Demand-Pull Research for Antitrust Policy

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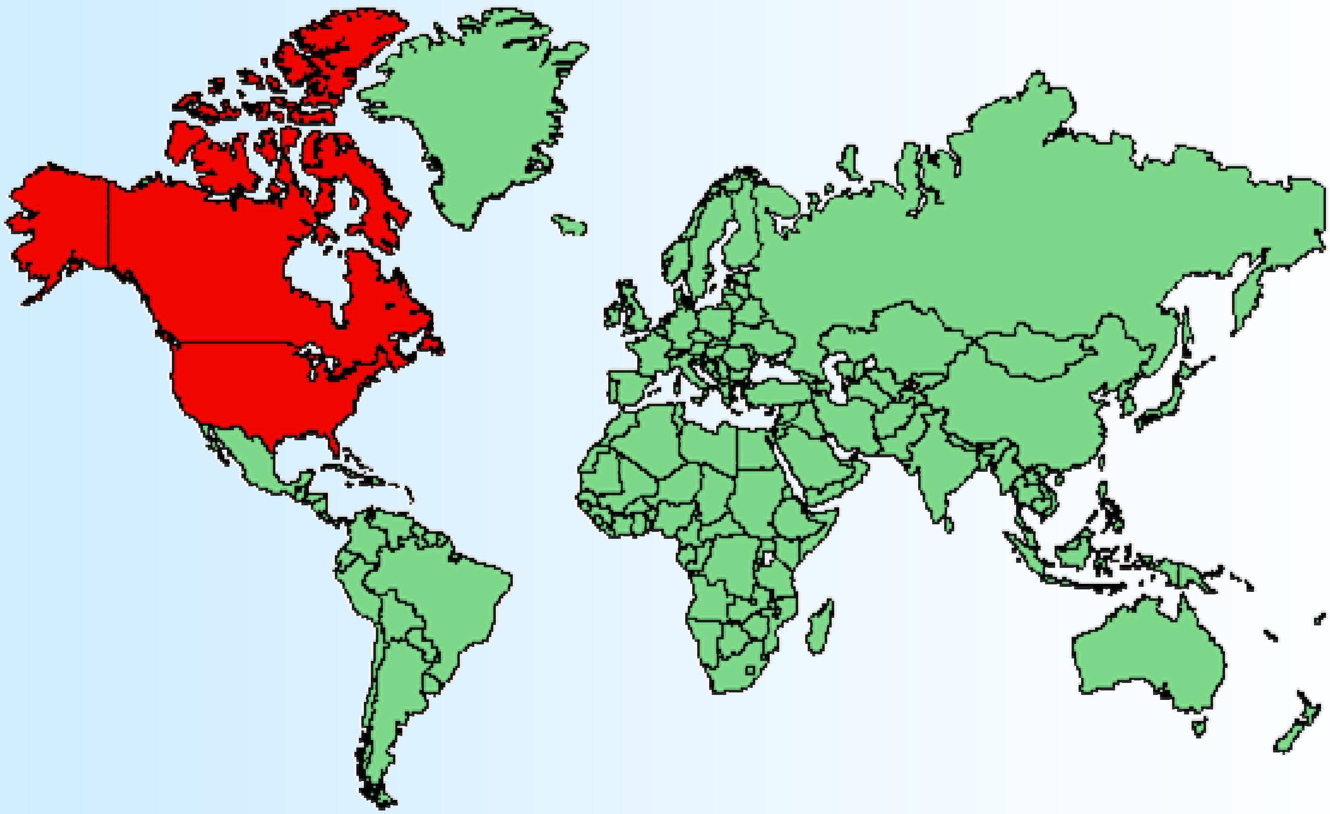
I. Policy Motivation

