Partner or Rival: Entry Deterrence in Two-Sided Markets

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March 2009
Motivation

- Often an incumbent firm is a monopolist or has a dominant position in two markets for complementary products (e.g., videogames and consoles).

- Predatory pricing by the incumbent may deter a potential entrant from entering one of the markets (e.g., videogames).

- An incumbent may be able to defend its monopoly position even when it has a cost disadvantage and an inferior quality product.

- Under what conditions, does the incumbent give up its monopoly power on one of the markets and allow a more efficient or higher quality firm to enter?

Extending monopoly power in the other market: Farrell and Katz [2000]

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Utility depends on the quality of product \( A \), \( q_i \in \{ q_L, q_H \} \) and \( q_H > q_L \)
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- Nature generates $q_i$ in market $A$ ($q_H$ with probability $\gamma$ and $q_L$ with probability $1 - \gamma$)
Consumers:

- Consumers receive positive utility only if they consume both product A and B

\[ \theta \in [0, 1] \] is a consumer's type or taste for quality.

The utility of consumer type \( \theta \) when he purchases both good A of quality \( q_i \) from firm \( i \) and product B at prices \( p_i \) and \( p_B \) is

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$$U_\theta = \theta q_i - p_i - p_B$$
Firm $E$ decides whether to enter market $A$ and if there is entry, firm $E$ decides $q_E$. 
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3. Given the quality levels, firms compete in price and quality
Equilibrium in the Pricing Subgame

- Two types of Equilibria:

  1. Firm I price undercuts and squeezes Firm E out of market
  2. Firm I exits market and Firm E becomes the monopoly in that market

Equilibrium depends on both the quality levels and the costs. Suppose $q_I = q_L < q_E = q_H$ and $c_E = 0$. Then there exists some $c_I$ such that Firm I deters entry (given that $q_H$ is sufficiently close to $q_L$).

The above equilibrium only exists if the incumbent can charge negative prices for good A (that is, it cross-subsidizes its buyers of good A possibly bundling it with product B). (If $c_E > 0$ equilibrium may exists with positive prices.)

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When the incumbent is more likely to be a high-quality firm, the entrant has a lower incentive to offer the high-quality product to the market if the incumbent has a low cost. On the other hand, when the incumbent has a high cost, the entrant has lower incentive to offer the high-quality product if the incumbent has a higher cost.
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Legal and Welfare Implications

- If the incumbent’s cost is not sufficiently low, then preventing the predatory pricing is welfare enhancing.

- Duplication of R&D efforts may be reduced when the incumbent credibly threaten to engage in a price war after entry and the fixed development cost, $F_E(q)$ is sufficiently large.
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- There is no reason for the antitrust authority to prevent predatory pricing in all the industries.