Behavioral Economics for Better Policy-Making

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Outline

- Behavioral biases
- Nudges
- Note on RCTs
- Note on experimental economics
- BE-based policy-making in the world
- Tactics for BE in policy-making:
  - Social norms
  - Real-time feedback
  - Social recognition
  - Co-operation: communication and trust
  - Positive error culture: using checklists
- Applications:
  - Financial inclusion with MoLD

Illusion of Control Exercise

- Three questions about when you feel in control
  - Rolling Dice (50%) (more in control)
  - Dealing Cards (17%) (better outcome)
  - Choosing Lottery numbers (33%) (more likely to win)

- Why different?
  - DV?
  - Mechanism

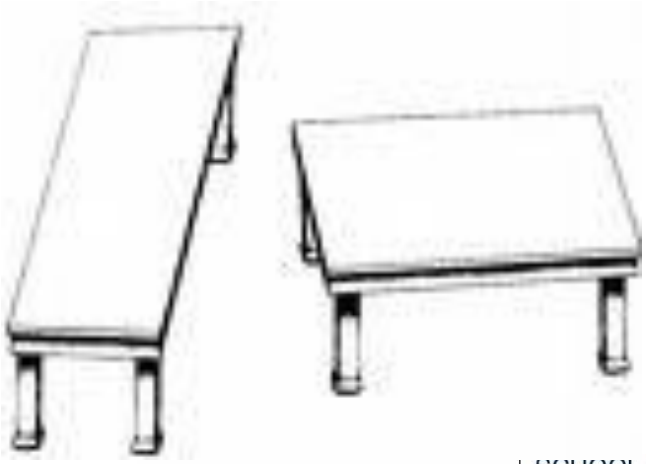
Self Control Exercise

- LE50 today vs LE100 6 months from today
  - 66% today, 33% 6 months (really? 200%!)
- LE50 one year vs LE100 one year plus 6 months
  - 0% one year, 100% one year + 6 months

- Same decision (huge rate of return)
  - Present-bias, hyperbolic discounting, …

Why do Biases Persist?

- Don't people learn?
  - Sometimes, but…
  - Errors of application / transferability
  - Experts are often more biased than laymen
    - Rachlinski judges
    - Stock traders and myopic loss aversion
- Biases are like optical illusions



Common Behavioral Biases

- Loss aversion: prefer to avoid losses than acquire gains of an equivalent amount → disposition effect (hold losers and sell winners)
- Regret aversion: Avoid taking actions (or take wrong actions) to forestall pain of regret → hesitation/inaction (Monty Hall problem), herding behavior
- Overconfidence: overestimate their ability; overplace themselves compare to others; overprecise about outcomes → excessive risk-taking, poor forecasting
- Optimism: overly hopeful and optimistic about the future or success of events → planning fallacy, home bias
- Status quo bias: maintaining the current state of affairs (avoid decisions would alter status quo; favor decisions that sustain it; or do nothing) → lack of diversification, default effects
- Framing effects: effect of the way of presenting choice on an individual's decision-making → impacts on trading, policy compliance
- *Present bias* (value immediate rewards and discount future ones), *hindsight bias, confirmation bias, self-control, representativeness, availability, conservatism, mental accounting, illusion of control, ambiguity aversion, recency, endowment, anchoring…….*

Nudges

- **Nudges**: interventions to encourage behavior changes for better outcomes
- Main Purpose of Behavioral Insights for Policy-Making: **EAST** (Easy, Attractive, Social and Timely) solutions for policy challenges
- Elements:
  - Identify behavioral biases/anomalies/challenges
  - Model (including behavioral considerations)
  - Devise interventions/policies
  - Evaluate impact
- Tools:
  - Analysis (econometric) of observational and survey data
  - RCTs (Randomized Controlled Trials)
  - Experiments
  - Behavioral techniques to gather (and influence) opinion (e.g. pre-mortem techniques)

Impact Evaluation through RCTs

- Randomized Controlled Trials (RCTs): allocation of individuals at random to receive intervention → Treatment group receives intervention (new policy) and control group receives standard practice, or no intervention at all
- Best proven method to evaluate impact of new policies
- Helps us know 'what works' and measure 'to what extent' it works
- Cost-effective: new policies and interventions are not applied on the large scale unless proven successful through RCTs
- Ethical
- Do not have to be complicated or difficult to run

