Pricing

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May 2013

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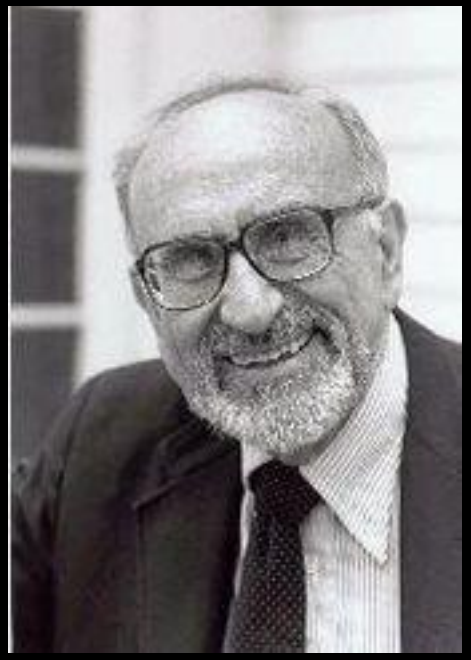
IRLE

Vertical Issues

How to pay for large fixed/common costs?

- Efficiency of marginal cost pricing
- But need revenue to cover costs

Kahn on Common Cost Allocation



- 1917 – 2010
- “Father of Airline Deregulation”
- Professor at Cornell
- 1974 Chair of NY PSC

Kahn on Common Cost Allocation

Like trying to find a black cat

Kahn on Common Cost Allocation

in a dark room

Kahn on Common Cost Allocation

where there is no cat!

Example of Versioning

- 30 High value users: willingness to pay
  - $300 for quick access; $100 for slow
- 70 low value users: willingness to pay
  - $100 for quick access; $75 for slow

Example of Versioning

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow

- What would you charge if you could identify customers?

Example of Versioning

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow

- Identity-based pricing:
  - $300 x 30 = $9000 $100 X 70 = $7,000

  = $16,000

Example of Versioning

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow

- What would you charge if you could NOT identify customers?

Example of Versioning

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow

- Only quick access:
  - P = $300 →
  - P= $100 →
  - Best price = $100 → $10,000

Example of Versioning

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow
- Only Quick:
  - Best price = $100 → $10,000
- Only Slow:
  - P= $100 →
  - P= $75 →
  - Best price = $75 → $7,500

Example of Versioning

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow
- Only Quick:
  - Best price = $100 ➔ $10,000
- Only Slow:
  - Best price = $75 ➔ $7,500

- What about 2 different prices?

Versioning solution

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow

Versioning solution

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow
- One idea
  - Quick access = $300
  - Slow access = $75
- How much revenue will you get?

Versioning solution

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow
- One idea
  - Quick access = $300
  - Slow access = $75
- High value customers
  - get no surplus from quick access
  - → no sales of quick access

Versioning solution

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow
- One idea
  - Quick access = $300
  - Slow access = $75
- High value customers
  - get no surplus from quick access, but do from slow
  - → no sales of quick access
- Revenue = $7,500

Versioning solution

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow
- One idea
  - Quick access = $300
  - Slow access = $75
- High value customers
  - get no surplus from quick access
  - ➔ no sales of quick access
- Need to make sure $P_{quick} < 300 - surplus_{low}$

Versioning solution

- 30 High :$300 for quick; $100 for slow
- 70 Low: $100 for quick; $75 for slow
- Need to make sure $P_{quick} < 300 - surplus_{low}$
- Alternative idea
  - Quick access = $275
  - Slow access = $75
- ($275 x 30) + ($75 x 70) = $13,500

Versioning

- Best 2 prices
  - ($275 x 30) + ($75 x 70) = $13,500
- No versioning
  - $10,000
- Identity-based pricing
  - $16,000

Versioning Welfare Effects

- Is Versioning good or bad
  - for welfare?
  - for consumers?
- Need to calculate welfare
  - Answer – it depends
- Economists look at Q
  - In this case, easy:
    - 100 Fast w/o versioning vs. 30 Fast and 70 slow
  - In other cases more difficult

Competition and Arbitrage

- Does competition undermine versioning?
- Arbitrage examples
- Resale

How does this apply?

- To Electricity?
- To Water?
- To Traffic?
- Other?

Pricing experiments

Koichiro Ito

Frank Wolak