Empirical Challenges and
Opportunities in Studying
Retail Price Maintenance

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OBJECTIVE AND APPROACH

• Objectives:

> 1. Describe a set of research questions that could be answered using real data
> 2. Present a (very limited) critique of theory from the point of view of a researcher interested in econometric analysis of RPM
> 3. Via an example, think through empirical problems in analyzing RPM

• To do this I'll use data on beer distribution which has features of RPM in it, where something like price floors are imposed at the distributor-to-retailer level. In some sense, the example is illustrative of generic data problems relevant to analyzing vertical relations generally, as well as RPM specifically.

• Focus almost exclusively on minimum RPM

THEORY AND RESEARCH QUESTIONS:

General Principles

1. Research questions are generated by theory. To work out what to look for in the real world to inform our decisions regarding the impact of RPM we need a body of theory that link observables to potential outcomes

2. Without theory there is no useful empirical work.

3. That said, without empirical work we should have cause to worry about the usefulness of theory

4. That is, it's a two-way conversation.

THEORY AND RESEARCH QUESTIONS:

RPM Theory in One Slide

1. Key Elements of Theory:

a. Free-Riding: if consumers free-ride then *prima facie* RPM = welfare enhancing
b. No-Free Riding: things get hard.
   a. To establish a pro-competitive justification for RPM: Have to look at the alignment of incentives between manufacturers and retailers.
      a. Intensive vs. Extensive margin: Manufacturer want more consumers in market, Retailer wants more consumers in store
      b. That is, the marginal consumer is different for manufacturer and retailer. [Double marginalization is relevant if maximum RPM]
   b. To establish a justification for RPM based on coordinated-effects or similarly synthetic monopoly: Need to show that prices are higher than competition would generate
      a. Difficulty is holding the quality of product (incl. service etc) constant, which means probably have to use a structural model.

2. Theory is frustrating here (and elsewhere in vertical relations literature) in that it is disjoint and un-unified. It has lots of little examples. This makes life hard for the empiricist as there is always some twist that you would like to test for but cannot.

THEORY AND RESEARCH QUESTIONS:

Feasible (?) Research Questions

a. General Descriptive: Who uses it? How often? What justifications are given?

b. Free-Riding:
   a. Positive: Can we find positive evidence for it?
   b. Methodological: How to test for it?
   c. Normative: To what extent is RPM welfare enhancing?

c. No-Free Riding (in addition to above):
   a. Positive: To what extent are retailer and manufacturer incentives misaligned? Who is the marginal consumer for each?
   b. Positive: How does the location of outlets affect incentives?
   c. Positive: How does RPM interact with other vertical restraints?

c. Coordinated Effects:
   a. Methodological: Is there a way to test for a coordinated effect?
   b. Normative: Assuming no reason for RPM other than C.E., what is the upper bound on it's impact on welfare. That is, in worst case scenario, how much can it be harming consumers

CONFRONTING DATA

a. Descriptive analysis cross-industry will be useful in documenting incidence of RPM

b. To make additional progress on most aspect of these questions the researcher will need to focus on a specific industry. This will inevitably be the case if the analysis is generated by an investigation.

