

Behavioral Economics and Development

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Historical views on development and homo economicus

Pre-capitalist versus capitalist (Marx)

Tradition vs. rationalism (Weber)

Mechanical versus organic solidarity (Durkheim)

Modernization theory:

- education. secularization, social mobility, political participation, urbanization, specialized institutions, bureaucratic state
- achievement vs. attribution.
- nuclear vs. extended family, individualism vs. communal orientation
- move from relations based on tradition and loyalty to those based on rational exchange

Critiques and Reactions

Critiques

- View that westernization is only path to development
- Seen as rationalizing illiberal policies: population control; forced migration/villagization; secularization campaigns; removal of children for education
- Rise of dependency theory, etc.

In economics, rise of modern development economics

- “Poor but efficient” (Schultz, 1964)

The incorporation of behavioral economics into development economics

Behavioral economics has (mostly) focused on universal insights from psychology

- Much work in development economics applies these insights to issues in development

Some work in behavioral economics examines behavioral differences

- Individual reactions to circumstances (e.g. education, scarcity)
- Differences across societies

Behavioral perspectives on some issues in development economics

1. High rates of return without rapid growth; Euler equation puzzle
2. Health behavior
3. Technology adoption
4. Insurance
5. Trust, cooperation and culture
6. Size distribution of firms; behavioral firms

Behavioral topics we cover

1. Present bias (Euler equation puzzle; Health behavior; Technology adoption)
2. Loss aversion / reference dependence (Lack of investment; insurance; technology adoption)
3. Attention (technology adoption)
4. Behavioral social learning (technology adoption)
5. Psychology of poverty and poverty traps
6. Social image and identity
7. Morality and social preferences
8. Complexity of information
9. Narrow bracketing
10. Habit formation
11. Sunk-cost fallacy
12. Intrinsic vs. extrinsic Incentives

Behavioral perspectives on some issues in development economics

1. High rates of return without rapid growth; Euler equation puzzle

A Puzzle

B Present bias

C Interactions between decision making and poverty

D Loss aversion

2. Health behavior

3. Technology adoption

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Returns to Capital and Lack of Growth

Puzzle:

High returns to capital in many contexts (Banerjee and Duflo, 2005)

Borrowing at very high rates

- 70 - 100% annual rates and more
- Small-time fruit vendors in Chennai who borrow at *daily* rates of 5% (Karlan and Mullainathan, 2011)

Grants to small businesses (deMel et al., 2008)

High returns to inventories (Kremer, Lee, Robinson, Rostapshova, 2013)

Predictable large increases in prices between seasons (Bergquist et al., 2014)

Euler equation implies counterfactually rapid growth rates, even in absence of any capital market

Suppose production function $F(K)$ where $F'' \leq 0$

$$u'(c_t) = \delta F'(K_t) u'(c_{t+1})$$

If log utility, $F'(K) = 50\%$ annually, and $\delta = 4\%$, then $\dot{c}/c = 46\%$

If constant intertemporal elasticity of substitution utility with $\sigma = 2$, $\dot{c}/c = 23\%$

- Still implies 63-fold consumption growth in 20 years

Need high “tax” or discount rate to resolve puzzle

Even with Non-Concave Production Function

Could have regions of unexploited high returns, but observed initial conditions need to be consistent with model

- Steady state will have low rate of return
- Euler equation will be satisfied (FOC)
- Individuals with high rate of return should have fast consumption growth

Suggests transformative effects of credit

- Seems counterfactual: limited uptake, limited transformation (Banerjee, Karlan, and Zinman, 2015)

Stochastic income and risk aversion?

Maybe people don't invest because investments are risky? e.g. fertilizer

Suppose income in period t is:

$$Y_{i,t} = Y_0 + \varepsilon_t + \sum_{i=1}^n \mu_{i,t} F_i(K_{i,t})$$

where n assets/capital goods, ε is aggregate shock, μ is asset-specific shock, arbitrary pattern of correlations between shocks.