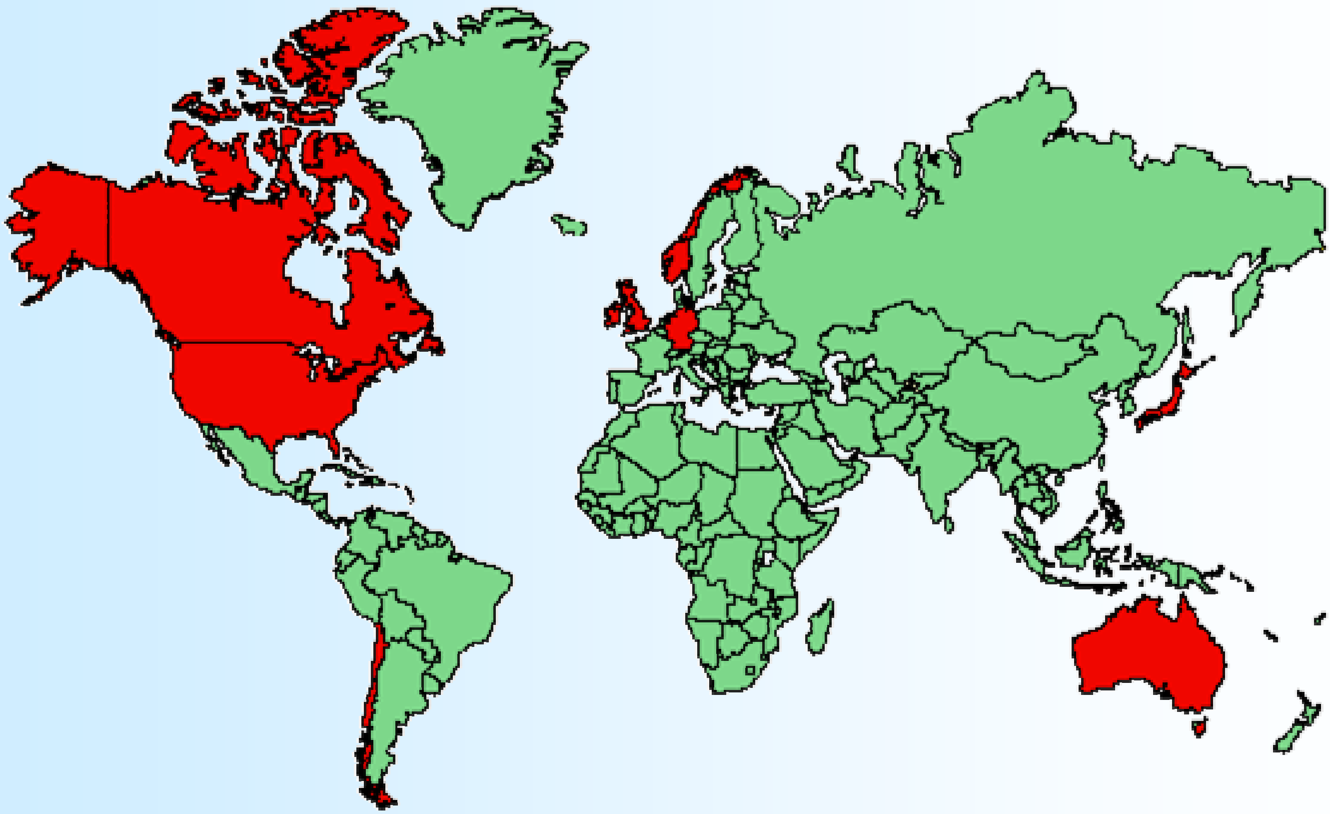
Global Proliferation of Competition Laws

