

Overview of Hospital Antitrust Methods and Issues

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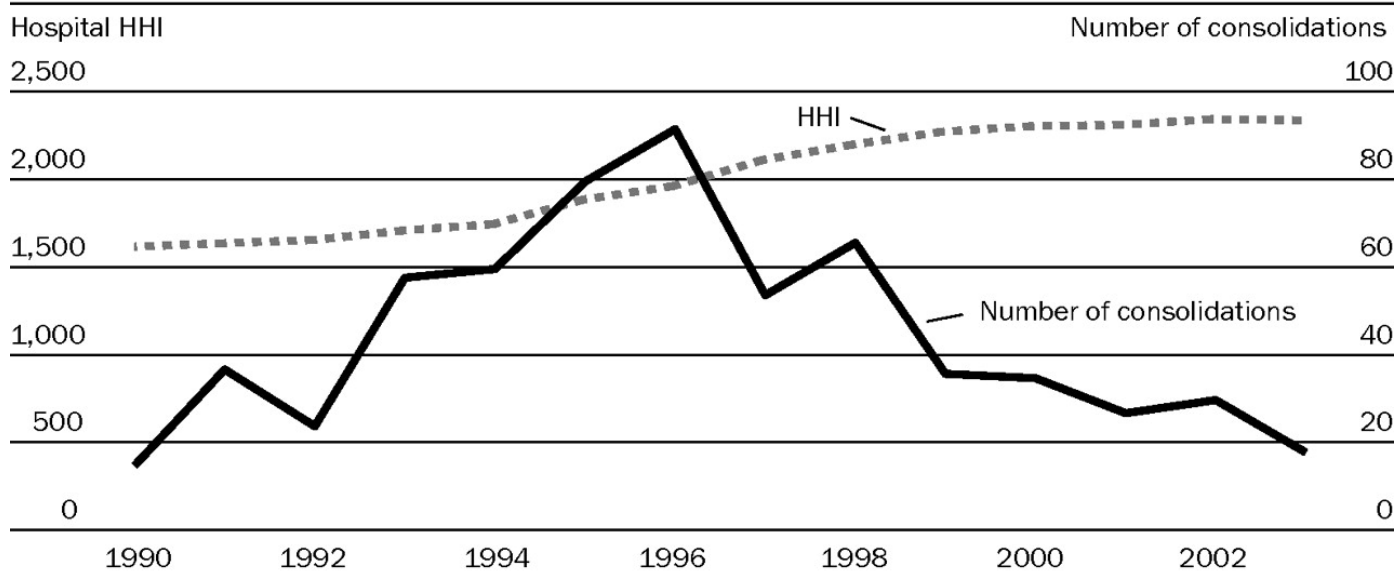
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Focus on Mergers

- Two very distinct time periods
 - 1981-1992, agencies won all but one case
 - 1993-2008, agencies lost all but one case
- Very few antitrust challenges to mergers
- Large increases in local market hospital concentration

EXHIBIT 1**Herfindahl-Hirschman Index (HHI) And The Number Of Hospital Consolidations Within Populous Metropolitan Statistical Areas (MSAs), 1990–2003**



SOURCE: American Hospital Association data, and authors' calculations.

NOTES: Consolidations include horizontal mergers and acquisitions and system expansions; consolidations are denoted by the solid line and relate to the right-hand y axis. Hospital HHI is denoted by the dashed line and relates to the left-hand y axis.

Robert J. Town, Douglas R. Wholey, Roger D. Feldman, and Lawton R. Burns,
Hospital Consolidation And Racial/Income Disparities In Health Insurance Coverage,
Health Affairs, Vol 26, Issue 4, 1170-1180

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Concentration

- Measured by Herfindahl-Hirshman Index
- Graph: large metro areas (100,000+), which are least concentrated
- Shows increase of average HHI from about 1,600 to 2,400
- About like 6 equal size firms to 4
- HHI of 1,000+ is concentrated, by FTC/DOJ Guidelines

Why did challenges lose after 1993?

