Preface

To compete in today's volatile market with rapidly changing consumer tastes and fierce competition, companies in the manufacturing and service industries are deploying new mechanisms to increase sales, market shares, and profits. As an effective mechanism to segment a market comprising of consumers with different needs, preferences, and willingness-to-pay, many firms have used product (or service) variety with different price points to serve different segments of the market, see Ho (1998). Ideally, the price of each of these products (or services) targets a particular segment of customers. For example, airlines often use different terms of sales (refundable/non-refundable, upgradable/non-upgradable, direct/connecting flight, etc.) to sell economy class tickets at different prices. Likewise, retailers often sell the same product at different prices in different channels (company's own web site, dealers' web sites, or company's physical stores) or at different times (before, during, and after the selling season), see Talluri and van Ryzin (2005). Ample academic literature in Operations Management and other areas considered these strategies. However, as consumers become more knowledgeable about the product, pricing, organizational and operational policies that the companies deploy for products and services, their purchasing begins to change dramatically.

In the academic Operations Management literature, consumer demand is often assumed to be *exogenous* so that demand functions are usually modeled as well defined and exogenously specified functions of price and/or other product attributes such as quality. This type of modeling approach captures the "macro" view of consumer demand and many OM models shed light on strategic and managerial issues ranging from revenue management to supply chain management. Today, however, many companies are beginning to take the "micro" view by selling each product and service to a target segment by utilizing more sophisticated selling mechanisms enabled by information technologies (say, one-on-one marketing). Some of these sales mechanisms are the following:

1. Mixed sales channels – To offer customers more options and price points, Amazon.com sells both new books (owned by Amazon) and used books (owned by independent used book sellers) which compete for demand from consumers.

2. Automatic markdown pricing – To clear overstocked items, Landsend.com pre-announces their price markdown schedule in advance so that consumers can time their purchases according to the markdown schedule.

3. Portals – To provide the one-stop shopping experience for their customers, Orbitz.com sells airline tickets for multiple airlines thus putting them in direct competition with each other.

4. Group buying – To provide each individual consumer with the buying power of the collective group, thebuyinggroup.com offers their members group discount prices on items ranging from cell phones to office supplies.

5. Auctions – To create an online market for consumers who want to buy or sell their items, ebay.com constructs different online auction mechanisms.

Anecdotal and empirical evidences suggest that, in these sales mechanisms, consumer purchasing behavior is fundamentally different from that arising in more traditional retailing environments. For instance, there is plenty of anecdotal evidence suggesting that many consumers are becoming more *strategic* in the sense that they postpone their purchases due to an anticipation of future price decreases. Besides strategic purchasing behavior, there is empirical evidence indicating that consumer's purchasing decision is often affected by the purchasing decisions of other consumers. For instance, Bikhchandani et al. (1992) develop a theory to explain how information cascades can induce the *herd behavior* among customers. If a consumer's purchasing decision is affected by informational factors pertaining to pricing, product availability, product characteristics, and other consumers' purchasing decisions, the consumer demand becomes *endogenous* in the sense that it now depends on the underlying sales mechanism as well as on the realized (total) price that the consumer actually pays. As the demand pattern changes in response to firms' actions, firms must manage their supply operations effectively and efficiently in order to meet these new challenges. Thus, the study of different sales mechanisms and their implications for consumer demands and supply operations is very timely and is of immediate practical relevance.

This book contains a collection of state-of-the-art OM models that examine the implications of rational or strategic purchasing behavior under different retail formats. These models provide new insights into how firms should operate in these new channels using different sales mechanisms. The chapters in this book are written by leading scholars who have initiated the quest for a deeper understanding of consumer's rational purchasing behavior under various sales mechanisms. Moreover, these scholars have continued their efforts in developing innovative ways for companies to respond to this rational purchasing behavior.

We enjoyed the experience of working on this book and we sincerely hope that this book will stimulate researchers in Operations Management and other areas to explore further this exciting emerging area of research.

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