Economics and Antitrust: Enforcement R&D

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Talk Outline: Enforcement R&D

- Motivation
- Horizontal merger policy
  - Structural oligopoly models
  - Consummated mergers
  - Bargaining
- Vertical restraints policy
  - Evidence + Theory = ???

Historic Opportunity for Economists

- To build on Mario Monti's accomplishments
  - State Aid
    - rectangles bigger than triangles
  - Anitrust
    - Merger Guidelines;
    - Best Practices;
    - Chief Economist
- Economists influence individual cases, but
  - Research has lasting influence on policy
- ➔Enforcement R&D: "Demand-pull" research to answer enforcement questions.

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

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 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?

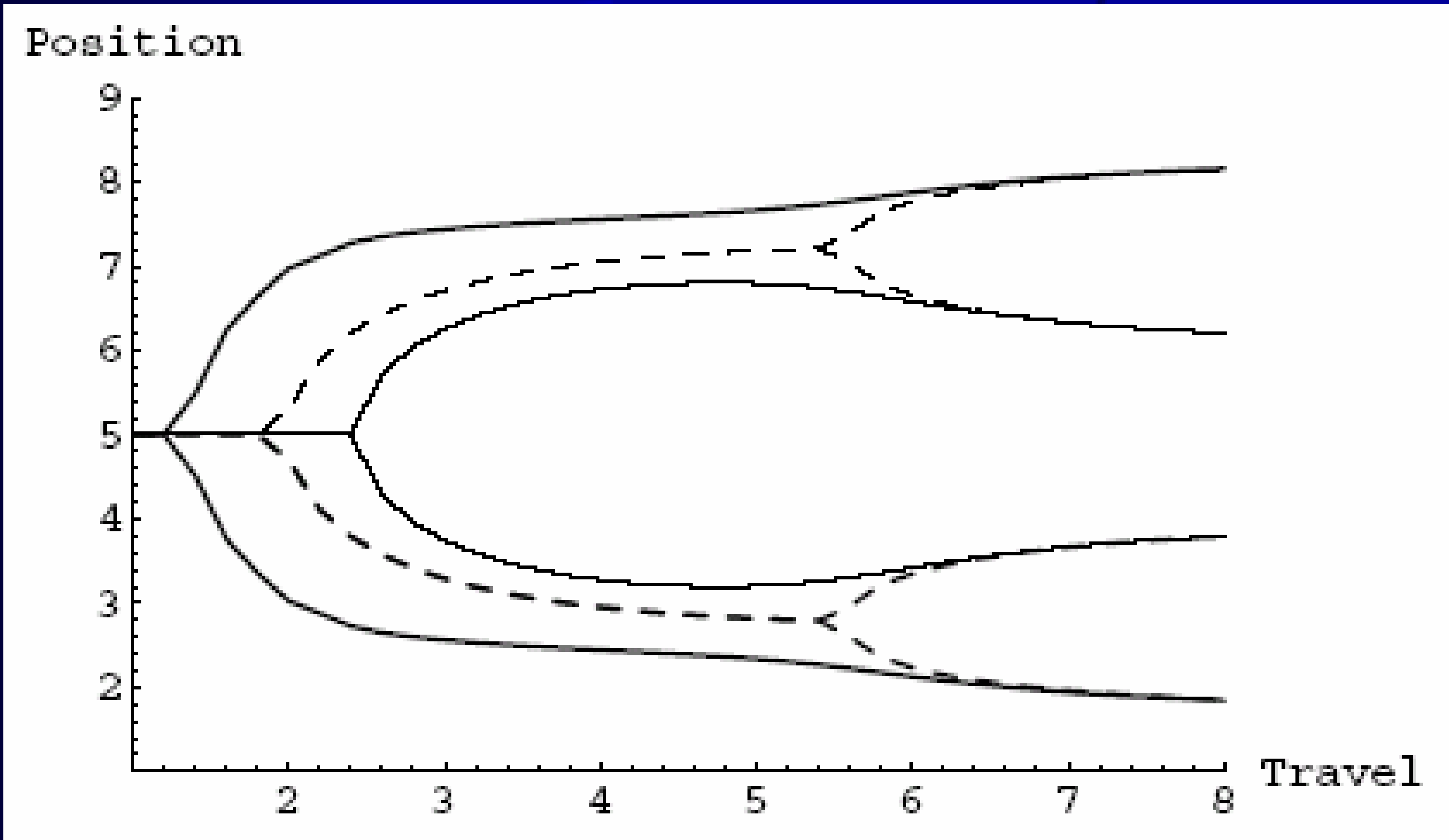
Where is Academic Research Going?