Experimental Economics

- Empirical evidence to support (falsify) behavioral aspects of policy interventions:
  1. Observational data
  2. Experimental data
- Experiments offer "cost effective" tool to measure behavioral response
- Types (not levels) of economic experiments:
  1. Laboratory experiments: "wind-tunnel" for testing anomalies (Plott 1987). Employs standard subject pool (students), abstract framing, and imposed set of rules
  2. Framed-field experiments: intermediate step between theoretical development and field-testing. Same as lab experiments, but with non-standard subject pool and field context
  3. Field experiments: same as framed-field, but natural environment for the subjects and subjects do not know they are in experiment.
- Increased External Validity from 1 → 3

Behavioral Insights Internationally

- Some governments created their own behavioral units:
  - White House Office of Science and Technology Policy: Social and Behavioral Sciences Initiative: http://www.whitehouse.gov/administration/eop/ostp/initiatives
  - UK's Behavioral Insights Team (Often called Nudge, after Richard Thaler's famous book): https://www.gov.uk/government/organisations/behavioural-insights-team
  - New South Wales Government's Behavioural Insights Community of Practice: http://bi.dpc.nsw.gov.au
  - Currently under construction: India (Behavioral Science Policy Unit), Lebanon (Nudge Lebanon), Saudi Arabia (Center for Strategic Development – Behavioral Insight) and Qatar (وحدة قطر للتوجيه السلوكي)

Integrating BE into Policy-Making

- Tactics:
  - Social norms: crafting persuasive appeals based on social norms to nudge behavior
  - Timely feedback: real-time feedback is cost-effective way to improve favorable behavior
  - Social recognition: efforts to celebrate successes or encourage competition
  - Co-operation: efforts based on reputation, enhancing trust, constructive communication and promoting reciprocity
  - Positive error culture: using checklists (and upward responsibility)
  - Behavioral use of collective intelligence (wisdom-of-the-crowds): diversity, independence and decentralization of collective decision-making
  - Pre-mortem technique: preventing failure in big projects (mainly, controlling for behavioral biases)

Tactics: Social Norms

- Reduce problem behaviors (or increase pro-social behavior) → convey the message that harmful behaviors occur less often than most people think.
- *BUT* for those already abstaining from undesirable behavior → normative information produce boomerang effect
- Social norms combining:
  - **descriptive norms** (perceptions of what is commonly done in a given situation)
  - **injunctive norms** (what is commonly approved or disapproved within the culture)

Social Norms (cont.)

- Schultz et al. (2007):
  - Field experiment on energy conservation in California, US, 290 HHs
  - Control: descriptive-norm → feedback on energy consumption (kWh per day), information on average consumption in neighborhood
  - Treatment: injunctive + descriptive-norm → feedback and information, plus ☺ if < avg. neighborhood consumption and ☹ if > avg. neighborhood consumption
  - Results: desirable outcome for >avg HHs for both control and treatment in SR; desirable and lasting outcome for *ALL* HHs for treatment in LR; increased consumption for <avg HHs in control in SR and LR!!!
- Water conservation in Cape Town (Smith & Visser, 2014): savings of 4 liter/HH/day
- Other applications: tax compliance and road safety
- *Ambiguity aversion, self-control bias and framing effects*

Tactics: Timely-Feedback

- Enhances individuals' awareness of choice consequences in complex settings
- improves performance dramatically in a cost-effective way
- Examples:
  - Health: placing a photo next to the x-ray of a patient improved radiologists' performance dramatically (Turner et al., 2008)
  - Fundraising: a 10-minute session including a conversation with a beneficiary of a scholarship → significantly increased fundraisers' productivity and performance (142% more time on the phone and 171% more money) (Grant et al. 2007)
  - Water conservation: presenting daily water level in major dams on a dashboard in SA
- *Recency bias, availability bias, ambiguity aversion*

