Price Discrimination & Competition: Implications for Antitrust

Luke Froeb & Dan O’Brien
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Disclaimer: These views are not necessarily those of FTC or any of its Commissioners
Price Discrimination is a Loaded Phrase in Antitrust

- Price discrimination implies “bad” things will happen.

- Logic:
  - “Competitive” markets require $P=MC$.
  - Price discrimination implies $P>MC$.
  - Hence, price discrimination implies that markets are not “competitive.”
Price Discrimination v. Differential Pricing

- Price differences do not generally raise antitrust concerns
  - E.g., movie theaters

- Price differences do not necessarily imply price discrimination
  - E.g., revenue management (cruise lines)
Antitrust Scholars on Price Discrimination

“Persistent discrimination is very good evidence of monopoly because it is inconsistent with a competitive market; it implies that some consumers are paying more than the cost of serving them, a situation that would disappear with competition.” (Posner, *Antitrust Law: An Economic Perspective*)
Economists on Price Discrimination, I

“...systematic discrimination may bolster the monopoly power of already powerful firms and facilitate adherence to collusive price structures.” (Scherer and Ross, *Industrial Market Structure and Economic Performance*)
Most of What You Thought You Knew is Wrong

- All of these “insights” come from comparing monopoly to perfect competition
- What happens when you compare oligopoly with discrimination to oligopoly without discrimination?
- None of these insights survive
Monopoly vs. Oligopoly Price Discrimination

- Price discrimination allows monopolists to extract more consumer surplus
  - But also expands market
  - Consumer welfare effects ambiguous
    - e.g., drugs in Northern vs. Southern Europe

- Price discrimination intensifies competition among oligopolists (in “typical” cases).
  - Reduces profit
  - Raises consumer welfare
Why does Price Discrimination Intensify Competition?

- With **uniform price**, firms compete only for “marginal” customers
  - At edge of market area; or
  - Without strong brand loyalty

- With **price discrimination**, firms compete for all customers, by offering discounts
  - Extends market area closer to rival; or
  - Allows competition for consumers loyal to rival’s brand

- Not a new insight (Scherer, 1970 edition)
Oligopolists would rather NOT Price Discriminate

- The ability to price discriminate puts them in Prisoners’ Dilemma
  - Individual incentive to discriminate—it always raises profit
  - But if rivals discriminate, everyone is worse off.
So what does this mean for antitrust?

- Cannot appeal to discrimination without careful analysis of consequences.
  - Example: how does presence of discrimination affect merger analysis?

- We dispel four widely circulated Myths about the effects of price discrimination.
Price Discrimination Under Spatial Competition --- A Simple Example

- Three supermarkets located around a triangular city connected by three 6-mile roads.
- Consumers are distributed uniformly along the roads and each purchase one unit.
- Travel costs $t=\$1$ per mile.
- The marginal cost of the product is $c=\$2$.
- Consumer valuations are high enough relative to production and travel costs that the most distant consumers will buy to good.
Uniform Pricing vs. Price Discrimination

<table>
<thead>
<tr>
<th>Location</th>
<th>Uniform Price*</th>
<th>Price Disc.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>$9.00</td>
<td>$7.00</td>
</tr>
<tr>
<td>B1</td>
<td>$10.50</td>
<td>$5.50</td>
</tr>
</tbody>
</table>

*Price are “full” prices of customer in the middle of each region
When Does Price Discrimination Intensify Competition?

- Customers do NOT agree on which brand is preferred
  - Arises naturally in geographic differentiation
  - And in discrete choice models
  - Common, if not typical case
- Analogy to product loyalties
  - Customers differ by brand preference.
3-to-2 Merger with Uniform Pricing

- If Firms 1 and 2 merge.
- Prices rise via unilateral effects.
- Merging firm raises price from $8 to $12.
- Rival raises price from $8 to $10.
- Some customers drive further to purchase products from further away
  - “cross-hauling”
3-to-2 Merger with Price Discrimination

- Competition on routes 13 and 23 doesn’t change.
- Thus, two-thirds of the customers are unaffected!
- Competition on Route 12 is affected.
- No inefficient “cross-hauling”

<table>
<thead>
<tr>
<th>Location</th>
<th>Pre-merger price*</th>
<th>Post-merger price*</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>$7</td>
<td>$9</td>
<td>29%</td>
</tr>
<tr>
<td>B1</td>
<td>$5.50</td>
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<td>91%</td>
</tr>
<tr>
<td>C1</td>
<td>$7</td>
<td>$7</td>
<td>0%</td>
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<tr>
<td>D1</td>
<td>$5.50</td>
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<td>0%</td>
</tr>
<tr>
<td>E1</td>
<td>$6.50</td>
<td>$6.50</td>
<td>0%</td>
</tr>
<tr>
<td>Average</td>
<td>$6.50</td>
<td>$7.50</td>
<td>16%</td>
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</table>

*Price are “full” prices of customer in the middle of each region
Comparing Merger Effects With vs. Without Price Discrimination

<table>
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<tr>
<th>Location</th>
<th>% Price Change with Uniform Pricing</th>
<th>% Price Change with Price Discrimination</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>44%</td>
<td>29%</td>
</tr>
<tr>
<td>B1</td>
<td>38%</td>
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<tr>
<td>C1</td>
<td>44%</td>
<td>0%</td>
</tr>
<tr>
<td>D1</td>
<td>38%</td>
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<tr>
<td>E1</td>
<td>21%</td>
<td>0%</td>
</tr>
<tr>
<td>Average</td>
<td>34%</td>
<td>16%</td>
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- Conclusion: In this example, on average, price discrimination mitigates merger effects.
More Realistic Examples

- The result that price discrimination mitigates merger effects in the example does not hold in all environments.
- In more realistic environments, the implications of price discrimination for mergers are more complex.
Impact of Price Discrimination on Merger Effects

- Price discrimination causes market area of merging parties and competitors to widen.

- Impact
  - Mitigates merger effects if it brings non-merging firms into closer competition
  - Amplifies them, if it brings merging firms into closer competition.
Myths About Price Discrimination

- Myth 1: Price discrimination does not arise in intensely competitive markets.
- Myth 2: Price discrimination indicates the presence of significant market power.
- Myth 3: Price discrimination almost always hurts some consumers
- Myth 4: Imperfect Price discrimination is socially inefficient.
Myths dispelled, Price discrimination:

- Can and does occur in markets with intense (but not perfect) competition... Myth 1
- Is not a good indicator of significant market power... Myth 2
- Can benefit all consumers... Myth 3
- May improve efficiency... Myth 4
Conclusions

- Does price discrimination make markets more competitive?
  - Answer: It can.

- Does price discrimination amplify or mitigate merger effects?
  - Mitigates merger effects if it brings non-merging firms into closer competition.
  - Amplifies them, if it brings merging firms into closer competition.