- **Ever more precise methods for estimating demand, but…**
  - What about supply?
- 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?

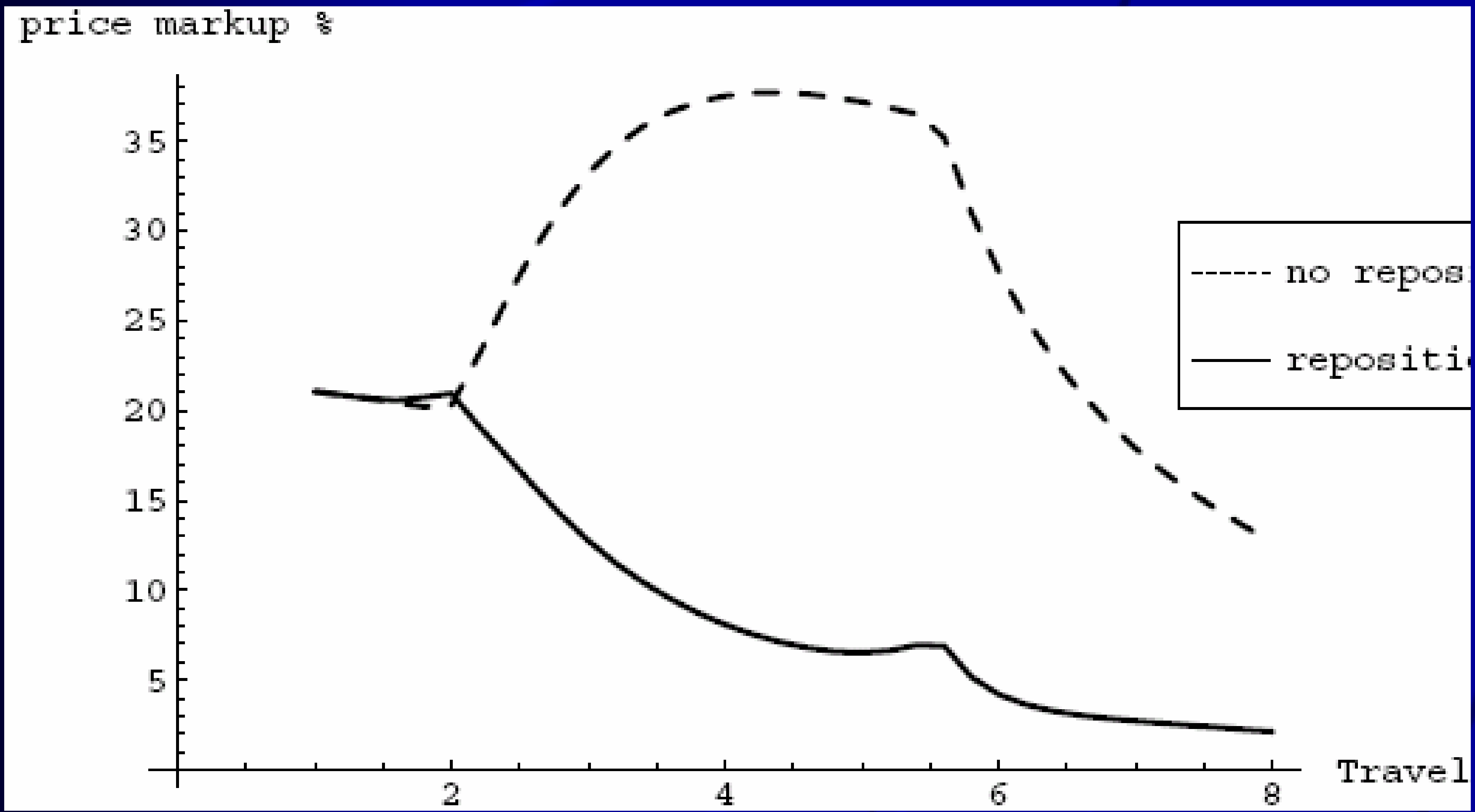
Post Merger Product Re-positioning

- Standard Bertrand differentiated products merger intuition
  - Closer are the merging firms, the bigger the merger effect.
  - Non merging firms gain more than merging firms.
- Now allow Post-merger repositioning
  - <u>Demand</u>: “gravity” choice model
    - Price + travel cost + logit error term
  - <u>Supply</u>: simultaneous price + location game

Results: Merging Firms Move Apart



Results: Repositioning → Lower Prices



Summary: Post Merger Repositioning

- Merging firms move apart to avoid cannibalization, so less competition lost by merger.
  - Increased product “variety” increases welfare