1900



Laws enacted in 1900 or before

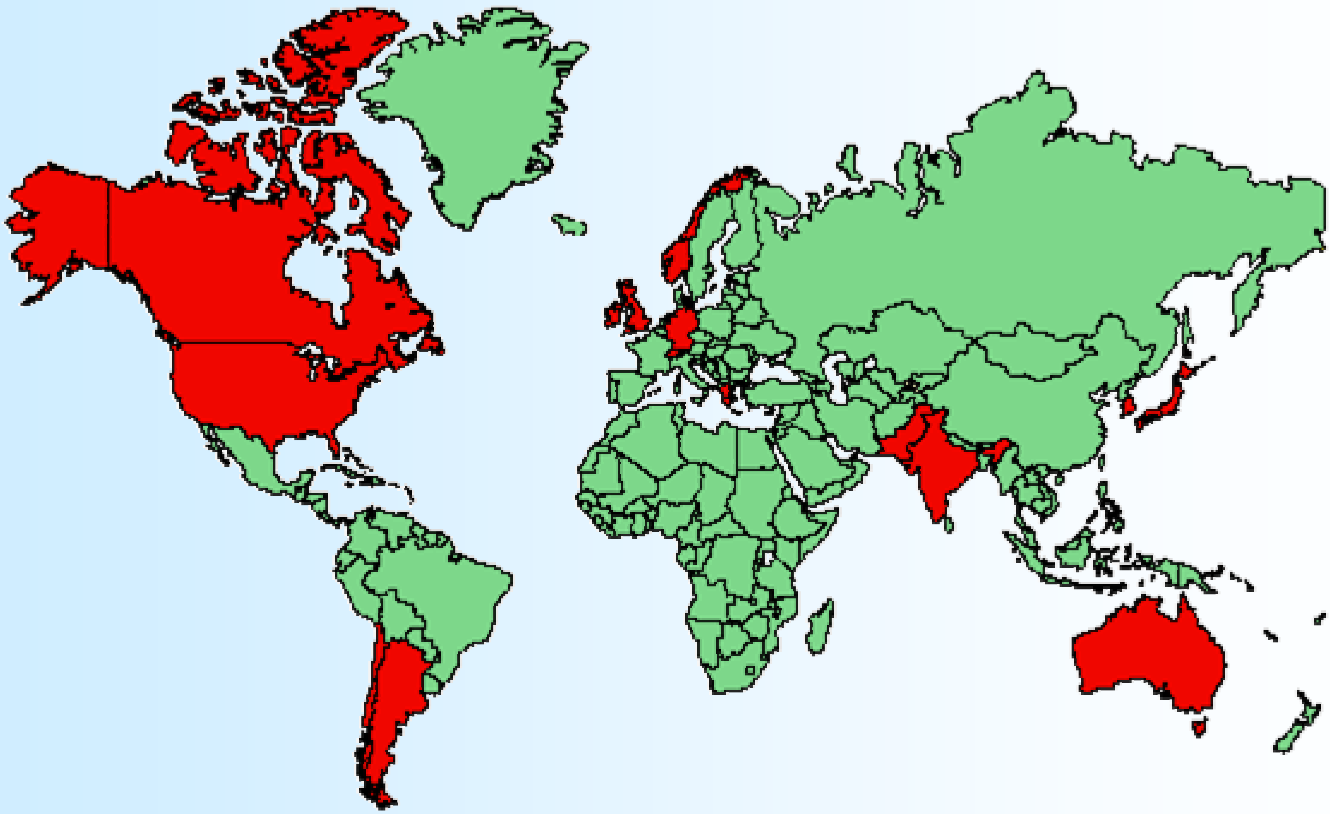
1960



Laws enacted in 1960 or before

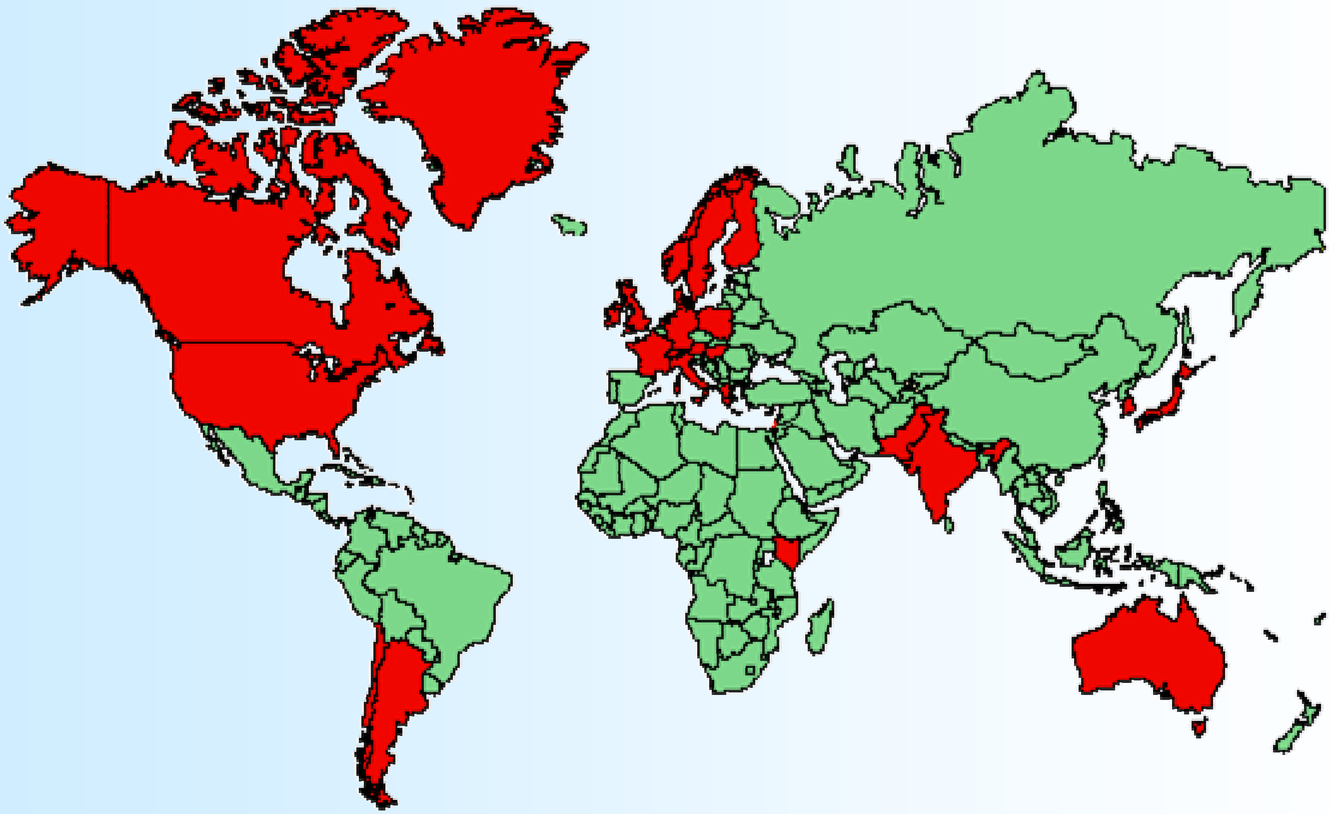
Note: EU introduced antitrust law in 1957