Stochastic Euler equations:

$$u'(c_t) = \delta E_t [\mu_{i,t} F_i'(K_{i,t}) u'(c_{t+1})], i=1, 2, \dots, n$$

Stochastic income and risk aversion?

Given initial capital stock, risk aversion will

- Reduce investment in assets which covary positively with consumption
- Increase investment in assets which covary negatively with consumption

But...

Stochastic income and risk aversion

Optimal to build buffer stock savings (Deaton 1991; Carroll 1997)

- If patient, risk averse, subject to large shocks, want large safe buffer stock.
- In ergodic distribution, only a few people have low buffer stock

For majority with large buffer stock, consumption should not move much with:

- high-frequency income shocks
- predictable income changes (e.g. seasons)

Implies that even if returns to fertilizer highly correlated with income in season, only modestly correlated with lifetime income and thus consumption

- Beta of fertilizer investment will be modest, and risk aversion will only modestly reduce fertilizer investment

For many, model with patient consumers counterfactual

In fact,

- Liquid buffer stocks are often modest,
- Consumption covaries with income, including predictable income
- Karlan et al. (2014) find that rainfall insurance increases fertilizer use

All these predictions emerge if agents are impatient

Thus with either deterministic or stochastic Euler equation, matching the data requires a high effective discount rate

Time Preferences?

Maybe $\delta = 50\%$?

- Implies would not give up \$1 today for \$1B in 30 years
- No one would own land, get an education

Instead, present bias (beta, delta)

- High discount rate between now and tomorrow
- Low discount rate between future periods

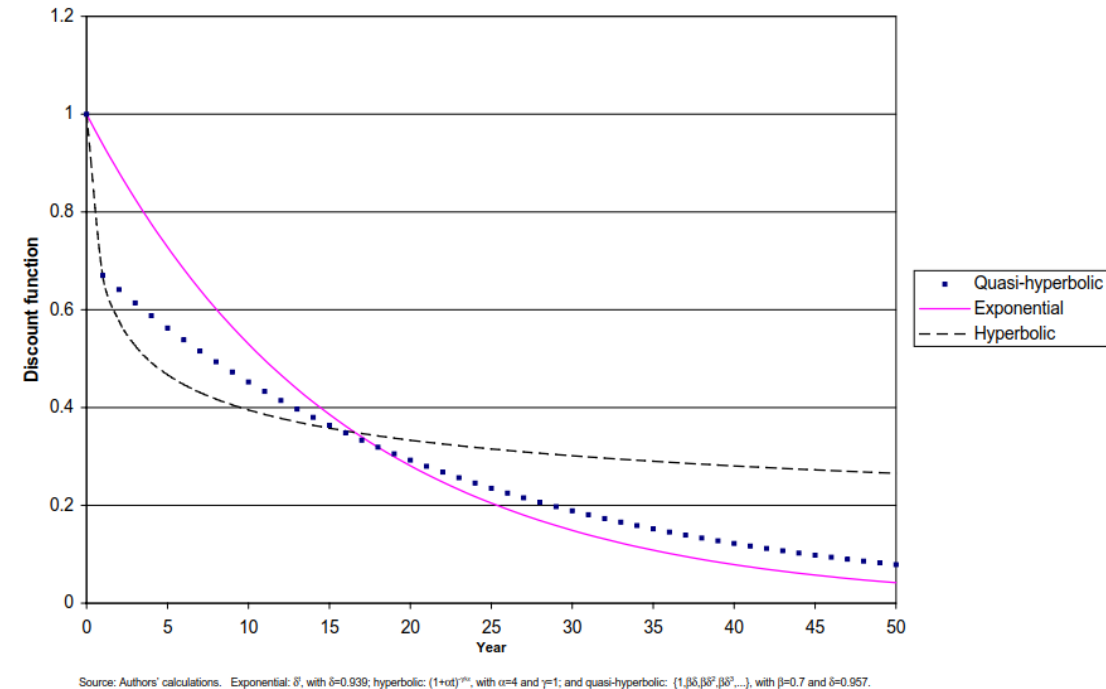


Figure: Comparison of exponential, hyperbolic, and quasi-hyperbolic discount functions [Angeletos et al., 2001]

Present biased consumers will...

