Competition and Consumer Protection:

A Behavioral Economics Account

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Motivation

- When rational consumers form accurate (unbiased) perceptions of benefits and prices, competition promotes efficiency and protects consumers.
- But what if consumers are imperfectly rational and misperceive benefits and prices?

Outline

- Exogenous Misperceptions
- Endogenous Misperceptions
- Welfare Implications
- Policy Implications: Disclosure Regulation

Exogenous Misperceptions

Exogenous Misperceptions

- Framework of Analysis
  - Rational Choice Framework
    - Benefit: B
    - Price: P
    - Demand: $D(B,P)$
    - Revenue: $R(B,P) = D(B,P) \cdot P$
    - Profits: $\Pi(B,P,C) = R(B,P) - D(B,P) \cdot C = D(B,P) \cdot (P - C)$

Exogenous Misperceptions

- Framework of Analysis
  - Behavioral Economics Framework
    - Perceived Benefit: $\hat{B}$
    - Perceived Price: $\hat{P}$
    - Demand: $D\left(\hat{B},\hat{P}\right)$
    - Revenue: $R\left(\hat{B},\hat{P},P\right)=D\left(\hat{B},\hat{P}\right)\cdot P$
    - Profits:

$$\mathrm{P}\left(\hat{B},\hat{P},P,C\right)=R\left(\hat{B},\hat{P},P\right)-D\left(\hat{B},\hat{P}\right)\times C=D\left(\hat{B},\hat{P}\right)\times\left(P-C\right)$$

Exogenous Misperceptions

- Framework of Analysis
  - Comparison
    - Rational Choice Framework

      Profits: $\Pi(B,P,C) = D(B,P) \cdot (P - C)$

    - Behavioral Economics Framework

      Profits: $\Pi\left(\hat{B},\hat{P},P,C\right) = D\left(\hat{B},\hat{P}\right) \times (P - C)$

Exogenous Misperceptions

- Framework of Analysis
  - Two Tradeoffs
    - Sellers want to increase B to increase D and R, but a higher B entails higher C.
      - Behavioral Model: Sellers can increase the perceived B and thus D, without incurring the cost of raising B.
    - Sellers want to reduce P to increase D and R, but also to increase P to increase R.
      - Behavioral Model: Sellers can reduce the perceived P and thus increase D, without reducing P.

Exogenous Misperceptions

- Framework of Analysis
  - Sellers gain from the divergence between
    - Perceived and actual benefit, and
    - Perceived and actual price.
  - Sellers will design their products, contracts and prices to maximize this divergence.

Exogenous Misperceptions

- Framework of Analysis
  - The Objects of Misperception
    - Product Attributes
    - Product Use (Use Patterns)

Exogenous Misperceptions

- A Simple Example
  - Setup
    - Credit Card
      - Used only for transacting. Balance paid in full each month
      - Forgetful consumer will miss the payment due date once
    - Issuer's Costs:
      - Fixed cost of 4
      - Variable cost of 2 per incidence of late payment
    - 2-Dimensional Price
      - Annual Fee: P1
      - Late Fee: P2
      - Total Price: P1 + P2

Exogenous Misperceptions

- A Simple Example
  - Misperception
    - Sophisticated Consumer: Accurately perceives the total price to be P1 + P2
    - Naïve Consumer: Perceived Total Price is P1
  - Contract Design
    - Sophisticated Consumer: Efficient (4,2) contract

      ➔ Total Price = 6
    - Naïve Consumer
      - (4,2) contract ➔ Perceived Total Price = 4
      - (0,6) contract ➔ Perceived Total Price = 0

Endogenous Misperceptions

Endogenous Misperceptions

- Competition Can Lead to Mistake Correction
- Limits
  - Collective Action Problem (Beales, Craswell and Salop, 1981)
    - Solution: First-Mover Advantage
      - Physical Product
      - Contract / Pricing Scheme
  - Reduced Incentive to Disclose Product Use Information (Bar-Gill and Board, 2011)
  - Shrouding (Gabaix and Laibson, 2006)
  - Competition through Misperception (Glaeser, 2004)

Welfare Implications

Hindered Competition

- When consumers are imperfectly rational, sellers design excessively complex products, contracts and pricing schemes
  - Complexity hides the true cost of the product
  - Complexity allows sellers to reduce the perceived total price of the product

Hindered Competition

- Complexity increases the cost of comparison shopping ➔ Less comparison shopping ➔ Less competition
- Imperfect rationality exacerbates the adverse effects of complexity on comparison shopping and on competition
- Effects of hindered competition
  - Distributional: Sellers gain, consumers lose
  - Efficiency: Consumers are not matched with the most efficient seller

Distorted Competition

- Pricing driven by salience, not by cost structure
- Distortion 1: Product Use
  - Result of deviation from cost-based pricing
- Distortion 2: Product Choice
  - Perceived Total Price < Actual Total Price
  - Artificially Inflated Demand

Policy Implications: Disclosure Regulation

Disclosing Product Use Information

- Most disclosure mandates focus on product attribute information
- But consumers also make a lot of product use mistakes
- Sellers should be required to disclose product use information
    - They often have better use information than consumers
    - They are less likely to voluntarily disclose use information

Designing Optimal Disclosure Mandates

- Simple Disclosures for Consumers
  - TCO disclosures, combining product attribute and product use information
    - With individual use information, when available
  - Examples
    - Cellphones
    - Consumer Credit – the APR disclosure
  - TCO disclosures
    - Help consumers figure out if benefits exceed costs
    - Facilitate comparison shopping

Designing Optimal Disclosure Mandates

- Comprehensive Disclosures for Intermediaries and Sellers
  - In electronic form
  - Facilitate the work of intermediaries
  - Level the playing field between current providers and their competitors
  - See:
    - FCC, Notice of Inquiry: Consumer Information and Disclosure (2009)
    - Sunstein, Disclosure and Simplification as Regulatory Tools, Memorandum for the Heads of Executive Departments and Agencies (2010)

Conclusion

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- When consumers are imperfectly rational, we cannot rely on competition to guarantee efficiency and protect consumers

  ➔ Behavioral Market Failure

  with potentially substantial welfare costs
- Optimally designed disclosure mandates can help.