

Development Economics

AEA Continuing Education Lectures

Lecture 4

Psychology and Development

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Outline

- **Introduction**
- Psychological forces in developing country settings
 - Self control
 - Cognition and attention
 - Social preferences and norms
- Psychology of poverty
 - Attentional depletion
 - Beliefs and aspirations
 - Mental health

Why Behavioral Development?

Developing countries -- more scope for psychological forces to matter:

- Large volatility in income and consumption (e.g. health shocks)
- Long horizons between effort and income, lumpy income (farming)
- High self-employment and informality (casual labor): labor supply flexibility
- Imperfect financial markets (savings, credit, insurance)
 - Larger impetus to self-smooth, harder to buffer mistakes via credit
- Weak institutions mean people have to navigate more of life themselves
 - No direct deposits or automatic payments
 - Lack of regulations and safety oversight (is fertilizer low quality, is medicine counterfeit)
- Market transactions: exchange between people who know each other personally
 - Social forces, such as norm, can play central role in market dynamics

Two (overlapping) streams

1) Psychological forces that apply everywhere

- Rich people exhibit same psychological traits
- But in poor settings: more scope to affect behavior, or have larger welfare consequences
- (Also: simply opportunistic testing using field methods)

2) Psychology of poverty

- Aspects of poverty itself may have psychological consequences
- Rich people may not exhibit these psychological traits (as much)
- Importantly: stems from environment, not individual

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Channels: Overview

DellaVigna JEL (2009): Excellent background paper on main models

Categories of models

- Nonstandard preferences
 - Present focus, reference dependence, risk preferences, social preferences, belief-based utility
- Nonstandard beliefs
 - Overconfidence, non-Bayesian beliefs, projection bias
- Nonstandard decision-making
 - Mental accounting, heuristics, framing effects, emotions, limited attention, memory

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(Note: given range of material, just do 1-2 illustrative examples for subset of channels)

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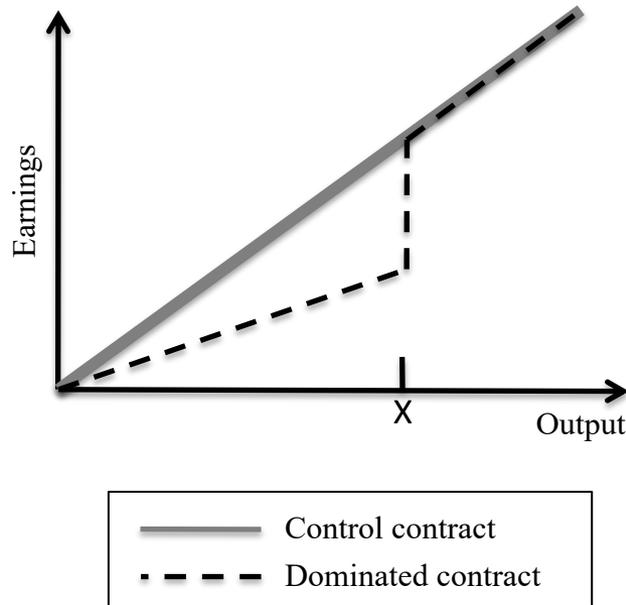
Self control - Background

- Self-control: ability to manage impulses and behaviors to achieve long-term goals
- Ask me about tomorrow (Monday):
 - I would like to go to labor stand tomorrow (Monday) so I can earn money for Tuesday spending
 - Implication: $c'(e) < \delta u'(w)$ [i.e., $\delta c'(e) < \delta^2 u'(w)$]
- Tomorrow (Monday) arrives:
 - I don't want to go to labor stand today. I don't really need to eat fruit or chicken on Tuesday, rice is fine. I'll go to stand tomorrow.
 - Now, when deciding about today: $c'(e) > \delta u'(w)$
 - But when deciding for tomorrow, my preferences reflect: $c'(e) < \delta u'(w)$

Self control - Background

- Model as time inconsistency (typically put it in discount function)
- Popular: Quasi-hyperbolic discounting [Laibson 1997, O'Donoghue Rabin 1999]
 - Exponential discounting: $U_1 = u(c_1) + \delta u(c_2) + \delta^2 u(c_3) + \delta^3 u(c_4) + \dots$
 - Quasi-hyperbolic discounting: $U_1 = u(c_1) + \beta [\delta u(c_2) + \delta^2 u(c_3) + \delta^3 u(c_4) + \dots]$
- Important concept: Naivete vs. sophistication
- Important prediction for sophisticates: demand devices that will impose today's preferences on tomorrow's self (commitment devices)
 - Most common way of testing for self-control problems in literature

Kaur Kremer Mullainathan (2016)



1) Control contract: linear piece rate b

2) Dominated contract:

– b if output $> X$

– $b/2$ if output $< X$

– Worker chooses X in advance (can choose $X=0$)

– *Should never be chosen by neoclassical agent: for any output, earn weakly less than control*

- Field experiment with data entry workers
 - Full-time job
 - 9 month horizon
- Paid piece rate for each accurate field
- Randomize daily:
 1. Control contract
 2. Option to Choose
 3. (Assignment to dominated contract)

Kaur Kremer Mullainathan (2016)

Panel A: Take-up of Dominated Contracts (Summary Statistics)

Dominated contract chosen: conditional on attendance	0.36 (0.31)
Dominated contract chosen: target=0 if absent	0.28 (0.26)

Panel B: Treatment Effects of Contracts

Sample	<i>Dependent variable</i>		
	<i>Production</i>		<i>Earnings</i>
	Control & Option (1)	Full Sample (2)	Full Sample (3)
Option to choose dominated contract	120 (59)**		
Evening option to choose contract		150 (69)**	4.60 (2.17)**
Morning option to choose contract		73 (69)	2.32 (2.17)
Target imposed: Level 1 target		3 (90)	-1.55 (2.88)
Target imposed: Level 2 target		213 (91)**	3.13 (2.89)
Target imposed: Level 3 target		334 (150)**	5.01 (4.80)
Observations: worker-days	6310	8423	8423
Dependent variable mean	5311	5337	172

Self-control: Discussion

- Applicable anytime costs borne today but benefits in future
 - Labor supply, savings, investment, education, exercise, vaccinations
 - [Examples: Ashraf et al 2006, Gine et al 2010, Duflo et al. 2011, Schilbach 2017]
 - Particularly long horizons in development: farming
- Implies (some) people value commitment (high powered incentives)
 - One downside of extreme flexibility in development: self-employment, casual labor with no minimum hours
 - Potential additional “theory of the firm”
- See Kaur, Kremer, Mullainathan (2010) for discussion of implications for development process

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Cognition and attention

- Economic models assume perfect cognition
 - Everything you “know” from your past (memory)
 - Everything you could observe in environment (attention)
 - Hold it all in your head simultaneously (“attention”)
 - Solve complex constrained maximization
- But humans have:
 - Limited attention
 - Imperfect memory
 - Constraints on cognition
 - Fundamental to every thought process, decision, action
- Relevance for development
 - Volatile environments make signal extraction hard
 - Lack of institutional support (must figure things out on your own)

Hanna, Mullainathan, Schwartzstein (2014)

- Many examples where people hold wrong beliefs in equilib'um or fail to learn
 - Despite lots of information or chance for experimentation
 - Less water when kid has diarrhea, whether an herbal remedy affects a cold, return to inputs (e.g. fertilizer) on plot, returns to education (Jensen)
 - Why don't people learn from the info available to them?
- Hypothesis: Limited attention can lead to selective learning
 - Cannot attend to everything in environment
 - Bayesian attends to the things she thinks are important
 - Don't notice the other things → never get to learn they matter
- This paper: Do seaweed farmers learn production function?
 - Many relevant attributes: line length, line spacing, growing horizon, pod size
 - Gain information from each “trial” (harvest) to learn optimal allocation
 - Believe some things important, but do not have view on pod size

Hanna, Mullainathan, Schwartzstein (2014)

TABLE II
BASELINE SURVEY RESPONSES ON PROCESS AND PRACTICES

	(1) % Unable to provide answer	(2) Perceived mean
Panel A: self-reported current production methods		
Typical pod size (g)	86	118.11 [57.01]
Typical length of line (cm)	2	5.05 [1.04]
Typical distance between lines (cm)	1	16.49 [3.14]
Panel B: self-reported optimal production methods		
Optimal pod size (g)	87	148.26 [248.45]
Optimal distance between knots (cm)	2	15.97 [2.84]
Optimal distance between lines (cm)	2	16.39 [3.01]
Optimal cycle length (days)	1	37.43 [7.14]

Notes. This table provides sample statistics on 489 farmers' responses from the baseline survey. Standard deviations are in brackets. Column (2) provides mean responses conditional on answering.

Hanna, Mullainathan, Schwartzstein (2014)

- Randomize attributes (including pod size) in growing trials with farmer
- 2 key predictions:
 1. Info from new trials: will not attend to (and so will not update on) pod size
 2. Being provided with information will lead to changes in beliefs and behavior

TABLE IV
EFFECT OF TRIAL PARTICIPATION ON SELF-REPORTED TECHNIQUES AND MEASURED POD SIZE

	(1) Changed farming techniques	(2)	(3) Pod size (g)	(4)
Trial participation	-0.084 (0.051)		-2.184 (3.610)	
After trial	-0.146 (0.048)***	-0.148 (0.057)**	-11.333 (3.003)***	-11.661 (3.578)***
After summary data	-0.145 (0.050)***	-0.150 (0.061)**	-13.587 (2.896)***	-13.859 (3.496)***
Trial participation * after trial	0.072 (0.060)	0.079 (0.071)	-2.051 (4.411)	-1.550 (5.306)
Trial participation * after summary data	0.162 (0.069)**	0.171 (0.084)**	6.951 (4.095)*	7.316 (4.982)
Hamlet fixed effects	X		X	
Farmer fixed effects		X		X
Observations	684	684	684	684

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Social preferences - Background

- Humans are fundamentally social
 - Relevance of social psychology for much of economic behavior
- Affects hedonics
 - Other regarding preferences: care about not just ourselves but also others
 - Hedonic value from interactions: taste-based discrimination
- Gives rise to norms
 - Shared values, beliefs, attitudes, and/or behaviors among a group
 - Unspoken rules or guidelines for how people actually behave (descriptive norms) or are expected to behave (injunctive norms)
 - Violations affect own utility (fairness)
 - Violations incur social punishment (helps sustain)
- Scope to affect the functioning of markets

