Abstract

We broaden the classic captive-and-shopper model of sales. Firstly, we allow for asymmetric marginal costs as well as asymmetric captive audiences. These asymmetries jointly determine the identities of the firms who compete (via randomized sales) to serve shoppers, and there can be more than two such firms. In a leading case of interest, the prices paid by shoppers fall in response to a cost rise for the firm that serves most of them. Secondly, we study asymmetric price adjustment opportunities via a two-stage game in which firms may cut but not raise their initial prices. In this setting (and also in a scenario with endogenous move order) we predict the play of pure strategies and that a unique firm serves the shoppers. Welfare properties depend on whether firm asymmetry is on the supply side (costs) or on the demand side (captive audiences). Thirdly, we allow firms to choose their production technologies via process innovations. One firm innovates distinctly more than others, attains a lower marginal cost, and ultimately serves the shoppers. We relate the distinctive asymmetric pattern of innovations to demand-side asymmetries and the shape of technology opportunity.