Chapter 3

B2B MARKETS: PROCUREMENT AND SUPPLIER RISK MANAGEMENT IN E-BUSINESS

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Abstract This chapter clarifies some of the different types of efficiencies that can be achieved in B2B electronic commerce. We focus on the risk management aspects of these efficiencies, especially those pertaining to supplier or supply chain management related costs. This novel approach incorporates risk management by combining the traditional collaborative framework (of reservation capacity and associated pricing) with a dynamic spot market, both of which are Web-based. By way of contrast, in prior research and industrial use, these two supply modes of collaborative commerce and spot market, have been used separately, in a

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non-integrated way. We develop a framework that draws upon our research, as well as that of others, suitably adapted by us to this context and interpreted to provide insights into the economics of B2B commerce against this backdrop. We also point out open questions and identify new research directions.

**Scope and Definition of B2B E-Commerce**

For this chapter, we adopt the following definition presented in Durlacher (2000) and define business-to-business e-commerce as well as business-to-business electronic markets as follows:

**Definition 3.1** Business-to-business e-commerce is commerce conducted between businesses over an intranet, extranet or Internet (i.e., IP networks). This trade may be conducted between a business and its supply chain as well as between a business and other businesses’ customers.

**Definition 3.2** Business-to-business markets are platforms on which B2B e-commerce may be conducted directly between buyer and seller or through a third party.

We start out this chapter with a brief discussion of several key sources of efficiency in B2B e-commerce, out of which we will mainly focus on risk management approaches. We then supply a framework for B2B e-commerce, and argue that traditional supply chain literature is not sufficient to provide insights into all aspects of B2B e-commerce. We continue with a description of the characteristics of Internet-based marketplaces and present the key results of recent work that fill some of the gaps between B2B e-commerce and the traditional supply chain research. We conclude the chapter with a brief summary of the main results, and sketch on-going research and an outlook on future work.

1. **B2B E-Commerce: Sources of Efficiency**

It is well known that B2B e-commerce achieves efficiencies through several of the following key mechanisms, as well as others:

1. Process Efficiencies

The standardization of software and formats for exchanging business information creates significant efficiencies, that are exploited in e-business. These include supplier discovery, i.e., analyzing and negotiating purchases with suppliers, price discovery, as well as automating labor-intensive procurement and sourcing processes. Moreover, the establishment of common standards within B2B markets will let companies juggle their suppliers, depending on available supplies.