

OPTIMAL OPERATIONAL STRATEGIES FOR ONLINE RETAILERS WITH DEMAND AND RETURN UNCERTAINTY

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ABSTRACT

Online retailers incur added costs to receive returned products from customers compared to their traditional brick and mortar counterparts. Our paper analyzes the optimal operational strategy for an online retailer that offers a guaranteed return policy to their customers. Under the guaranteed return policy, the retailer accepts all returns from customers and covers all of shipping costs incurred. The model is further extended to analyze the retailer's operational problem of re-selling returned products. The added profits the retailer generates from employing the re-selling strategy is quantified. Our model provides the threshold prices required for the retailer to sell the product. Furthermore, we provide the optimal order quantity for a retailer who operates under demand uncertainty and return uncertainty.

Keywords: demand uncertainty; customer returns; ordering decisions; product re-selling