Social Nature of Markets

- Markets made up of people → underpinned by social relationships
- Social ties especially pronounced in developing country markets
 - People depend on each other for not only leisure, also job referrals, credit
- Creates scope for social norms to affect the functioning of markets
 - Groups of buyers or sellers could sustain norms in perceived group interest
 - Deter self-interested deviations via threat of sanctions (Bursztyn Jensen 2017)
 - Enabled by repeat interaction, in absence of formal coordination (e.g. Osmani 1990, Kandori 1992, Ellison 1994, Olson 2009, Fehr and Schurtenberger 2018)

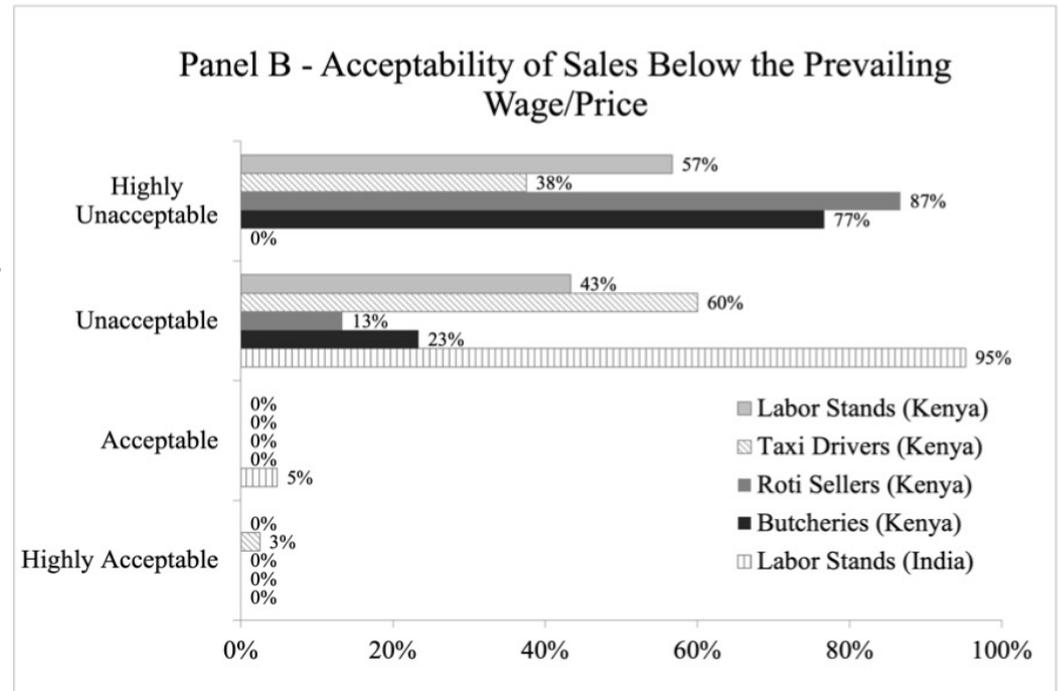
Breza, Kaur, Krishnaswamy (2023)

Norms against undercutting prices

Surveys of sellers in various markets in Kenya and India:
Urban labor stands, taxi drivers, food vendors, butchers

“Suppose one «worker/driver/vendor»
«takes a job/sells their products»
for «prevailing price-10%».

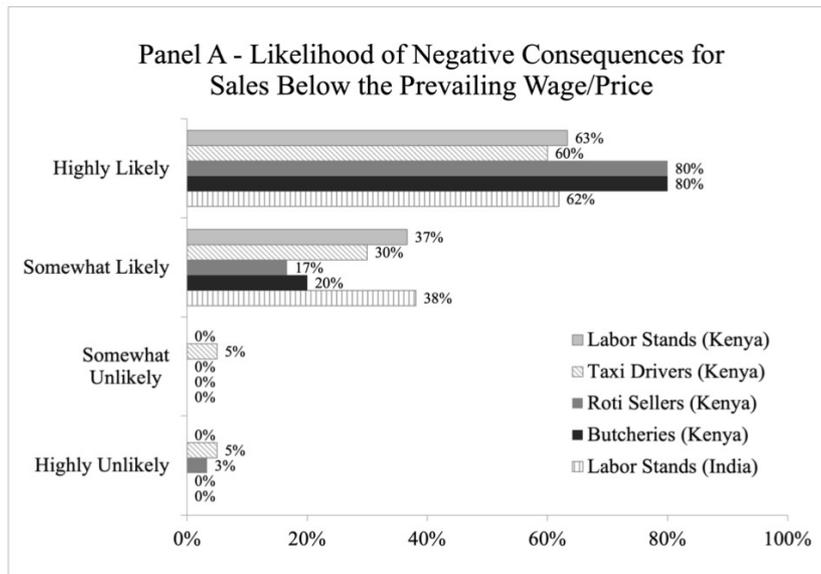
Do you think this behaviour is acceptable?”



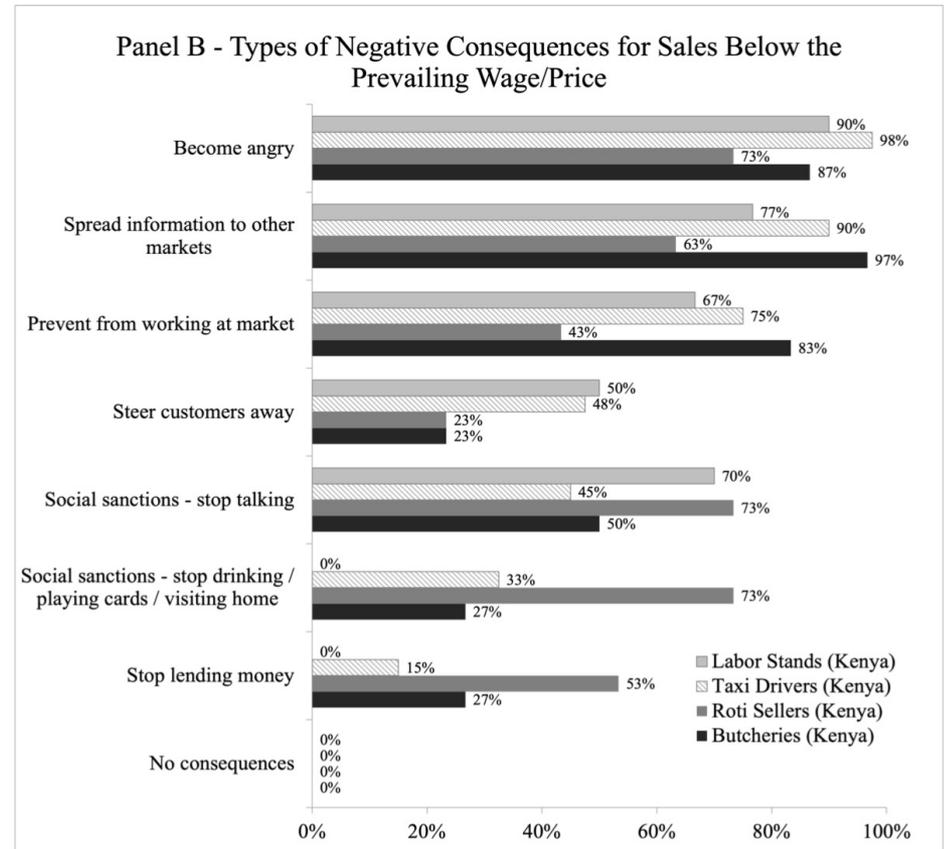
Breza, Kaur, Krishnaswamy (2023)

“Suppose one «worker/driver/vendor»
 «takes a job/sells their products»
 for «prevailing price-10%».

How likely is it that he would face negative consequences from others?



“What are the reactions he will face?”



→ Potential for market power to arise in a range of settings

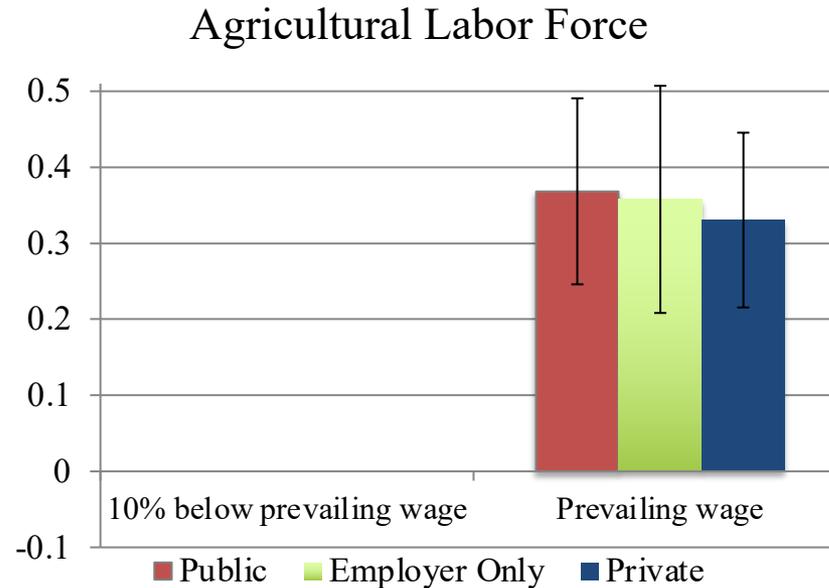
Breza, Kaur, Krishnaswamy (2023)

- Test for social norm against accepting jobs below prevailing wage
 - Rural labor markets in Odisha, India
 - Large, decentralized groups of workers spanning entire labor market (village)
 - Jobs offered by real employer in each village (N=183 villages)

