

STOCK AVAILABILITY INFORMATION IN E-TAILING

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EXTENDED ABSTRACT

E-tailers face a variety of challenges and decisions as to what information they should display to online visitors. The direct cost of providing such information may be relatively small, yet the influence of such information on consumer purchasing decisions, and therefore the firm's net sales and profits, can be substantial. We address the potential impact of sharing inventory-availability information within the e-tailing environment.

Brick-and-mortar retailers recognize that inventory sizing and location is critical to maximizing sales. In an e-tailing context, inventory is not directly visible to consumers, and online retailers cannot equivalently exploit the promotional benefits of in-store inventories. We wish to understand how an e-tailer can best leverage its inventory data. Should the retailer provide consumers with precise and unfiltered information regarding inventory availability, or disclose more limited information? In this work, we focus specifically on the issue of inventory information-sharing in online retailing. With respect to inventory availability, is more information-sharing preferable to less?

Interestingly, e-tailers follow highly inconsistent strategies regarding the sharing of inventory-information, despite their similarities in other respects. Most e-tailers offer no information beyond the designation "In stock." In this paper, we will develop a consumer model to study the influence of shared inventory information on purchase decisions. By jointly analyzing the inter-related consumer and e-tailer decision problems, we can assess the profitability of alternative information-sharing strategies. As a result, we can address questions such as: (i) Should online vendors disclose precise stock-level information? (ii) Under what conditions should share inventory information? (iii) How does stock information alter consumer decision making and search processes?

The issue of inventory visibility is an important factor that differentiates e-tailers from traditional retailers. Brick-and-mortar retailers carefully manage the availability and visibility of their inventory assets; so too must e-tailers. However, divergent strategies may result from the significant environmental differences in information availability and gathering for e-tailing consumers. For example, while the brick-and-mortar retailer might benefit from displaying large quantities of product ("warehouse store" type displays), an online seller of the same product may enhance sales by disclosing rather limited availability information. In the online setting, with low search costs, if consumers are informed that stock-out risks are low, then consumers will be more likely to delay their purchase. On the other hand, increasing the perception of a stock-out risk may motivate online buyers to reduce the search for alternatives and thus make a less informed decision. Less search effort on the part of the buyer could in turn prove to be more profitable for the seller. Thus, determining the conditions under which an e-tailer should (optimally) share such availability information requires a careful study of these tradeoffs.

References are available upon request.