(Laibson 1997; Angeletos et al., 2001)

Rapidly spend down liquid assets, becoming effectively liquidity constrained

Build up (or hold) a stock of illiquid assets that pay off in distant future

Leave high rate of return investments on the table, if effectively liquidity constrained

Not be able to smooth consumption; consumption will co-move with income shocks, even with predictable income variation

Procrastination

Commitment

Measuring demand with liquidity constraints

If people are liquidity constrained, surprising someone and offering to sell a good will not measure long-run demand

Endow people with money first?

- But how much money unclear in buffer stock world
- Can induce experimenter demand effects.

Give people time to buy the good (Dupas, 2009)

- Offer coupons, to reduce demand effects
- WTP underestimates welfare if present bias

Allow them to pay using credit?

Present bias: measurement

Since discount rates apply to utility, not streams of income, better to elicit time preferences with effort than with money (Augenblick, 2017; Augenblick et al., 2015; Kaur, Kremer, and Mullainathan, 2015).

Dynamic Interactions Between Poverty and Decision Making

Limited evidence for classic production function based poverty traps, e.g. nutrition-based efficiency wages

Recent literature suggests interactions between poverty and decision-making

- Temptation goods / present bias (Banerjee and Mullainathan, 2008)
- Cognitive function and decision-making based poverty traps (Mullainathan and Shafir, 2013)
- Ongoing work on depression, chronic stress, sleep, alcohol, nutrition, pain...

Different welfare consequences of psychological vs production function traps

Interactions between decision making and poverty

Scarcity: Strong effects on cognitive function over harvest cycle for farmers in India (Mani et al., 2014) but no effects around payday for individuals in the US (Carvalho et al., 2015).

Other factors associated with poverty: High rates of depression and possibly anxiety (Lund et al., 2010; WHO, 2001); alcohol consumption (Schilbach, 2015), sleep deprivation (Rao et al., ongoing; Grandner et al., 2010), pain (Case and Deaton, 2015), noise (Dean, ongoing) etc.

- Less treatment available in poor countries.

But so far most “psychology of poverty” evidence is on effects on basic cognitive function. Need more evidence on actual economic outcomes

- e.g. Schofield (2015) on effort discounting, Rao et al (ongoing) and Kaur et al. (ongoing) on productivity

From micro-feedback loops to macro poverty traps?

Plausible that very high returns to appropriate interventions to address poverty/psychology dynamics - e.g. ultra-poor programs

Plausible that sometimes positive feedback loops

However, multiple steady states require particular parameter values. How common?

- Income distributions typically unimodal
- Limited evidence for dramatic big push effects
- Commodity price spikes don't seem to trigger rapid, lasting growth
- Winning Georgia's land lottery did not lift poor out of poverty (Bleakley and Ferrie, 2013)

Can loss aversion help explain high expected returns?

Psychological and experimental evidence suggests that many people are loss averse (rather than risk averse).

Kink in utility function around a reference point; losses felt more strongly than gains.

- Empirical estimates that people weigh losses twice as much as gains: turn down gambles with equal chance of winning \$2 and losing \$1.
- With narrow bracketing this could inhibit many investments facing farmers and small businesses in developing world

Loss aversion and investment

Shopkeepers in Kenya exhibiting greater loss aversion in experimental tasks maintain lower inventories (Kremer et al., 2013).

Asset by asset; people may be hesitant to give up existing assets to invest in new assets, making asset allocations sticky, maybe reducing migration

Under loss aversion, loans collateralized with assets purchased under the loan will have high uptake and low default. (Jack et al., 2016; Kremer and Rao, ongoing).