		Wage Level	
		w	$w-10\%$
Social Observability	Public		
	Employer only		
	Private		

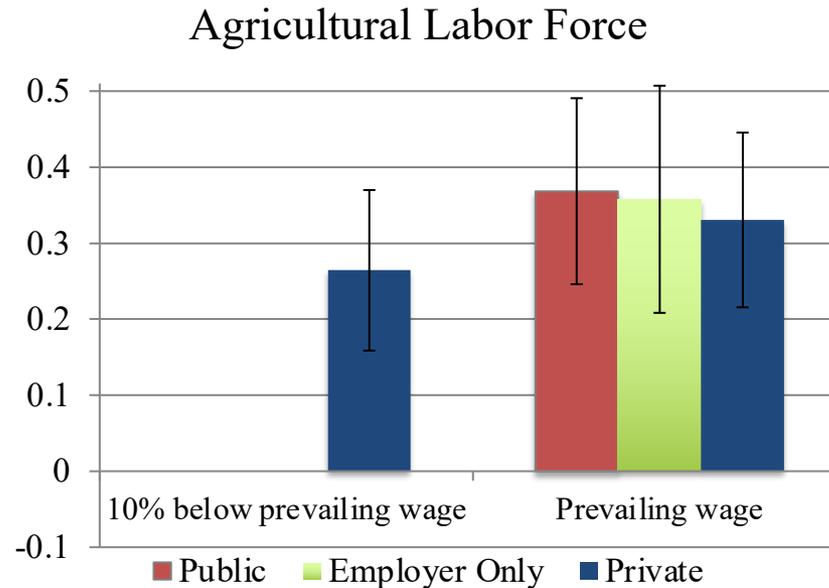
- Prevailing wage serves as a “placebo” test
 - Social observability should only matter under norm violations

Breza, Kaur, Krishnaswamy (2023)



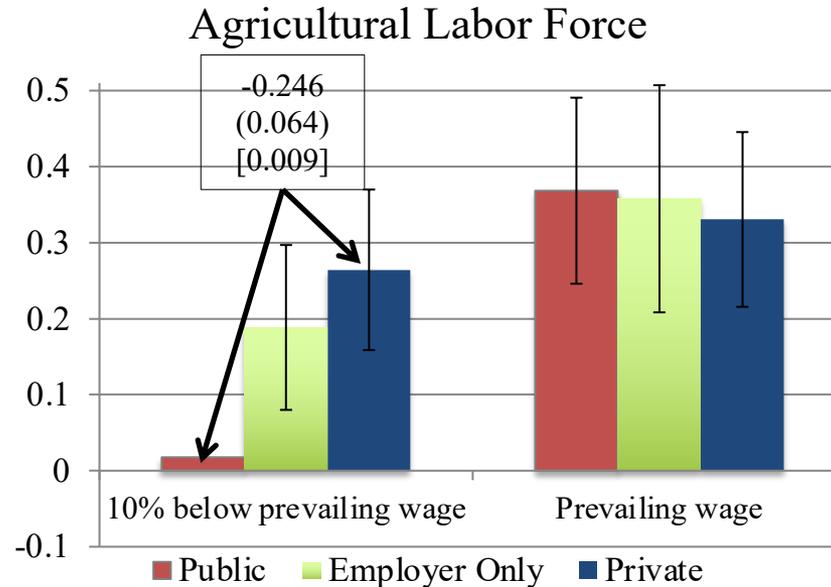
- At prevailing wage:
 - No difference in labor supply by observability (but large CIs)
 - Baseline: Mean involuntary unemployment rate of 42%

Breza, Kaur, Krishnaswamy (2023)



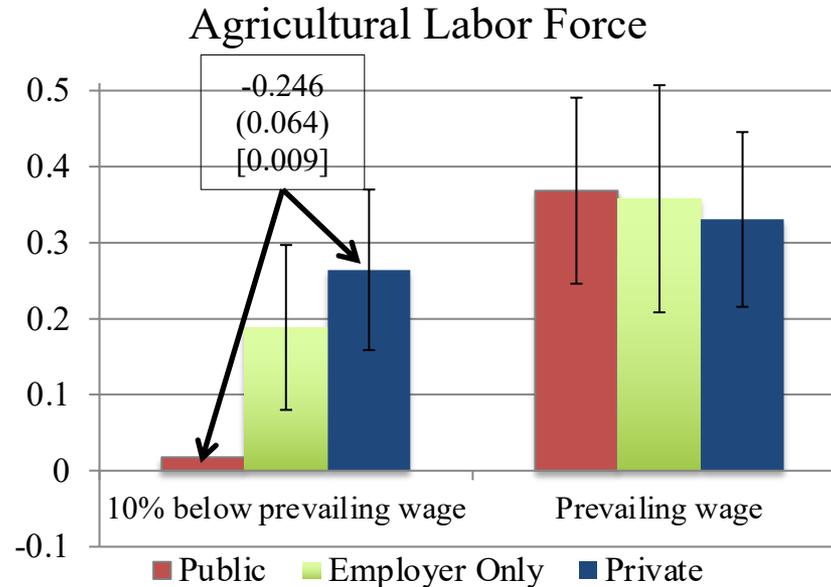
- Wage cut – private:
 - Take-up: 26% (agri workers)
 - Positive “elasticity”
 - Robust levels of labor supply below prevailing wage in private

Breza, Kaur, Krishnaswamy (2023)



- Wage cut – public:
 - Labor supply declines sharply
 - Agri labor force: 1.8% take-up in public
- Effect is not driven by employer presence
- Workers give up 26-49% of weekly agri wage earnings to avoid being seen as breaking norm

Breza, Kaur, Krishnaswamy (2023)



- Distortion on aggregate labor supply curve:
 - Private: positive supply at lower wages
 - Public: appears almost perfectly elastic at prevailing wage

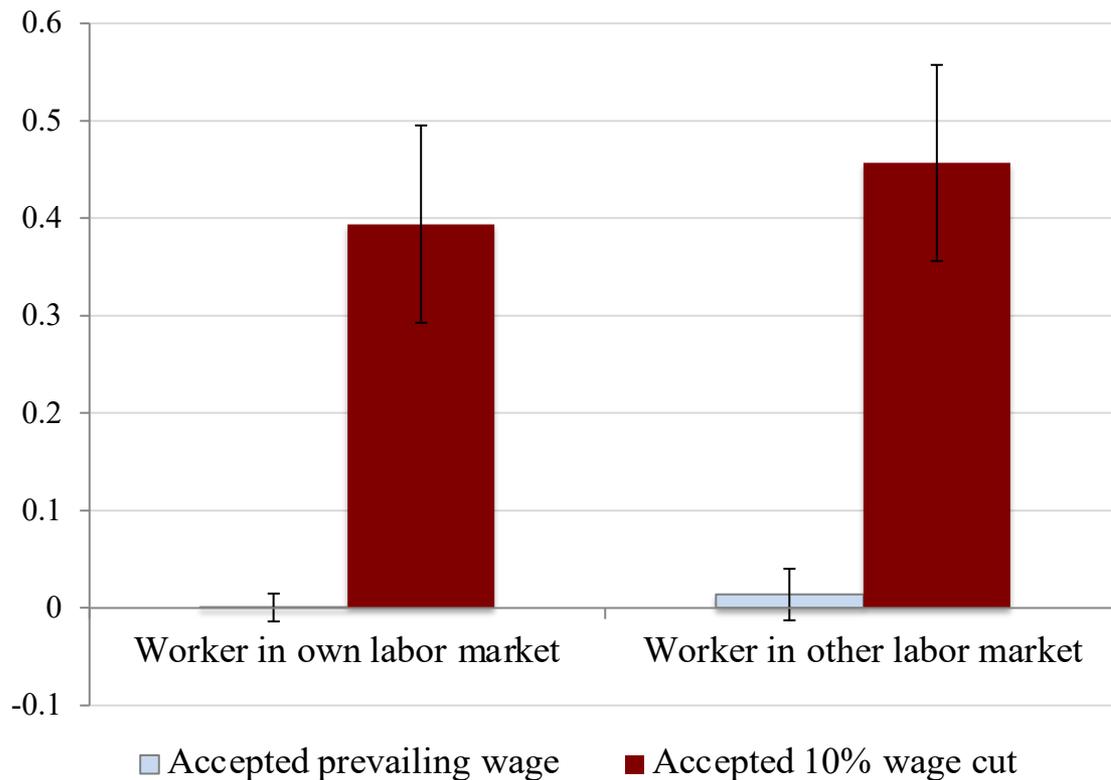
Breza, Kaur, Krishnaswamy (2023)

- Costly punishment game in different sample
- Workers willing to pay to take away money from those who accepted low wage



Breza, Kaur, Krishnaswamy (2023)

- Costly punishment game in different sample
- Workers willing to pay to take away money from those who accepted low wage
- Even if that worker is in a different labor market: internalization in moral terms



Bursztyn, González, Yanagizawa-Drott (2020)

- Perceived norm: unacceptable for women to work outside of household
- Field experiment in Saudi Arabia
- Use surveys to understand extent of disapprobation
- Men privately support women working outside the home, but mistakenly think other men don't
- Correct perceptions by giving information
- Wives more likely to apply for jobs outside home

Endogeneity of Norms

- Media interventions can affect norms and perceptions
- La Ferrara, Chong, Duryea (AEJ: Applied 2012)
 - Quasi-random variation in entry of telenovela producer in Brazil
 - Reduction in fertility among women, especially low-income women
- Jensen Oster (QJE)
 - Quasi-random roll-out cable TV availability in India

TABLE IV
EFFECT OF CABLE TELEVISION ON WOMEN'S STATUS, SARI DATA

Dependent variable:	Beating attitudes (1)	Son preference (2)	Autonomy (3)	Pregnant at survey time	
				2001–2003 (4)	1997–2003 (5)

A. Baseline effects of cable					
Explanatory variable					
Village has cable	-.1608** (.073)	-.0882** (.040)	.0260*** (.006)	-.0379*** (.013)	-.0678** (.028)
Dep. var. mean (SD)	1.70 (1.75)	0.57 (0.49)	0.64 (0.21)	0.072 (0.26)	0.13 (0.35)
Number of observations	7,014	1,699	7,014	7,014	11,488
R^2	.01	.01	.01	.01	.01

