Antitrust

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Sherman Act (1890)

Section 1: "Every contract, combination in the form of trust or otherwise or conspiracy, **in restraint of trade** or commerce among the several states, or with foreign nations, is hereby declared illegal"

Sherman Act (1890)

Section 2: "Every person who shall **monopolize, or attempt to monopolize** ... shall be deemed guilty of a felony"

Clayton Act (1914)

Section 7: Prohibits mergers where "the effect of such acquisition may be substantially **to lessen competition** or tend to create a monopoly"

Note the key phrase

FTC Act (1914)

Section 5: "Unfair methods of competition ... are declared unlawful"

The FTC Act formed the Federal Trade Commission
This section can only be used by the FTC
A reasonable amount of debate as to how it adds to the previous laws

Comments

- The laws are very vague
- What they mean in practice has led to case law
- Some claim that the goal is the "promotion of healthy competition"; What does that mean? This is where economics has come in.
- An open question: Consumer Surplus vs. Total Surplus?

Agencies

- In the US there are two main federal agencies
- The Department of Justice (DOJ) Antitrust Division
  - Criminal Sections (lawyers looking at criminal, mostly collusion)
  - Civil Sections (lawyers focused on civil investigations)
  - Economic Analysis Group (55-65 PhD Economists)
- The Federal Trade C omission (FTC)
  - Bureau of Competition (lawyers looking at mergers and conduct)
  - Bureau of Consumer Protection (lawyers looking at consumer protection)
  - Bureau of Economics (75 PhD Economists)
- Other federal agencies: FCC (telecommunications), DOT (transportation)
- State AG's and private action

Sanctions

- Criminal penalties
  - fines (corporate + individual)
  - prison time
  - only DOJ
  - very significant ($1.6B a year ago)
- Equitable relief
  - forbidding actions
  - divestiture
  - both DOJ + FTC (slightly different process)
- Monetary damages (mostly private parties)

Per Se vs. Rule of Reason

- A per se violation requires no further inquiry into the practice's actual effect
- This is the case for most forms of collusion
- Some business practices, however, at times constitute anticompetitive behavior and at other times encourage competition
- For these cases the court applies a rule of reason looking at the totality and asking whether the challenged practice promotes or suppresses market competition.

Main Areas of Violations

- Collusion
  - Difference between explicit and tacit collusion
  - Explicit collusion is usually viewed as a per se criminal offense
- Monopolization
  - Exclusion
    - Exclusive dealing (if you have market power)
    - Leveraging market power from one market to another
    - "harm to competitors" vs "harm to the competitive process"
  - Predation
    - Pricing below cost to drive a competitor out of the market
  - Abuse of dominance (difference between EU and US law)
  - Generally evaluated under Rule of Reason
- Mergers

Process of evaluating mergers

- Hart-Scott-Rodino (HSR) filing
  - threshold
  - split between FTC and DOJ
  - 30 days: can "pull and refile"
  - either clear or issue "2nd request"
- 2nd request
  - request data and documents
  - interview witnesses and 3rd parties
  - timing
- Clearance or sue
  - divestures
  - slight difference between FTC and DOJ
  - other agencies

Mergers

Suppose two companies want to merge what are the pros and cons from a social point of view?

Mergers

- Pros:
  - Internalize externalities (if the products are complements)
  - Reduce cost (which can lead to lower prices)
  - Increase incentive to innovate
  - Improve business practices
  - Saving failing business (and productive assets)
- Cons
  - Unilateral Effects: Lead to higher prices (if prices are substitutes)
  - Coordinated Effects: Increased likelihood of (tacit) collusion

The Williamson Tradeoff

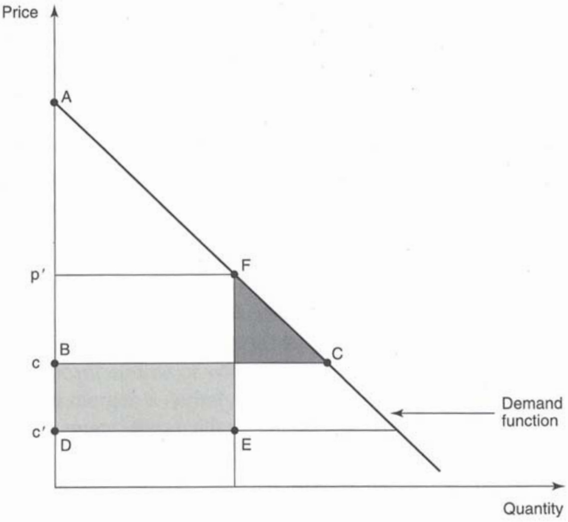

Figure 3.1
The Williamson trade-off

The Williamson Tradeoff

- Post-merger: the productivity gain (a "rectangle") generally outweighs the CS welfare (a "triangle") and therefore a small cost improvement likely will offset the anticompetitive harm
- Caveats
  - Relies on TW standard and not CS standard
  - Need merger to start from competitive level (see next slide)
  - How to deal with cost heterogeneity?
  - Focus on price

The Williamson Tradeoff

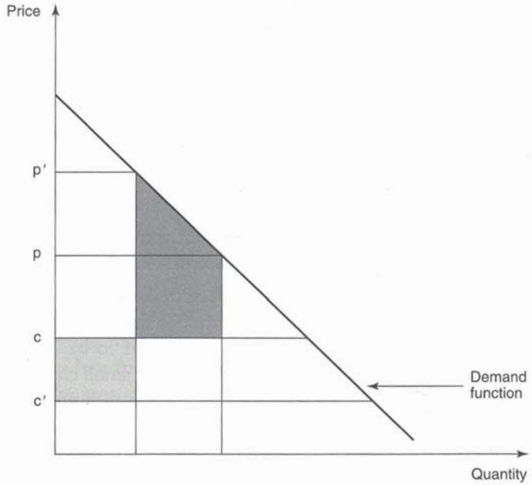

Figure 3.2
The Williamson trade-off when the premerger price exceeds marginal cost