c. Hence, I will focus on one industry for the rest of this talk:
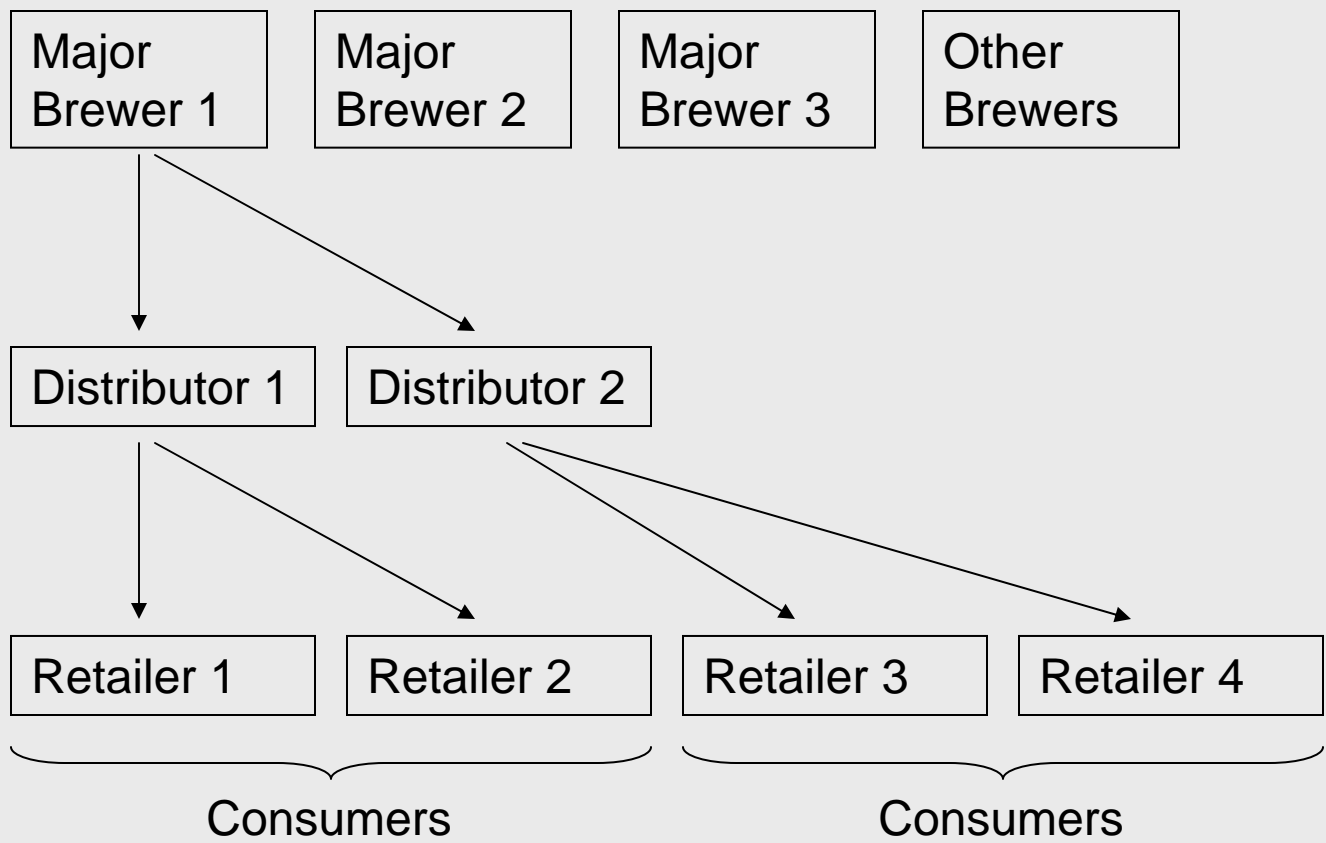
EXAMPLE DATA

Beer Distribution in Illinois in the Early 1990s:

See "Diagnosing Foreclosure Due to Exclusive Dealing" at
http://pages.stern.nyu.edu/~jasker/index.html for a paper
based on these data

EXAMPLE DATA

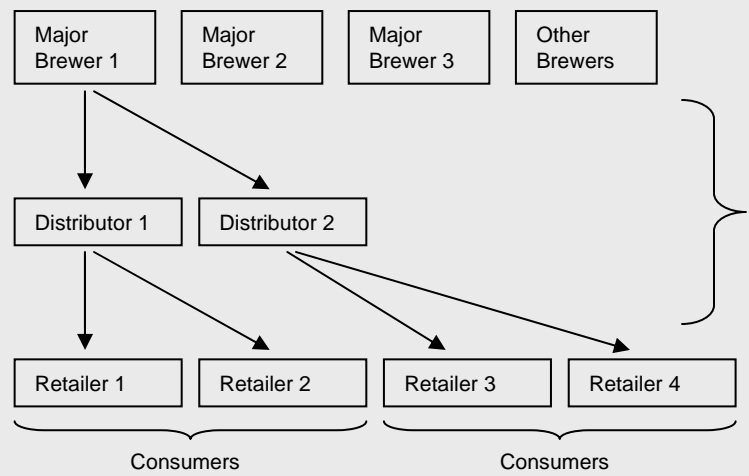Beer Distribution in Illinois in the Early 1990s:
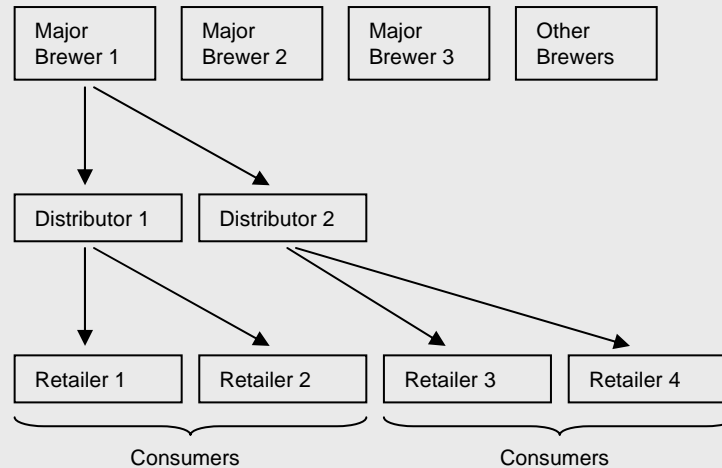
(Very Stylised) Features of the market:

