Reputation

- Reputations are essential with experience goods
  - Where experience good after buying
- Reputation performs two functions
  - Allow people to learn about quality of product
  - Discipline bad behavior
- Offline
  - Long term relations, word-of-mouth, legal system
- Online reputation mechanisms
  - eBay – buyers and sellers rate each other
  - Yelp – customers review restaurants
  - Peer-to-peer networks – rate user’s contribution to system
Reputation Mechanisms

- Information technology allows for precise management
  - What type of information is solicited?
  - When should it be solicited?
  - How is information aggregated?
  - What information is made available, and to whom?

- Examples
  - Detailed information (surveys) vs. positive/negative?
  - How filter out suspect reviews? Weight by trustworthiness?
  - Provide recent reviews or entire history? (eBay vs. Yelp)

- Challenges
  - Encourage participation
  - Extract accurate, useful information
  - Avoid strategic manipulation
Typical eBay page

INFORMATION RULES - HAL R. VARIAN CARL SHAPIRO (HARDCOVER) NEW

Price: US $28.37

Buy It Now

Add to cart

BillMeLater New customers get $10 back on 1st purchase Subject to credit approval. See terms

Shipping: FREE Standard Shipping | See details
Item location: Indian Trail, North Carolina, United States
Ships to: Worldwide See exclusions

Delivery: Estimated between Thu. Aug. 15 and Wed. Aug. 21
Includes 5 business days handling time after receipt of cleared payment.

Payments: PayPal, Bill Me Later | See details

Returns: 30 days money back, buyer pays return shipping | Read details

eBay Buyer Protection
Covers your purchase price plus original shipping. Learn more

Seller information
moviemars-books (255043) ★ me
99.1% Positive feedback

Save this seller
See other items

Visit store: MovieMars Books

$ Have one to sell? Sell it yourself

Stuff by eBay™
Keep track of all your shipments in one place
Watch the video

10/21/2014
Reputation and eBay

- eBay has first-mover advantage
  - Does not guarantee success: Altavista, WordPerfect
  - Reputation system is key part of success

- Reputation system protects buyers
  - Is good delivered promptly?
  - Is good as described?
  - Outright fraud?

- System creates switching costs for reputable sellers
- More important as eBay increases high-values sales
  - Art, cars, houses, land
How Valuable is Seller Reputation?

- Reputation is useful [for postcards]
  - Having 2000 positive feedbacks and 1 negative yields 8% higher prices that having 10 positive feedbacks
  - When have little feedback, negatives make little difference. Reflects cheapness of online profiles.

- After receive first negative feedback
  - Weekly sales rates goes from +7% to -7%
  - Subsequent negative feedback arrives 25% more rapidly

- Seller exit
  - Exit more likely when reputation is low
  - Just before exit, sellers receive lots of negative feedback
How Valuable is Seller Reputation?

- It’s also valuable to be a “powerseller” or a “store”.
- Saeedi (2012), looks at iPod prices:

<table>
<thead>
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<th>Average Prices</th>
<th>Fitted Values</th>
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<tbody>
<tr>
<td></td>
<td>All iPods</td>
<td>New iPod Nano</td>
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<tr>
<td>All Sellers</td>
<td>$131.81</td>
<td>$132.95</td>
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<td>$130.70</td>
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<td>Powersellers</td>
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<tr>
<td>Powersellers &amp; Stores</td>
<td>$139.90</td>
<td>$135.29</td>
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</table>
Does Reputation Work?

- Baseball card market on Ebay
  - Graded card: Ken Griffey Jr worth $1200 for 10, $150 for 9, $60 for 8.

- Graded market
  - Reputation of seller doesn't matter.

- Ungraded market
  - Higher claims lead to higher prices: $90 for 10, $70 for 9, $50 for others.
  - 10 claim not credible: should get card graded
  - When tested, quality independent of claims.
  - High claims had higher frauds (hit and run strategy).
  - Buyers and sellers of 10's less experienced

- Role of eBay reputation
  - High reputation less likely to claim “10”
  - Raises probability of sale, but not prices
  - Fixing claim, reputation has no effect on quality, lowers prob of fraud
Mutually positive feedback (N=451,227)
Only buyer left bad feedback (N=2,884)
Mutually bad feedback (N=5,279)
Only seller left bad feedback (N=357)
Problems with Ebay Reputation

1. Feedback not sufficiently rich
   - Feedback often concerns time to delivery, not quality of card
   - Detailed review expires after 90 days
2. Easy to build up reputation
   - Market for feedback: buy “positive feedback book” $0.25
   - Build up as buyer, then become seller
3. Feedback is bilateral
   - Buyers fear retaliation from sellers
4. Reputation could be more informative
   - Weight by value of transaction
   - Weight by experience of buyer
   - Weight by recentness
Theory
Reputation and Learning

- Reputation provides information about underlying quality
  - Helps solve “adverse selection”
  - Epinions, Amazon’s reviews