1980



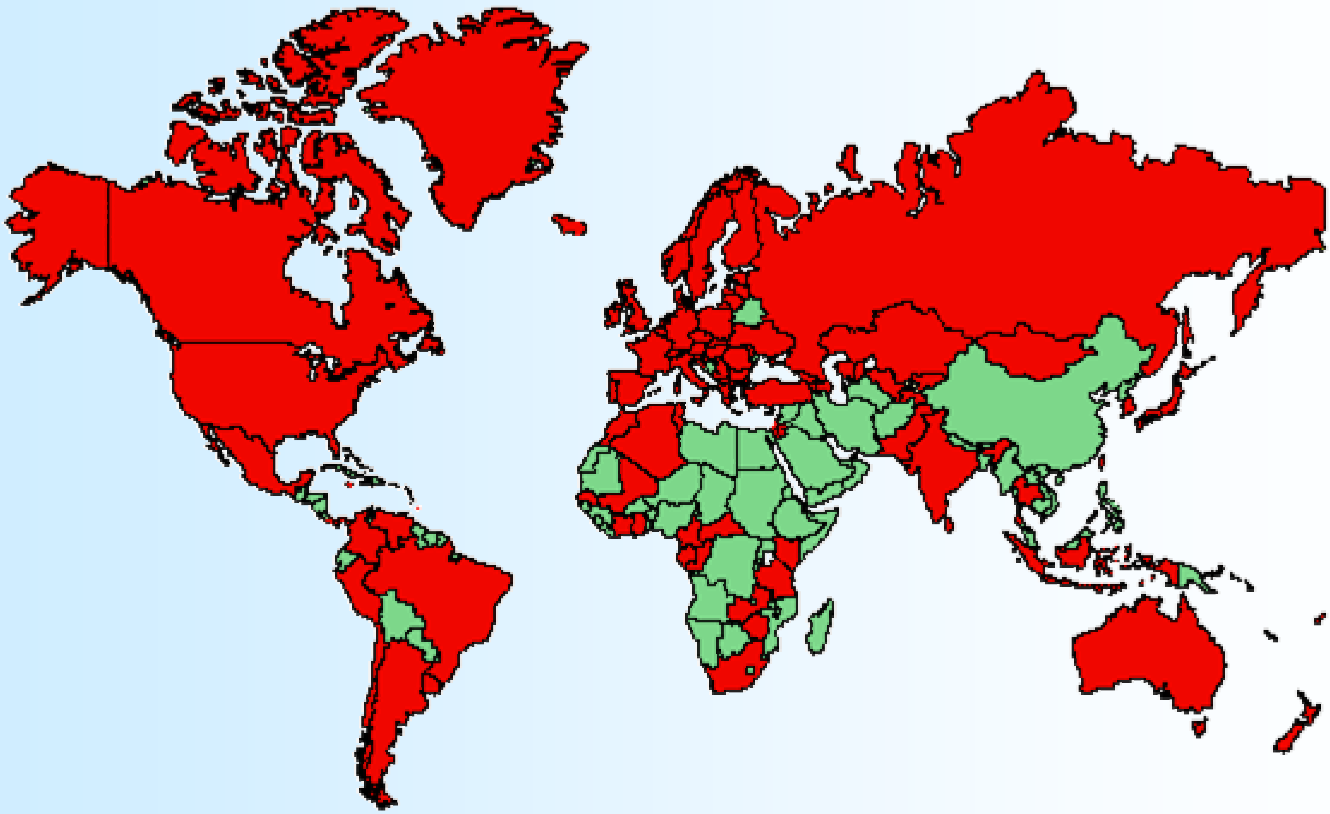
Laws enacted in 1980 or before

1990



Laws enacted in 1990 or before

Today



Laws enacted in 2004 or before

Income & Rule of Law

- Top twenty percent of countries…
  - per capita Income of $23,450,
  - Growth 2.6 percent a year
- Bottom twenty percent of countries…
  - per capita Income of $2,560,
  - *Negative* growth: -0.9 percent a year
- WARNING: “Bad” antitrust will become part of “micro” foundation of this “macro” effects

What do these laws do?

