Strategic Competition and Predatory Pricing

Lecture 3
Paper 9 / IIB (Industrial Policy)
Dr. J. Steinbuks
Lecture Outline

1. Introduction to Strategic Competition
2. A Theory of Predation
3. How to Detect Predation?
   - Rules-based Approach
   - Empirical Study: Sugar Industry
4. Application of Antitrust Laws
   - Case Study: Matsushita vs. Zenith
   - Case Study: The Liggett Case
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Introduction to Strategic Competition

- Firms’ actions to improve future positions
- Examples:
  - Rising entry costs to reduce future entry
  - Promoting exit of competitors
  - Achieving a cost advantage over competitors
- \textit{Limit Pricing}: use of price instruments by an incumbent firm to deter entry
- \textit{Brand Proliferation}: over-satiating market with different brands to deter entry
- Using Labor Unions, NGOs to Deter Entry
Introduction to Strategic Competition

- Predatory Pricing: using price instruments to induce competitors’ exit from the market
  - Example: Airline Industry
Average One-Way Fares for Selected Carriers: Billings (BIL) - Denver (DEN)

Source: Morrison (1998)
Introduction to Strategic Competition

- *Predatory Pricing*: using price instruments to induce competitors’ exit from the market
  - Example: Airline Industry
- Exclusionary Intent of Predatory Pricing
- *Demonstrative Market*: where aggressive pricing takes place
- *Recoupment Market*: where benefits are reaped
- "*Black hole*" of antitrust: difficult to observe, even more difficult to prove existence
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A Theory of Predation

- “Workhorse” Model: Dominant Firm
  - Compare pre-entry and post-entry
    - with normal competition
    - with possible predation
- “Long-purse” theory of predation
  - Imperfect capital markets, credit rationing
- Reputational predation
  - Establish reputation of tough competitor
- Test Market predation
  - Distort information on “true” market demand
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How to Detect Predation?

• Rules- based approach
  – Use a simple, clear rule to detect predation
  – Pros: easy and “cheap” to implement
  – Cons: difficult to justify economically

• Areeda-Turner rule:
  – Price below marginal cost is predatory
  – Approximation by Average Variable Cost

• Williamson rule:
  – Post-entry increase in output is predatory
How to Detect Predation?

- Joskow – Klevorick rule:
  - Two stage approach
  - First stage: find whether market structure facilitates predation
  - Second stage: apply cost-based / pricing behavior rules discussed above

- US Supreme Court judgment:
  - One should prove that predation is profitable
  - Predator should be able to recoup losses
How to Detect Predation?

• Sugar Industry (Genesove and Mullin, 2006)

• Research questions:
  – How to distinguish empirically between competitive and predatory responses to entry?
  – How profitable is predation (if it exists)?

• Approach:
  – Direct test based on prices and marginal costs
  – Indirect test based on economic models, firms’ capacities, and demand estimates
How to Detect Predation?

- Sugar Trust: 1887 – 1914
- Two price war episodes
- 1898 – 1900: AB / Doscher price war
- Sugar: very simple production technology
- Linear MC: \( c = c_0 + 1.075P_{\text{RAW}} \)
- \( 16\,\text{¢} \leq c_0 \leq 26\,\text{¢} \)
- Proper margin: \( PM = P - 1.075P_{\text{RAW}} \)
- Predation occurs when \( PM \leq c_0 \)
How to Detect Predation?

Source: Genesove and Mullin (2006).

AB enters
Doscher enters
Predation occurs
War ends
How to Detect Predation?

Ratio of Trust losses to rivals losses

Source: Genesove and Mullin (2006).
How to Detect Predation?

- Was predation profitable? Yes.
  - Lower acquisition costs / buyout prices
  - Evidence supports “long purse” story
  - Less entry after price wars
  - Reputational effects

- Was entry profitable?
  - Yes, for firms with large internal funds
  - No, for other firms
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Application of Antitrust Laws

- Collusive Predation: *Matsushita v. Zenith*
- Market for B-W and color Television
- Complex case, various economic issues:
  - Predatory pricing
  - Collusive behavior
  - International competition, law of one price
  - Alternative opportunity cost principle
- US firms accused Japanese competitors of conspiracy with intent to monopolize
Application of Antitrust Laws

• Plaintiffs arguments:
  – Evidence of export collusive agreement
  – Prices below cost, secret rebates
  – Large increase in Japanese market share
  – Exit by US firms
  – Japanese export prices lower than home
  – Excess profits in home market, cross-subsidies to finance predation
  – Long-purse argument for predation
Application of Antitrust Laws

- Defendants arguments:
  - Falling demand for B-W TVs, no reason to prey
  - Little barriers to entry, difficult to recoup losses
  - Secret rebates reflect competition among Japanese firms
  - Export price differential reflects differences in international costs
  - Foregone profits are too big to justify “long purse” story (McGee)

- Plaintiffs lost the case
Application of Antitrust Laws

- Predation by Nondominant firm: Liggett
- Market for cigarettes

### TABLE 10-1
Cigarette Market Shares and Concentration

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<thead>
<tr>
<th></th>
<th>1980</th>
<th>1984</th>
<th>1988</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philip Moris</td>
<td>30.9%</td>
<td>35.3%</td>
<td>39.3%</td>
</tr>
<tr>
<td>R. J. Reynolds</td>
<td>32.6</td>
<td>31.6</td>
<td>31.8</td>
</tr>
<tr>
<td>Brown &amp; Williamson</td>
<td>13.7</td>
<td>11.3</td>
<td>10.9</td>
</tr>
<tr>
<td>American Tobacco</td>
<td>10.8</td>
<td>7.9</td>
<td>7.0</td>
</tr>
<tr>
<td>Lorillard</td>
<td>9.7</td>
<td>8.2</td>
<td>8.2</td>
</tr>
<tr>
<td>Ligget &amp; Myers</td>
<td>2.3</td>
<td>5.7</td>
<td>2.8</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th></th>
<th>1980</th>
<th>1984</th>
<th>1988</th>
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<tr>
<td>Four-firm conc.</td>
<td>88.0</td>
<td>86.4</td>
<td>90.2</td>
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<tr>
<td>Herf-Hirschman</td>
<td>2421</td>
<td>2534</td>
<td>2799</td>
</tr>
</tbody>
</table>

Source: Plaintiff’s exhibit 4285.
Application of Antitrust Laws

• Liggett accused B&W of predation
• Liggett arguments:
  – Market definition: generic cigarettes
  – Use of volume rebates to drive price below MC
  – Pressure to drive generic prices closer to brand prices
  – Market structure facilitates predation
  – Economic estimates show below AVC pricing by B&W (Areeda-Turner)
Application of Antitrust Laws

- **B&W Defense:**
  - Market definition: all cigarettes
  - B&W is too small to be successful predator
  - No evidence of supra-competitive pricing
  - Tax benefits justify below AVC pricing

- **Court decision:**
  - Agreed with Liggett market definition
  - Liggett failed demonstrating supra-competitive pricing, so no possibility to recoup profits

- Liggett lost the case