Bundling

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March, 2016 / For the Federal Communications Commission

Outline

1. Introduction
2. Monopoly Bundling
3. Imperfect Competition

Outline and Focus of Presentation

- Focus on recent theoretical work on the incentives and consequences of bundling.
- Discussion organized by market structure,
  - First, monopoly bundling incentives,
  - Then bundling in imperfectly competitive markets.
- The connections to bundling in video markets will be drawn,
  - Mostly considering retail bundling, such as MVPD bundling of channels.
  - Though, many of the features mentioned apply to bundling by content providers as well.

Some General Comments

- Two major streams:
    - Strategic incentives – focussed on affecting rival.
    - Price discrimination incentives – focussed on 'rent' extraction, nonlinear pricing.
- I will discuss mainly the second stream.
- My research is on multi-object selling schemes.
    - Technical and stylized, but still yields important insights.

Why Look at Monopoly?

- Video content providers often enjoy some protection from competition: de facto or de jure:
  - Standard natural monopoly reasons.
  - Other ‘meta’-bundling reasons.
  - One-stop’ shopping.
- Monopoly incentives persist in oligopoly markets.
  - In imperfectly competitive markets, firms with some power over price will face similar motives.

A Simple Model

- Consumers demand one or both of two ‘programs’, (E)ntertainment and (S)ports.
  - Consumers know their willingness to pay for each program.
  - Video distributer only knows broad distribution of consumer preferences.
  - Would like to find a pricing scheme to maximize revenues.
- Could just price each program separately (independent pricing).
- Could sell only the bundle of E and S together (pure bundling).
- Could choose a hybrid of the two (mixed bundling).
- In fact, there are other even more arcane options.

Some Qualitative Results

- Even in this is very simple model, computing the best pricing scheme is a very difficult mathematical problem.
- However, some robust conclusions are available.
  - Even if the values for the different packages are completely unrelated, mixed bundling generally dominates independent pricing.
  - In this solution, stand-alone prices rise relative to independent pricing, and bundle prices are (usually) 'subadditive', it costs less to buy the bundle than making up the bundle oneself.
  - For some environments, it is best for the monopolist not to offer stand-alone options at all (pure bundling dominates).
  - Unlike single product models, monopolist always prefers to exclude some consumers.
  - Curiously, there are even better, complex, pricing schemes where the monopolist offers random packages. Are these realistic?

Models

- Two modes: One-stop shopping (Comcast vs. FIOS) versus pick and choose? (MVPD vs. OTT video).
- As before, two programs, E and S.
- However, for each program, each consumer has an inherent preference for acquiring it from one or the other provider: eg. because of slight product differentiation.
- Market structure varies:
  - Four independent providers, one for each ‘product’,
  - One bundler and two independent providers,
  - Two bundlers.

One-stop Shopping

- With one-stop shopping, in a Hotelling like duopoly framework with two part tariffs:
- Armstrong-Vickers (2001) show that firms choose not to distort consumer choices by inefficiently bundling.
- Instead, they offer their products at (efficient) prices equal to marginal costs.
- They compete with each other in terms of net utility offered to each consumer.
- Specialized example?, full market coverage?, forward looking consumers?

Pick and Choose – Duopoly

- Again, consumers are interested in two different packages, but suppose consumers can pick different packages from different providers:
- In a duopoly framework, even if products are independent in demand, like in the monopoly framework, there is an incentive to bundle.
- Although bundling tends to lead to less efficient consumer choices, it also generates lower prices than a la carte pricing.
- Even if there is a strong consumer interest in ‘mix and match’ pricing, it is possible that firms only compete in bundles.

Pick and Choose – Mixed Market Structures

- Suppose one firm offers two packages and two independent firms provide single packages that compete with it (eg. Hulu and ESPN 36o competing with Comcast or FIOS for customers).
- Even if the two packages are independent in demand, if the multi-product firm bundles, the products from the two independent firms become complements.
- A consequence is that independent firms competing against a bundling multi-product firm are at a disadvantage because of the externality.
- Could conceivably create an incentive for counter-merger, but strong price competition on bundles may discourage this.