships (Horner & Thompson, 2003). Further, it is becoming clearly demonstrated that the knowledge used by a firm to improve this efficiency is unique to a particular supply chain and is therefore very difficult for competitors to imitate (Robertson et al., 2001), in their own situations, thus developing a degree of sustainability in the competitive advantages created. However, it has been suggested that most published work in research and practice is biased towards e-commerce in sales and marketing (Van Hoek, 2001), and the wider strategic benefits from fully integrated supply chains that utilise e-commerce are ignored (Davidrajuh, 2003; Fraser et al., 2000; Reynolds, 2000).

There can be little doubt that the most significant enabler of improved supply chain management efficiency is business-to-business (B2B) e-commerce. In general, e-commerce has provided a means of achieving fundamental changes in the structure, management and operations of organisations (Dertouzos, 1997; McLaren & McLaren, 1999; Meyer & Taylor, 2000). The basis of strategic advantage from supply chains may well be proven to be dependent on a firm’s capacity to use the Internet to integrate and synchronise supply chain activities, particularly to enable transparent, collaborative and connected decision-making processes among those positioned within the chain. Indeed, it is quite likely that the concept of supply chain itself is becoming outmoded and that the idea of supply networks (Overby & Min, 2001; Robertson et al., 2001) will become the norm. There is also little doubt that international trade between supply chain partners and outsourcing as a result of strategic emphasis on core competencies are increasing at a pace not experienced before. This adds more complexity to supply chains and is further evidence for the need to clearly understand the significance of strategic advantage from supply chain business networks.

**SUPPLY CHAIN MANAGEMENT (SCM)**

A supply chain encompasses all activities associated with the flow of materials, information and services from raw material supplies, through product or service processing facilities and warehouses to the end customer. Supply chains include end-to-end processes that create and deliver these products, information and services (Turban et al., 2002). In the motor industry, for example, this also involves sourcing and procurement of raw materials and parts, assembly and production, inventory management, order
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