Competition with Capacity Constraints and Non-Linear Pricing, with an Application to Mergers

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Abstract

This paper analyzes a model of competition between capacity-constrained firms. In contrast to existing literature, we consider the case in which firms can set non-linear price schedules. We show that there exists a unique pure-strategy equilibrium, in which each firm obtains profits on its pivotal units (i.e., the part of demand that can only be served by this firm) but prices non-pivotal units at marginal costs. This equilibrium tends to be more competitive than in the mixed-strategy equilibrium that occurs with linear pricing. The model is highly tractable and capable of providing policy guidance in complex market environments. We analyze mergers and show that effects are driven by the change in pivotality, thereby providing a micro-foundation for the use of pivotality analyses in antitrust.