Example: Product is ‘high’ or ‘low’ quality with equal prob
  - High product yields \( v=10 \) with prob \( \frac{3}{4} \), and \( v=0 \) with prob \( \frac{1}{4} \)
  - Low product yields \( v=10 \) with prob \( \frac{1}{4} \), and \( v=0 \) with prob \( \frac{3}{4} \)

First customer
  - Willing to pay: \( \Pr(\text{high})U(\text{high}) + \Pr(\text{low})U(\text{low}) = $5 \)

Second customer (if first liked product)
  - Bayes rule: \( \Pr(\text{high}|v_1=10) = \frac{3}{4} \)
  - Willing to pay: \( \Pr(\text{high})U(\text{high}) + \Pr(\text{low})U(\text{low}) = $6\frac{1}{4} \)
  - What if first did not like the product?
Reputation and Discipline

- Reputation punishes bad behavior ("moral hazard")
  - Helps overcome eBay rating, restaurant hygiene
- Firm chooses high effort (cost $c_H$) or low effort ($c_L$)
  - Benefit to customers: $v_H > v_L$. But agent does not see effort.
  - Firm then chooses price to charge agent.
  - Assume high effort is socially optimal: $v_H - c_H > v_L - c_L$
- What happens in one-shot game?
- Repeated game with discount rate $\delta$
  - Suppose customers use "grim trigger" punishment: Pay up to $v_H$ if never cheated; only pay $v_L$ if ever cheated before
- High effort sustainable if firm patient (i.e. $\delta$ high):

$$\frac{1}{1-\delta} (v_H - c_H) \geq (v_H - c_L) + \frac{\delta}{1-\delta} (v_L - c_L)$$
Punishment schemes

- Is punishment severe enough to deter defection?
- Is punishment credible? Subgame perfect? Renegotiation proof?
  - Is punishment optimal after defection?
  - Credible not to renegotiate?
- When to punish?
  - Is deviation deliberate or by mistake?
- How do you recover from mistakes?
Cooperation harder to enforce when:

- Harder to detect defection (e.g. more randomness)
- Longer to detect defection (e.g. time to review)
- Harder to coordinate punishment (e.g. diffuse community)
- Higher benefits from defection (e.g. high value goods)
- Demand high (e.g. selling Wii’s before Christmas)
- Firm is less patient (e.g. firm is failing)
- Re-entry is easy
- Ambiguity about what is acceptable behavior
Eliciting Feedback

Coming Soon
In theaters December 14.

The Hobbit: An Unexpected Journey (2012)

Adventure | Fantasy - 14 December 2012 (USA)

Your rating: ★★★★★★☆☆☆☆☆ 9.3/10

Ratings: 9.3/10 from 4,437 users
Reviews: write review

A curious Hobbit, Bilbo Baggins, journeys to the Lonely Mountain with a vigorous group of Dwarves to reclaim a treasure stolen from them by the dragon Smaug.

Director: Peter Jackson
Writers: Fran Walsh (screenplay), Philippa Boyens (screenplay), and 3 more credits
Stars: Martin Freeman, Ian McKellen and Richard Armitage
See full cast and crew
Designing Reputation Mechanisms

What type of information should be solicited?
- Positive/negative (Rotten Tomatoes), ratings out of 5 (Yelp), detailed surveys (eBay), freeform (Yelp)

How encourage participation
- Pay for feedback (Angie’s List), prestige (Yelp), Matching (Netflix)

How obtain high quality reviews?
- Review the review (Yelp), or review the reviewer (Amazon).

How prevent strategic manipulation?
- Cross-check reviews, Use robust statistics

How is information aggregated?
- Weight more recent higher? Weight reviews by rating?

Punishing bad behavior
- Make re-entry harder, reduce time until reviews posted
The Trust Business
The Trust Business

- For many firms their reputation is most important asset
  - Financial firms (banks, life insurance, market makers)
  - Experience goods (Intel, Odwalla, Toyota)

- Banks
  - Banks invest money in long-term projects (e.g. mortgages)
  - If people believe bank will fail, this causes bank run
  - Failure becomes self-fulfilling

- Intel
  - In 1994 covered up Pentium bug
  - Refused to replace when discovered

- Odwalla
  - E. coli outbreak in 1996, led 66 people to become sick
  - Recall cost $6.5m (revenue $59m) and started to pasteurize
Enron

- Market cap of $60bn at end of 2000
  - Hid $8bn of debts and went bankrupt by end of 2001
  - Why aren't profitable parts of Enron still in business?

Enron's Business

- Long-term contracts for natural gas (and chemicals, metal etc)
- Enron acted as middleman - party to every transaction
- Every trader has credit exposure to Enron

What happened?

- At start of scandal Enron started to look shaky
- Bid-Ask spread widened because of credit risk
- Enron’s profits fell, further increasing credit risk

Lesson: loss of trust cannot be contained

- It can spill into all aspects of firm's operations