Chapter 6

AUCTIONS AND PRICING IN E-MARKETPLACES

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1. B2B E-Marketplaces

By offering high-speed communication and tight connectivity, advances in information technology have opened new venues for companies to create flexible supply chains. Today, many companies, from the electronics, pharmaceutical, to the automotive industry, are focusing on their core competencies and outsourcing significant portions of their business operations. As supply chains become more decentralized upstream, the pricing of intermediate goods is no longer a formality used between departments - but rather the key to a company's survival. Strangely enough, while companies have spent millions of dollars to help them reduce their operating costs, the majority continue to use crude techniques in deciding what price to charge for their products [Anthes, 1999].

The increased adoption of revenue management pricing policies, along with the emergence of Internet enabled marketplaces, referred to as e-marketplaces, is one of two separate but interrelated phenomenom that is helping to change business practices. Sophisticated capacity allocation strategies, the essence of current revenue management tools, are burgeoning on the business-to-consumer (B2C) front. Designed for markets with perishable products and limited supply, revenue management tools aid companies in *dynamically* selecting the optimal mix of products to offer to customers. This is done by allowing customers to make advance bookings for different products (fare classes) and dynamically changing the availability of each product [McGill and van Ryzin, 1999] [Phillips, 2003]. While revenue management tools focus on capacity allocation decision, they have generally ignored related pricing decision. That is, revenue management tools take the prices for different products as given,[1] rather than simultaneously determining the optimal price for each product with the capacity allocation.

E-marketplaces allow companies to go one step beyond traditional revenue management techniques, by offering a natural medium to optimally develop sophisticated pricing policies.Via e-marketplaces, suppliers (and buyers) can reach larger markets, dynamically change prices as the need and opportunity arise, and, most importantly, gain vital information about demand elasticity to incorporate into their pricing decisions.

While companies have embraced revenue management and e-marketplaces as essential to their future growth on the B2C front, they have been slow to alter their current business-to-business (B2B) practices. In particular, companies have been slow to use e-marketplaces as a transaction medium, due to the slow pace of technology diffusion and the complexity of most B2B transactions.[2] While B2C transactions can generally be