- Non merging firms are squeezed towards the middle of line
  - Non merging firms do not gain as much,
  - Can even lose as a result of merger

Bargaining

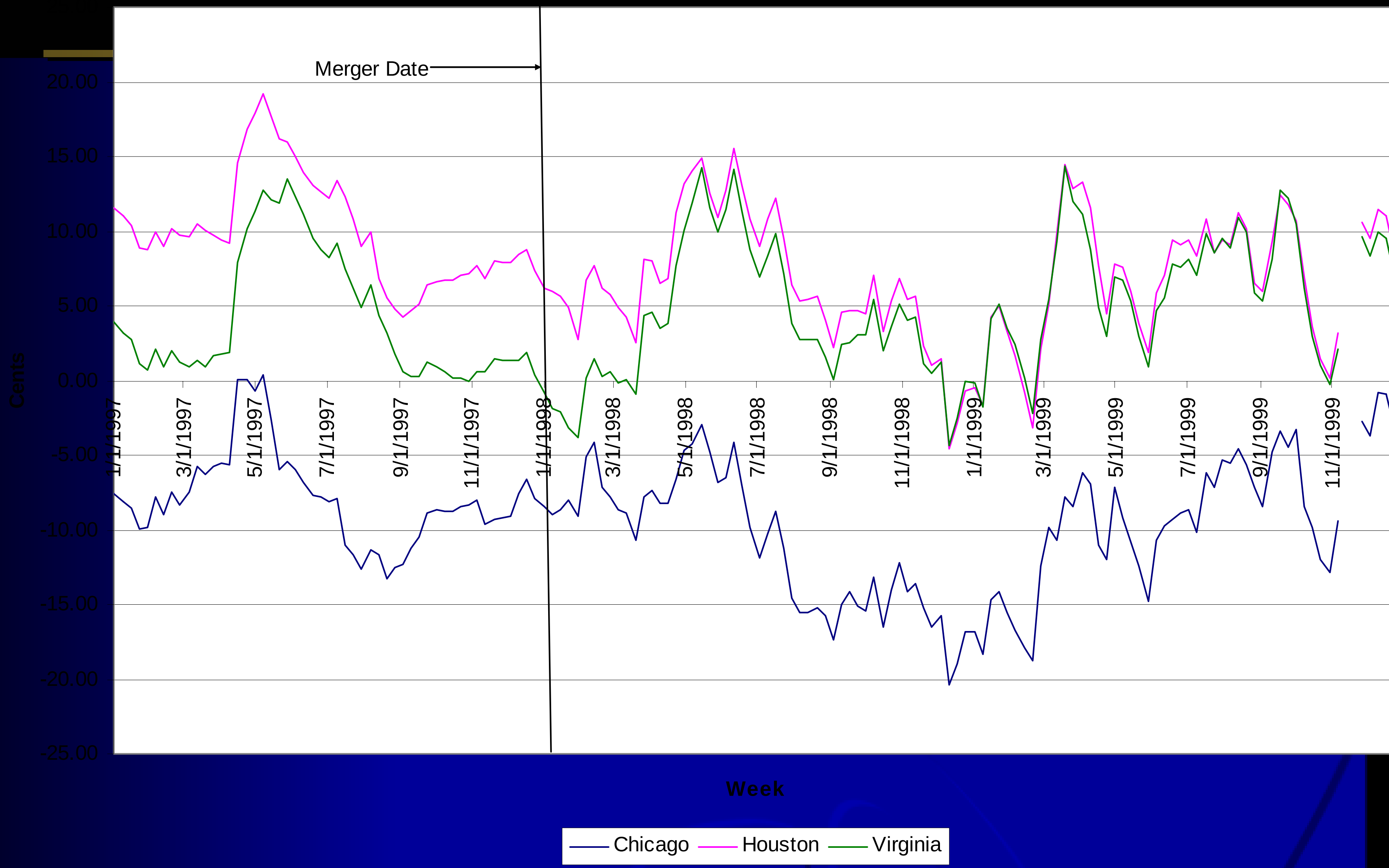
- Theory: Nash axiomatic bargaining solution
  - Agreement "z" maximizes (S1(z)-D1)*(S2(z)-D2)
  - Anything that increases my opponents surplus, or reduces mine, increases my bargaining "power."
  - Nash research program → antitrust policy program
- Competition Advocacy: "Any-willing-provider" (AWP) laws compel managed care plans to include any health care provider willing to accept the plan's terms and conditions.
  - Reduces bargaining position of managed care plans, i.e., no threat to exclude them from network.
  - Threat of exclusion from network induces aggressive bidding by providers to be included.

