The Economics of Vertical Restraints
Vertical Restraints

**Definition**: Contractual relationships between a supplier (manufacturer) and distributor (retailer) restricting the conditions under which the latter may sell or distribute the supplier’s product

**Examples**: Resale Price Maintenance (RPM), exclusive territories, MSRP, cooperative advertising programs, tying, exclusive dealing
Vertical Restraints

Consumers

M1
M2
M3
D1
D2
D3
D4
D5
Why Does A Manufacturer Want to “Restrain” Dealers At All?

• A manufacturer generally desires retail competition because it increases sales
  – This is the single monopoly profit theorem
  – For the monopolist more sales → more profit

• Key: why might imposing restraints on a retailer or distributor increase output/ sales?
Economics of Vertical Restraints

• **Answer:** Vertical restraints solve incentive conflicts between the manufacturer and retailer.

• The supplier may want the retailer to do something to increase sales that he would not do without payment (i.e., pre-sale services, such as promotional effort, demonstrations, shelf space, displays, etc.).

• Where does this incentive conflict come from? **Externalities.**
Fundamental Incentive Conflict in Distribution Chain

The benefits of the retailer’s pre-sale demand enhancing activities are not fully internalized by the retailer

- Conflict in incremental profit margins between manufacturer and retailer for many products (e.g., soda, microprocessors, cereal)
- Cannibalization effects --- promoting Coke reduces Pepsi sales
- If these conflicts could be overcome, the retailer would supply the services and overall output would go up
Other Efficiencies of Vertical Restraints

• Horizontal or “inter-dealer” externalities
  – This is the “discount dealer” problem where the consumer consumes the services at outlet 1 for free but purchases product from discount outlet 2 which does not provide services. Example: “shop there buy it here;” repeat sale mechanism

• Dealer quality problems
  – In the absence of a contractual restraint, the dealer may “free-ride” on the manufacturer’s brand name by supplying low quality because the cost will be shared by the manufacturer, i.e., dealer does not pay “full price” for shirking on quality.
Resale Price Maintenance
Anticompetitive Theories of RPM

• Manufacturer collusion. RPM might be used by manufacturers who wish to fix retail rather than upstream prices. Why might this strategy be preferable?

• Retailer collusion. RPM to facilitate a retail cartel

• Foreclosure. RPM contracts pay retailers to exclude rivals, e.g. Coke uses RPM contracts to compensate retailers for giving them all the shelf space.
  – This is the traditional bubble diagram where manufacturer couples exclusivity or partial exclusivity with compensation (RPM, discounts, etc.).

• What do these theories predict happens to market prices? What about to market output?
Procompetitive Theories of RPM

• Prevent Discount Dealer Free-Riding
  – Telser (1960)
  – Applies to incentives to provide certain free-rideable services

• Align incentives between manufacturer and retailer to promote in the absence of free-riding
  – Klein & Murphy (1988)
  – More general account

• Empirical evidence (Lafontaine & Slade) supports pro-competitive theories
# RPM Economic Theory Predictions

<table>
<thead>
<tr>
<th>Economic Theory</th>
<th>Predicted Impact on Price</th>
<th>Predicted Impact on Output</th>
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</thead>
<tbody>
<tr>
<td>Collusion - Dealer or manufacturer</td>
<td>&gt;0</td>
<td>&lt;0</td>
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<tr>
<td>Foreclosure / RRC</td>
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<td>Promotional Services</td>
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<td>Dealer Quality</td>
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<tr>
<td>Prevent Inter-Dealer Discount Free-Riding</td>
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Question: Can Vertical Restraints Possibly Be Anticompetitive?

Can a firm that wants to enhance its monopoly through contractual restraints do so profitably?