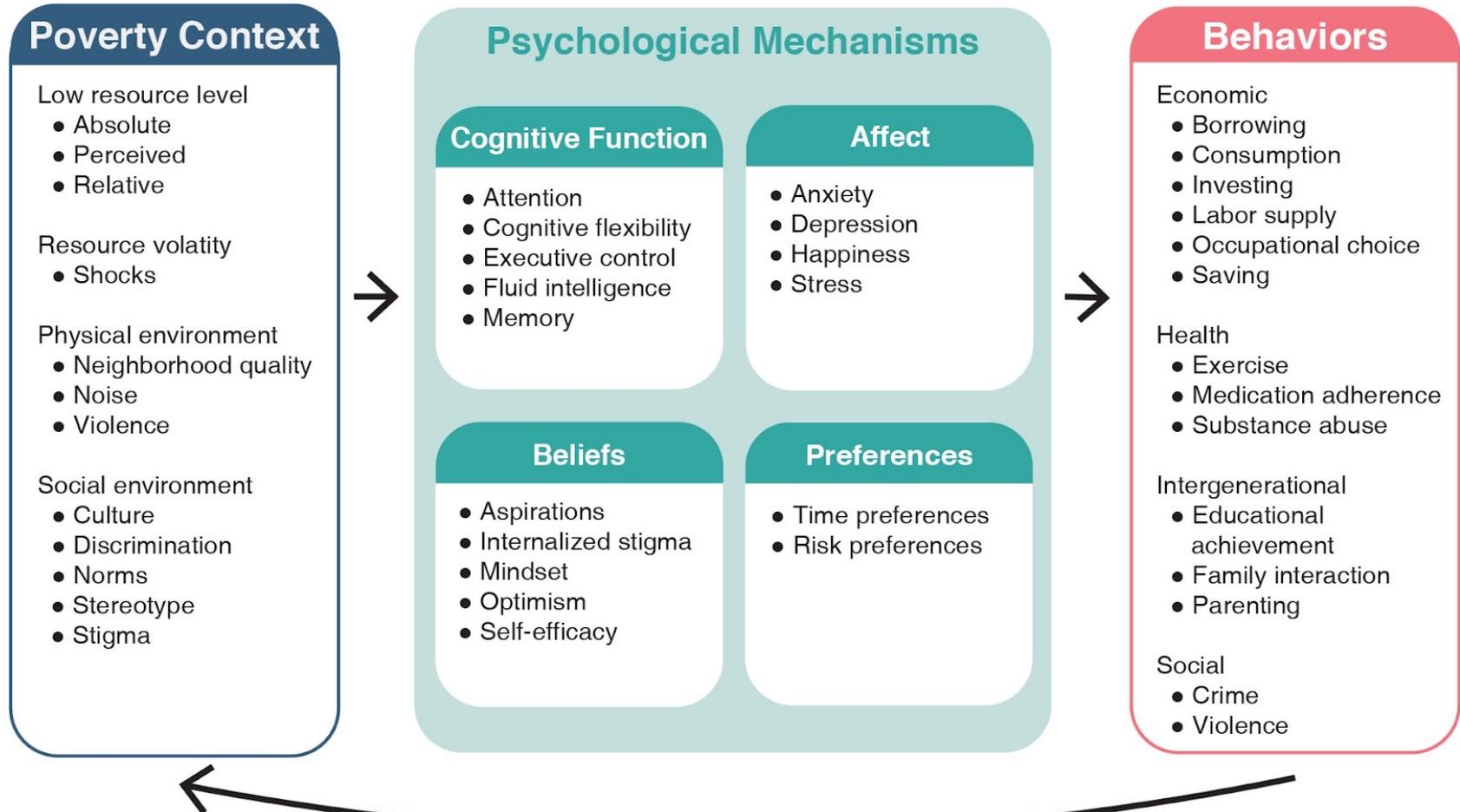
Rao (2019)

- Test of contact hypothesis:
 - Interactions with outgroup can reduce prejudice against it
- Exploit natural variation:
 - Reservations for low-caste students in elite Indian private schools
 - Variation in peer group: seat and study group assignment by first name
 - Allows for isolation of impact of inter-personal interactions
- Lab in the field measures as outcomes
- Exposed rich students become more prosocial (e.g. dictator games)
- Exposed rich students discriminate less (selection of partner for relay races for prize money)

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 - Cognitive function: scarcity, attentional capacity
 - Beliefs and aspirations
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Framework: Psychology of Poverty



Source: Park, Ho, Hallez, Kaur, Srinivasan, Zhao (2024)

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Scarcity: Hypothesis

- Mullainathan and Shafir, *Scarcity* (2013)
- Poverty → monetary concerns top of mind
 - “How will I make rent?”
 - “Should I skip this month’s utility bill?”
 - Compelling documentation in “Financial Diaries” (Morduch Schneider)
- Argument: this happens *automatically*
 - Study: Memory test (Shah et al.)

Sergeyev, Lian, Gorodnichenko (2023)

Q17a-Q17b: Over the past week, how many working hours were you distracted by your financial concerns?

Q17c: Over the past week, how many hours did you spend thinking about and dealing with issues related to your household's finances?

Q20: How much money do you typically spend per week in order to alleviate the stress driven by your financial concerns, which you would not spend if you were not financially stressed?

Table 2: Quantitative Measures of the Consequences of Financial Stress

	Obs	Mean	Median	Std	Min	Max	q25	q75
Hours worked	9,991	39.6	40	15.0	0	100	31	45
Working hours distracted	7,428	6.4	5	6.1	0	20	1	10
Hours on financial issues	2,517	7.7	6	5.9	0	20	3	11
Stress spending	9,979	211.2	100	265.3	0	1000	25	300

Scarcity: Hypothesis

Attention becomes hyper-focused on “threat”

Generates 2 opposing forces (Mullainathan and Shafir):

1. Tunneling

- Optimize well for the specific threat at hand
- (How to pay this week’s utility bill before lights get shut off?)
- Example: After buying groceries, poor people more likely to know price of milk

2. Bandwidth tax

- Less attentional resources available for other things
- Other concerns now (e.g. help children with homework)
- Future needs (will need to pay water bill next week)
- In literature: Most work is testing for this force

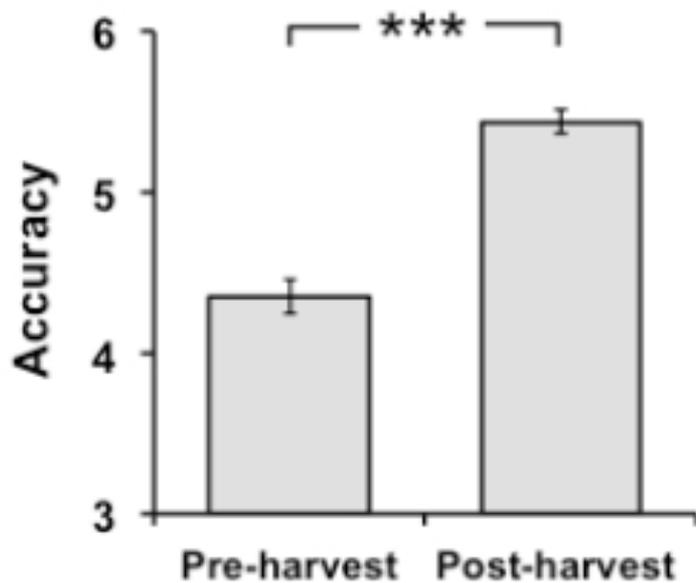
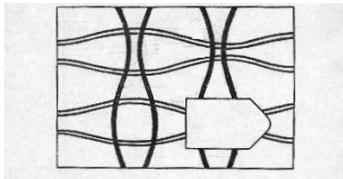
Mani Mullainathan Shafir Zhao (2013)



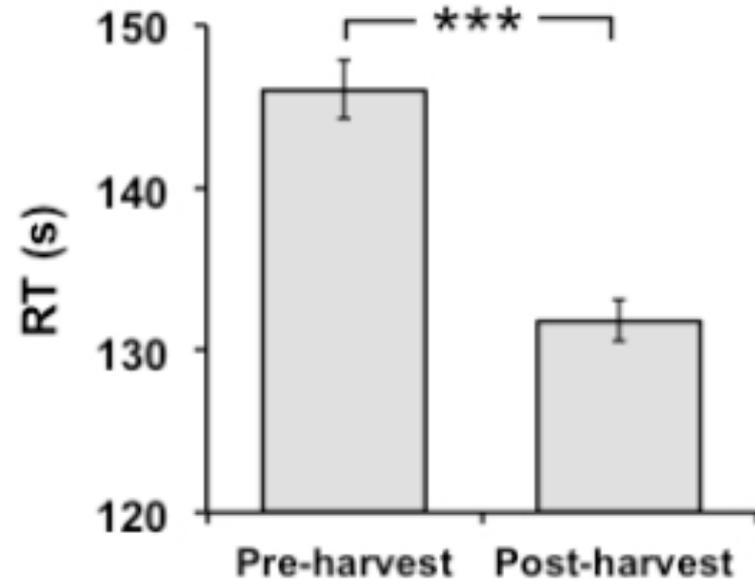
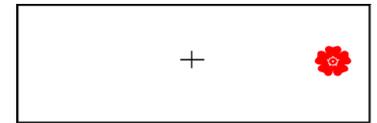
- Sugarcane farmers: quasi-random harvest date
- Same farmer is “richer” post harvest
- Measure cognition before vs. after
- Test for “bandwidth tax”: unincentivized test (no relevance for current threat)

Mani Mullainathan Shafir Zhao (2013)

Fluid Intelligence (Ravens)



Executive Function (Cognitive control task)



Duquennois (2022)

- Test questions for students
- Variation in whether same math question asked in money units
- Idea: Money may bring financial concerns top of mind – natural priming
- Real outcome: how do students do on subsequent questions?

Figure 3: Two Examples of Matched ASSISTments Questions

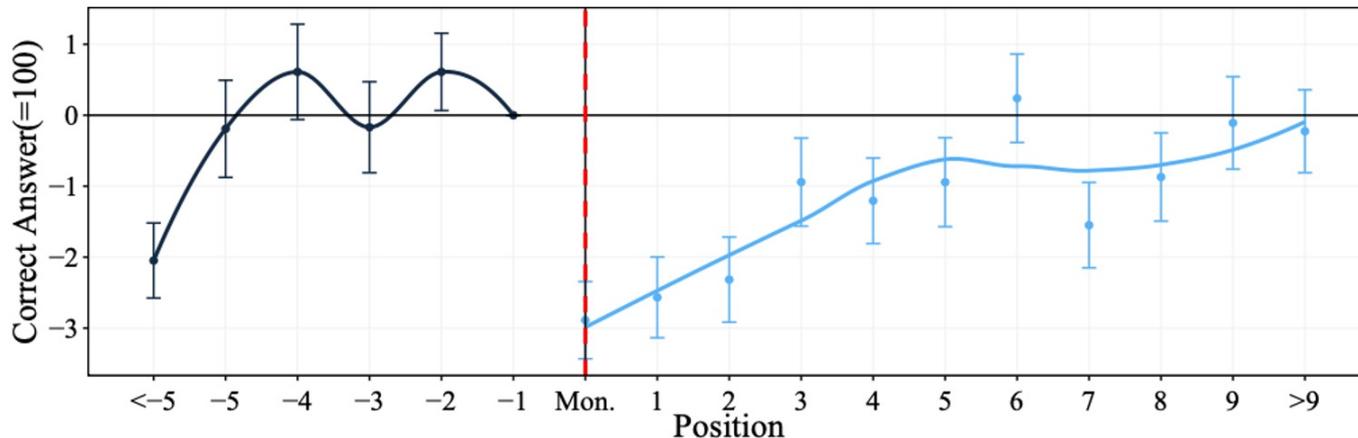
Kate went shopping with \$72 in her pocket, but she didn't want to spend it all. She decided to spend 25% of her money at most, and save the rest for later. How much was Kate willing to spend?