Predicts stickiness of wealth rather than poverty trap

Under poverty trap model, \$100 to shopkeeper → growth or fall back

Under loss aversion, potentially \$100 more indefinitely

Framing of \$100 will matter

Loss aversion: reference points

What is the reference point? Status quo (Kahneman and Tversky) vs. rational expectations (Koszegi and Rabin)

- Status quo ref point: Often predicts staying in place, sticky allocations. Will often look like very high degree of local risk aversion.
- Expectations ref point: Multiple equilibria possible. If stochastic reference point (since already anticipating uncertainty in outcomes), somewhat more willing to take risks.

Conjecture: both matter. If decision with lots of experience (e.g. planting usual crops), expectations determine reference point. If new choice (e.g. try new technology) status-quo reference point.

Loss aversion: narrow bracketing

Narrow bracketing (Tversky and Kahneman, 1981): Consider each choice in isolation. Fail to integrate with other choices and background risk

Will choose (FOSD) dominated choices (Rabin and Weizsaecker, 2009)

Will often appear very locally risk averse

- e.g. sequentially reject 100 gambles with equal chances to lose \$10 or gain \$12, by considering each of them in isolation

Can we teach people to bracket differently?

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Health behavior

Apparent under-adoption of cost-effective preventive health and treatment for chronic conditions (e.g. vaccinations, deworming, bednets, water treatment, hypertension).

Arguably excessive treatment for some acute conditions.

May be information in part, but many say they believe in biomedical explanations.

Implied cost of prevention is high

Health behavior

High price-sensitivity

Deworming medication (Kremer and Miguel, 2007); mosquito nets (Cohen and Dupas, 2010); water treatment (Ashraf, Berry, and Shapiro, 2010).

- Price sensitivity, lower, but still high relative to benefits with time to purchase (Dupas, 2009).

Small (and time-limited) incentives for vaccination (Banerjee et al., 2010) or collecting HIV tests (Thornton, 2008).

For example, estimated private financial benefit of deworming is \$142 (Baird, et al. 2015), yet US\$0.30 per child cost-sharing fee decreased take up 80 percent (Kremer and Miguel, 2007).

Knife-edge balance between benefits and costs of prevention?



Source: Kremer and Glennerster, 2012 & Baird et al, 2015

Behavioral mechanism: present bias

Two ways present bias may generate this underinvestment:

1. Procrastination
2. Liquidity constraints due to present bias

Present bias and procrastination

Driven by the *immediate utility costs* of the investment:

- e.g. hassle and psychic costs of going to doctor, walking to farther-away water source, using dilute chlorine solution, changing diet, learning painful news about health status, taking medication

Procrastination requires both present bias and some degree of naivete.

- Prefer to do painful task tomorrow, mispredict that they *will* do it tomorrow

Consistent with:

- effect of time-limited incentives: e.g. Banerjee et al., Duflo et al.
- effect of reducing hassle costs: e.g. water dispensers

Note: Would not procrastinate on acute condition, since benefits immediate

Present bias and liquidity constraints

Present bias can lead to liquidity constraints (Angeletos et al. 2001)

Once liquidity-constrained:

- High-return preventive investments may be left unexploited
- Moreover, monetary expenditures might now translate into (almost) immediate utility costs, since need to cut back on other consumption in order to, e.g., pay for doctor visit

Consistent with

- Evidence on effects of increased liquidity (Dupas and Robinson, 2013)
- Discounted fertilizer offer soon after harvest (Duflo et al. 2011)

Commitment contracts

Demand for commitment is “smoking gun” evidence of present bias
(Ashraf et al., 2006; Gine et al., 2010; Duflo et al., 2011; Schilbach, 2017, etc.)

