# Monopoly

Economics 121
Spring 2006
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# Finish "competition" lecture

- Back to slides from last time to discuss those we skipped at the end
- Introducing a new product
  - As soon as remunerative, versus wait for most-profitable time
- General idea: maximize consumer welfare subject to non-negative profits
- When does competition misfire?

# Not-Competition

- Many books repeat "benefits of competition" in form "defects of monopoly"
  - Do CP do this?
  - Also vice versa
  - Is this a problem, opportunity?

# Monopoly Pricing

- We already studied profit-maximizing level of price: $L = (p - MC)/p = 1/e$
- Price discrimination important: later (CP 9)
- Product quality
  - What does monopolist have to do to survive?
  - What does m. have incentive to do?
  - Finite Greed?
  - Durability of light bulbs

# Sensitivity of profits to price

- Smooth hills are flat on top
- How flat?  To second order,

$$\frac{-\dfrac{1}{2}m^2\Pi''(p^*)}{(p^*-c)X(p^*)} = \frac{m^2}{(p^*-c)^2} - \frac{1}{2}m^2\frac{X''(p^*)}{X(p^*)}$$

# What the &*(% does that mean?

- For linear demand, {cost of a small "error" in price, as fraction of gross profits} is (roughly) the square of {price error as fraction of gross margin}
- Error in pricing equal to 10% of gross margin (say 5% of price?) loses 1% of gross profits
  - Typically higher fraction of net profits
  - It doesn't cost a monopoly much to offer some random customers a better price
    - That doesn't mean it is costless…
    - Compare price discrimination reasoning

# A competitive firm's profit hill

- Much sharper peak—why?
- Identifying "competitive firm" with much more elastic demand

# Advertising

- Raises demand—economists mostly don't go into how/why
- Equilibrium advertising/sales ratio if D(p,s)
- Does advertising count as MC in the Lerner equation?
  - "Have to" increase it to add sales, so like MC
  - Merger application: MCI-Sprint, cellular

# Seeking and Protecting Monopoly

- Rent-seeking
  - Is it hard to give away money?
  - Beyond deadweight loss triangle
  - Productive and unproductive rent-seeking
    - Patents—much more later (CP ch 16)

# Diagnosing Monopoly

- Rate of change of prices—why not
- Profits—why not
  - Economic
    - Long-run: efficiency advantage (rent) or entry barrier
    - Short-run: many factors
      - Losses: "excessive" competition?
  - Accounting
    - Return on capital; timing of costs, revenues
      - Plough it back
    - Capitalization of monopoly

# Diagnosing Monopoly

- Identifying competitors or lack thereof
  - Can they expand enough?
  - "Dominant firm with fringe" model calibrates "enough"
- Entry conditions
- "Monopoly" in antitrust
  - Firm that can unilaterally hurt consumers?

# Dominant Firm with Fringe

- Market power but not monopoly: sets price
- Rivals individually small enough to behave competitively (price-takers)
  - Might collectively be a large share of market
- Does dominant firm have lower costs?
- Residual demand curve
  - Elasticity of residual demand
    - What it depends on

## Merger to Monopoly

- CP Example 4.6
  - US antitrust law: "failing firm defense"
  - Newspapers: JOA
    - *Examiner* and *Chronicle*
- How will market evolve if no merger?
  - Will merger efficiencies happen post bankruptcy?
- What if firms must compete for survival?

## Next Time: Pass-through of cost changes

- No pass-through of change in fixed cost
- How much of change in MC does monopoly pass through?
  - Contrast with competitive pass-through
- Does an increase in variable cost/MC hurt the monopolist, if it can pass it through?

# Dates etc

- Problem Set 1: due Jan 31 at *beginning* of class
- Midterm 1: in class Feb 9
  - DSP: let me know!!!
  - Drop date: Feb 17
- Feedback
  - Jenny and I find this stuff fairly easy…