• Customers are harmed by monopoly and must be compensated for participating in arrangements that make them worse off.
• Bork used this insight in Antitrust Paradox to argue that vertical restraints could never be anticompetitive.
• Other economists argued that these problem simply meant vertical restraints were unlikely to be successful in excluding rivals.
Claim: A Monopolist *Cannot Afford* to Anticompetitively Exclude Its Rivals

\[ A = \text{Monopoly Profit} \]

\[ B = \text{Deadweight Loss} \]

\[ C = \text{Consumer Surplus} \]
Overcoming the Chicago School Critique:

Exclusion that is anticompetitive and profitable

- Multiple customers and exclusion as a public good
- High costs of coordination among customers
- Significant scale economies in production
Exclusive Dealing
Anticompetitive Exclusion: Exclusionary Market Power

• Conduct that allows a firm (or group of firms), to ...
  – Achieve, enhance or maintain market power, by ...
  – Disadvantaging competitors, and thus ...
  – Harming consumers
Potential Exclusionary Conduct

• Exclusionary Group boycotts
• Exclusive Dealing
  – With Input suppliers
  – With Customers
• Tying arrangements
• Vertical mergers
• Refusals to deal
Exclusionary Conduct Paradigms

**Predatory Pricing**  
*(Chicago-School Paradigm)*
- Reduce price as an investment
- Cause rival to exit, at which point the firm can raise price to monopoly level
- Focuses on impact of price reductions

**Raising Rivals’ Costs**  
*(Post-Chicago Paradigm)*
- Raise competitors’ costs, which leads them to reduce output and raise price, which permits firm to raise its price
- Focuses on impact of “foreclosing” competitors’ access to inputs or customers

Some conduct arguably might be characterized either way. Example: loyalty/exclusivity discounts; bundling discounts
RRC Example:
*JTC Petroleum*

Local Suppliers

- Piasa et al (Cartel members)

Distant Suppliers

- JTC (Excluded rival)

Asphalt Market

Applicator Market

Municipalities
JTC Petroleum: Exclusion and Collusion In Tandem

• **Collusive conduct**
  – Asphalt applicators fixed price of services to municipalities

• **Exclusionary conduct**
  – Applicators then paid local asphalt suppliers not to deal with JTC, a rival applicator
  – “Involuntary cartel”

• Collusive and exclusionary are intertwined
  – Exclusion helps to perfect collusion
RRC Analytic Framework

• Competitive Harm
  – *Step 1: Raising Rivals’ Costs (RRC)*
    • “Harm to competitors”
    • Do rivals’ have cost-effective alternatives to foreclosed input?
    • Is “competition for exclusive” sufficient to prevent RRC?
  – *Step 2: Power Over Price (POP)*
    • “Harm to consumers and competition”
    • POP Step required under rule of reason
    • Downstream market power; involuntary cartel
    • Do consumers have cost-effective alternatives to output?

• Competitive Benefits
  – *Step 3: Efficiencies*
    • Does exclusion lead to cost-savings, superior product, or lower prices?
    • Is exclusion “reasonably necessary” for cognizable benefits?

• Overall Effect on Consumers
  – *Step 4: Evaluating overall (net) effect on consumers*
    • Does price rise? Does quality-adjusted price rise?
    • $50 price increase for $5 quality improvement harms consumers
JTC Fact Analysis: Is there RRC? POP?

- Local Suppliers
- Distant Suppliers
- Non-excluded Suppliers

Asphalt Market

- Piasa et al (Cartel members)
- JTC (Excluded rival)
- Non-excluded firms; Competing products

Applicator Market

- Municipalities
Why Would the Asphalt Suppliers Support the Cartel?

• Boycotting JTC reduces asphalt sales
• Applicator cartel will raise prices, which will reduce need for asphalt
• Cartel solution –
  – Pay above-market input prices
  – Share cartel profits with asphalt suppliers
Potential Efficiency Benefits

- RRC conduct may reduce costs or improve product quality
- If so, impact of benefits on consumers must be evaluated
  - Are consumers benefited or harmed overall?
- Sources of efficiency benefits from exclusives
  - Improved coordination that reduces costs
  - Elimination of “discount dealer” free riding
  - Increased dealer loyalty and facilitating retailer promotional effort
  - Intensifying competition for distribution
Efficient Exclusive Contracts: Buyer-Driven Exclusives

Restaurants may gain from the increased competition for exclusives, in terms of a lower input price -- which may be passed on to consumers.
Facilitating Promotion With Exclusives

Economic analysis of the efficiencies of exclusive dealing contracts is based upon two common sense business propositions.

