Behavioral Innovations for Influencing (Savings) Behavior

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Scope

• Focus on saving
  • But... important to think holistically
    – About household balance sheets
    – About intertemporal choice across various “domains”
    – About markets, competition, and equilibrium
    – Economists’ comparative advantages!

• Beyond poor/LMI
  – Motivation for focus on decision making are “behavioral” biases/heuristics that seem be in play for wide swaths of people
  – Pre-meltdown the average (and aggregate) U.S. household savings rate was negative

• And hence about scalability
  – Innovations that might pass a market test
  – Policies/regulations that might be implemented cheaply
Disclaimer

• More “one man’s research agenda” than comprehensive literature review
• Keeping in mind that my interests are informed by state of the literature(s)
  – (maybe too lightly)
Motivation

• Do people save too little? Borrow too much?
• *No airtight evidence on this*
• Lots behavioral theory, circumstantial evidence says “yes”
• Evidence I find most convincing:
  – Serial expensive borrowing (e.g., payday loans in USA)
  – Borrowing responds strongly to “economically irrelevant” stimuli
    • Ad content (Bertrand, Karlan, Mullainathan, Shafir, JZ)
    • Surveys mentioning bank overdrafts (Stango and Zinman)
  – Demand for commitment
    • Savings
    • Debt reduction
Overview of Talk: Getting from R to D

1. Research: Theories of Undersaving
   • Preferences, expectations, price perceptions
   • All have some empirical support
     – Mostly of circumstantial variety
     – Mostly of lab variety (although field growing)

2. Development: Innovations (many based on research)
   • Products
   • Process
   • Upfront Disclosure/Marketing
   • Real-time Information and Reminders (Messaging)
   • Advice

3. Agenda: key areas for future R&D
Behavioral Theories of Undersaving: Costly Self-Control

• E.g., time-inconsistent preferences

• Main predictions
  – Undersaving/overborrowing (always want to consume today)
  – Demand for commitment among the (partly) sophisticated

• Main application:
  – Commitment improves welfare of the sophisticated
  – (But what do about naïve, partly sophisticated guys?)
Behavioral Theories of Undersaving: Loss-Averse Preferences

• Consumption levels sticky
• So hard to (get people to) save more when incomes flat
  – Real income?
  – Discretionary income?
• (But begs question: why not saving enough to begin with?)
Behavioral Theories of Undersaving: Limited Attention to Budget Constraint

• Limited attention to what, exactly?
  – To penalty and other state-contingent fees (shrouded pricing, a la Gabaix and Laibson)
    • Stango and Zinman on overdraft fees
    • Descriptive evidence on lack of awareness of adjustable rate mortgage market risk exposure
  – To future expenditure opportunities/needs
    • Even predictable ones (school fees, car registration fees)

• Distinct predictions/applications:
  – *reminders* can change behavior
  – *goal-setting and planning* can change behavior
  – (for those *not* sophisticated about their bias here)
    • In contrast to trying solve self-control problem with commitment
Behavioral Theories of Undersaving: Overly Optimistic Expectations

• About future income or other part of budget constraint
  – Optimal self-delusion, given anticipatory utility
  – So there is a role for preferences here, albeit stable ones

• Can go either way
  – Income vs. substitution effects

• In practice may push toward overborrowing
  – Anticipate won’t roll over
  – Anticipate will refinance at favorable rate
  – Life-cycle smoothing

• Application: new disclosures/information that “debiases” expectations
  – But debiasing is (consumer) welfare-reducing, in theory!
Behavioral Theories of Undersaving: Biased Price Perceptions

• People underestimate exponential growth and decline. So:
  • Saving and investment appear deceptively unrenumerative (low future values)
    – Can lead to undersaving if price effects dominate
  • Borrowing can appear deceptively cheap (Stango and Zinman JF)
    – Compound growth of principal owed in rollovers
    – Decline of principal owed in installment debt

• Growth biases most relevant over long horizons
• Decline biases most relevant over short horizons
• Application: new disclosures/information that “debias” price perceptions
From “R” to “D”: Innovations

• Now turn to a summary and half-baked taxonomy of innovations/interventions
  – Many of these developed based on behavioral research
  – And designed to counter one or more of the biases described earlier
Product Innovations: Commitment Contracts for self-control

• Hard commitments
  – Performance bond model
    • Shown to increase savings in Ashraf et al, trying to replicate in many other settings
    • Show to increase smoking quits in Gine et al
  – Deadlines (improve task completion/performance in Ariely and Wertenbroch)

• Soft commitments
  – Peer support/"sponsorship"
  – Small time/hassle costs (e.g., of extended deadline, changing enrollment status)
  – (Mixed?) evidence that these work
Innovations: Commitment Contracts

Unresolved questions:

• Scalability? Jury still out, but cause for optimism
  – Wholesale, through employers
  – Retail, for debt reduction if not for savings

• What do about (partly) naïve guys?
  – Need to bundle with other interventions?
Product Innovations: From Debt to Savings

• General idea: if habit formation and/or inattention matter, can harness this by adding features to debt products that offer opportunities for seamless “conversion” to saving

• Specific idea: extend installment debt payments to "paying yourself" once debt paid off
  – Borrower could make hard or soft commitment

• Specific idea: encourage simultaneous borrowing and saving
  – With positive or negative “deltas”
  – Many microfinance institutions require positive delta! “Savings-collateralized borrowing”. Wow (yikes?)
Process Innovations:
Pro-savings defaults

• Make default option pro-saving
• Huge effects on 401k enrollment

• Open questions
  – Increase net saving?
  – Do we want people making passive decisions?
    • Newer work on “active defaults”
  – What do when can’t move default in desired direction?
Process Innovations: Others?

