

MECHANICAL & INDUSTRIAL ENGINEERING COLLOQUIUM: ME 794 001

Counteracting Strategic Purchase Deferrals: The Impact of Online Retailer's Return Policy Decisions

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We study how online retailers' return policy choices are affected by consumers' discount-seeking purchase deferrals, i.e., strategic consumer behavior. We focus mostly on the Internet retailing context, where consumers may not be able to assess the fit between their expectations and products at the time of purchase, thus making the issue of how lenient the retailer's return policy is paramount. In this research, we investigate whether allowing returns may entice strategic consumers to purchase earlier at full price, as well as how lenient (measured by the magnitude of the refund) the optimal return policy should be. We argue that an effective return policy can not only induce higher full-price sales by limiting regret from an unfit purchase, but also signal a higher chance of clearance period unavailability. However, our results highlight that permitting returns when facing strategic consumers is a double-edged sword, both for a monopolist and competing retailers. We find that, only when a retailer can salvage without a heavy discount, an optimally determined (partial) refund that is less than the clearance period price can mitigate purchase deferrals. This finding contrasts earlier research on returns management for a monopolist retailer, which ignored strategic consumer behavior and found a partial refund that equals the salvage price to be always optimal. We also offer three explanations for when the common retail practice of offering a full refund sustains as an equilibrium decision for a monopolist, namely, consumers' transaction cost of returns, the market acquisition effects of lenient return policies, and products that can be salvaged without a loss. Our analysis of an arbitrary number of competing retailers yields a unique rational expectations equilibrium, where each retailer's equilibrium refund is non-decreasing in its unit salvage revenue, which we use to highlight that (i) retailers whose unit salvage revenues are below a threshold should not allow returns, and (ii) for the retailers who should optimally offer a refund, a higher salvage revenue implies a higher full price, a higher stocking quantity, and thus a higher profit. Consequently, choosing a clearance sales partner who can salvage at prices higher than competing clearance mediums is a strategic lever for a retailer to gain competitive advantage when selling to strategic consumers. (A working paper is available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2498107.)

Bio: Tolga Aydinliyim is currently an Assistant Professor of Management at the Zicklin School of Business, Baruch College, CUNY. Previously he was an Assistant Professor of Decision Sciences at the Lundquist College of Business, University of Oregon. Tolga got his Ph.D. in Operations Research from Case Western Reserve University in 2007, after earning a B.S. in Industrial Engineering from the Middle East Technical University in 2003. Tolga's research interests are broadly in operations and supply chain management (OM and SCM), with particular interest in OM-marketing interface, retail operations, sustainability in OM and SCM, and time sensitive capacity allocation issues in SCM. His papers have appeared in *Manufacturing & Service Operations Management* and *Decision Sciences* among others.

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