Economics 001
Principles of Microeconomics
Professor Arik Levinson

• Lecture 17
  – Measuring market power
  – Regulation and antitrust policy

Review of market structures

<table>
<thead>
<tr>
<th>Summary</th>
<th>PC</th>
<th>Monopoly</th>
<th>Cartel</th>
</tr>
</thead>
<tbody>
<tr>
<td># firms</td>
<td>many</td>
<td>1</td>
<td>few</td>
</tr>
<tr>
<td>Pricing</td>
<td>MC=MR=P</td>
<td>MC=MR=P</td>
<td>strategic</td>
</tr>
<tr>
<td>Output</td>
<td>most</td>
<td>less</td>
<td>between</td>
</tr>
<tr>
<td>Profits</td>
<td>0</td>
<td>&gt;0</td>
<td>between</td>
</tr>
<tr>
<td>Mkt power</td>
<td>0</td>
<td>price setter</td>
<td>between</td>
</tr>
</tbody>
</table>

Measuring market power

• 1) 4-firm concentration ratio
  – = % sales from 4 largest firms
  – ≈ 0 for perfect competition
  – 100% for monopoly

\[
\text{ Concentration ratio } = \frac{s_1 + s_2 + s_3 + s_4}{\sum s_i}
\]

Measuring market power

• 2) Herfindahl Index
  – = sum of (mkt share)^2 of largest 50 firms
  – ≈ 0 for perfect competition
  – 10,000 for monopoly

\[
H = \sum_{i=1}^{50} \left( \frac{s_i}{\sum s_i} \times 100 \right)^2
\]

Examples

<table>
<thead>
<tr>
<th>Product</th>
<th>4-firm ratio</th>
<th>Herfindahl</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greeting cards</td>
<td>84</td>
<td>2840</td>
</tr>
<tr>
<td>Soup</td>
<td>60</td>
<td>1306</td>
</tr>
<tr>
<td>Computers</td>
<td>43</td>
<td>793</td>
</tr>
<tr>
<td>Nuts and bolts</td>
<td>13</td>
<td>102</td>
</tr>
<tr>
<td>Dresses</td>
<td>6</td>
<td>24</td>
</tr>
</tbody>
</table>

Government action

• (a) Regulation
• (b) Antitrust law
Transportation regulation in the U.S.

- Railroads
  - Interstate Commerce Commission (ICC)
- Trucking (ICC)
- Airlines
  - Civilian Aeronautics Board (CAB)

Antitrust Law

- Sherman Act of 1890
  - (1) Forbids conspiring to restrict trade
  - (2) Forbids monopolization, or attempts to monopolize
- Clayton Act (1914)
  - allows private suits, and triple damages
  - restricted mergers
- FTC Act (1914)

Case Law

- 1911: Standard Oil, American Tobacco
  - "rule of reason"
  - both companies ordered to divest holdings of competitors
- 1920: U.S. Steel Company
  - acquitted despite 50% share of steel market
- 1945: Alcoa Aluminum
  - convicted merely for being too big

Case Law (continued)

- 1961: General Electric and Westinghouse
  - key executives fined personally, and jailed
- Du Pont "cellophane"
  - broadened definition of market share
  - used cross-price elasticities

The turning point in 1982

- New merger guidelines
- AT&T breakup
- IBM suit dropped

Controversial business practices

- Resale price maintenance
- Offers to beat any competitor's price
- Product tying