Formal Analysis

- Farrell-Shapiro (1990) offer a formal analysis using the Cournot model
- Generally in Cournot, merging parties reduce output, non-merging parties increase output but overall output declines.
- FS ask 2 questions
  - When does a price decrease as a result of a merger (in a Cournot industry)? A necessary condition is cost synergies
  - Under what circumstances does a merger increase aggregate surplus? Establish conditions that do not require knowing synergies

The Bertrand model

- Can see the basic effects in the DP Bertrand model we have been using
- FOC (pre merger)

$$p_1 = mc_1 - \frac{q_1}{\partial q_1 / \partial p_1}$$

- FOC (post merger)

$$p_1 = mc_1 - \frac{q_1}{\partial q_1 / \partial p_1} - (p_2 - mc_2)\frac{\partial q_2 / \partial p_1}{\partial q_1 / \partial p_1}$$

- The last term is called the Upward Pricing Pressure (UPP) = PCM*Diversion

UPP

- UPP can be compared to MC improvements to determine the effect on prices
- To compute a price increase need a pass-through rate
- Becomes more complicated with multiple products (in principle can stack up)
- NOT an equilibrium analysis (can be very different)

DOJ-FTC Horizontal Merger Guidelines

Framework

- Market Definition
- Competitive Effects: Unilateral + Coordinated
- Additional factors (e.g., entry) + pro-competitive justifications (e.g., efficiencies)

Note: the burden of proof shifts

Market Definition

- Somewhat strange to economists, but VERY important to lawyers
- Used to frame the "issues"
- Also used for "Structural Analysis" in Competitive Effects
- Both product and geography dimension
- Hypothetical Monopolist Test (HMT)
  - Would a (hypothetical) a profit maximizing monopolist over the candidate market impose a "small but significant and non transitory increase in price (SSNIP)
  - Usually taken as %5
  - Add products until true
  - Logic: if even a monopolist would not increase prices then the market is too small.

Competitive Effects

How would you measure the competitive effects?

Concentration

$$HHI = \sum_i s_i^2 * 10,000$$

- Look at 2 measures
- Level: if post-merger the HHI is greater than 2,500 then highly concentrated
- Delta: (i.e., change in HHI $= 2 * s_1 * s_2$) If more than 200 then considered significant
- Coarse measure but highly influential
- Of course, depends critically on market definition

Unilateral Effects: UPP

- Simplest version: UPP $=$ Margin DiversionRatio
  - A larger margin (on product 2) implies higher pricing pressure
  - Higher diversion implies higher pricing pressure
- Several alternative versions, all simple formulas
- Two key questions:
  - Where do the inputs come from?
  - Do the implicit assumptions fit the industry?

UPP: Pros and Cons

- Advantages
  - Easy to calculate (assuming known inputs)
  - Inputs can usually be obtained from business documents
- Potential disadvantages
  - Assumes no other changes (e.g., quality, repositioning)
  - Assumes no competitor reaction
  - Too formulaic: the assumptions do not always fit industry realities
  - Does not predict post-merger prices
  - Inputs often do not match up with economic measures

UPP: a cautionary example

- Originally UPP was proposed as a quick screen (like HHI)
- But often it is used for more; this can sometimes be misleading
- A cautionary example:
  - Consider a homogenous good industry; with a 2-to-1 merger
  - Pre-merger margins will be very low (economic theory would say zero)
  - Therefore, UPP (and GUPPI) will also be low
  - However, a merger to monopoly in this industry is likely to produce very large price effects
- This is an extreme example; but it demonstrates a more general point

Reduced form regressions

- An alternative approach:
  - Use regression analysis to estimate the effect of competition using pre-merger variation in market conditions
  - Past merger or variation across markets
- Avoids the need to rely on
  - A specific model
  - Unknown inputs
- But
  - Requires data that is not always available
  - Is not tied to a specific mechanism of loss of competition (could something else be driving the price variation?)

Reduced form regressions: Pros and Cons

- Advantages
  - Natural experiment flavor, intuitive
  - Can be based on detailed, reliable data
  - Simple econometrics
- Potential disadvantages
  - Observed variation due to other factors, not merger
  - Even if the merger caused price increases, is it a loss of competition?
  - How do the effects in the data relate to the merger at hand?A specific model

Merger Simulation

- The 3rd approach combines the best of the first two
- Step 1: write a model that captures the economics of the industry
  - Can be a pricing model like the one used for the UPP/GUPPI
  - But can also be tailored to the industry
- Step 2: estimate the model inputs based on the best available data
  - Can use business documents (as in GUPPI) or econometric analysis (as in reduced form approach)
- Step 3: calculate post-merger equilibrium prices for all competitors reflecting the mergers effects on incentives, costs, quality, etc.Advantages

Coordinated Effects

- Much harder to define and quantify
- "Checklist approach"
  - Increase in concentration
  - Vulnerability to coordinated conduct/history
  - Eliminate a maverick

Other Factors

- Entry
    - Likelihood
    - Timeliness
    - Sufficiency
- Efficiency
    - Arguments usually made by the parties
    - Hard to evaluate
    - So often ignored
    - How much is merger specific
- Incentives to innovate

Recent Examples

- Aetna-Humana
- American Airlines -USAirways