

Western University

Scholarship@Western

Inspiring Minds – A Digital Collection of
Western's Graduate Research, Scholarship and
Creative Activity

Inspiring Minds

September 2023

Probabilistic Price Promotion

Yongqin Lei

Western University, ylei73@uwo.ca

Fredrik Odegaard

Western University, fodegaard@ivey.uwo.ca

Follow this and additional works at: <https://ir.lib.uwo.ca/inspiringminds>

Citation of this paper:

Lei, Yongqin and Odegaard, Fredrik, "Probabilistic Price Promotion" (2023). *Inspiring Minds – A Digital Collection of Western's Graduate Research, Scholarship and Creative Activity*. 488.

<https://ir.lib.uwo.ca/inspiringminds/488>

Yongqin Lei

Imagine instead of paying \$2 for a double-double at Tim Hortons, your paying price is rather determined by drawing a lottery, which could be much lower than \$2 if you are lucky! Compared to the fixed \$2, would you be more likely to buy the coffee if its price depends on your luck? What if I also tell you that for any final price determined through the lottery, you have no obligations to purchase at such price, and can simply walk away if you don't like the price?

My research studies the optimal design of this kind of probabilistic pricing from a retailer's perspective. In particular, how many lottery outcomes should the retailer offer, and what should be the corresponding probabilities to receive each different lottery outcome? My study also answers when is it more profitable to offer probabilistic pricing than a traditional fixed price.