- Methods and Issues—my assigned title
- Challenges lost mostly because of Issue of **market definition**
- Expansive market areas found by misapplication of two methods
 - **Critical loss**
 - **Elzinga-Hogarty**

Merger analysis usually prospective

- Usually define a market and calculate the concentration levels pre and post merger
- DOJ/FTC Guideline concentration levels
- 1,000-1,800, moderate concentration
- Over 1,800, high concentration
- Most hospital market highly concentrated, even before mergers

Need to define relevant antitrust market

- Geographic dimension has been key
- 1981-1992, courts mostly found local markets
- 1993-2008, courts found expansive markets
 - E.g. Dubuque (U.S. v. Mercy), market included hospitals 100 miles from each other

Expansive markets imply low concentration

- Such big markets led to low concentration because of many independent hospitals
- Any merger has little effect on concentration

Methods went awry

- Critical loss is correct in principle
 - It has been misapplied
- Elzinga-Hogarty is only a very rough indicator
 - Wrongly taken as definitive threshold issue
 - Arbitrary, high, percentages of patient flows were taken as bright lines
 - Lack of robustness was not appreciated

Critical loss and hypothetical monopolist thought experiment

- Tentatively define a market
- Question: Can a hypothetical monopolist price a small but significant and nontransitory amount above the competitive price level?
- Usually taken as 5 percent

Critical loss analysis--answer

- Break-even sales lost because of 5 percent price rise
- Depends on the profit margin
- If large – critical loss will be small
- E.g. profit = 50% → CL = 9.1 %
- If small – critical loss will be large
- E.g. profit = 10% → CL = 33.3 %

Next: Compare

- If est. critical loss $<$ predicted actual loss
 - price increase is unprofitable
 - tentative market is too small
- This is has been argued successfully, defeating the market definitions proposed by the agencies

But: Part of the economic logic has been missed

- High profit margins
 - High market power already
 - Consumers are not price sensitive
- Predicted actual lose should be low
- Proposed markets are probably OK

Predicting actual loss

- Contestable zip codes argument
- If 20 % go out of the area for care now, predict that a large percent will do so in response to a 5 % price change

Wrong conceptually

- Much patient flow is not price sensitive
- Silent majority idea: Most consumers will not go outside area because of 5% price difference, even if a minority go outside for idiosyncratic personal or medical reasons

Wrong empirically

- Post-merger study in Santa Cruz (John Simpson)
- Large price increase from merger
- Very little switching, even in “contestable zip codes,” even after years

Contestable zipcode similar to Elzinga-Hogary test

- E-H defines markets based on patient flow
- If flows < 75% → “weak market”
- If flows < 90% → “strong market”
- Often used as a definitive, bright line test, often 90%, e.g. *California v. Sutter*

Same weakness as contestable zipcodes, plus

- Further problems applying the method in practice
- Sidelight: Kenneth Elzinga himself has testified that it should not be applied to hospitals at all (Evanston case)

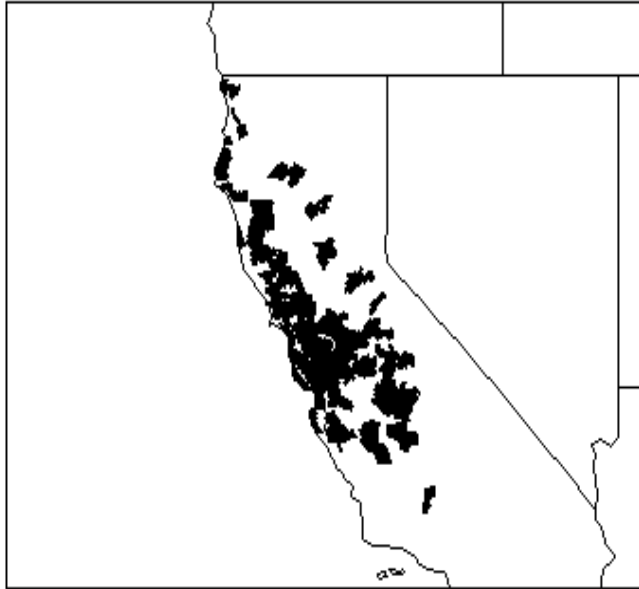
Elzinga-Hogarty is not robust

- Trying to apply E-H to the East Bay markets in *California v. Sutter* case (Frech, Langenfeld % McCluer 2004)
- 90% E-H “strong market” was impossible
 - Also in *FTC v. Tenant* (Poplar Bluff, Mo.)
 - Both 90% and 75% market did not exist, even including the entire state of Missouri
- Results sensitive to 75% v. 80% flow

Even 80% markets not robust

- Slightly different construction of E-H 80% market gives wildly different areas.