1. Manufacturers often want their dealers to supply more promotion than the dealers would independently decide to provide

2. By creating undivided dealer loyalty, exclusive dealing increases dealer incentives to increase promotion of the manufacturer’s product
Facilitating Promotion With Exclusives

- Based upon two common sense business propositions.
  - #1. Manufacturers often want dealers to supply more promotion than the dealers would independently provide
  - Manufacturers and dealers face incentive conflict because dealers do not take into account manufacturer profits from on incremental sales created by some forms of promotion (e.g. eye-level shelf space)
  - #2. By creating undivided dealer loyalty, exclusive dealing increases dealer promotional incentives
Dealer Free-Riding Incentives

- Compensating dealers for increased promotion
  - Slotting fees
  - Wholesale price discount
  - Resale Price Maintenance
  - Exclusive territories

- Ensuring dealer performance
  - Inherent dealer performance problem
  - Dealers have incentive to “free-ride” on the manufacturer’s compensation arrangement
  - This dealer free-riding might occur in a variety of ways
  - Exclusive dealing can solve these free riding problems
Summary

• Modern antitrust analysis expresses greater concern for RRC conduct than price predation
  – Harm to competition, not merely competitors, the appropriate focus

• Four-step RRC analytical framework focuses on overall impact on consumers
  – Step 1: RRC
  – Step 2: POP
  – Step 3: Efficiencies
  – Step 4: Overall effect

• Each step involves fact-intensive inquiry
Measuring Foreclosure
Relevant Metrics and Tests

Foreclosure rate and contract duration

• Exclusive dealing practices are thought to be less likely to be anti-competitive when:
  – the foreclosure rate (the share of the “market” that is denied from rivals) is low
  – the duration of the exclusive contracts is short

• Courts routinely grant summary judgment when exclusive dealing practices generate foreclosure rates < 40%

• But, there is not a consensus on how to measure the foreclosure rate
Foreclosure Hypothetical

- The **blue** and **red** segments are parts of the same antitrust market
- Shares in the **blue** segment (60% of market): Incumbent = 100%; Rival = 0%
- Shares in the **red** segment (40% of market): Incumbent = 55%; Rival = 45%
- Each **blue** customer participates in the Incumbent’s exclusive dealing program
- Zero **red** customers participate in the Incumbent’s exclusive dealing program
Foreclosure Hypothetical

Input Markets:
- Blue Customers: I=100/R=0
- Red Customers: I=55/ R=45

Output Market:
- Incumbent
- Rival

Consumers:
- 60 PERCENT OF MARKET
- 40% OF MARKET
Naïve Foreclosure

• *Definition 1* ("Naïve" Foreclosure) The foreclosure rate is the fraction of the market that is participating in the discount program
  
  – In our example, the foreclosure rate would be 60%, as the entire *blue* segment (which comprises 60% of the entire market) is participating in the discount / exclusive dealing program
  
  – Note if we change exclusive dealing program to loyalty discount program where discount if retailer gives 80 percent of sales then still 60% even though I = 80 and R = 20

*These highlight the point that the “right” foreclosure metric must be tied to the theory of harm*
Naïve Foreclosure Hypothetical: NFR = 80%?

60 PERCENT OF MARKET

Blue Customers
I=80/R=20

Incumbent

40% OF MARKET

Red Customers
I=80/R=20

Rival

Consumers
What’s Wrong with Naïve Foreclosure?

• **Definition 1** ("Naïve" Foreclosure) The foreclosure rate is the fraction of the market that is participating in the discount program.

• Economics: Naïve foreclosure is completely detached from RRC theory of harm
  
  – What we are trying to measure is if excluded rival can reach MES
  
  – Naïve foreclosure doesn’t so that

  – Church & Dwight example where shares with exclusivity program and without it are the same --- what is EFFECT of exclusivity?