But commitment contracts only work well with high degree of sophistication

- Naivete → low demand for commitment
- Partial naivete → systematic failure of commitment, with plausibly negative effects on welfare if people incur the costs without the intended benefit (John 2017; Bai et al., 2017)

Uncertainty also implies low demand for commitment (Laibson, 2015; Amador, Werning, and Angeletos, 2006)

More promising approach may be to reduce hassle costs, provide direct time-limited incentives, ease liquidity constraints (Bai et al., 2017)

Attention

Inattention to health can have large costs.

Many reminder interventions in health
(Pop-Eleches et al., 2011; Raifman, et al., 2014; Lester et al., 2010).

Potential negative externalities if attention is a limited resource.

- Ask if people want reminders?
- Some non-effects in literature. Increasing over time?

Need more evidence on whether reminders remain effective in the long term

Biased beliefs and health behavior

Low-information environments with missing markets for experts

Some evidence of information aversion in the health domain

Oster et al. (2014) on Huntington Disease

Weinstein (1982) on optimistic bias for one's relative chances of developing various health problems

Some ideas from psychology that *don't* seem to matter

Little evidence for real-world development importance of some psychological effects frequently invoked by practitioners to justify policy:

- **Sunk-cost fallacy**: No evidence that higher prices cause greater product use (Ashraf, Berry, and Shapiro, 2010; Cohen and Dupas, 2010).
- **Crowd-out of intrinsic motivation**: Little evidence that extrinsic incentives crowd out intrinsic motivations in real world development contexts. (Ashraf, Bandiera, and Jack, 2014; Ashraf, Bandiera, and Lee, 2016).

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Technology Adoption

Various examples with apparently non-optimal technology choice:

- Pineapple farming in Ghana, HYV seeds, seaweed pod size, fertilizer, contraceptives, soccer ball manufacturing techniques, layout of equipment in textile factories

Do external analysts correctly understand payoffs?

Do decision makers have information?

Technology adoption: attention and complexity

Inattention and wrong mental models (Hanna et al. 2014)

- Production function is complex and attention is costly
- Individuals will pay attention to the dimensions they think are important
- If start off thinking something is not important (wrong mental model), will not pay attention and will never learn
- Even with infinite data available

Complexity of information

- Provision of simplified information about seaweed pod size (Hanna et al. 2014), water safety (Bennear et al., 2011) or business practices (Drexler et al., 2011) may be more effective than providing full information

Technology adoption: present bias and loss aversion

Present bias

- If adoption requires costly experimentation, procrastination is a risk
- Would benefit, again, from simplification (if learning is costly).
- Is there demand for commitment for technology adoption (training)?

Loss aversion

- Conjecture: relevant reference point when trying something new is the status quo. Possibility of losses with respect to the status quo will trigger loss aversion

Behavioral Social Learning

Rational social learning will often lead society to right long-run choice if some can get past initial experimentation costs

Banerjee (1992) herd behavior: model converges on optimal technology if

- observe output
- observe size of investment
- Smooth loss function makes choices reveal signals

Redundancy neglect

Theoretical work shows that imitating common sources without accounting for redundancy in the signals received can create confident and incorrect beliefs (Eyster and Rabin, 2014).

- People may overweight the beliefs and actions of others.

Empirical evidence of naïve, non-Bayesian updating

- People neglect the correlation of information structures resulting in double-counting of signals (Enke and Zimmerman, 2017).
- Rather than using Bayes' Rule to evaluate the state of the world, people use a weighted average of neighbors' actions or opinions (Chandrasekhar, Larreguy, and Xandri, 2016)

Redundancy neglect

This may create information traps, making it hard to encourage adoption of technologies that go against conventional wisdom.

Limited field evidence on how non-Bayesian social learning influences technology adoption.

Behavioral Social Learning

Social image/preferences

The degree of communication between people may be endogenous—giving and soliciting information is a decision.

People may be hesitant to ask for or provide information when doing so signals effort or ability (Chandrasekhar, Golub, and Yang, 2017; Banerjee, Breza, Chandrasekhar, and Golub, 2017).