Evidence

- When a state allows any willing provider in the network, health expenditures increase by about 2%.
  - ➔Level playing field *ex post*, leads to tilted playing field *ex ante*
- Mike Vita, “Regulatory restrictions on selective contracting: an empirical analysis of `any-willing-provider’ regulations,” Journal of Health Economics 20 (2001) 955–966

Consummated Merger Estimation

- Marathon/Ashland oil refinery joint venture → change in HHI of about 800, to 2260
- Isolated region
  - uses Reformulated Gas
  - Difficulty of arbitrage makes price effect possible
- But prices did ***NOT*** increase relative to other regions using similar type of gasoline


Merger Date
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
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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

Monopolization Cases

- "Cheap" exclusion vs. more traditional monopolization cases.
  - (1) cheap, (2) effective, and (3) inherently unlikely to generate plausible, cognizable efficiencies.
- Orange book listings
- Restrictions on others' output by agreement (as in *South Carolina Board of Dentistry*1)
- Unilateral conduct (as in *Rambus* and *Unocal*).
  - Unocal, by deceiving CARB and the other refiners into adopting Unocal's patented technology into a binding standard, acquired monopoly power

Why the Focus on "Cheap Exclusion"?

- Economic theory:
  - Combining substitutes is bad
  - Combining complements is good
- "Post Chicago" economists constructed theoretical examples of harm caused by
  - Raising Rivals' Costs
  - Softening Competition
  - Multilateral Competition
  - Agency Theory
- But what does the empirical evidence say?

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 Induce Provision of Demand-increasing 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.

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 Vertical Evidence

- Most studies find evidence that vertical restraints or integration 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

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

Property Rights & 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