

# Ex-Post Merger Evaluation

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# Why Study Old Mergers?

- Expensive use of agency resources
  - Most studies do not directly lead to law enforcement.
- Case Study
  - How can results from a single merger study be generalized?

# Why Study Old Mergers?

- Evaluate Enforcement
  - Is agency aggressive enough?
  - Too aggressive?
- Improve Enforcement Methodology
  - Prospective Merger Review Difficult.
  - Evaluate methodological tools used in prospective merger analysis
- Training
  - Empirical skills gained from studies benefit enforcement mission.

# Rest of Talk

- Policy Evaluation
- Retrospectives in two key industries
  - Hospitals
  - Petroleum
- Other Studies
  - Retailing
  - Consumer Products
- Divestitures

# Policy Evaluation: Study Design

- Literature does not measure price effect of *average* merger
  - More than 96% of mergers in U.S. cleared without a second request (*HSR Report FY 2012*)
- Goal: Evaluate agency decision making on the enforcement margin
  - Cases where agency/court allowed merger but seriously considered challenging.
- Conduct Many Studies
  - If prices increase, on average, following mergers on the enforcement margin, then enforcement is not aggressive enough.

# Hospital Merger Enforcement 1990s

- Most cases decided on geographic market
  - Elzinga-Hogarty Analysis
    - Measure flow of patients into and out of region
    - Increase region size until flows into and out of a region are small
    - In hospital industry, this technique generated large geographic markets
- DOJ and FTC lost 7 consecutive hospital mergers in late 1990s, essentially stopped challenging hospital mergers.

# FTC Hospital Studies

- In 2002, then FTC Chairman Muris decided to conduct retrospective analyses of a number of consummated hospital mergers.
- Subpoenaed data from hospitals and insurance companies.
- Estimated the price effects resulting from four hospital mergers
  - Three Bureau of Economics working papers: 293, 294, 295 available at <http://www.ftc.gov/be/econwork.shtm>.
  - Special volume of *International Journal of the Economics of Business* (2012) includes these studies and other hospital merger related papers.

# Outcomes of Hospital Research

- Show previous methodology does not identify problematic mergers
  - Many economists now explicitly model bargaining between hospitals and insurers.
    - Patient flow information is used to identify bargaining model.
- Successful challenge of a consummated merger
  - FTC vs Evanston/Northwestern/Highland Park
- FTC now has a very active prospective merger enforcement program
  - Four hospital mergers blocked or abandoned since 2008



# Gasoline Studies

- Concern that increased market concentration resulting from mergers was responsible for increased gasoline prices.
- Bureau of Economics staff conducted five studies of seven consummated mergers in the petroleum industry.
  - Working Papers: 270, 278, 291, 300 available at <http://www.ftc.gov/be/econwork.shtm>
  - *American Economic Review, Papers and Proceedings*, May, 2011
- Studies by Bureau of Economics Staff do not find evidence of a significant increase in retail price following the studied mergers.
  - Other studies using different modeling approaches find price increases following some of these mergers, e.g., GAO (2004), Hastings (2004), Hastings and Gilbert (2005).

# Criticism of Merger Retrospective Studies

- Case Studies
  - How can we generalize findings?
- Carlton (2009): Study many mergers to learn about distribution of merger price effects.
  - Mergers in unconcentrated markets
  - Mergers in concentrated markets

# Retail Markets

- “Do Retail Mergers Affect Competition? Evidence from Grocery Retailing”
  - Hosken, Olson, Smith (2012)
  - BE Working Paper 313, available at <http://www.ftc.gov/be/workpapers/wp313.pdf>
- Estimate price effects of supermarket mergers
- Examine many mergers taking place at roughly same point in time.
  - 14 U.S. markets in 2007 or 2008
- Different levels of concentration
  - 8 in highly concentrated markets ( $HHI > 2500$ )
  - 6 in moderate or unconcentrated markets

# Findings

- Prices increased in 5 markets
  - 4 were highly concentrated.
- Prices decreased in 5 markets
  - Only 1 highly concentrated.
- Conclusions:
  - HHI thresholds are a useful enforcement screen.
    - Mergers in unconcentrated markets are rarely problematic.
    - Mergers in concentrated markets are sometimes, but not always, problematic.
  - Price reductions consistent with merger efficiencies.

# Unilateral Effects: Differentiated Products

- Focus on how mergers change the merged firm's pricing incentives.
  - Deneckere and Davidson (1985)
- Introduced in 1992 Horizontal Merger Guidelines
- Commonly assumed model for simulating merger price effects
  - Hausman, Leonard, Zona (1994), Nevo (2000)
- Empirical evidence unilateral effects are important?

# Unilateral Effects: Consumer Goods Markets

- Ashenfelter and Hosken (2010)
  - 5 Consumer Products mergers in late 1990s
    - Find prices increase following 4 of 5 mergers
- Ashenfelter, Hosken, Weinberg (2013)
  - Examine Maytag/Whirlpool appliance merger
    - Price increases in 2 of 4 most affected markets
- Weinberg and Hosken (forthcoming)
  - Evaluate merger simulation methodologies using data on two consummated mergers.
    - Find merger simulation sensitive to assumed demand model.

# Divestiture Study: J&J/Pfizer

- Examine the effectiveness of divestitures resulting from a large merger.
  - Divestiture of 6 consumer products following Johnson and Johnson's purchase of Pfizer's consumer health division.
- Determine if the divestiture maintained competition in affected markets
  - Were brands as effective with a new owner?
  - Did prices rise or output fall?
- Finding:
  - “Overall, the results are consistent with the view that the divestitures maintained the pre-transactional level of competition”
- Bureau of Economics Working paper 296 available at: <http://www.ftc.gov/be/workpapers/wp296.pdf>

# Conclusions

- Retrospective analyses are essential to evaluate enforcement effectiveness and enforcement methodologies.
- With limited resources focus on:
  - Critical Industries
  - Studies that can evaluate enforcement tools
    - Merger Simulation
    - Divestiture Policy



# References

- Hospital Studies

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