- Implies seeding info more broadly can reduce learning

People may not be willing to provide information to others for free if they paid for it or put in effort to get it (Fabregas, 2017)

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Insurance

Risk-sharing is a major topic in development economics

- Large literature on informal risk sharing
- Literature on how risk considerations affect crop choice, migration choice, marriage....

Warning:

- Lab evidence consistently rejects expected utility approach in favor of cumulative prospect theory.
- Aversion to small positive expected value gambles impossible to explain with expected utility theory (Rabin 2000)
- Actual pattern of what is and what is not insured in rich countries difficult to understand with expected utility theory
- Bangladesh migration results

Low take-up of insurance

Many people in developing countries exposed to very risky income streams (e.g. farming)

Yet low take up of actuarially fair weather insurance (Cole et al., 2012)

- Basis risk? (Mobarak & Rosenzweig 2012 , Gine et al. 2008)

Low take-up of health insurance (Thornton et al., 2010)

- Administrative issues?

Potential Explanations

Casaburi and Willis (2017) intertemporal exchange part of most actual insurance contracts; eliminating this increases insurance take up dramatically

- Important role for liquidity constraints, present bias

Ambiguity aversion

- Ambiguity in insurance contracts reduces demand; ambiguity aversion magnifies the effect
- e.g. basis risk (Bryan 2013), nonperformance risk (Biener et al. 2017)

Could loss aversion / prospect theory play a role?

- If premiums are seen as losses (Eckles & Wise 2011, Hwang 2016)
- Diminishing sensitivity away from reference point leads to risk-seeking behavior in loss domain

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Trust, Cooperation and Development

Trust and cooperation important for economic and political outcomes

- e.g. Algan and Cahuk (2013) review

Developing countries have lower levels of trust and positive reciprocity

- Falk et al (2017) using global survey
- Note: trust has an aspect of both beliefs and preferences

Is this a cause or consequence of development?

Social diversity and development

Relatedly, thin markets and poor legal contract enforcement mean greater reliance on social networks and personal interactions

Ethnolinguistic fractionalization correlates with negative economic and political outcomes (e.g. Easterly and Levine, 1997), although may itself be endogenous.

- Experimental field evidence, e.g. Hjort (2014) on inter-ethnic social preferences reducing productivity in a large firm in Kenya
- Experiments utilizing priming, IATs, etc. e.g. Hoff and Pande (2006)
 - But priming -- as an experimental technique -- is not a robust method. Best avoided. (see special issue of Perspectives on Psych Science 2014)
- IATs also controversial, although have some predictive power for real-world behaviors (Oswald et al. 2013).

Role of social image and norms

Frontier of behavioral research on (pro)social behavior is on social image

- Desire to conform to social norms
- And also to impress (in socially sanctioned ways)
- Visibility of actions can matter a great deal

Some recent applications

- Bursztyn et al. (2017) on conspicuous consumption in Indonesia
- Chandrasekhar et al. (2017) and Banerjee et al (2017) on social learning
- Chetty et al. on taxpayer recognition / shaming in Bangladesh

Much more work to be done in developing-country settings

- Including on how norms change, e.g. gender norms

Shaping social preferences and norms

Important to understand policies which can improve intergroup behaviors

- Rao (2015) on integration in schools
- Blouin and Mukund (2017) on post-conflict Rwanda
- Miguel (2004) on national identity in Tanzania
- Role of policy and culture (Miguel and Gugerty, 2005)

And policies which can influence certain social norms

- La Ferrara et al. (2002) and Jensen and Oster (2009): TV effects on fertility and gender attitudes
- Bursztyn and Yanagizawa-Drott (ongoing) on female labor force participation in Saudi Arabia

Moral attitudes across cultures

Psychology and behavioral econ has focused excessively on WEIRD -- Western, Educated, Industrialized, Rich, Democratic -- populations (Henrich et al. 2010)

Have conceptualized morality as being solely about *harm* and *fairness*

Haidt 2012: Outside of WEIRD population, much broader conception, including not just harm and fairness, but also deeply held belief in morality of:

- Loyalty
- Authority / respect
- Purity and sanctity

Implications for economic and political behavior are ripe for exploration (recent politics!)

