Monopolization and Dominant Firm

Lecture 1
Paper 9 / IIB (Industrial Policy)
Dr. J. Steinbuks
Lecture Outline

1. Brief Intro to Antitrust Law
2. Why Monopoly is “Bad”?
   - Extension: Dominant Firm Theory
3. How do we Measure Monopoly power?
   - Empirical Study: Alcoa
4. Development of Antitrust Law
   - Case Study: AT&T
   - Case Study: IBM
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Brief Intro to Antitrust Law

- Main idea: correct market failures (e.g....?)
- United States:
  - Sherman Act (1890)
  - Clayton Act (1914)
  - FTC Act (1914)
- United Kingdom:
  - Statutes of Monopolies (1623)
  - Competition Act (1998)
- European Union:
  - EC Treaty (1957)
Brief Intro to Antitrust Law (US)

• Sherman Act (1890):
  – prohibits restraint of trade (e.g. price fixing)
  – prohibits monopolization (market dominance)

• Clayton Act (1914):
  – prohibits anti-competitive (a-c) mergers
  – prohibits a-c price discrimination
  – prohibits a-c tying and exclusive dealing

• FTC Act (1914):
  – FTC helps DOJ investigate antitrust cases
Brief Intro to Antitrust Law (UK)

• Statutes of Monopolies (1623)
  – one of the first legal acts to limit monopolies
  – difficult to enforce, many loopholes

• Competition Act (1998)
  – restricts practices that distort, restrict or prevent competition
  – restricts abuse of a dominant position by a firm

• Office of Fair Trading (OFT)
  – Main competition watchdog in the UK
Brief Intro to Antitrust Law (EU)

• EU Treaty of Rome (1957)
  – Article 85 prohibits agreements between two or more firms which restrict competition
  – Article 86 prohibits firms in a dominant position to abuse that position

• EU Treaty of Amsterdam (1997)
  – no substantial changes
  – Articles 85 and 86 are now articles 81 and 82

• EU Competition Directorate General (DG)
  – Main competition watchdog in the EU
Brief Intro to Antitrust Law

• Enforcements
  – state agencies (DOJ, FTC, OFT, Competition DG)
  – private parties (filing antitrust case through court)

• Remedies:
  – government intervention (decrees, fines)
  – court orders (“treble damages”)
  – out-of-court settlement

• Exemptions:
  – labor unions, export associations, farmer co-ops
Brief Intro to Antitrust Law

- Actual Ruling on Microsoft Case
- [http://www.youtube.com/watch?v=Qqie6WxDBDc](http://www.youtube.com/watch?v=Qqie6WxDBDc)
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Why Monopoly is “Bad”?  

• Normative analysis:  
  – Welfare analysis (intermediate micro)  
  – Extension: dominant firm theory  

• Positive analysis:  
  – Econometric studies  
  – Litigation processes (accounting analysis)  
  – Court judgments  

• Is monopoly always “bad”?  
  – Static versus dynamic arguments
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How do we Measure Monopoly Power?

• Index approach:
  – Lerner Index (economic approach)
  – Bain Index (accounting approach)
• Are there barriers to entry?
• Importance of market definition (DuPont)
• Prices vs. marginal costs (DuPont)
• Existence versus Importance of monopoly
How do we Measure Monopoly Power?

- Empirical Study: Alcoa (Suslow, RAND 1983)
  - Secondary (scrap) market for aluminum, 1922-1940
  - Emphasis on the short-run market power
  - Simple production technology, “quasi-linear” marginal costs
  - “Structural” approach, system of four equations:
    - primary aluminum demand: \( Q_{d\text{alcoa}} = f(P_{\text{alcoa}}, P_{\text{scrap}}, W) \)
    - scrap aluminum demand: \( Q_{d\text{scrap}} = f(P_{\text{alcoa}}, P_{\text{scrap}}, X) \)
    - scrap aluminum supply: \( Q_{s\text{scrap}} = f(P_{\text{scrap}}, Y) \)
    - profit-maximization condition: \( MR(P_{\text{alcoa}}, Q_{d\text{alcoa}}) = SRMC(Z) \)
    - market clearing condition: \( Q_{d\text{scrap}} = Q_{s\text{scrap}} \)
    - \( W, X, Y, \) and \( Z \) – vectors of exogenous variables
How do we Measure Monopoly Power?