David has 840 cookies. He decides to give 96% of them to a friend as a birthday present. How many cookies does David give away?

Duquennois (2022)

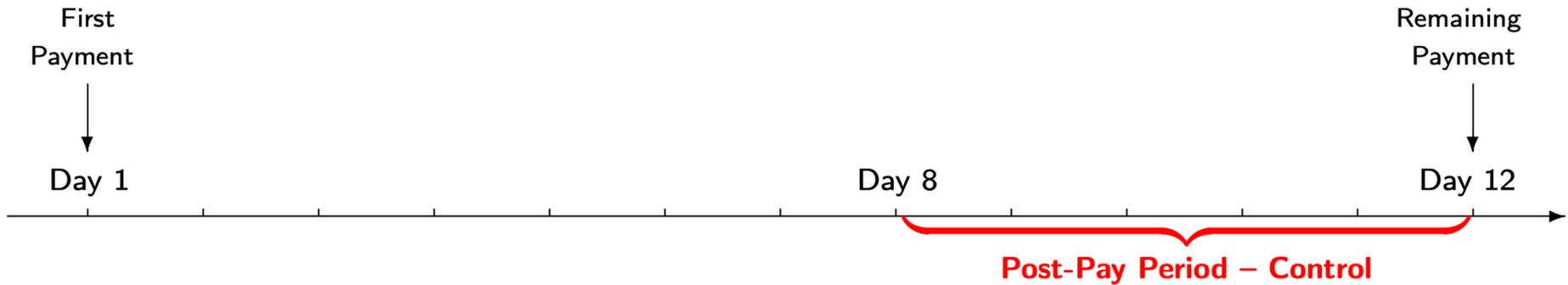
- TIMSS test: administered to 4th graders globally
- Some questions use money example, others don't
- Quasi-random variation in question order across students within class
- Question fixed effects throughout to control for difficulty

Figure 1: Differential Performance by Question Position Relative to Monetary Event for Below National Median Students in TIMSS

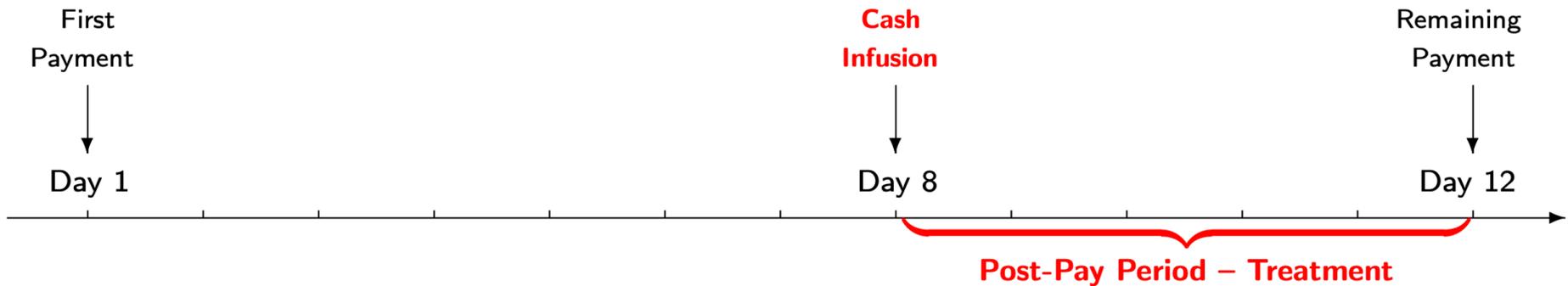


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CONTROL GROUP

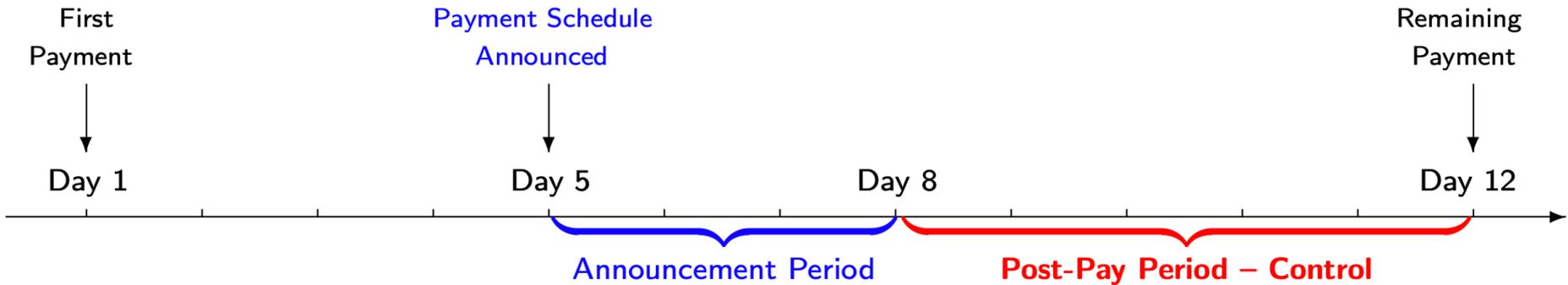


TREATMENT GROUP

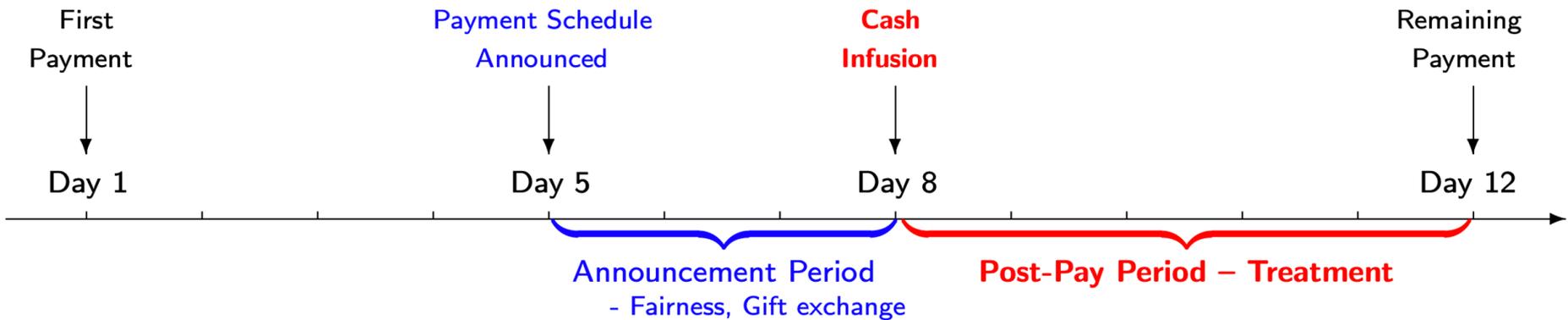


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CONTROL GROUP



TREATMENT GROUP



Kaur Mullainathan Schilbach Oh (2024)

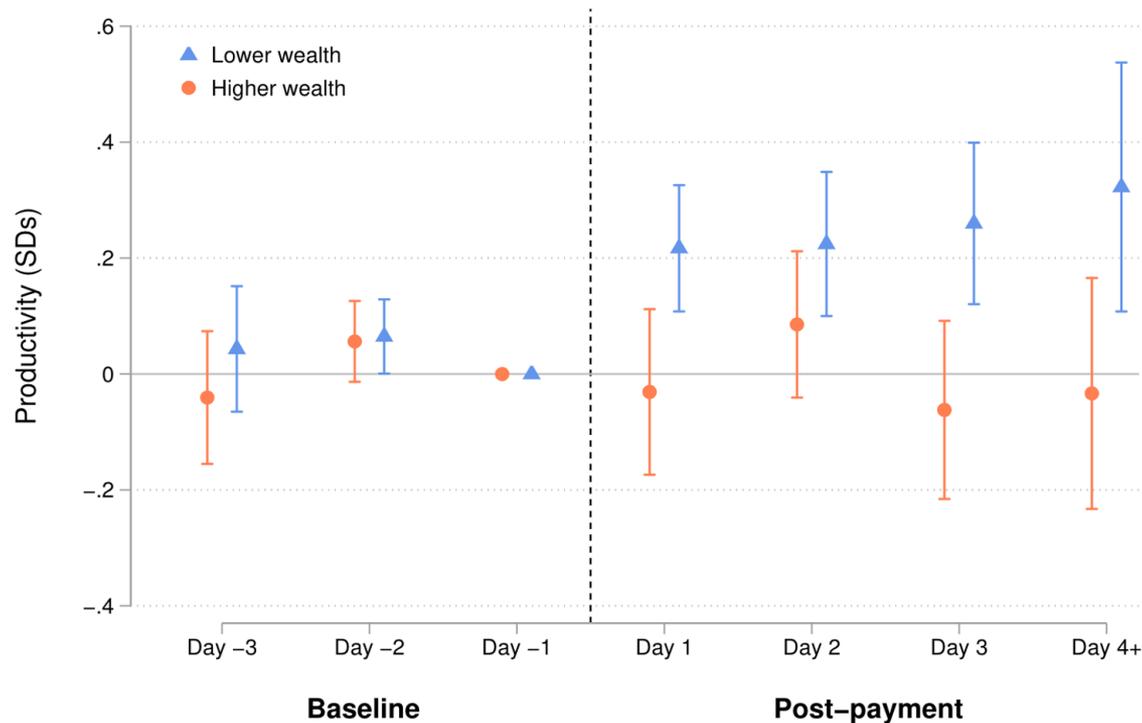
Table II: Effects on Expenditures

	Loans and Credits		Household expenditures					Total expenditures	
	Amount (1)	Any Payment (2)	Total (3)	Food (4)	Clothes (5)	HH essentials (6)	Medical (7)	Tobacco/ alcohol (8)	Amount (9)
PANEL A: Overall Impacts									
Cash	270.77*** (53.79)	0.40*** (0.04)	149.95*** (39.00)	68.61*** (24.42)	34.58** (16.88)	13.63*** (5.07)	13.18 (12.29)	-0.28 (4.56)	371.24*** (67.74)
Control group mean	94.20	0.18	372.37	270.36	14.31	7.92	31.55	34.01	568.08
N: workers	402	402	402	402	402	402	402	402	402

