Behavioral Economics and Insurance Regulation

Tom Baker

FACI May 2015
Econ?

Human!

Dunce?
Anomalies (Relative to Econs)

- Insurance against irrationally small risks
  - Deductibles that are too low
  - Extended warranties
- Shadow deductible
- Insurance for emotionally treasured objects
- Preference for no-claim rebates & deferred dividends
- Preference for insurance against named risks
- Underinsurance for infrequent big risks (flood)
Biases affecting perceived value

- Excessive discounting (decrease value)
- Over optimism (decrease value)
- Loss aversion (increase value)
- Emotional attachment (selective increase)
- Availability heuristic (depends)
- Regret aversion (increase value for frequent small losses; decrease value for infrequent large losses)
- Threshold effects (depends)
- Overconfidence/Control illusion (depends)
Information processing issues

• Hyperbolic discounting
• Complexity aversion
• Aversion to contemplating some topics (death)
• General cognitive constraints relative to the information demand needed to assess value
How to help Humans?

• Insurance economics still provides the best guide to when insurance is worth it
• Multiple biases/cognitive limits pointing in different directions
• Assuming we understand the relevant biases/cognitive limits:
  – De-biasing & overcoming limits are very difficult
  – Can the market be structured to reduce the impact of the bias or cognitive limit? Sometimes.
  – Does it need to be? Not always.
Extended Warranties vs. Low HO Deductibles

• Similarly irrational for an Econ to purchase
• Similar BE explanations for why Humans purchase:
  – Regret aversion
  – Mental accounting
  – Loss aversion
  – Availability heuristic
• BUT very different market context:
  – Shrouded pricing (situational monopoly) for extended warranties means price is WAY above cost
  – Low deductible HO leads to actuarially rational risk segmentation, so price is in line with cost
BE ideas for annuities
(Market is already doing this)

• Optimism bias + over confidence = I can do better by saving/investing than giving my $ to insurers
  – Scare stories (availability heuristic)

• Loss aversion: premiums are framed as losses.
  – Reframe premiums as an investment

• Regret aversion: what if I die too soon?
  – Provide death benefits
APPENDIX
Table 1: Extended Warranty Calculations

<table>
<thead>
<tr>
<th>Assumptions</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TV Lifetime</td>
<td>5 years</td>
</tr>
<tr>
<td>Lifetime probability of repair$^{33}$</td>
<td>20%</td>
</tr>
<tr>
<td>Annual probability of repair</td>
<td>$1 - (1-.2)^{1/5} = 4.3%$</td>
</tr>
<tr>
<td>Prob. of repair in 2 out-years (not covered by manufacturer’s warranty)</td>
<td>$1 - (1-0.43)^2 = 8.5%$</td>
</tr>
<tr>
<td>Cost of Repair$^{34}$</td>
<td>$400</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Results</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Value of Warranty</td>
<td>$0.085 \times 400 = $34.16</td>
</tr>
<tr>
<td>Cost of 3 year Warranty</td>
<td>$349</td>
</tr>
<tr>
<td>Cost/Expected Monetary Value</td>
<td>$\approx 10/1$</td>
</tr>
</tbody>
</table>
Why Prices are So Far Above Cost

• Shrouded pricing
• Stage 1 Base product
  – Advertised, competitive pricing
• Stage 2 Optional, secondary purchase
  – Situational monopoly pricing
Regulatory Approaches to EW

- Enhanced disclosure
- Ban point of sale purchase of add on
- Price regulation
- Open up the situational monopoly
FCA’s Market Study

- Require firms to make public their claims ratios
- Ban point of sale purchase for certain services
- Ban pre-ticked boxes

**Highly Recommended: Add Quik-Trip Travel Protection**

Peace of mind is only a click away.

- Yes! For just $8.50 per traveler, I'd like to add Quik-Trip Travel Protection. This is $8.50 total.

Get reimbursed up to 100% with Allianz Travel Insurance. Provides coverage for Electronic and Sporting Equipment, as well as reimbursement for travel delays (up to $150). Also includes 24/7 Travel Emergency Assistance. Terms, conditions and exclusions apply, learn more.

Travel insurance listed as "One of the 10 Best Travel Inventions of All Time", USA Today & SmarterTravel.com, 2012

- No, I choose not to protect my purchase.

Product available to residents of all states except: WA. Plans underwritten by Jefferson Insurance Company or BCS Insurance Company.

- Price comparison websites