### Table 2: Results for Linear SRMC (Log-Log Form)*

<table>
<thead>
<tr>
<th>Equation</th>
<th>Constant</th>
<th>$P_A$</th>
<th>$P_S$</th>
<th>PSTL</th>
<th>FED</th>
<th>ΔFED</th>
<th>QAUTO</th>
<th>TIME</th>
<th>$\gamma$</th>
<th>S.S.R.</th>
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<tbody>
<tr>
<td>Primary Demand</td>
<td>-1.62</td>
<td>-2.08</td>
<td>1.25</td>
<td>.59</td>
<td>.11</td>
<td>.26</td>
<td>.38</td>
<td>2.38</td>
<td>—</td>
<td>4.06</td>
</tr>
<tr>
<td>($S_d$)</td>
<td>(6.85)</td>
<td>(.76)</td>
<td>(.52)</td>
<td>(.63)</td>
<td>(.43)</td>
<td>(.13)</td>
<td>(.42)</td>
<td>(2.74)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Scrap Demand</td>
<td>-3.73</td>
<td>.77</td>
<td>-.73</td>
<td>.59</td>
<td>.11</td>
<td>.26</td>
<td>.38</td>
<td>2.38</td>
<td>—</td>
<td>2.91</td>
</tr>
<tr>
<td>($Q_d$)</td>
<td>(5.53)</td>
<td>(1.43)</td>
<td>(.59)</td>
<td>(.63)</td>
<td>(.43)</td>
<td>(.13)</td>
<td>(.42)</td>
<td>(2.74)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Scrap Supply</td>
<td>.74</td>
<td>—</td>
<td>1.62</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>1.21</td>
<td>—</td>
<td>2.46</td>
</tr>
<tr>
<td>($Q_d$)</td>
<td>(.86)</td>
<td>—</td>
<td>(.73)</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>(2.72)</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Primary Supply</td>
<td>(Linear SRMC up to Capacity)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.08</td>
<td>.004</td>
</tr>
</tbody>
</table>

$N = 17$

$\log L = 37.875$

* Standard errors are in parentheses.

Partial elasticity (assuming constant $P_{\text{scrap}}$) $\eta_1 = -2.08$

Total response elasticity $\eta_2 = -1.67 \Rightarrow$ Lerner index = 0.598
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Development of Antitrust Law

- Important cases:
  - Standard Oil, 1911 (disintegrated)
  - Tobacco Trust, 1911 (disintegrated)
  - Alcoa, 1945 (competition through privatization)
  - United Shoe, 1953 (unbundling)
  - Eastmen Kodak, 1973 (not guilty)
  - Xerox, 1975 (out-of-court settlement)
  - Cereals manufacturers, 1982 (not guilty)
Development of Antitrust Law

- **Case Study: AT&T:**
  - 1984: AT&T dissolves into 8 pieces
  - “Natural” Monopoly through
    - Restriction on interconnections
    - Exclusive patenting on long-distance calls
  - Government case:
    - Market definition: short- and long-distance calls
    - Barriers to entry, denial of interconnections
    - Discrimination, rising competitors’ costs
Development of Antitrust Law

• Case Study: AT&T:
  – Government case:
    • Abuse of regulation, disclosure issues
    • Cross-subsidies, prices not linked to cost
  – AT&T defense:
    • Company’s monopoly power limited by regulation
    • Denied certain allegations (prices – cost link)
    • Economies of scale and economic efficiency
    • Unexpected change in regulatory policy
Development of Antitrust Law

• Case Study: IBM:
  – mid-1970s: IBM sued for monopolization
  – The Telex suit:
    • IBM controls over 90% of the market
    • Very narrow market definition
    • Focus on price cuts, fixed term plan, bundling
    • Predation based on competitive capabilities
  – Other companies made similar appeals
  – Interest from FCC, DOJ
Development of Antitrust Law

• Case Study: IBM:
  – The IBM defense:
    • Telex’s market definition is wrong
    • IBM share on “data processing” market is low
    • Market share does not equal market power
    • IBM practices are not predatory but competitive
  – IBM loses, fights back, wins
  – Increased freedom for dominant firms
  – Less practices deemed “anti-competitive”