Tactics: Social Recognition

- Social rewards (e.g. status recognition, ranking schemes, name and shame, …)
- More powerful effect on behavior than economic incentives
- Preventive public health (Ashraf et al., 2014):
  - Field experiment in Zambia, induce hairstylist and barbers to sell female condoms in their shops
  - Compare financial and non-financial incentives: random allocation over 4 groups: no rewards; 90% margin on condom sales; 10% margin on condom sales; stars stamped on publicly displayed chart, representing condom sales
  - After one year: "star treatment" sold twice amount sold by any other group
- Water conservation in Cape Town: Most effective nudge → HHs reduced consumption by 10% were recognized on the city's website (Brick et al., 2017)
- Name and shame: CU experiment in Fayoum (later) → 2% default rate over two years

Tactics: Co-operation

- We value reciprocity and fairness; wiling to cooperate to attain shared goals
- Ultimatum game:
  - $10 shown to 2 players: proposer and responder
  - Proposer: offer any (ranging from$1 to $10)
  - If responder accepts, money shared according to offer; if rejects, none
  - Self-interest hypothesis: offer the least → $1
  - Reality: Avg. proposer offers 1/3 – 1/2 of pie
- Communication: text reminders to increase attendance among adult students in UK (Chande et al., 2017)
- Trust: institutions, neighborhoods, countries with higher trust → less corruption, more tax compliance, less expensive law enforcement, more banking (financial inclusion) → avoid poor frames; enhance self-control
- Positive error culture: using checklists → move responsibility upward and makes accountability easier → TRUST

Financial Inclusion using BE
(in collaboration with Ministry of Local Development)

- Hajjah Amira, 55, simple villager in Al-Gomhoreya village, Fayoum, Egypt
- Looks after her sick husband, who cannot work; has two daughters and one son; married her daughters and helped her son through 3-year military service
- Was first to join our experimental Credit Union for the Poor in 2014 until 2016
- Hajjah Amira: typical Egyptian villager, runs micro household projects to help and support her family. She lives on less than $2 a day AND does not want charity
- 370 million Muslims are like Hajjah Amira
- 1 out of every 2 poor people in the world is Muslim (almost 22% of Muslims are poor)
- **Why can't traditional micro-finance help Hajjah Amira?**

The Need for *NEW* access to finance

- Only 24% of Muslim adults have bank account (compared to 44% of non-Muslims)(Demirgüç-Kunt *et al*. 2013)
- Financial exclusion for religious reasons (share of adults) (Moheildin et al. 2011):
  - Afghanistan: 34%
  - Iraq and Tunisia: 26–27%
  - Saudi Arabia and Djibouti: 23–24%
  - Sudan: 4.5%
  - Kuwait and UAE: 2.5-3%
  - Malaysia: almost 0%
- High rates of interest (some reached APR 200%).
- Receive subsidies (95% of microfinance institutions, UNCDF 2005).
- Primarily rural environments (e.g. Grameen bank and BRAC in Bangladesh, TriBanco in Brazil, Prodem in Bolivia and FINCA International)
- Challenges:
  - Lack of tracking individuals + Increasing number of MFIs.
  - Debt traps
  - **LOW TAKE UP RATES**

Credit Unions for the Poor

- Credit Unions for the poor based on large scale RoSCA (Rotating Savings and Credit Associations):
  - Pooling resources from the community, with no outside capital infusion
  - Building on and enhancing social "capital" (investment by individuals in a community to be drawn from to make benefits)
  - Experimental economic techniques: Experiments offer "cost effective" tool to measure behavioral response

- Hajjah Amira was one of the first to join our experimental Credit Union for the Poor in 2014 until 2016
- Started by saving and borrowing only LE 360/6m → bought few chicks, raised and sold them → bought few grams of gold (5 and 8) for her daughters' marriages

- 1st phase provided proof-of evidence on validity of stylized CU model (2014-2016): repeated one large RoSCA of around 100 members
- Followed by laboratory experiments in the field (to measure and compare social capital of the CU members and non-members): trust; reciprocity and contributions to public goods
- Currently, Randomized Control Trials to test a full model of CU for the Poor: financial literacy training; democratic decision making; use of technology (mobile phones/smart cards) to transfer payments; compare small scale VSLAs