Drastic immediate increase in expenditures (within 3 days of cash receipt):

- 40 p.p. more likely to pay off a loan ($p < 0.001$)
- 42% increase in HH items ($p < 0.001$) (E.g. food, clothing, soap, fuel)
- Majority of effects on same evening as when cash is disbursed

Kaur Mullainathan Schilbach Oh (2024)



- Across all workers: cash infusion increases output per hour by 7.1% ($p=0.047$)
- Among poorer workers (below median wealth): output per hour increases by 13.1% ($p=0.007$)

Kaur Mullainathan Schilbach Oh (2024)

Examine *how* workers produce →
Insight into what has changed



Making a leaf plate

- Stitch to form circle (cannot be too small)
- No holes or gaps, leaf stems must not be visible
- Each leaf is irregular shape → easy to make mistakes

3 measures of attentiveness in production

- Number of double holes (undoing a stitch)
- Number of leaves; number of stitches
- (Collection unknown to workers)

- Average effects: treated workers increase attentiveness by 0.08 SDs ($p=0.031$)
- Among poorer workers (below median): attentiveness improves by 0.23 SD ($p=0.008$)

Replication & Testing Challenges

- Variation: often tested using “Priming”
 - Bring specific idea (thoughts of money) top of mind; measure reaction (minutes)
 - Serious debate about robustness, replicability
- Measurement of outcomes
 - Cognitive tests (Ravens) may not be not robust, esp poor countries
 - Floor or ceiling effects (need to look at levels, not SDs)
 - Makes it difficult to conduct test that nails mechanism
- Ex ante predictions
 - Objective vs. subjective states of scarcity? Challenge with manipulations
 - Expect tunneling or bandwidth tax? Challenge with “real” outcomes
- Replication debates:
 - Carvalho et al. (2016) and Mani et al. (2020)
 - O’Donnell et al. (2021) and Shah et al. (2023)
- Regardless, magnitudes and mechanisms remain unclear

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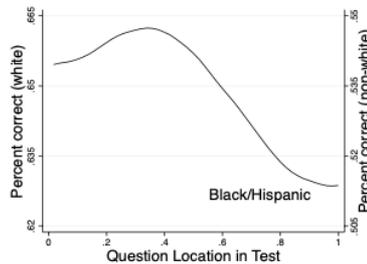
Brown, Kaur, Schofield (QJE 2024)

- Long-held views on how schooling may affect cognition
 1. Learning academic content and skills (e.g. literacy, problem solving)
 2. Capacity to engage in cognition itself (e.g. undertake effortful thinking)
- 2nd possibility: More expansive view of how education shapes general human capital
- Specific feature of schooling: Effortful thinking for continuous stretches of time
- Investigate effects on one particular mental capacity: Cognitive endurance

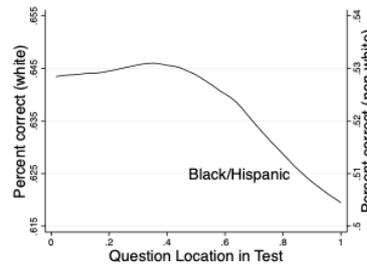
Brown, Kaur, Schofield (QJE 2024)

Motivation: Large declines in performance over time

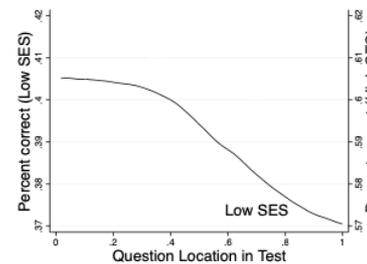
TIMSS Exam



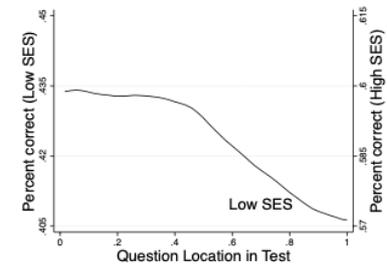
(a) Math (US)



(b) Science (US)



(c) Math (global)



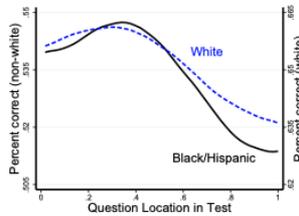
(d) Science (global)

- TIMSS: Administered to 4th graders during school day (36 mins per subject)
- Question order randomized, ample time to finish test (< 2% of students don't finish)
- Performance decline across subjects: 12% globally, 6% in US

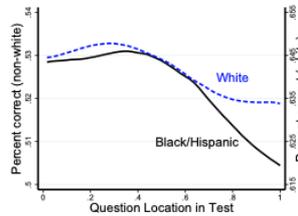
Brown, Kaur, Schofield (QJE 2024)

Systematic SES heterogeneity across tests and subjects

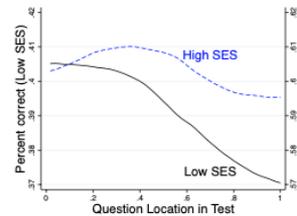
TIMSS Exam



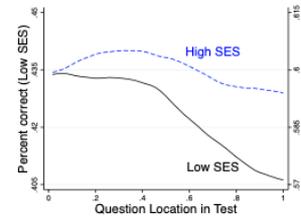
(a) Maths (US)



(b) Science (US)

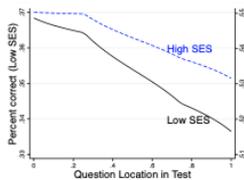


(c) Maths (global)

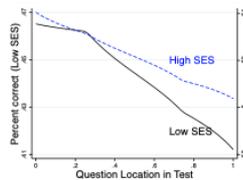


(d) Science (global)

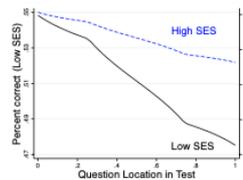
PISA Exam



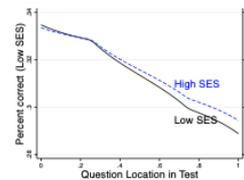
(e) Maths (US)



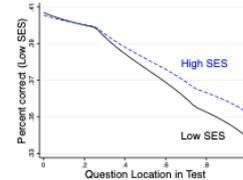
(f) Science (US)



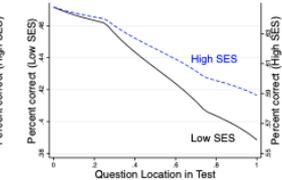
(g) Reading (US)



(h) Maths (global)



(i) Science (global)



(j) Reading (global)

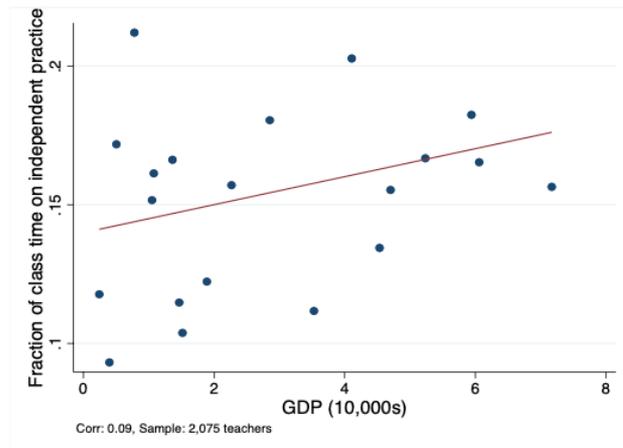
- Large differences: 30-200% more decline among low SES students
- Accounts for 10% of test score gap between Blacks/Hispanics and Whites in the U.S.

Brown, Kaur, Schofield (QJE 2024)

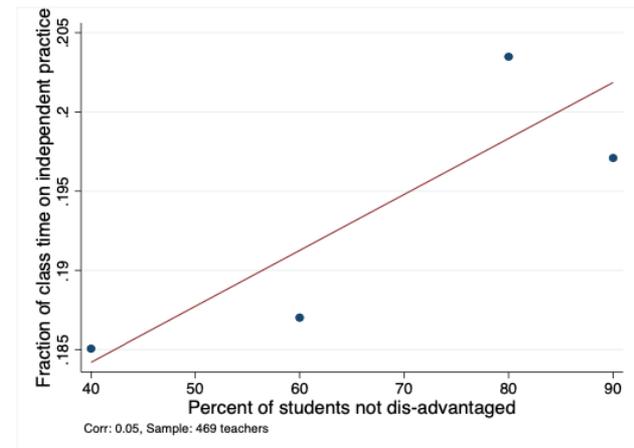
Motivation: Does schooling have relevance for attentional practice?

- Psychology literature: "train" sustained attention by practicing focus
- TIMSS teacher time use survey: do students "practice material on their own"?

