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Dr. Saibal Ray, Associate Professor
Desautels Faculty of Management, McGill University

Channel Returns Policies for Durable Products

Many relatively short lifecycle durable products have been using returns policy as the contractual protocol between channel partners for quite some time. More recently, these sectors have witnessed the emergence of (mostly web-based) used goods markets as important transaction channels between buyers and sellers. Given that these two issues are critically linked from both supply and demand perspectives, in this paper, we study what role the strength of the used goods market plays in shaping the manufacturer's (resp., retailer's) incentive to offer (resp., accept) a returns contract. We do so through a two-period dyadic channel framework where the retailer faces uncertain demand for a durable product from a renewable set of customers and the manufacturer needs to decide whether or not to offer a returns contract. Analyzing the resulting game for myopic customers, we first characterize the necessary and sufficient conditions under which a returns contract is the equilibrium contracting strategy for the channel partners as well as the corresponding channel decisions and profits. Further analysis of these conditions reveals that a stronger used goods market generally increases the likelihood of a returns policy contract to be the equilibrium strategy. This insight seems to be quite robust to various modeling assumptions, and contradicts the burgeoning managerial trend to replace returns contracts with price-only ones for products having rapidly growing used goods markets. We also demonstrate how used goods markets affect the equilibrium channel decisions and profits as well as how demand uncertainty and logistics costs associated with returns influence the equilibrium contracting strategy. Finally, we extend our model framework to include forward-looking customers, and show that the viability of a returns policy is, in fact, negatively impacted by such behavior.

Biography: is an Associate Professor in the Operations Management area of Faculty of Management in McGill University (Montreal, Canada). He also holds the Desautels Faculty Scholar Chair position and Quebec Teaching Chair position in the faculty. In addition, he is the Director of the faculty's PhD program and also the Co-Director of Master in Manufacturing Management program. His current research interests are in supply chain risk management, integrated operations - marketing models, time-based competition, inventory management and empirical operations management. His works have been accepted/published in *Management Science*, *Operations Research*, *Manufacturing and Service Operations Management*, *Marketing Science*, *Production and Operations Management*, *IIE Transactions*, *Naval Research Logistics*, *European Journal of Operational Research* and *International Journal of Production Economics*. He holds a Ph.D. from the Department of Management Sciences at the University of Waterloo.

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