ECN 453: Horizontal Mergers 2

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Horizontal Mergers

- **Merger**: When two firms become one.
- **Horizontal Mergers:** Mergers between two firms in the same industry.
- **Review from last time:** when deciding whether to approve a merger, a regulator needs to tradeoff the positive effects from cost efficiencies with the negative effects of market power.

Plan

1. Horizontal merger dynamics
2. Horizontal merger policy

Plan

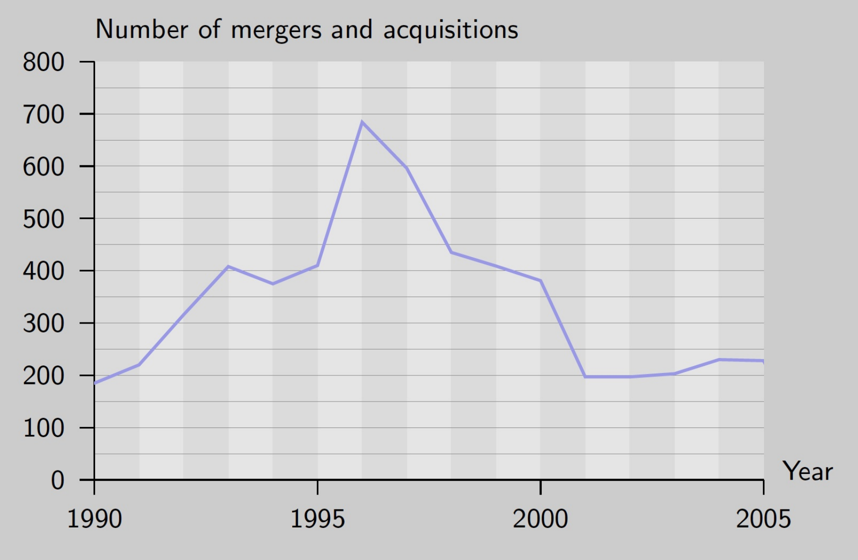
1. **Horizontal merger dynamics**

2. Horizontal merger policy

Horizontal Merger Dynamics

- Before, considered one merger happening in isolation.
- Now, we will discuss some dynamic issues in horizontal mergers.
- First, we will talk about **merger waves**. Multiple mergers in an industry often happen in a short span of time. Why?

Horizontal Merger Dynamics: Merger Waves in US Radio Stations



Horizontal Merger Dynamics: Merger Waves

- What caused this wave in US Radio Station mergers?

- **Exogenous factors**: US 1996 Telecommunications Act raised ownership caps in local markets and relaxed some other regulations.

- Alternatively, merger waves may be caused by endogenous factors.

- **Endogenous factors**: US supermarket business had a merger waves in the 1990s.
  - Some argue this merger wave was driven by need to cut costs and remain competitive with Wal-Mart

  - As several firms merged together, pressure to cut costs became even greater, leading to more mergers.

Merger waves may results from exogenous events (e.g. industry deregulation) or from endogenous events (e.g. a merger between two large firms).

Horizontal Merger Dynamics: Merger Waves (textbook Q11.6)

- **Setup:** Consider an industry where firms choose quantities (Cournot). Market demand is given by $Q = 150 - p$. Firms are identical. Marginal cost is constant and $c = 50$. Fixed cost is $F = 150$.

- Useful formula (from the previous lecture):

$$\pi_i = \left(\frac{a-c}{n+1}\right)^2 - F_i$$

- **Questions:**
  - (a) What are the profits per firm as the number of firms is equal to 2,3, and, 4?
  - Suppose a merger leads to a new firm with the same fixed cost and the same marginal cost.
  - (b) Suppose that initially there are 4 firms. Show that a merger between Firms 1 and 2 is unprofitable.
  - (c) Suppose that Firms 3 and 4 decide to merge, forming Firm 3&4. Show that now a merger between FIrms 1 and 2 is profitable.

Horizontal Merger Dynamics: Preemptive Mergers

- Primary goal of a merger/acquisition may be to preempt a rival from doing so.
- Example (quote from an analyst):
- *Google bought Waze not just because the company offers a potentially good product that Google can link to its own dominant map service, but possible because its purchase keeps Waze out of the hands of its rival Facebook, which was also a rumored bidder.*
- Under these conditions, the merger might even *reduce* value!

Horizontal Merger Dynamics: Mergers and Entry

- Consider again the US radio broadcasting industry.
- After the merger wave, the next slide shows that in most markets (72%) mergers are followed by higher entry rates.

Horizontal Merger Dynamics: Mergers and Entry - monthly net entry rates

Horizontal Merger Dynamics: Mergers and Entry

- Why do you think entry might increase after a merger?

Horizontal Merger Dynamics: Mergers and Entry

- Why do you think entry might increase after a merger?
- One reason: a merger can be thought of as a firm exit.
- **If barriers to entry are not very high, then mergers tend to be followed by new firm entry.**
- Another way of thinking about this: mergers and entry jointly create 'self-correcting' dynamics. This will play an important role in public policy towards mergers which we will now see.