Global Sample



US Sample



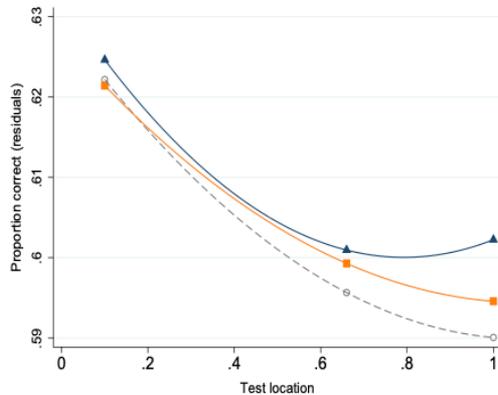
- High income students spend 40% more time in independent practice

Brown, Kaur, Schofield (QJE 2024)

- RCT with private schools in UP, India
- Randomize 8-10 hours of cognitive practice in 20 mins increments
 - Math practice (mimics what good schooling does)
 - Games practice (stronger test: attentional practice, devoid of all content)

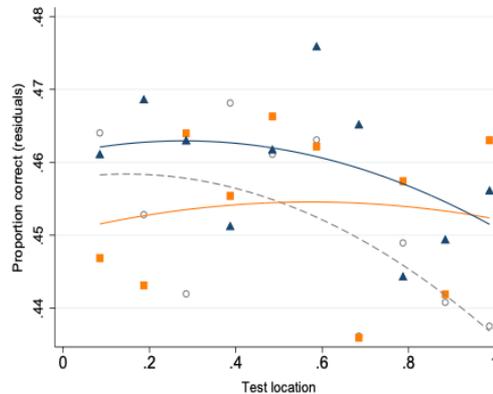
Performance declines

Listening



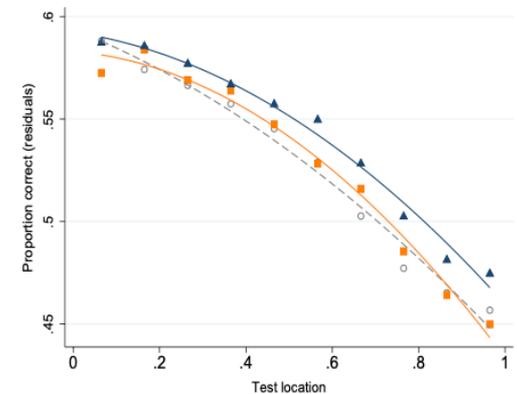
Decline reduction: 17% (pval 0.041)
Quintile 1 effect: -0.0013 (pval 0.845)

Ravens Matrices



Decline reduction: 33% (pval 0.031)
Quintile 1 effect: -0.0050 (pval 0.617)

Math



Decline reduction: 14% (pval 0.014)
Quintile 1 effect: -0.0088 (pval 0.333)

○ Control ■ Games Practice ▲ Math Practice

Brown, Kaur, Schofield (QJE 2024)

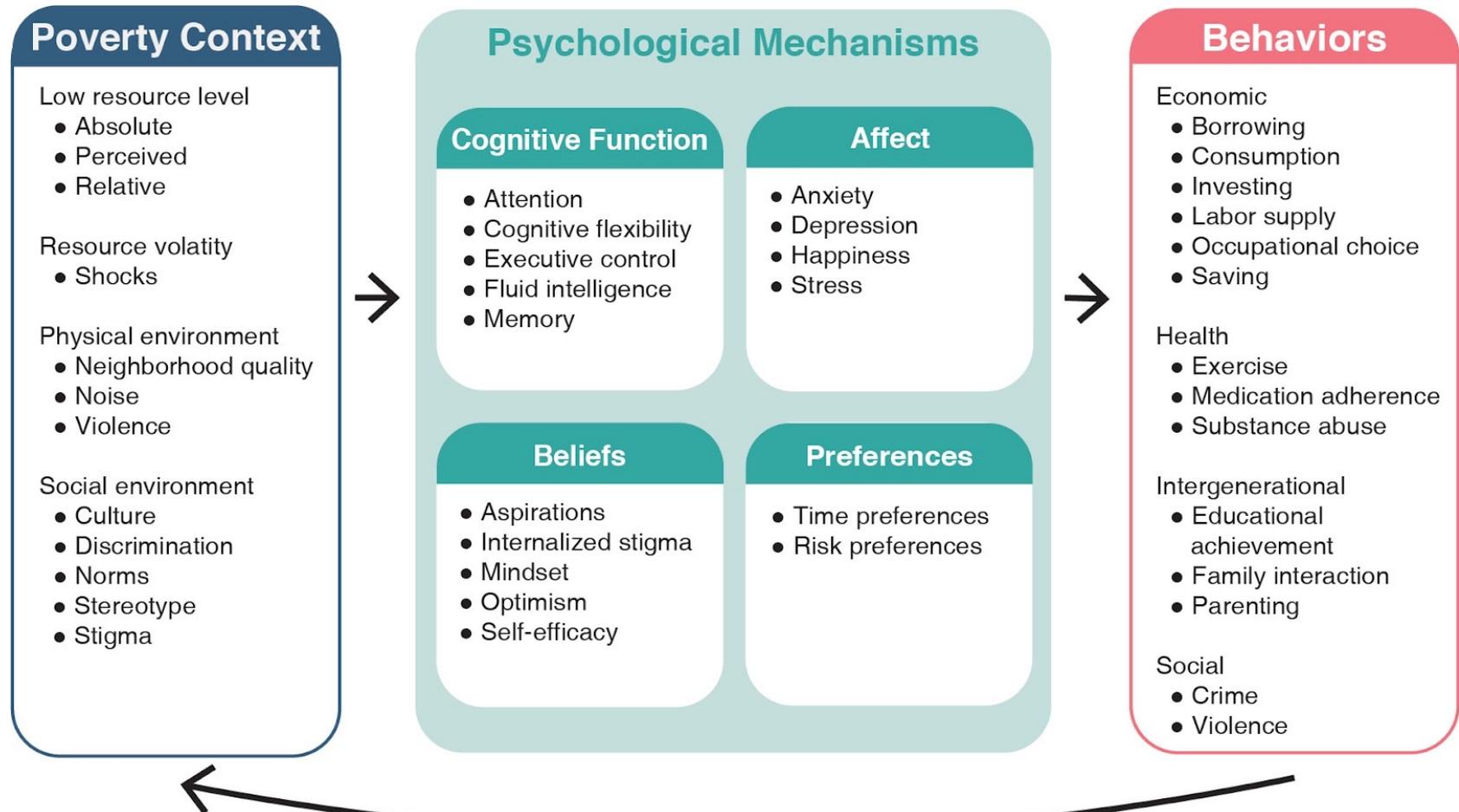
- Substantive test score gains on unrelated subjects (recall 8-10 hours)
- Spending time in effortful thinking (devoid of subject content) improves ability to accumulate traditional human capital

	Dependent Variable: Z-score of Student's Grades				
<i>Subject:</i>	All (1)	Non-Math (2)	Hindi (3)	English (4)	Math (5)
Panel A: Pooled Treatment Arms					
Cognitive Practice	0.0897** (0.0348)	0.0923** (0.0386)	0.0989** (0.0393)	0.0919** (0.0407)	0.0849** (0.0377)
Panel B: Disaggregated Treatment Arms					
Math Practice	0.0916** (0.0402)	0.0926** (0.0445)	0.0962** (0.0452)	0.0978** (0.0471)	0.0902** (0.0437)
Games Practice	0.0877** (0.0399)	0.0920** (0.0444)	0.1015** (0.0453)	0.0860* (0.0469)	0.0795* (0.0428)
p-value: Math Practice = Games Practice	0.9232	0.9899	0.9063	0.8013	0.7999
Observations	11320	7539	3780	3759	3781

Outline

- Introduction
- Psychological forces in developing country settings
 - Self control
 - Cognition and attention
 - Social preferences and norms
- Psychology of poverty
 - Cognitive function
 - **Beliefs and aspirations**
 - Mental health

Framework: Psychology of Poverty



Source: Park, Ho, Hallez, Kaur, Srinivasan, Zhao (2024)

Aspirations

- Disadvantaged may lack opportunities to learn “capacity to aspire” (Appadurai 2013)
- Can lead to aspirations-based poverty trap (Dalton et al. 2016, Genicot Ray 2017)
- Orkin et al. (2023): 80-minute aspirations and planning workshop
 - 2 videos about fictional female role models
 - Workshop: set aspiration, define concrete steps, plan for obstacles

Table 2: Treatment Effects on Economic Behaviour

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Index Components						
	Economic Index	Labour Supplied (Days)	Inputs & Hired Labour	Education Expenditure	Revenue	Non-Land Assets	Consumption Expenditure
Asp&Plan	0.112*** (0.035) [.]	26.8** (11.6) [0.069]	230** (100) [0.069]	22.2 (27.7) [0.127]	260* (155) [0.069]	98** (46) [0.069]	142* (74) [0.069]
Cash	0.234*** (0.039) [.]	27.2** (12.4) [0.012]	451*** (103) [0.001]	44.8 (30.4) [0.036]	465*** (159) [0.003]	406*** (50) [0.001]	322*** (77) [0.001]
Combined	0.258*** (0.063) [.]	9.0 (11.5) [0.096]	653*** (214) [0.004]	126.4*** (31.5) [0.001]	546* (303) [0.030]	352*** (47) [0.001]	232** (95) [0.012]

- See also Lybert Wyddick (2018)

Self Efficacy

- Self-efficacy: belief in my ability to reach my goals
- (Distinct from, but related to, locus of control: belief that I, as opposed to external forces, have control over the outcome of events in my life)
- McKelway (2023)
 - Experiment with married women in rural UP, India
 - Randomize self-efficacy intervention: Group meetings in 9 sessions over 4 weeks
 - Randomize promotional video shown to husbands about local women’s job

Table 2: Effects in the Main Experiment

	GSE Index (1)	Working (=1) (2)	Econ Index (3)
GSE Only	0.115** (0.055)	0.054** (0.026)	0.145*** (0.047)
Promo Only	-0.017 (0.059)	0.044* (0.024)	0.074* (0.043)
Both	0.103* (0.053)	0.009 (0.026)	0.079* (0.044)

Self Efficacy

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 - Look at effects in reverse direction: randomize jobs among women applicants