- Target
  - Cartels
  - Mergers
  - Abuse of dominance (vertical restraints)
- Irony
  - Successful “export” of EC antitrust laws
  - Just as they are more becoming more like US laws with focus on effects

Historic Opportunity for Economists

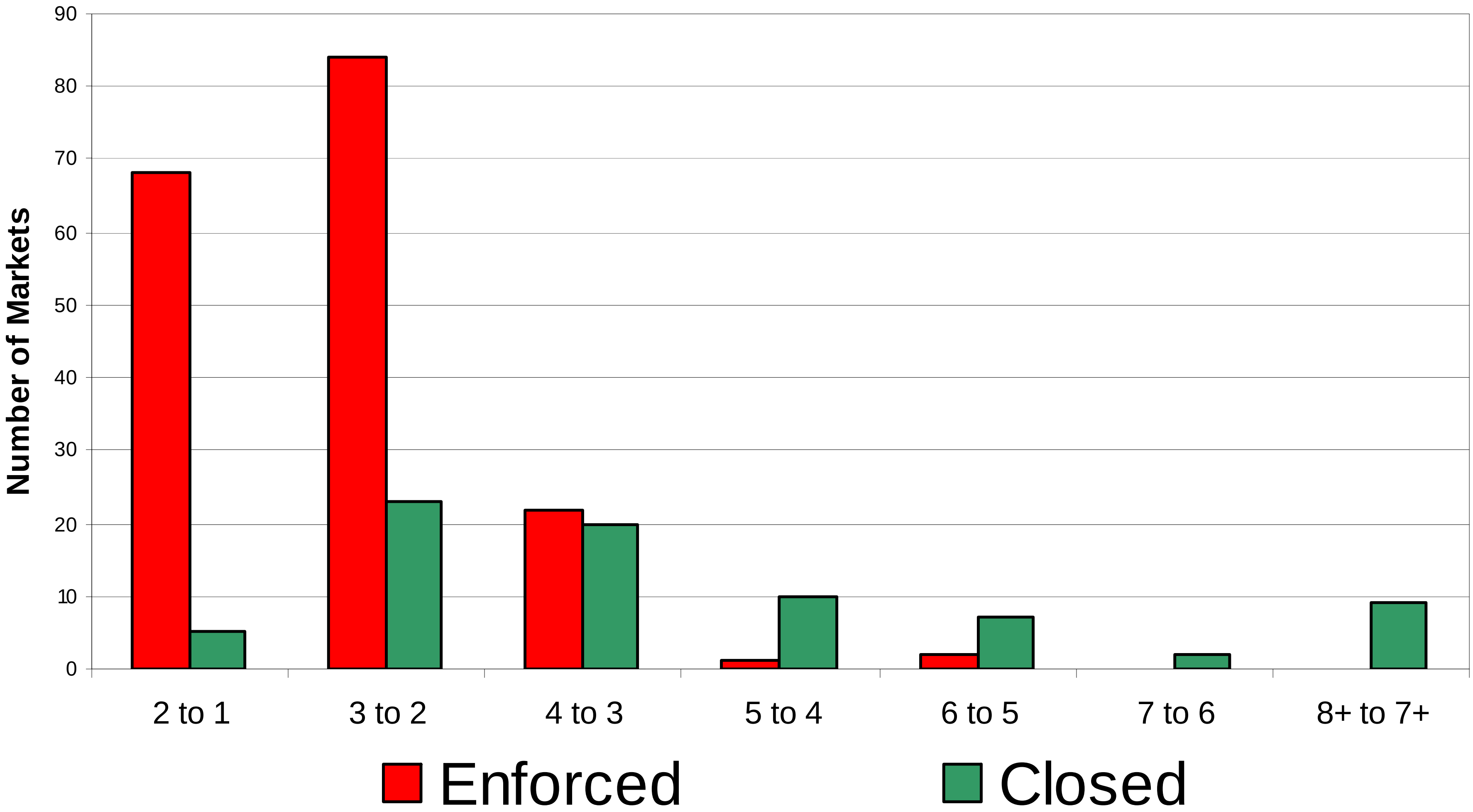
- To build on Mario Monti’s accomplishments
  - State aid
  - Merger Guidelines; SIEC⇔SLC
  - Best Practices
  - Chief Economist
- ➔Moving away from “form” towards “effect”
  - Attorneys determine form,
  - Economists determine effect.

U.S. FTC Enforcement

- Consumer Goods Mergers
  - Scanner data
  - Structural oligopoly models
- Consummated Mergers
  - Differences-in-differences estimation
- Competition Advocacy
  - “Freedom to choose” laws
- “Cheap” exclusion non-merger cases

II. Horizontal Merger Policy

FTC Merger Data,1996-2003:
➔Structure just a starting point



What’s Wrong w/Structural Presumptions?