Brief digression

1. Behavioral Welfare Economics
2. Behavioral Design

Behavioral Economics and Welfare

With behavioral biases, choice can no longer be trusted to reveal preferences

- Inattention: difference in demand when taxes included vs not in sticker price (Chetty, Looney, and Kroft, 2009). Fairly clear which is “true” demand here.
- Present bias: Common practice is to respect the preferences of the long-run self (i.e. ignore beta). This is somewhat controversial.

Insight from behavioral public finance: heterogeneity of bias matters a lot for welfare implications of subsidies. (Allcott & Taubinsky 2014; Chetty 2015)

Behavioral Economics and Welfare

Health presents a particularly stark case of difficulties of doing welfare economics in a behavioral world: respect implied value of health / life from observed demand for clean water, deworming?

Kremer et al. (2011) uses a travel cost model to estimate willingness to pay for a DALY through cleaner water at \$23.68.

Health planners use \$150 per DALY or up to three times GNP per capita. Very different policy implications.

Behavioral design

(e.g. Datta and Mullainathan 2014)

Set defaults wisely

Choice sets: eliminate dominated options

Eliminate small payments and hassle costs

Time-limited micro-incentives

Simplify information

Use overweighting of small probabilities in incentives

- e.g. low-prob lottery valued $>$ EV

Use social-norming language and make “good” behaviors visible?

- Caution: potential to harm people through shaming

Behavioral design

(e.g. Datta and Mullainathan 2014)

Habit formation (outside of addiction)?

- Short-term incentives: Mixed evidence of habit formation in exercise (Charness and Gneezy 2009; Carrera et al 2017) and hand-washing (Hussam et al. 2016). Effects, when they exist, seem to fade within weeks / months. More to be done here, e.g. in education.
- Utilizing systematic cues, e.g. consistent time-of-day, visual cues: Not much evidence

Reminders and salience?

- Mixed evidence on effectiveness, and concerns about crowding out attention to other things

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Size Distribution of Firms, Informality

Lots of self employment, small firms, informality

- Taxation, regulation (e.g. labor regulation), predation?
- But many firms even smaller than these thresholds
- Credit market issues? But profitable firms should grow over time

Correlation between firm size and family structure
(Ilias 2006; Bertrand et al., 2008)

Difficulty of cooperation? Where do duties lie?

Regular employment may be costly

Loss of flexibility in scheduling, loss of autonomy

Low hours in many contexts

High teacher absence not only in public schools, but also private schools

Evidence that people move in and out of the formal sector

Blattman and Dercon (2017) randomly assign industrial jobs in Ethiopia, finding that workers quickly quit and move to different sectors.

Wage premia for many formal jobs

Could there be complementarities in regular employment?

Regular employment may be more costly in developing countries

Costs of regular employment may be greater in a society with poorly functioning institutions.

If few people around you have a fixed schedule, having a fixed schedule may be more costly.

Evidence of hysteresis in employment in developed countries. Stigma of unemployment may be greater in a society where unemployment is rarer.

Marxist view that people need to be forced into employment relationship

Enclosure.

Replacement of putting out with factory system.

Colonial taxes.

Historical prevalence of labor coercion

Role of education in generating “non-cognitive skills”

Factory discipline as commitment device

Clark (1994) argues workers want factory discipline as a commitment device

- Much rosier view

Kaur, Kremer, Mullainathan (2015)

- Find many data entry workers choose dominated commitment contract over piece rate contract
- However, also find substantial heterogeneity
- With asymmetric information, firms may screen out undesirable workers with factory discipline or steep incentives, reducing overall welfare
- Justification for legislation limiting hours, etc?