Plan

1. Horizontal merger dynamics
2. **Horizontal merger policy**

Horizontal merger policy

- Three interested parties in a horizontal merger: merging firms, non-merging firms, and consumers.
- Task for public policy: evaluate the relative importance of each gain/loss, and to assess the overall effect.
- This is very challenging! E.g. information about cost savings comes from the firms themselves, usually, and they have a clear incentive to overstate the benefits.

Horizontal merger policy

- Also important to merger analysis: what is the increase in price following a merger?
- From our previous discussion about market structure, equilibrium price is increasing in market concentration.
  - Two large firms merging implies a greater increase in price than two small firms.
- Price increase channels:
  - **Unilateral effects** (less competition)
  - **Collusion effects** (easier to collude with fewer firms)

Horizontal merger policy: practical aspects

- **How much concentration is 'too much'?**

- Department of Justice (DOJ) and FTC follow horizontal merger guidelines which depend on the Herfindahl-Hirschman Index (HHI):

- 1. $HHI < 1500$ OR change in $HHI < 100$ due to merger: safe harbor
  - "ordinarily require no further analysis"

- 2. $HHI > 2500$ AND change in $HHI > 200$ due to merger
  - "presumed likely to enhance market power"

- 3. Intermediate situations not included in the above two cases.
  - "potentially raise significant competitive concerns and often warrant scrutiny"

- These are only guidelines, but mergers in the second category will attract a lot of scrutiny from regulators.

Horizontal merger policy: practical aspects

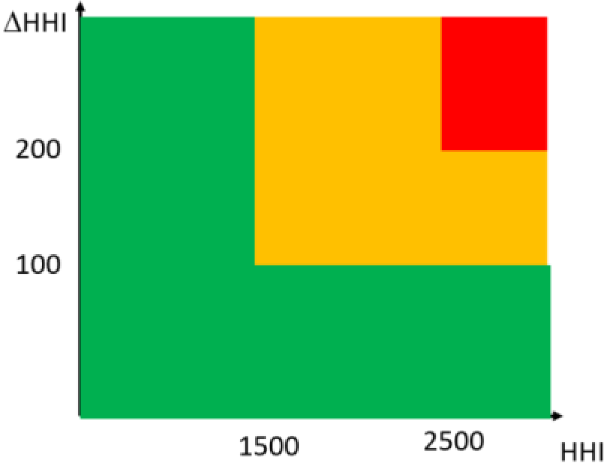


Figure: From: voxeu.org/article/concentration-screens-horizontal-merger-review. Green: safe harbor. Yellow: potentially raise concerns. Red: presumption will raise market power.

Practice question: HP-Compaq Merger Q11.4

- **Setup:** In 2001, HP acquired Compaq. The merger had an impact on two different markets: desktop PCs and servers.
- Pre-merger market shares in the desktop PC market were: Dell 13; Compaq 12; HP 8; IBM 6; Gateway 4.
- Pre-merger market shares in the servers market were: IBM 26; Compaq 16; HP 14; Dell 7.
- Assume that the 'leftover' market share is made up of tiny firms that can be ignored when calculating the HHI.
- **Question:**
  - 1. Determine the value of HHI in each market before the merger.
  - 2. Assuming market shares of each firm remain constant, determine the value of HHI after the merger.
  - 3. Considering the values determined above and the merger guidelines, was the Department of Justice right in allowing the merger to take place?

Horizontal merger policy: practical aspects

- **What is the relevant 'market'?**
- To compute the HHI, need to define market shares. What is the denominator in the 'share'?
- Definition of market is an obvious way for firms to skirt merger enforcement: try to define the market as large as possible.
- Example: 1996 Staples and Office Depot (two largest US chains of office supplies superstores) proposed a merger.
  - If market is 'office superstores': combined market share of merging parties is $> 70\%$.
  - If market is 'stores that sell office supplies': combined market share is much lower.
- To get around these debates about market definition, recently FTC has favored a more direct approach of estimating the impact of a merger on consumer prices.

Horizontal merger policy: merger remedies

- In the US, mergers are challenged in court.
  - That is, regulators do not block them directly. In the EU, the European Commission blocks mergers directly and this can then be appealed in court.

- Possible outcomes:

- **Behavioral remedies**: e.g. prices cannot be increased by x% during the next *n* years

- **Structural remedies**: e.g. sell assets to competitor

- Merger might be blocked

- Merger might be allowed to go ahead

Summary of key points*

- Mergers usually involve a public policy tradeoff: lower costs vs increased market power
- Understand the dynamic effects of mergers
- Know about two practical aspects of merger policy: 1. how regulators target enforcement based on concentration and 2. market definition

*To clarify, all the material in the slides, problem sets, etc is assessable unless stated otherwise, but I hope this summary might be a useful place to start when studying the material.