- Market delineation draws bright lines even when there may be none
  - No bright line between “in” vs. “out”
- Market Shares may be poor proxies for competitive positions of firms
- ➔Market shares and concentration may be poor predictors of merger effects

What is Effect of Merger?

- “Effect” question compares two states of the world (“with” vs. “without” merger)
  - but only one is observed
- Two ways of drawing inference about unobserved state of world
  - Natural experiments
  - Theory-based inference

Natural Experiments

- *Control group* (without merger)
- *Experimental group* (with merger)
- ➔Difference between groups is estimate of merger effect.

- BIG questions
  - How well does experiment mimic merger effect?
  - Did you hold everything else constant?

Example: Consummated Merger

- *Control Group*: Pre-merger period
- *Experimental Group*: Post-merger period
- ➔Did price increase?

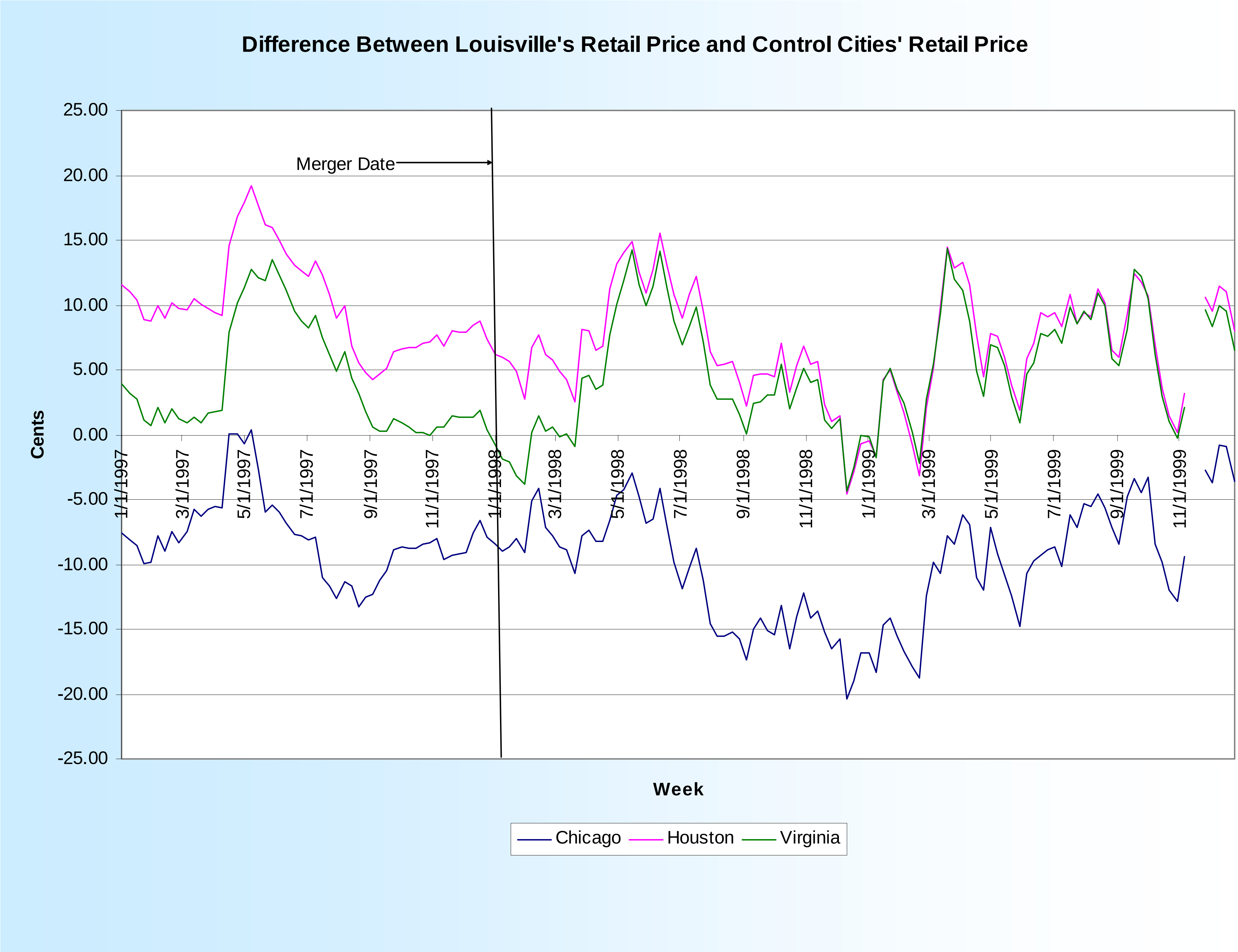
- BIG question: "Compared to what?"
  - Compared to "control" cities hit by the same demand and cost shocks
  - Economic Jargon: "Differences in Differences Estimation"
    - First difference: pre- vs. post-merger
    - Second difference: target vs. control cities