These highlight the point that the "right" foreclosure metric must be tied to the theory of harm.
“But For Foreclosure”

• **Definition 2 (“But-for foreclosure” rate)** The foreclosure rate is the additional share of the market that the firm **obtained** due to the discount practice
  
  — Suppose we were to use the Incumbent’s share in the **red** segment as a proxy for what its share would be in the **blue** segment in the absence of the discount practice
  
  — In our example, the foreclosure rate would be $60\% \times (100\% - 55\%) = 27\%$

• Advantage that more accurately measures impact of exclusive dealing program
Naïve Foreclosure

- **Definition 2b** Same as above, but expressed as a fraction of the “contestable share”
  - Given that the Incumbent’s but-for share would be 55% (in each segment), it can be argued that only 45% of the market is “contestable”
  - But does high foreclosure in contestable portion of the market related to RRC theory? Does it make economic sense in measuring likelihood rival can compete for distribution sufficient to reach MES?
  - **In our example, the foreclosure rate would be 33% (=15% / (1-55%))**
What About Exclusion Via Product Design?
Google Search Investigation
Google! [Arizona Republic]

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Republic of Baja Arizona Homepage
Homepage for the movement to free southern Arizona from Phoenix.
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Fan's Love-Hate Relationship With the Star Wars Franchise
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Best pizza in the DC area from washingtonpost.com

Apr 17, 2013 • Washington Post’s Going Out Guide Editors’ Picks: Best Pizza in DC, MD, VA

America’s 15 best pizzas - USA Today

www.usatoday.com/.../2013/11/30/best-pizza-in-america/3785309
Nov 30, 2013 • America’s 15 best pizzas. Pizza is tough to rank responsibly. But that’s just what The Daily Meal set out to do.

The Ten Best Pizzas in D.C.: DCist
donist.com/2013/09/the_best_pizzas_in_dc.php
From the traditional margherita at 2 Amys to a pizza that’s more of a BBQ sandwich, here are ten of the best pizzas in D.C.

Best pizza Washington, DC - Yelp

Reviews on Best pizza in Washington, DC. &pizza. Wiseguy NY Pizza, Menomale Pizza Napoletana, Spizza, District of Pi, 2 Amys Neapolitan Pizzeria, Pizzeria ...

DC's Best for Pizza - Zagat
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The Best Pizza in Washington, DC on Yelp. Read about places like: &pizza, Wiseguy NY Pizza, Menomale Pizza Napoletana, Vace, Bacio Pizzeria, Matchbox Capitol Hill, …
The FTC conducted an extensive investigation into allegations that Google had manipulated its search algorithms to harm vertical websites and unfairly promote its own competing vertical properties, a practice commonly known as “search bias.”

In particular, the FTC evaluated Google’s introduction of “Universal Search”—a product that prominently displays targeted Google properties in response to specific categories of searches, such as shopping and local—to determine whether Google used that product to reduce or eliminate a nascent competitive threat.

Similarly, the investigation focused on the allegation that Google altered its search algorithms to demote certain vertical websites in an effort to reduce or eliminate a nascent competitive threat.
Are Google’s Search Results Exclusionary Conduct?

Internet Users

Google

Vertical Search

Consumers

Non-Excluded Users

Internet Users

Search Markets
Analysis of Google Exclusion Claims

Step 1: How much of relevant input market is foreclosed by bias in search results?

Step 2: Does “search bias” give Google “Power over Price?” What price?

Step 3: Are there efficiencies from a search engine linking its own content prominently?
Google investigation in a nutshell

• Is Google search biased?
• Did Google harm vertical sites via “manipulation” and demotion?
• **KEY: Are consumers harmed?**
Is Google Search biased?

• Yes.

• Does Google “promote” its own products?
  – Yes. Many sellers are “biased” towards their own products.
  – Burger King refuses to sell me McDonald’s superior french fries!
  – Private label brands in supermarkets
  – Vertical integration generally

• Is “bias” related to market power? Or is “bias” in response to consumer demand?
Are consumers harmed?

• Important to develop evidence to determine whether Google’s vertical blends increased or decreased consumer welfare.
Did Google demote/harm vertical search sites?
FTC’s Conclusion

• The FTC concluded: “Documents, testimony and quantitative evidence the Commission examined are largely consistent with the conclusion that Google likely benefited consumers by prominently displaying its vertical content on its search results page” (p. 2).

• Further, the “introduction of Universal Search, as well as additional changes made to Google’s search algorithms – even those that may have had the effect of harming individual competitors – could be plausibly justified as innovations that improved Google’s product and the experience of its users.”