Selling Through Priceline? On the Impact of Name-Your-Own-Price in Competitive Market

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May 2, 2016

Priceline.com patented the innovative pricing strategy, Name-Your-Own-Price (NYOP), that sells opaque products through customer-driven pricing. In this paper, we study how competitive sellers with substitutable, non-replenishable goods may sell their products (1) as *regular* goods, through a direct channel at posted prices, and possibly at the same time (2) as *opaque* goods, through a third-party channel that engages in NYOP. We establish a stylized model framework that incorporates three sets of stakeholders: two competing sellers, an intermediary NYOP firm, and a sequence of customers. We first characterize customers' optimal purchasing/bidding decisions under various channel structures, and then analyze correspondin sellers' dynamic pricing equilibrium. We conduct extensive numerical studies to illustrate the impact of inventory and time on equilibrium prices, expected profit, and channel strategies. We find that the implications are highly dependent on channel structure (dual versus single). In particular, more inventory may reduce one's expected profit under dual structure, while this never happens when a seller uses direct channel only. Interestingly, although competing sellers seldom benefit from the existence of NYOP channel, it is possible that one or both of the sellers adopt it in equilibrium. We identify timing, inventory levels, and channel opaqueness as key drivers for NYOP adoption and characterize equilibrium areas for each type of channel structure.

Key words: Competition; Distribution channels; e-Commerce; Game Theory; Opaque Product; Pricing; Probabilistic Goods; Name-Your-Own-Price;

1. Introduction

Decades since the emergence of e-commerce, online B2C shopping has entered into a renaissance age in which sellers actively seek innovative techniques that add flexibility to their offerings and operations. These innovations have taken place in: (1) the form of product/service offerings (e.g., opaque products offered by Hotwire.com, Priceline.com, and many tour operators), (2) the way prices are determined (e.g., customer-driven pricing at eBay.com and Priceline.com), and (3) the way in which transaction could be processed (e.g., quantity alarm set by Groupon.com). By releasing products, prices, and business transactions from their traditional, static roles, these innovations