Unintended Consequences of Promotions:
Managing Prices and Profits When Loyal Consumers Stockpile

Nanda S. Kumar
The University of Texas at Dallas

Date: 21.07.2017 & Venue: P22 @ 2.30 PM

Abstract

Increased sales due to promotions could be at the expense of competitors: such sales come from consumers with relatively weak brand preferences. However, increased sales from brand loyal consumers could well cannibalize sales of the promoted brand. An unintended consequence of promotions is that loyal consumers who otherwise would be willing to pay high prices may strategically stockpile at low prices to reduce their cost. What is its impact on firms' profits? How should firms adapt their pricing to consumer stockpiling? To answer these questions we analyze an infinite horizon dynamic model of competition under duopoly and derive the Markov Perfect Equilibrium pricing strategies.

We find that strategic stockpiling by loyal consumers at low prices does not reduce firms' long-run profits if initial consumer inventory is zero. We analytically derive an upper bound on the losses that occur following consumer stockpiling and show that it is relatively small. We derive the mixed strategy equilibrium that serves as a guide for managers on how to adapt their pricing strategies to meet the challenge of stockpiling by loyal consumers. When the equilibrium pricing is compared to the situation with no stockpiling, we find that firms move away from frequently promoting below the stockpiling threshold, moreover the probability of charging the reservation price and the price below which consumers start stockpiling increases. Specifically, mass points appear at reservation price and in the interior of the support at stockpiling threshold. Finally, a prediction of our model is a positive inter-temporal correlation in prices implying, somewhat counter-intuitively, that in equilibrium deep promotions are followed by deep promotions.

Speaker Profile

http://jindal.utdallas.edu/faculty/nanda-kumar