The Hong Kong University of Science and Technology
Dept of Information Systems, Business Statistics and Operations Management
Dept of Industrial Engineering & Decision Analytics
Joint Seminar Announcement

Impact of Markdown Price Strategy on Returns: A Price Transparency and Valuation Uncertainty Story
by
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Date	:	**6 March 2025 (Thursday)**
Time	:	**3:00 – 4:15 PM**
Venue	:	**3/F Classroom 3 (3005), LSK Business Building**

Abstract: A substantial proportion of purchases in the fashion industry are returned, representing nearly eight billion dollars in merchandise annually. These returns create significant challenges for retailers, straining their operations, complicating inventory management, and eroding profitability. This study investigates **how different discount strategies influence net sales, defined as sales after accounting for returns**. Specifically, we compare two common discount strategies: bundle discounts, which offer reduced prices for specific products when purchased together, and per-item discounts, which apply to individual products without additional purchase requirements.

Our analysis focuses on three key factors influencing the effectiveness of discount strategies in enhancing net sales: **customers' uncertainty** about a product's post-purchase value, the post-purchase **leverage effect of bundle discounts**, and **customer inattentiveness** to pricing details. Collaborating with one of Turkey's largest fashion retailers, we use structural estimation to evaluate bundle discounts in comparison to per-item discounts. Our findings reveal that net sales under bundle discounts can outperform per-item discounts by 15.61% when the post-purchase leverage effect is utilized effectively. However, bundle discounts may underperform when this leverage is absent or poorly implemented. Additionally, we find that customers often overlook pricing details, amplifying their uncertainty about a product's post-purchase value and contributing to higher return rates. Simulations show that improving customer attentiveness to pricing details can further increase net sales by 2.68%.

When choosing the optimal discount strategy, retailers should consider both product returns and customers' potential inattentiveness to pricing details. Bundle discounts that effectively use the post-purchase leverage effect achieves the best net sales. While inattentive customers may generate higher initial sales, retailers ultimately benefit more in net sales from a customer base that is attentive to pricing.

Bio: Ozge Sahin is a Professor of Operations Management and Business Analytics at the Johns Hopkins Carey Business School. She got her Ph.D. and MS degrees in Operations Research from Columbia University. She is the Faculty Director of Innovation Field Projects in the Johns Hopkins Carey Business School MBA Program. She also chairs the school's Curriculum Committee and was the co-chair of the Carey Faculty Advisory Committee to the Dean. She teaches Operations Management, Business Analytics, and Advanced Business Analytics in masters and MBA programs.

Her research interests include pricing, marketplace analytics with an emphasis on consumer behavior, and strategic capacity and supply chain management. Some of her recent research projects include analysis of pricing strategies with search cost, promotion optimization, biases in sequential decision problems, assortment optimization, and fairness in marketplaces. Ozge has published papers in academic journals, including *Management Science, Operations Research, Manufacturing and Service Operations Management.* She serves as an Associate Editor for Operations Research, and Naval Research Logistics, served as an Associate Editor for M&SOM, was the past chair of the Informs Revenue Management and Pricing Section. She is also the Department Editor of Revenue Management and Pricing Area of Decision Sciences Journal. She served as a consultant to companies, including Lucent Technologies, Amadeus SAS, and Amazon. She is an Amazon Scholar with a focus on Pricing and Sourcing Research at Amazon since 2019.