Pass-Through and Market Power

Economics 121

Spring 2006

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Competitive Industry

- Recall supply-demand diagram showing:
  - Increase in all firms' MC schedule by $1/unit is passed through to an extent d/(d+s)
    - d is (absolute value of) slope of demand curve
    - s is slope of supply curve
      - Exercise: could use elasticities interchangeably
    - In long run (maybe short run) expect s << d, so near 100% pass-through
- Cost change for just one price-taking firm is *not* passed through
- Change in fixed costs passed through in long run (as change in min AC), *not* in short run

Monopoly

- Last time showed:
  - If constant MC, linear demand, 50% pass-through of change in MC
  - If constant elasticity (>1), more than 100% pass-through
    - [Why the second calculation doesn't always give the answer…]
- General result?

Monopoly pass-through in general

$$(\varepsilon - 1)p = \varepsilon c$$

Elasticity of elasticity of demand

- Let E be $\dfrac{p}{\varepsilon}\dfrac{d\varepsilon}{dp}$

Then the answer is...

$$dp/dc = \frac{\varepsilon}{\varepsilon - 1 + E}$$

How can we check?

- Constant elasticity certainly implies E=0
- Formula is correct then
- Can you think of other checks?
  - Calculate [epsilon] and E for linear demand

What does that tell us?

- Little hope of knowing E in reality
  - whereas we can often estimate elasticity
    - From changes in quantity in response to price changes
      - Assuming price changes not correlated with demand shifts
    - From Lerner equation
      - Assuming the firm knows something about its elasticity
- So: monopoly pass-through *highly unpredictable*
  - Can easily be small
  - Can easily (yes!) be well over 100%
  - Never negative (exercise--don't use the E formula)
  - Monopoly may not obsess about getting p just right
    - Recall: monopoly profit hill is flat on top
    - Does the monopoly know its E?

Effect on firms

- Asked about effect on downstream buyers
- But how much do firms care about cost increases when there is pass-through?
- "Monopoly can just pass it through"

Effect on competitive firms

- Cost effect: lose Q dc
- Price effect: gain Q dp
- Why can we calculate as if firm keeps Q?
- Consumers lose Q* dp
- So firms plus consumers total lose Q* dc

Effect on Monopoly

- Monopoly loses Q* dc
- Why not a countervailing price effect?
  - Balanced by quantity effect—not chosen optimally
  - Monopoly could have changed price/output before, so that doesn't help much
- Consumers also lose!
- Total loss more than Q* dc
  - Maybe much more… more than twice…
  - No simple adding-up as in competitive case

Who suffers from cost increase

FTC-Rambus and the rules of standards organizations

- Firms as agents for consumers in getting low input prices
- Private antitrust cases: rules on who can get damages
  - Illinois Brick rule: indirect buyers can't
    - Subject to "repeal" by states; some qualifications
  - Hanover Shoe rule
    - Direct buyers can, even if plausibly not harmed much
  - Is the Supreme Court stupid or smart?
    - Do such rules really aim to get money to the "true" victims?

Next Topic

- Cartels and collusion
- Read CP chapter 5, 122-150