Add-on pricing: theory and evidence from the cruise industry

Marco Savioli (University of Bologna, Italy)
Lorenzo Zirulia (University of Bologna, Italy)

In many industries, firms give consumers the opportunity to add (at a price) optional goods and services to a baseline product. The aim of our paper is to provide a theoretical model of add-on pricing in competitive environments with two new distinctive features. First, we assume that offering the add-on entails a fixed cost. Second, we allow firms to have a limited ability to capture the value that consumers obtain from the add-on. Our model shows that when both firms offer add-ons, which happens when the cost of offering them is low, the prices for the baseline products are lower compared to the case when add-ons are not offered. In asymmetric equilibria, in which only one firm offers the add-on, thus gaining a competitive advantage, prices can be higher or lower depending on the capacity of firms to capture the value consumers obtain from the add-on: baseline products prices are lower when firms can extract ex-post most of the consumer surplus. The predictions of the model are confirmed via a hedonic price function on a dataset of cruises offered worldwide. In line with the model, we find that those characteristics which are associated to on board extra revenues, like the presence of a casino on the ship, reduce ticket prices, while a greater number of excursions, where travelers have the possibility of self-organization, increases them.
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