Bundling and Tying:
Antitrust Analysis in Markets with Intellectual Property

Gregory Vistnes

Charles River Associates

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Overview

- Bundling Theories
  - Traditional Vertical Theories
    - Ordover, Saloner & Salop (1990)
    - Krattenmaker & Salop (1986)
  - "Conglomerate" Theories
    - Whinston (1990)
    - Carlton & Waldman (1998)
    - Nalebuff (2000)
- Why Are IP Markets Special?

Bundling To Commit to An Aggressive Entry Response

Whinston:

- Monopolist in markets A and B threatened by entry in market B

- *Problem*:
  - Threat of aggressive post-entry pricing is not credible
- *Solution*:
  - Monopolist bundles (high profit) product A to product B
  - Bundling leaves the Monopolist's monopoly profits in A "hostage" to continued sales of B
  - Bundling creates a credible commitment to aggressive post-entry pricing as the only means of preserving profits in market A
- *Caveat*: Monopolist must *commit* to bundling

Bundling To Preclude Future Entry

Carlton & Waldman:
- Monopolist in OS market
- No OS competition if software only compatible with OS^{mono}

- ***Problem***:
  - Browsers allow future compatibility between $OS^{entrant}$ and software written to browser (not to OS)
  - Compatibility creates a threat of future OS competition.
- ***Solution***:
  - Monopolist bundles OS^{mono} to own browser
  - Monopolist makes own browser incompatible with $OS^{entrant}$
  - Bundle reduces or eliminates demand for rival browser
  - Absent rival's browser, no threat to future OS monopoly
  - Bundling profitability reflects monopoly of both OS & browser

Bundling To Affect Incentives

- Nalebuff:
  - Bundling can result in lower prices
  - Bundling can increase profits of bundler, but reduce profits of single-product rivals
  - With multi-product rivals, the first firm to bundle enjoys higher profits, while second firm's profits fall
  - Rivals may not want to offer comparable bundles
    - Bundling by all firms can result in very aggressive pricing
  - No "market power" test

The Markets for Pizza and Beer

Firm 1

Firm 2

Firm 3

Firm 4

Firms set price without considering effect on demand for the complementary good

A Merger Without Bundling

Firms 1 and 2 merge

Firm 3

Firm 4

Merged firm lowers price in recognition that lower prices stimulate sales of the complementary product.

Merged firm does not capture all "spillover effects" from reduced price of complementary product.

Bundling of Pizza and Beer

Bundled Product

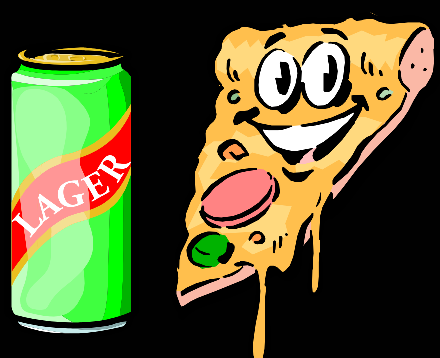
Firm 3

Firm 4

Bundling allows merged firm to capture ALL spillover effects, resulting in a further price reduction

Bundling can also reduce rivals' demand: Firm 3's demand is limited to customers who love pizza, but care so little for beer that they're unwilling to pay the small increment for the bundle.

Bundling Can Affect Differentiation



Quality: Low + Low

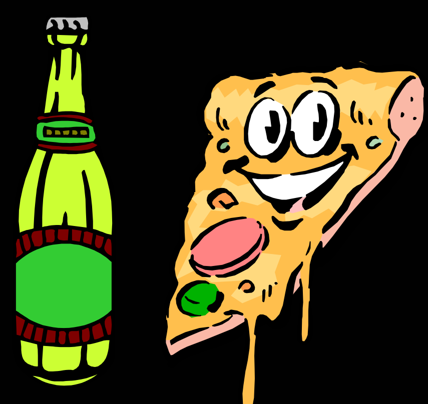
Vs.

Quality: High + High

Differentiated bundles and HIGH prices

Quality: Low + High

Vs.



Quality: High + Low

Undifferentiated bundles and LOW prices

What's Special About IP Markets?

- Strong Efficiency Justifications for Bundling?
  - Strong complementarities?
    - IP often an "input" rather than a stand-alone product
  - Important double-marginalization issues?
- Greater Anticompetitive Potential From Bundling?
  - Greater likelihood of market power?
  - Transitory IP-based market power encourage bundling?
  - Greater incentives to block entry?
- Transactions Among Rivals May Be More Common
  - IP Often "Sold" To Potential Rivals
  - Package licensing create scope for mischief?

IP and Market Power

- Most Bundling Theories Require Substantial Market Power
  - Does IP Provide This Market Power?
- Does Satisfaction Of The Market Power Test Provide A Basis For Heightened Competitive Concerns?
  - Not all IP confers substantial market power
  - Market power "test" is a necessary, not sufficient, condition for most bundling theories
- Can Limited Duration Of IP-Based Market Power Encourage Bundling?
  - Does the "one monopoly rent" critique apply?
  - Particularly relevant in markets with network effects?
  - Carlton & Waldman

Incentives to Block Entry May Be Higher in Markets with IP

- With High Fixed Costs and Low Marginal Costs:
  - Prices are very responsive to entry
  - Entry significantly reduces the incumbent's profits
  - Entrants may have a difficult time recouping costs
- Bundling theories focusing on entry deterrence may be particularly relevant
  - Whinston
  - Carlton & Waldman

Bundling To Increase Differentiation May Be Important

- Competition in Undifferentiated IP Markets Can Be Ferocious
  - Low variable costs result in low prices
  - Network effects result in ferocious competition
- Bundling Can Increase Differentiation Among Competing Products
  - Increased Differentiation May Reduce Competition

In Conclusion

- Intellectual Property and Bundling:
  - Same theories, but different fact patterns
- Greater Potential for Anticompetitive Bundling?
  - Greater incentive to discourage entry?
  - Greater incentive to differentiate products?
- Greater Potential for Efficiencies?
  - Efficiencies may be the real motivation for bundling
  - Alternatively, efficiencies may just be an excuse
- Analysis Should Remain Fact-Intensive, Not Just Theory-Intensive