Bundling and Incentives for Innovation

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Introduction

- Previous literature has found that bundling can deter entry, and quite possibly reduce innovation.
- If so, this has troubling implications about innovation and the future of our economy.
- See Bakos and Brynjolfsson, and Nalebuff.
- For Microsoft – Is it worth it to keep buying goods to add to their bundle?
- As a small entrepreneur, when is it worth it to create a stand-alone good to compete with a large bundler?

Introduction

- Hypothesis – Managing entry correctly, where the entrant is welcomed, and then bought out – and added to the bundle – can be much better for the incumbent than a no entry scenario.
- The entrant is a huge winner if bought out.
- Questions to be asked:
  - What happens to the incentives to innovate as the bundle size grows larger?
  - What is the change in value of the bundle to the incumbent?
  - What is the resulting change in profit for the small entrepreneur?

The Model

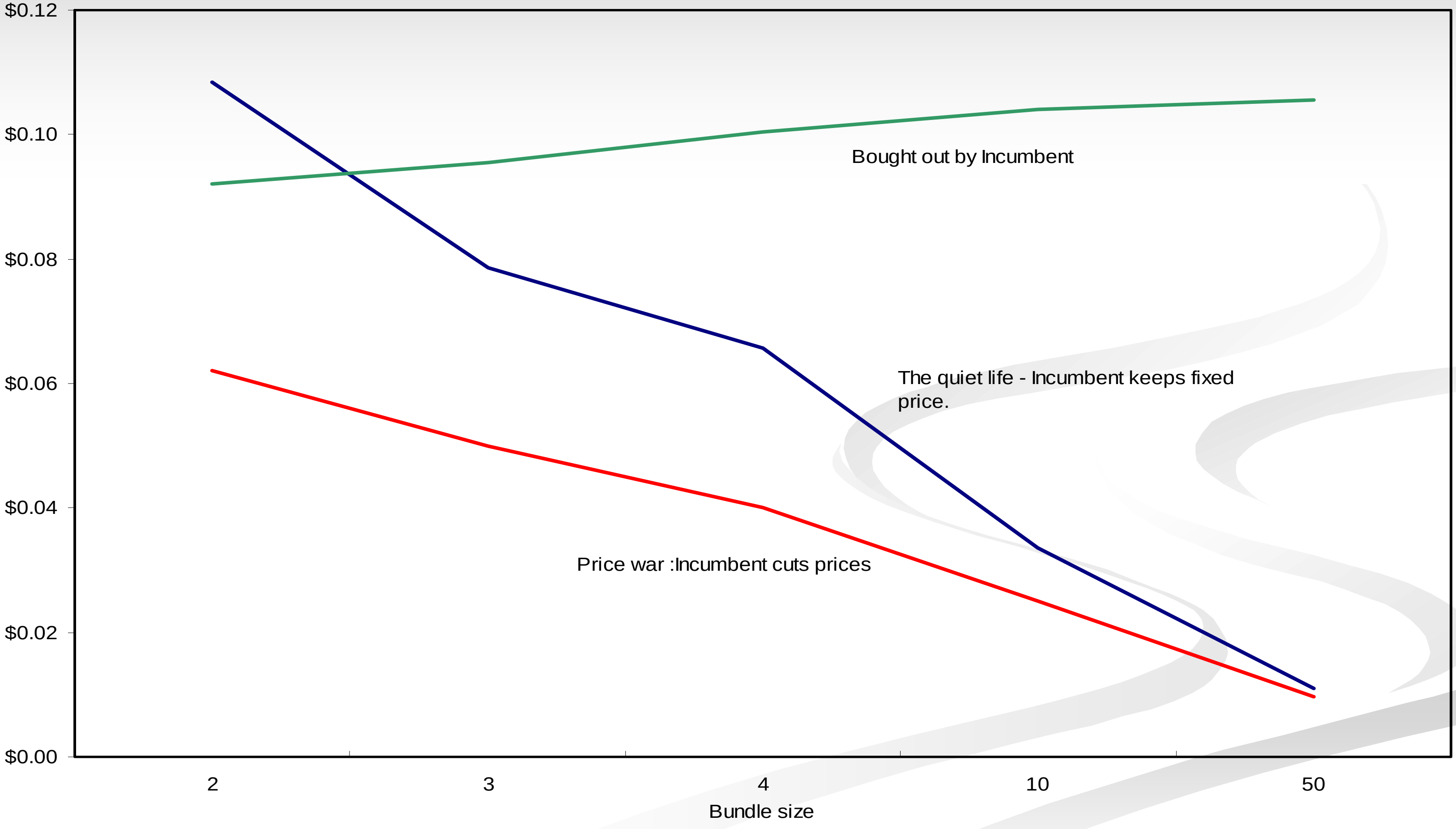
- All goods values are i.i.d. ~ U[0,1].
- Goods are zero-marginal cost.
- Two cases to be investigated.
  - Perfect Substitutes – Excel alone vs. Excel in Office
  - Imperfect Substitutes – Lotus alone vs. Excel in Office
- Options: Good alone, bundle, both, or nothing.
- (Demonstration on the board)

The Model

- Consumers pick the largest of possible surplus.
- Scenarios to be modeled.
  - Uncontested Monopolist.
  - Entrant comes in. Sleeping Incumbent.
  - Incumbent wakes up. Price war ensues.
  - Incumbent buys entrant
    - Throws out the perfect substitute.
    - Or, adds the imperfect substitute to the bundle.
  - Assumption – Surplus is divided 50/50 between monoplist and entrant. This is also known as a Nash bargaining solution.

Results

Profit of Entrant against a Bundler



Conclusions and Extensions

- **Innovation can be encouraged.**
- This is because bundling is so powerful:
  - Even if a consumer prefers Lotus to Excel, and would have a positive surplus if she bought Lotus by itself, might end up buying Office – not Lotus!
- Would these results hold if bargaining was not 50/50?
- How are consumers affected?
- What happens when we leave the [0,1] world?

Extensions of Imperfect Substitutes

- Monopolist could buy entrant out and add product to the bundle, rather than discard it as before.
- This creates extra value which can be shared with the entrant.
- The larger the bundle size, the more of the consumer surplus of the product that is captured by the monopolist.
- They would both agree to this deal.
- Large bundles get more marginal benefit for extra good – they can afford to pay more.
- Like Bakos/Brynjolfsson, larger bundles are more aggressive acquirers. They can leverage the good even that much more.
- Example: With $60 billion in cash, nobody outbids Microsoft for a software company.