(Marathon/Ashland Joint Venture)

- Combination of marketing and refining assets of two major refiners in Midwest
- First of recent wave of petroleum mergers
  - January 1998
- Not Challenged by Antitrust Agencies
- Change in concentration from combination of assets *less* than subsequent mergers that were modified by FTC

Merger Retrospective (cont.): Marathon/Ashland Joint Venture

- Examine pricing in a region with a large change in concentration
  - Change in HHI of about 800, to 2260
- Isolated region
  - uses Reformulated Gas
  - Difficulty of arbitrage makes price effect possible
- Prices did ***NOT*** increase relative to other regions using similar type of gasoline



Difference Between Louisville's Retail Price and Control Cities' Retail Price
Merger Date
25.00
20.00
15.00
10.00
5.00
0.00
-5.00
-10.00
-15.00
-20.00
-25.00
Cents
1/1/1997
3/1/1997
5/1/1997
7/1/1997
9/1/1997
11/1/1997
1/1/1998
3/1/1998
5/1/1998
7/1/1998
9/1/1998
11/1/1998
1/1/1999
3/1/1999
5/1/1999
7/1/1999
9/1/1999
11/1/1999
Week
Chicago
Houston
Virginia

Theory Based Inference

- Posit pro- and anti-competitive merger theories
- Which one better explains the evidence?
- Example: Merger in bargaining markets

Bargaining Theory

From Oracle-Peoplesoft trial:

"the area [that] is the most indeterminate in all of antitrust economics where you have negotiations between two parties. There is no determinate theory that predicts the outcome."

Question: can economics predict effects of mergers in bargaining markets?

John Nash's "Split the Difference" Theory

- Same indeterminancy confounded John Nash
- Proved any "reasonable" solution would "split the difference"
- ➔*The gains from bargaining relative to the alternatives to bargaining, determine the terms of any bargain*
- What happens if a manager offers a $50 sales incentive to salespeople?
  - Makes salespeople more eager to reach agreement, so they reduce price by $25.

What Does Nash's Bargaining Theory Imply for Mergers?

- If merger changes alternatives to agreement, it also changes the terms of agreement.
- *Example*: Drugs bargaining with an insurance company to get onto a formulary.
  - If two substitutes bargain jointly, and no other substitute, merged company gets better price
- *Evidence*: how good are the alternatives to the merging products?

Bargaining Natural Experiment

- “Any-willing-provider” (AWP) laws compel managed care plans to include any health care provider willing to accept plan’s terms and conditions.
- Threat of exclusion from network induces competition between providers to be included in “network.”
- *Prediction*: Getting rid of this threat changes price

Bargaining Experiment (cont.)

- When a state adopts a allows any willing provider in the network, health expenditures increase by about 2%.
  - Mike Vita, “Regulatory restrictions on selective contracting: an empirical analysis of `any-willing-provider’ regulations,” Journal of Health Economics 20 (2001) 955–966

Horizontal Merger Questions

- Backlash against structural models: “Do they fit the evidence?”
  - Bertrand, auctions, bargaining
- Rise in reduced-form estimation
  - Staples-Office Depot (FTC)
  - Oracle-PeopleSoft (Justice)
- How do we estimate effects of consummated mergers?
  - Difference-in-difference estimators

Consumer Goods Mergers

- 20-50% price variation caused by Temporary Price Reductions (TPR's)
  - NOT caused by MC reductions;
  - Instead, margins vary with price
- TPR's correlated with promotion and advertising expenditures
- TPR's have strong seasonal variation

Cons. Goods Merger Questions

- What is effect of TPR’s?
  - Hoarding by consumers ➔ elasticity bias
  - Aggregation bias across stores and time
- What is role of promotion, seasonality?
- What causes price variation?
  - Price discrimination?
  - Mixed strategy equilibrium?
- How is equilibrium affected by merger?

Where is Academic Research Going?

- **Ever more precise methods for estimating demand, but…**
  - What about supply (firm behavior)?
- BLP, now two-step estimation (auction, demand, dynamic) avoids computing equilibrium, but…
  - Equilibrium required for policy effects
  - Existence and uniqueness?
- How do we model…
  - Advertising & Promotion?
  - Post-merger product repositioning?