- (feel like must be more out there... one more later)
Innovations in Upfront Information

• Upfront disclosures to counter excess optimism
  – “Typical experiences with this product”
• Upfront disclosures/marketing to counter biased price perceptions
  – Show growth of future values (SEC regs discourage retailers from doing this)
  – Prevent lenders from marketing “low monthly payments”
    • mandated APR disclosure “works”, but is really expensive to enforce (Stango and Zinman RFS)
• Unresolved questions: just about everything
  – Quite far from identifying optimal disclosures, particularly when account for enforcement costs
  – Particularly interesting work to be done on nonlinear (state-contingent) contracting (shrouding)
Innovations in (Social) Marketing

• Saving decisions good margins for studying persuasive vs. informative advertising
  – Direct marketing
  – Commodity product

• Some evidence that ad content matters for saving (H&R block experiment) and borrowing decisions (Bertrand et al)

• Key prediction of psych/behavioral theories: persuasive advertising should be relatively ineffective on extensive margin of saving
Innovations in Messaging: Reminders for Limited Attention

• Reminder is not information, just a nag to do something planned
• Reminders to save increase balances among new clients of banks in 3 different LDCs (Karlan, McConnell, Mullainathan, Zinman 2010)
  – Some evidence that reminders mention specific future expenditure ("goal") are incrementally effective
• But does increase total/net savings? No data.
  – Outcome measurement: huge issue for this and other behavioral interventions
  – Someone behavioral enough to respond to a reminder might do something else to undo the intended effects of the reminder, no?
    • E.g., by borrowing expensively: need think about the rest of the balance sheet
  – If take behavioral economics seriously, need to take seriously the possibility (likelihood?) that nudges/shoves have unintended consequences
  – On consumer decision making alone
  – And that’s not even getting into competition, regulation under limited enforcement
Innovations: Reminders

• Many other key unresolved questions:
  – Optimal design of messaging program:
    • Content
    • Timing
    • Frequency
    • Duration
    • Channel (email, text message, direct marketing)
    • Client customization
  – (Why) do reminders work better on those measured as having time-inconsistent “preferences”?  
    • Do reminders somehow make people more sophisticated about self-control?
    • Are we measuring limited attention instead of time preferences?
Innovations in Messaging: Ongoing/Real-Time Information

• Monthly statement content
  – E.g., years to paydown (credit card statements)

• Alerts: balances, spending, goal-tracking
  – Could be part of messaging program that includes reminders
  – Offered now not just by financial institutions, but also by 3rd-party aggregators/advisors

• Unresolved questions: just about everything
Back to Product Innovations:
“Killer App” Guided DIY and Advice

• New online platforms aggregate consumer account information, analyze it, and provide customized advice based on algorithms
  – Mobile banking a subset of this
• Also DIY tools: goal-setting, planning, tracking and feedback
• Potential for reminders
• Potential for commitments
• Unresolved questions: how make this work?
  – Each piece has behavioral component (to test)
  – Revenue model (willingness-to-pay)?
Less Ambitious DIY (as Process Innovation)

• Financial institutions could offer/require a simple planning exercise as part of account signup
  – “A goal is not a plan”: Goal-setting vs. Goal + planning/tasking
  – Client vs. firm-designed plans
More Product Innovations: Behavioral Engineering/Kitchen Sink

• Save More Tomorrow (Benartzi and Thaler)
  – Advice
  – Default in to...
  – Soft commitment to...
  – Increase 401k contributions out of future pay raises

• Borrow Less Tomorrow (Karlan and Zinman)
  – Currently testing
  – Simple planning tool
  – Hard to move default option
  – Soft commitment: peer support cuz no future raise
  • Distribution channel challenging: employers lack incentives
  – Reminders (cuz auto-deduction not always feasible)
Another Product Innovation: Workplace Small-Dollar Lending

- Lower costs by bottling employer’s information on borrower job security
- Not behavioral at core, much more about driving down credit risk and related costs
- But... opportunity for behavioral “intermediation”
  - Disclosures
  - Advice
  - Messaging
  - Commitments
  - Etc.?
Key Big Questions Going Forward

• Can build a workhorse behavioral model?
  – Behavioral research victim of own success: proliferation of behavioral “factors”
  – Are these factors related? Need descriptive evidence on correlations and common factor(s)
    • Analogy to research on mental abilities/intelligence(s)
    • “G-factor”
  – Which factors are most strongly correlated with decisions?
  – Testing extant models in the field will help too!
  – Important because theory informs Development
Key Big Questions Going Forward

• Can advice market work better?
  – Pricing, conflicts, and trust
    • Willingness-to-pay movable?
  – Quality and scope
    • Liabilities too! This is arguably where big money/mistakes are
Key Big Questions Going Forward

• More holistic outcome measurement. Cost is a big issue. Possible solutions:
  – Online surveys
  – Summary statistics for financial condition
  – Credit reports
  – Do research with firms that do account aggregation!
Key Big Questions Going Forward

• Effects of competition
• Effects of regulation (with limited enforcement)
• E.g., what does steady-state look like, post-brilliantly designed intervention/innovation shown to work in partial equilibrium?
  – I.e., gains from trade with Industrial Organization, Public Finance, even Asset Pricing
Key Big Questions Going Forward

• Complementarities (generalities) with other “domains” of intertemporal choice

• E.g., health also has combination of:
  – low-frequency, high-stakes decisions
  – countless high-frequency (day-to-day), small-stakes decisions that definitely “add-up”
Finis

• Thanks!