Assume that industry is made up of one large firm (perhaps created by a merger/tender offer), and many smaller price-taking competitors

- "dominant firm" has a comparative advantage (lower MC of production)
- "dominant firm" can afford to restrict its output, let price-taking firms sell as much as they want, and still increase its own profits

First consider industry equilibrium without monopolistic behavior

- industry supply is the horizontal sum of dominant firm's MC and fringe firms' supply curves
- equilibrium price and quantity occur where demand = supply
Dominant Firm Monopoly Model: Competitive Solution

The demand curve facing the dominant firm is the horizontal difference between the industry demand and the fringe firms' supply curve:

- i.e., let the fringe firms sell as much as they want at any given price level, without restricting output
- only works if dominant firm has cost advantage

Dominant Firm Monopoly Model: Fringe Firms as Price-takers
Dominant Firm Monopoly Model: Oligopolistic Solution

The dominant firm can now maximize profits by deriving the marginal revenue (MR) curve relative to its demand curve.

- set $\text{MR} = \text{MC}$ to find profit-maximizing price
- restrict output
- monopoly profits equal to shaded square area
Dominant Firm Monopoly Model: Implications

1. Fringe firms will benefit from increased monopoly pricing by the dominant firm
   - they sell more, at a higher price, because the dominant firm restricts its own output

2. Fringe firms will be helped if a new efficiency will lower costs for all firms in the industry

3. Fringe firms will be hurt if the dominant firm improves its efficiency (MC curve shifts downward)
   - dominant firm can increase output and profits at a lower price

Testing the Dominant Firm Model

Look at stock price reaction to horizontal merger announcements for a portfolio of firms in the same industry

- either monopolization or efficiency gains predict that the merged firms will increase in value

- also look at reactions to antitrust complaints that might negate a pending merger proposal
Testing the Dominant Firm Model: Eckbo (JFE, 1983)

1963-78, large mining & manufacturing NYSE/AMEX firms (at least one firm listed)

- 191 horizontal mergers
  - 26 challenged by FTC, 39 challenged by Justice

- 68 vertical mergers
  - 5 challenged by FTC, 6 challenged by Justice

- avg: 11 rivals per merger (median = 5)

Effects on Merging Firms

Announcement effects (3-day, Table 5):

<table>
<thead>
<tr>
<th></th>
<th>Bidders</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merger proposal,</td>
<td>0.1%</td>
<td>6.2%</td>
</tr>
<tr>
<td>unchallenged (N)</td>
<td>(102)</td>
<td>(57)</td>
</tr>
<tr>
<td>Merger proposal,</td>
<td>1.2%</td>
<td>10.2%</td>
</tr>
<tr>
<td>challenged (N)</td>
<td>(57)</td>
<td>(29)</td>
</tr>
<tr>
<td>Antitrust complaint</td>
<td>-0.7%</td>
<td>-9.2%</td>
</tr>
<tr>
<td>(N)</td>
<td>(49)</td>
<td>(17)</td>
</tr>
</tbody>
</table>
Effects on Rival Firms

Announcement effects (days -20 to +10, Table 6):

<table>
<thead>
<tr>
<th></th>
<th>Total Sample</th>
<th>Industry Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Merger proposal, unchallenged (N)</td>
<td>1.1% (126)</td>
<td>-0.1% (53)</td>
</tr>
<tr>
<td>Merger proposal, challenged (N)</td>
<td>2.5% (65)</td>
<td>4.5% (24)</td>
</tr>
<tr>
<td>Antitrust complaint (N)</td>
<td>1.8% (55)</td>
<td>-2.2% (18)</td>
</tr>
</tbody>
</table>

Testing the Dominant Firm Model: Summary

(1) Rival and merging firms benefit from merger announcements
   - not comparative efficiency gain for merging firms

(2) Antitrust challenges seem to happen when rival firms' stock prices rise
   - common industry sample includes cases where there is also an unchallenged merger in the same industry
Testing the Dominant Firm Model: Summary

(3) Merging firms' prices fall on antitrust complaints, but rivals' prices do not

- inconsistent with monopolization effect of merger
- implies that "efficiency gains" are available to rivals, but less so to merging firms

(4) Vertical mergers seem to have no anti-competitive effects (Table 9)

- but sample sizes are small