Implications of limits on firm size

Firms may only replace self employment when productivity advantage becomes large enough to outweigh these costs

- Reduces ability of innovations to spread, incentives to innovate
- Reduces replacement of inefficient producers

Returns to capital may be high at low levels of capital, but then diminish very sharply, limiting arbitrage opportunities

Behavioral firms in the informal economy

Lucas span of control model and Chicago critique of behavioral economics:

- Behavioral firms will be weeded out of the market
- Even if only 5% of people do not have behavioral biases, they will become the managers of firms

Distortions in developing countries prevent efficient firms from growing and displacing less efficient ones

Self-employed individuals in developing countries are not just behavioral consumers, *they are behavioral firms* -- or at least behavioral managers.

Mean behavioral biases of “managers” in poor vs rich countries

Stango et al. (2017) estimate the extent of behavioral “biases” using a nationally representative survey in the US

- Loss aversion, present bias, overconfidence, ambiguity aversion, narrow bracketing, statistical fallacies, inattention
- Average American has 8 out of 16 biases (sd 2.4)

Thought exercise:

- Assume same distribution in all countries
- Consider cross-country variation in share of individuals working as managers
- Assume those with fewest biases selected as managers first (in line with Chicago critique)

Mean behavioral biases of managers in poor vs rich countries

	Share of Managers (%)	Mean Behavioral Biases of Managers
US	6.9	0.23
OECD	12.5	0.49
Mexico	26.9	1.33
India	65.0	4.24

Share of managers calculated from World Bank, 2010. Note that here the self-employed are defined as managers, even if they are only managing themselves and their own businesses.

What is special or different about behavioral economics in developing countries and among the poor?

Why is behavioral economics useful for development?

How is behavioral economics different in developing countries?

Behavioral economics has focused almost exclusively on consumer behavior (since non profit-maximizing firms should be weeded out of the market). Due to various market imperfections in developing countries, this weeding-out is less likely to occur. Therefore, behavioral economics in poor countries should also study firm behavior.

Consumers in developing countries often face much worse decision environments and require much more self-regulation (see next slide).

Emerging evidence on the psychology of poverty – the effects of scarcity, stress, sleep deprivation, pain, poor nutrition, depression and anxiety etc. on cognitive function and economic behaviors, although this literature needs much more evidence on economic outcomes.

Regulatory and market weaknesses result in poor decision environments

Absence of quality assurance and consumer protection (Duflo 2012).

- Choice sets include more bad options than in rich countries

Information-poor environments

- Missing markets for experts

Poorly set defaults

- e.g. no social security withholding, no chosen-by-employer health plan

Lacking the commitment and social norms provided by formal employers

- e.g. can show up late and drunk regularly if Indian rickshaw driver

Why is behavioral economics important for development?

Behavioral economics is normal science in the Kuhnian sense, not a paradigm change. It tries to provide slightly better models of human behavior. Our claim is that these models better fit important patterns in the data, and often make different (qualitative or quantitative) predictions than standard models.

More psychologically realistic models sometimes provide different diagnoses of problems and imply different policy responses.

This is not to say that getting institutions and markets right is not very important! Sometimes, there are interactions between psychology and institutions, and the response to a behavioral factor may precisely be changing some institution or regulation.

There could be something quite important about culture and social norms in affecting economic development, but much more needs to be done before we reach any conclusions here.

Bad institutions, incomplete markets *and* behavioral economics

Occasional criticisms we hear of behavioral work in development:

- Focus on nudges distracts from more important issues of poor institutions and market design.
- Blaming the poor for their poverty.

Our view:

- The psychology we consider is largely universal.
- Sometimes interacts with poor institutions and markets.
- Better fits important empirical patterns.
- Often implies different policy responses.

Behavioral Development Economics
(Chapter under preparation for the first edition of the
Handbook of Behavioral Economics)