Post Merger Product Re-positioning (Later talk)

- **Merging firms move apart to avoid cannibalization**
  - **What good are pre-merger elasticities?**
  - **Non merging firms can lose from merger**

III. Vertical Restraints

FTC Non merger Cases

- “Cheap” exclusion vs. more traditional monopolization cases.
  - (1) cheap, (2) effective, and (3) inherently unlikely to generate plausible, cognizable efficiencies.
  - Caused by abuse of government process

What Are Effects of “Abuse”

- Economic theory gives us “possibility theorems”
  - But not way to tell when effects likely
- The same conditions that give rise to abuse also give rise to potential efficiencies
  - Double markup
  - Investments & other demand increasing activities

Vertical Restraints Solve Double Markup Problem

- ***Gasoline***: vertical integration reduces prices by $0.03/gallon; [Vita, 2000; Barron et al., 2004; and Barron & Umbeck, 1984 & 1985; Shepard,1993]
- ***Beer***: UK “beer orders” reducing vertical control of pubs resulted in higher retail beer prices, [Slade 1998]
- ***Cable TV***: integration of cable TV programmers with distributors lowered retail prices [Chipty, 2001]
- ***Various***: 30% of litigated Resale Price Maintenance cases involved **maximum** RPM [Ippolito, 1991]
- ***Fast Food***: Prices are higher in franchised fast food restaurants as compared with company-owned stores [Lafontaine 1995; Graddy 1997/]

Vertical Restraints Increase Investment & Services

- Ippolito (1991) and Ippolito & Overstreet (1996) found that RPM generally consistent with demand-increasing activities
- Sass & Saurman (1996) found that ban on exclusive territories in beer sales reduced beer consumption by 6%.
- Mullin & Mullin (1997) found vertical integration induced investment in relationship-specific assets in steel production.
- Hersch (1994) found evidence consistent with efficiency rationale for RPM.

What about Anticompetitive Theories?

- "Post Chicago" economists constructed ***theoretical*** examples of harm caused by
  - Raising Rivals' Costs
  - Softening Competition
  - Multilateral Competition
  - Agency Theory
- But what is the evidence?

Evidence of Anticompetitive Vertical Theories?

- ***Various***: Gilligan (1986) finds negative abnormal returns upstream when RPM contracts challenged.
  - Consistent with efficiency and manufacturer cartel.
- ***Cable TV***: Ford and Jackson (1997) find vertical integration ➔ small losses in consumer welfare ($0.60 per subscriber per year).
- ***Cable TV***: Waterman and Weiss (1996) found that cable systems that owned pay movie channels were less likely to carry rival pay channels
  - consistent both with pro- and anticompetitive behavior.
- ***Gasoline***: Hastings (2004) found rivals of acquired gas stations raised prices post-acquisition, but that the tendency to raise prices did *not* depend on the vertical structure of the rival station.
  - Price increase attributed to "branding" formerly "unbranded" retailers

Summary of Evidence

- Most studies find evidence that dominant firm activity is pro-competitive
- This efficiency often attributable to elimination of double-markups
- Studies also find evidence consistent with “dealer services” efficiencies
- Evidence of anticompetitive uses of vertical controls generally ambiguous
- Overall, difficult to find evidence that vertical controls reduce welfare

IV. Demand-side Policy Intervention

A Tale of Two Surgeries: What About Demand?

- Breast reconstruction vs. breast augmentation
- From 1992-1998, price increases
  - one increased by 12-13%
  - the other by 23-25%
- Quiz: match surgery to price increase.
- ==>Demand matters
  - inherent inelasticity
  - third-party insurance coverage
- Policy iimplication:
  - Why look ONLY at supply-side?

What does this say about our antitrust enforcement?

- Supply-side enforcement
  - Hospital Mergers
  - Provider cartels
- Would we be better off trying to make demand more elastic?
  - Insurance reform
  - Make patients face prices
- Is our enforcement optimal?
  - Is $MP1/p1 > MP2/p2$?

Consumer Protection: Information and Demand

- Information Regulations Adopted to Protect Consumers
  - By Prohibiting Harmful Information
  - By Requiring Helpful Information Disclosures
- What are Effects of Regulation
  - Health Claims (prohibiting information)
  - Mortgage Disclosures (requiring information)

Mandated Disclosures can harm competition

- Proposed regulations
  - Mortgage brokers must disclose markup (yield spread premium) for loans.
  - Direct lenders, e.g., retail banks, exempt
- FTC conducted study to test effects on demand
  - Lacko and Pappalardo

Results From Copy Test

- Without disclosure
  - 90% identified less expensive loan
- With disclosure
  - 70% identified less expensive loan
- With two loans that cost the same
  - 40% couldn't ID cheaper one

Conclusion

- Horizontal policy is on right track because research is headed in right direction.
  - Reaction against structural models similar to what happened in Labor and Macro
  - Rise of natural experiments using differences-in-differences estimation?
- Vertical policy is in disarray because research is inconclusive
  - Theoretical existence proofs
  - Scarce empirical evidence