DOES MERGER CONTROL WORK?
A RETROSPECTIVE ON U.S. ENFORCEMENT ACTIONS AND MERGER OUTCOMES

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Introduction

• In recent years retrospective studies of mergers have become the focus of considerable effort and attention by policymakers and academics.
• This paper is neither a new retrospective nor simply a survey of the existing literature.
• We have conducted an exhaustive search of the literature, collecting studies that estimate the effect of individual mergers.
• We then augment these studies with information about the antitrust agencies’ competitive assessments of the mergers.
Criteria for 26 Qualifying Articles

• Must address one or more mergers individually
• Must have appeared in a peer-reviewed journal in economics or closely related discipline, or in a respected working paper series such as that from the NBER, FTC, or DOJ
• Must study transactions (mergers and acquisitions or joint ventures/alliances) with major effects on horizontal competition
• Must study transactions involving U.S. companies and markets
Not a random sample

• Mergers studied are almost all “close calls” and hence competitively interesting

• Include cases where:
  – antitrust agency brought no challenge
  – agency and merging parties reached a pre-merger agreement resolving competitive concerns with divestitures, conduct remedies, etc.
  – cases in which the agency’s challenge was rejected by a court or other entity with primary jurisdiction
  – agency filed an antitrust complaint after the merger was consummated
Overview of articles and “transactions”

• 58 distinct article-transaction combinations
  – some articles analyze more than one transaction and some transactions are analyzed in more than one article

• “Transactions” represent corporate mergers or joint ventures with two exceptions:
  1. Guinness-Grand Met is separated into 3 observations, one for Gin, Scotch, and Vodka
  2. Maytag-Whirlpool is separated into 4 observations, one for clothes washer, clothes dryers, refrigerators, and dishwashers
Dataset construction

• To construct a single price effect for each article-transaction combination we:
  – Accept any guidance provided by the author as to the most reliable summary estimate
  – Also strive to identify and record the estimates that address the central concern about the merger, rather than inquiries into secondary effects
  – Then we take a simple average of the remaining estimates

• 47 transaction-level average price effects
  – When a transaction is studied in more than one article, we take a simple average across studies
# Price Effects of the Transactions

<table>
<thead>
<tr>
<th></th>
<th>ALL TRANSACTIONS</th>
<th></th>
<th>MERGERS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Price Change</td>
<td>Number of Cases</td>
<td>Price Change</td>
<td>Number of Cases</td>
</tr>
<tr>
<td>Overall</td>
<td>5.73%</td>
<td>47</td>
<td>7.11</td>
<td>40</td>
</tr>
<tr>
<td>Increases</td>
<td>8.64</td>
<td>36</td>
<td>9.09</td>
<td>34</td>
</tr>
<tr>
<td>Decreases</td>
<td>-3.80</td>
<td>11</td>
<td>-4.10</td>
<td>6</td>
</tr>
</tbody>
</table>
From Mergers to Merger Policy

• Evaluation of merger *policy* requires information on agency actions toward mergers with price studies

• Information on agency actions found in
  – Court proceedings
  – Consent decrees/Competitive Impact Statements
  – Agency statements

• But no public information in many cases
  – Implies no formal action against merger
  – Likely an investigation
Types of Agency Actions

Four categories of agency actions

(1) Cleared without action
   – Includes cases where clearance subject to minor initial modification
     • Example: Deletion of non-compete clause

(2) Approved subject to conduct remedy
   – Conduct remedy permits merger but constrains behavior

(3) Approved subject to divestiture remedy
   – Divestiture of overlapping assets intended to preserve competition
   – Generally viewed as stronger action than conduct remedy

(4) Opposed
   – Mergers opposed by DOJ but approved by DOT or STB
## Frequency of Agency Actions

<table>
<thead>
<tr>
<th></th>
<th>All Transactions</th>
<th>Mergers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opposed</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Divestiture</td>
<td>5.5</td>
<td>4.5</td>
</tr>
<tr>
<td>Conduct</td>
<td>3.5</td>
<td>3.5</td>
</tr>
<tr>
<td>Cleared</td>
<td>10</td>
<td>9</td>
</tr>
</tbody>
</table>

### Implications
- Considerable enforcement activity against these transactions
- More than half approved subject to conditions or opposes
Price Outcomes and Agency Actions

- Mean price change by agency action

<table>
<thead>
<tr>
<th></th>
<th>All Transactions</th>
<th>Mergers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opposed</td>
<td>1.84%</td>
<td>1.84</td>
</tr>
<tr>
<td>Divestiture</td>
<td>4.87</td>
<td>5.84</td>
</tr>
<tr>
<td>Conduct</td>
<td>17.10</td>
<td>17.10</td>
</tr>
<tr>
<td>Cleared</td>
<td>6.37</td>
<td>7.08</td>
</tr>
<tr>
<td>No Information</td>
<td>5.00</td>
<td>7.20</td>
</tr>
</tbody>
</table>
Implications

Major implication:

All categories show price increases

Details:

• Cases opposed by DOJ result in modest price increases
• Neither conduct nor structural remedies very effective
• Conduct remedies notably ineffective
• Cases cleared or for which there is no information (but likely an investigation) result in nontrivial price increases
Agency Actions and Price Outcomes

• Do agency actions match competitive problem?
  – Ex ante “competitive problem” measured by ex post price outcome

<table>
<thead>
<tr>
<th>Agency Action</th>
<th>Decrease</th>
<th>0 – 5%</th>
<th>5 – 10%</th>
<th>10%+</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) None</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
<tr>
<td>b) Remedies</td>
<td>0</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
Implications

• Challenges in 4 of 6 cases with large price increases
  – But not in either case where price fell
  – Means proportion test finds significance at 10.1%

• But note that despite remedies in cases of greatest competitive threat, prices increased anyway

• When cases of “no information” treated as “cleared mergers,” percentages change but results similar
Probit Analysis of Remedies vs. No Action

• Dependent variable: Remedy = 1, No action = 0

• Define single dummy variable for price outcome:
  – 0 for cases where price decreases
  – 1 for cases where change in price between 0 and 10%
  – 2 for cases where price change exceeded 10%

• Examine all data, but focus on
  – Cases where investigation acknowledged
  – Cases involving true Mergers
## Probit Analysis of Agency Actions

<table>
<thead>
<tr>
<th></th>
<th>Acknowledged (a)</th>
<th>Acknowledged plus no information (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price Dummy</td>
<td>.835</td>
<td>.728</td>
</tr>
<tr>
<td></td>
<td>(1.69)</td>
<td>(2.49)</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.10</td>
<td>-1.64</td>
</tr>
<tr>
<td></td>
<td>(1.69)</td>
<td>(4.10)</td>
</tr>
<tr>
<td>Pseudo-R²</td>
<td>.102</td>
<td>.104</td>
</tr>
<tr>
<td>N</td>
<td>19</td>
<td>42</td>
</tr>
</tbody>
</table>
Implications

• Price Dummy generally significant, or close
  – Implies greater likelihood of policy action where competitive threat greater
  – True for 23 cases with acknowledged results
  – Also when those with no information included

• Inclusion of variable for Year shows increasing likelihood of clearance over time
Caveats

- Small numbers
- Classification issues
- Inclusivity
- Selection issues