“Just In Time” Financial Education in the Form of Financial Decision Support Systems

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President’s Advisory Council on Financial Capability

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Thank you

• National Endowment for Financial Education
• Opinions expressed are my own
A Psychologist’s Look at Public Policy Around Consumer Financial Decisions

• Upstream v. Downstream Help

• The Consideration Set as the Key Dependent Variable in Consumer Decisions

• Recommender Systems to Nudge Consumers’ Consideration Sets
  – “Just in Time” Financial Education plus Decision Support to make unfamiliar tradeoffs & facilitate shopping
Problems with Financial Education

• Too far upstream from decisions it is intended to change
• Decays with time... needs to be just in time
• Human inability to map from lesson in one context to another with same deep structure
Role of Financial Education in Toolkit

• Financial Literacy is a “better info” remedy
  – What’s the half-life?

• “Nudges” & “Just in Time Financial Ed”?  
  • Nudge / defaults when consumers homogeneous
  • JIT Financial education + active choice when needs heterogeneous … but technology can assist

• Illustrate by “mortgage recommender” system
Consideration Sets, Screening & Comparison

For a mortgage option to be chosen
- option must be considered
- buyer must not consider better-liked option

Consideration set is more influential than info about details of alternatives

Can regulation protect consumers by “nudging” them to consider “safe” alternatives and to make consideration of “unsafe” alternatives less likely?
Recommender System as Nudge
(Lynch, Woodward, Goldstein, DeBruyn, Deggendorf)

1. Elicit personal circumstances that affect risks
2. Person-specific risk feedback for different types of mortgages in market (JIT Financial Ed)
3. Measure consumer’s tradeoffs of mortgage features to derive weights of utility function
4. Sort database of loans from best to worst wrt person’s utility function. Provide contact for top 5 (JIT Financial Ed)
5. Shopping advice (JIT Financial Ed)
Advantages of Recommender Systems

• Change the consideration set
• Built to deal with consumers with heterogeneous preferences
• Reduce the costs of shopping, search, & matching
• Provide “just in time” financial education
  – Not forgotten (like financial ed)
  – Not ignored due to mapping problems
• Promote competition. Screened options
  – more similar in utility than unscreened
  – Translate multidimensional products to 1 dimension
Thank you
Backup
What’s Wrong with Disclosure Regime?

- 2nd-order effect on preference *given* consideration; don’t change consideration set

What’s the mistake?
- a. buying more house than one can afford?
- b. wrong mortgage for selected house?

Disclosures solve neither problem
- too late to derail house choice
- disclosures provide no alternative mortgage
- even with disclosures for 2 or more products, too tough to process information (Lynch & Ariely; Woodward)

Nobody tests effects on choice
Disclosure to Consumers or Infomediaries

- Honest disclosure to consumers will not overcome confusion in choosing among multidimensional products
- Require disclosure to regulator, and provide decision support tools to help sort options for fit with personal risks & tastes.
  - e.g. medicare.gov for drug plans
  - Baker & Johnson’s tools for choosing health insurance
  - Thaler’s “smart disclosure”
**Proposed Randomized Experiment**

### Form of Assistance x Timing

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<th>Start of Home Shopping</th>
<th>Closing</th>
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<tbody>
<tr>
<td>Know Before You Owe</td>
<td>Group 1</td>
<td>Group 3</td>
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<tr>
<td>Mortgage Recommender</td>
<td>Group 2</td>
<td>Group 4</td>
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### Outcomes to Measure

- Percent fixed v. riskier mortgages selected
- Average home price & LTV
- Number of mortgages considered / shopped
- Default rates 1 year later
Challenges to Recommender Systems

• How to deliver at right point in time?
• How to compel firms to provide complete product information? (Thaler)
• Government or private industry?
  – Billshrink.com, Kayak
• If private industry, will seller self-interest obliterate potential benefits to consumers?