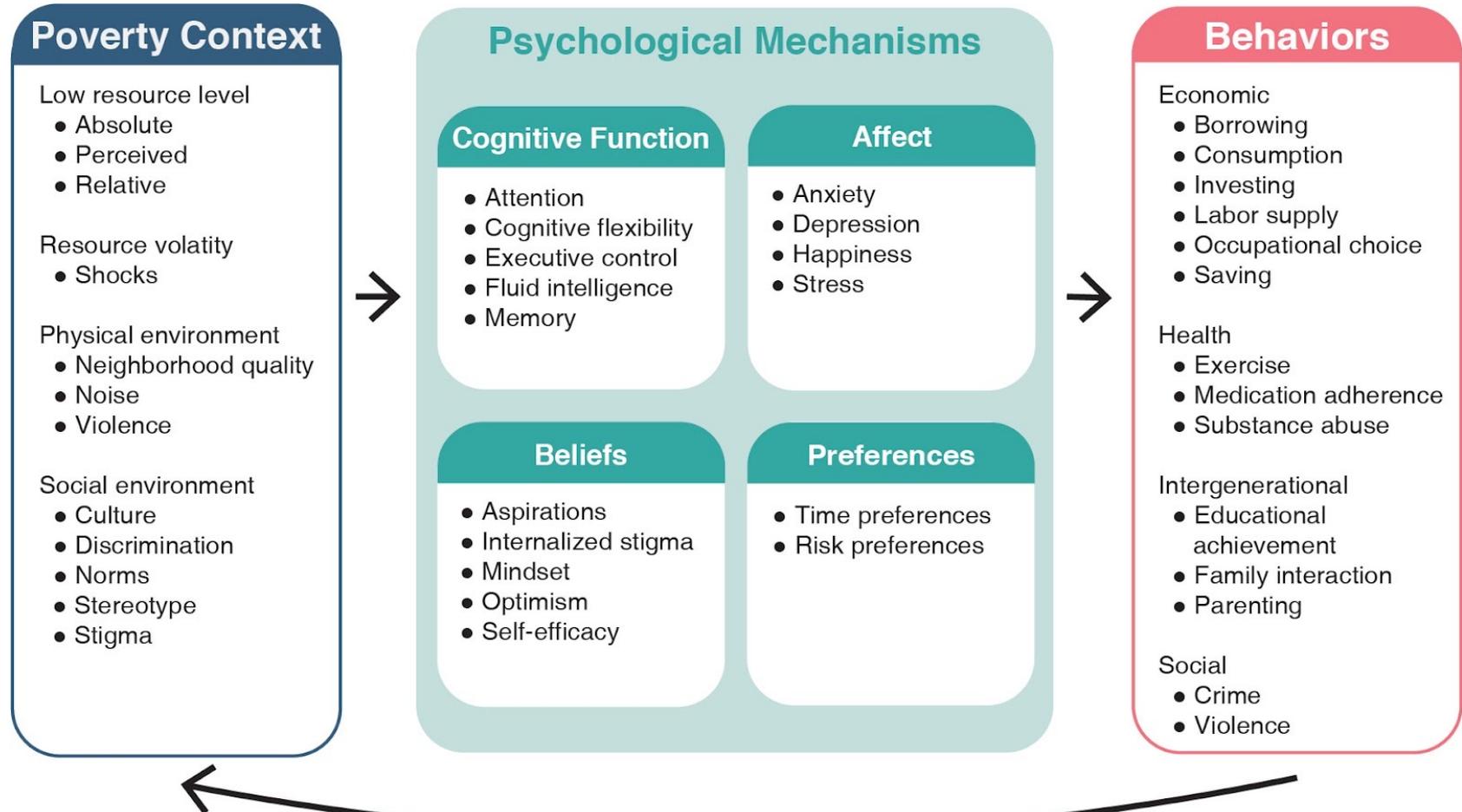
Table 3: Effects in the Job Offer Experiment

	GSE Index		Participated (=1)	
	(1)	(2)	(3)	(4)
Job Offer	0.146** (0.060)	0.152** (0.071)	0.086 (0.079)	0.112 (0.094)
Job Offer Baseline Value	Yes	Yes	N/A	N/A
Strata (Village) FE	Yes	Yes	Yes	Yes
Weighted	No	Yes	No	Yes
Control Mean	0.305	0.346	0.343	0.300
N Women	237	237	237	237

Self Efficacy

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- (Distinct from, but related to, locus of control: belief that I, as opposed to external forces, have control over the outcome of events in my life)
- McKelway (2023)
 - Experiment with married women in rural UP, India
 - Randomize self-efficacy intervention: Group meetings in 9 sessions over 4 weeks
 - Randomize promotional video shown to husbands about local women's job
 - Look at effects in reverse direction: randomize jobs among women applicants
- Jalnidh Kaur (2024)
 - Target teachers' self-beliefs: relevance of their effort for student outcomes
 - Large gains in teacher effort and test performance
- Other self-beliefs mechanisms: grit (Alan et al. 2019), mindset (Campos et al.2017), future visualization (Ashraf et al. 2022)

Framework: Psychology of Poverty



Source: Park, Ho, Hallez, Kaur, Srinivasan, Zhao (2024)

Mental health

- Depression is world's leading cause of morbidity
- Low income people more likely to be depressed than rich people
- Causal? Some evidence from impact of cash transfers

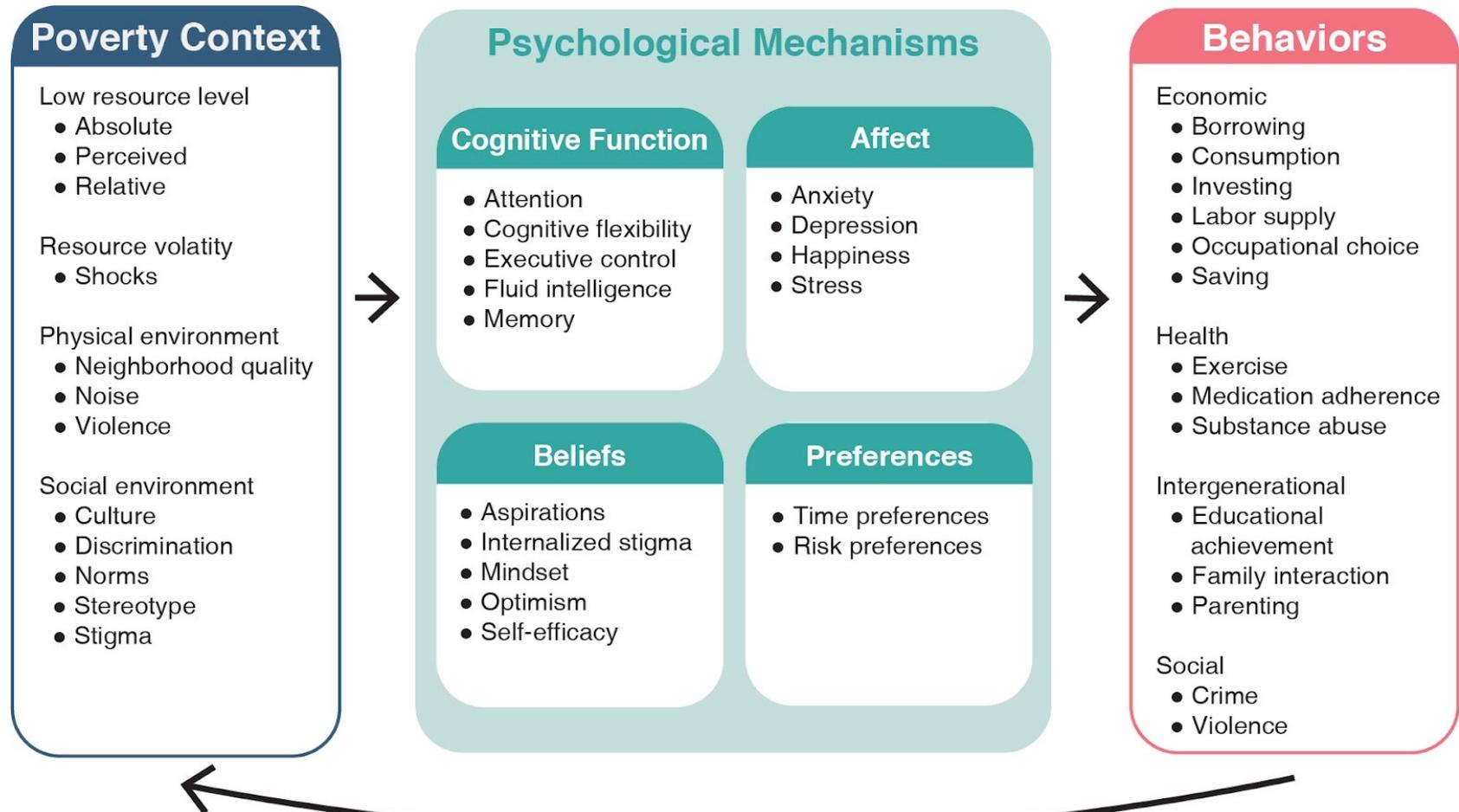
TREATMENT EFFECTS: INDEX VARIABLES

	(1)	(2)	(3)	(4)	(5)	(6)
	Control mean (std. dev.)	Treatment effect	Female recipient	Monthly transfer	Large transfer	<i>N</i>
Value of nonland assets (US\$)	494.80 (415.32)	301.51*** (27.25) [0.00]***	-79.46 (50.38) [0.52]	-91.85** (45.92) [0.28]	279.18*** (49.09) [0.00]***	940
Nondurable expenditure (US\$)	157.61 (82.18)	35.66*** (5.85) [0.00]***	-2.00 (10.28) [0.92]	-4.20 (10.71) [0.99]	21.25** (10.49) [0.22]	940
Total revenue, monthly (US\$)	48.98 (90.52)	16.15*** (5.88) [0.02]**	5.41 (10.61) [0.92]	16.33 (11.07) [0.59]	-2.44 (8.87) [0.84]	940
Food security index	0.00 (1.00)	0.26*** (0.06) [0.00]***	0.06 (0.09) [0.92]	0.26** (0.11) [0.13]	0.18* (0.10) [0.25]	940
Health index	0.00 (1.00)	-0.03 (0.06) [0.82]	0.10 (0.09) [0.72]	0.01 (0.10) [0.99]	-0.09 (0.09) [0.72]	940
Education index	0.00 (1.00)	0.08 (0.06) [0.43]	0.06 (0.09) [0.92]	-0.05 (0.10) [0.99]	0.05 (0.09) [0.84]	823
Psychological well- being index	0.00 (1.00)	0.26*** (0.05) [0.00]***	0.14* (0.08) [0.43]	0.01 (0.08) [0.99]	0.26*** (0.08) [0.00]***	1,474

Mental health

- Depression is world's leading cause of morbidity
- Low income people more likely to be depressed than rich people
- May constrain cognition, behavior
- See Ridley, Rao, Schilbach and Vikram Patel (Science 2020) for review
- Baranov (AER 2020): psychotherapy to treat postpartum depression in Pakistan
 - Higher employment, earnings, investments in children 7 years after the intervention
- Lund et al. (2019): a meta-analysis of 31 RCTs in developing countries
 - Treatments for mental illness generally increase education and labor supply
 - Esp. when psychosocial combined w/ pharmacological or economic component
 - But plenty of mixed evidence (e.g. Bhat et al. 2022, Bennett)
 - Note: Core measurement challenge
- Promising, scalable interventions: Group therapy by trained layperson (Patel et al.)
 - Includes cognitive behavioral therapy

Framework: Psychology of Poverty



Source: Park, Ho, Hallez, Kaur, Srinivasan, Zhao (2024)