1. Legislatively imposed exclusive sales territories

2. Brewers set prices distributors charge retailers

> a. either a price band; or a specific price, depending on type of retailer (small store vs large chain)

3. Some distributors are exclusive, via contractual incentives

4. Distribution contracts contain little or no pricing data, lots of information sharing

EXAMPLE DATA

Beer Distribution in Illinois in the Early 1990s:

Data on who distributes for whom, and territories from ILCC

Data on distributor characteristics from trade directories

Scanner Data from a retail chain give scope for demand estimation, include wholesale price

Features of the market:

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Empirical Challenges in Studying Retail Price Maintenance

EXAMPLE DATA:

Sales Territories (in Greater Chicago) are not the same for different brewers

Miller (above) and Anheuser-Busch (below). Each square is a page in the Greater Chicago Street Directory.

PROBLEMS ARISING FROM DATA

RESEARCH QUESTION: Free-Riding:
- (a) Positive: Can we find positive evidence for it?
- (b) Methodological: How to test for it?
- **(c) Normative: To what extent is RPM welfare enhancing?**

- With good consumer level Nielsen type data, for many products, may be able to get at free-riding (could also use surveys). However in beer hard to see how free riding could matter. (?)
- But say it did…

  - Hard to answer part (c) because of all the other vertical restraints
  - Why use RPM if you can also take advantage of exclusive sales territories? – seems to kill free-riding
  - Why worry about incentives being misaligned for those distributors that are exclusive as well?
  - The combination of vertical restraints being used may be suggestive of harm in and of itself. However, hard to work out which restraint is doing what…
  - This makes it hard to answer (c), above, because faced a difficult accounting problem. This issue will also arise when attributing antitrust damages

PROBLEMS ARISING FROM DATA

RESEARCH QUESTION: No-Free Riding:
a. Positive: To what extent are retailer and manufacturer incentives misaligned? Who is the marginal consumer for each?
b. Positive: How does the location of outlets affect incentives?
c. Positive: How does RPM interact with other vertical restraints?

- (c) Has already been discussed.

- Ignoreing the beer example for the moment, (a) and (b) are closely related (if the downstream market is a monopoly, then incentives may be well-aligned). There do exist studies of retail outlet competition that focus most often on supermarkets. See Smith (2004), Thomadesen (2005), Katz (Harvard Phd Thesis 2007)

- The methodology for these sorts of studies is based on traditional demand analysis which is problematic because the econometrician has to specify choices sets and choices at all possible outlets. This becomes messy fast.
- The Katz thesis is particularly interesting because it uses a partially identified model approach which allows all the nasty issues in classical demand estimation to be side-stepped.

PROBLEMS ARISING FROM DATA

RESEARCH QUESTION: Coordinated Effects:
  a. Methodological: Is there a way to test for a coordinated effect?
  b. Normative: Assuming no reason for RPM other than C.E., what
     is the upper bound on it's impact on welfare. That is, in worst
     case scenario, how much can it be harming consumers

First issue:

1. Theory is almost useless here. There is one published paper (Jullien and Rey (2007) that formalises a potentially useful theory for why RPM is anticompetitive. It formalises the Matthewson and Winter (1998) idea that RPM makes deviations from collusive agreements between manufacturers easier to spot. Hence it facilitates collusion.
2. Does not make much sense in Beer data due to multiple prices
3. More theory needs to be done here to provide empiricists with models to work with.

4. The basic issue is: why would a manufacturer agree to minimum RPM? The manufacturer should want to maximise joint upstream and downstream profits and then split somehow. Easiest way to do this is to get retailers to compete untill P=MC at the retail level.

PROBLEMS ARISING FROM DATA

RESEARCH QUESTION: Coordinated Effects:
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Second issue:

1. Demand analysis (feasible in the beer data) will be useful to give demand conditions to feed into models to answer (b). But you need a model…
2. Probably the first step is to see how close a market with RPM is getting to collusion (an get an upper bound on antitrust harm). This would be executed in a way similar to the Aviv Nevo's RTE Cereal papers, (2000) and (2001).
3. So, an upper bound on antitrust harm is feasible, but point estimates are hard (theory is again problematic).

4. Similarly, without being clear on what you are testing for it is hard to come up with diagnostic procedures as suggested in (a).

5. Remaining issues: interaction with other vertical restraints. How do you attribute harm?

CONCLUSION

Many problems in empirical analysis:
- Data availability
- Confluence with other vertical restraints
- Disjoint nature of theory on the pro-welfare side
- Paucity of theory on the anti-competitive side
- Usual empirical issues of identification, specification, causal inference etc
- Little previous empirical work at all

That said,

- Surprisingly rich area to work on, but need a strong dialog between theorists and empiricists for work to really push what we know.

- Econometric analysis of antitrust damages are feasible given current tools, given adequate theory of antitrust harm.

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