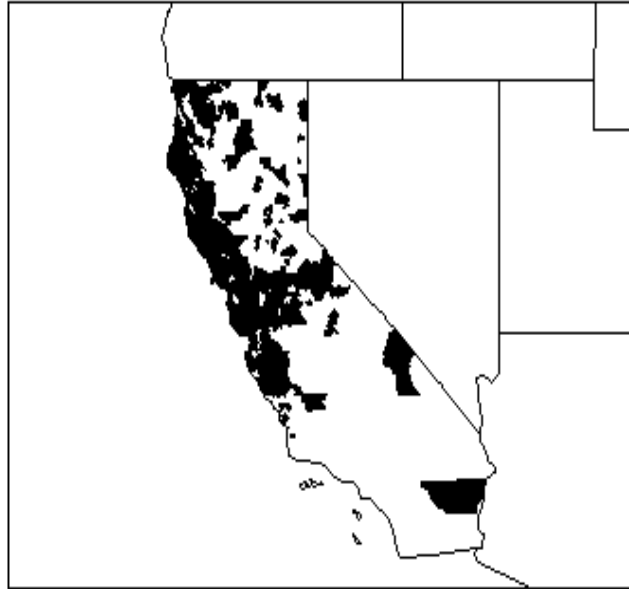
(A) Rank by: Count -- Expand Area by: "Rank, Combine"



401.6 mi per inch

Supply-Side HHI: 340

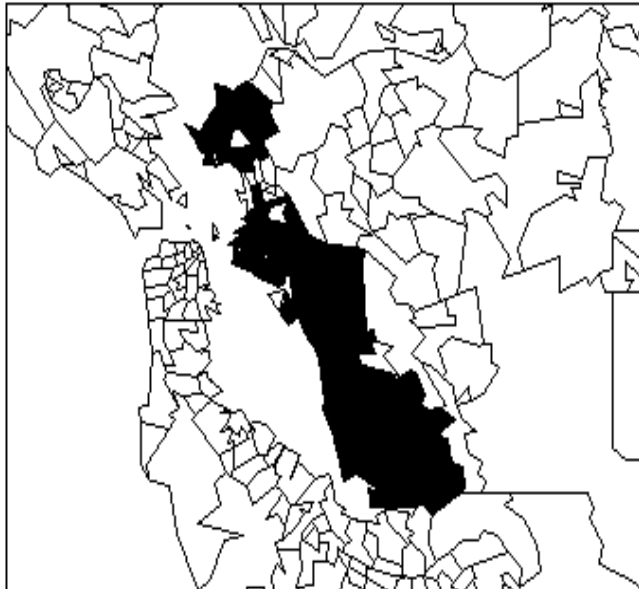
(B) Rank by: Market Share -- Expand Area by: "Rank, Combine"



494.7 mi per inch

Supply-Side HHI: 425

(C) Rank by: Count -- Expand Area by: "Combine, Rank"



32.3 mi per inch

Supply-Side HHI: 1,896

(D) Rank by: Market Share -- Expand Area by: "Combine, Rank"



23.1 mi per inch

Supply-Side HHI: 2,231

- Geographic markets alternative methods
- 80% flows
- HHI 340 to 2,341
- Source: Frech, Langenfeld & McCluer (2004), pp. 945

Conclusion

- Biggest issue is geographic market definition
- Two big problems with methods
 - Misapplication of critical loss analysis
 - Misapplication of Elzinga-Hogarty test
- Results: markets are often too big in recent hospital antitrust cases

A few references

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Equation for critical loss (in %)

- Critical Loss = $X = [Y/(Y+CM)]*100$
- Where:
- Price Increase = $Y = [(P_1 - P_0)/P_0]*100$
- Cont. Marg. = $CM = [(P_0 - AVC_0)/P_0]*100$