Psychology of Poverty

Michal Bauer

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Motivation

Broad question: Are individual characteristics, such as time preference, cognitive skills and productivity

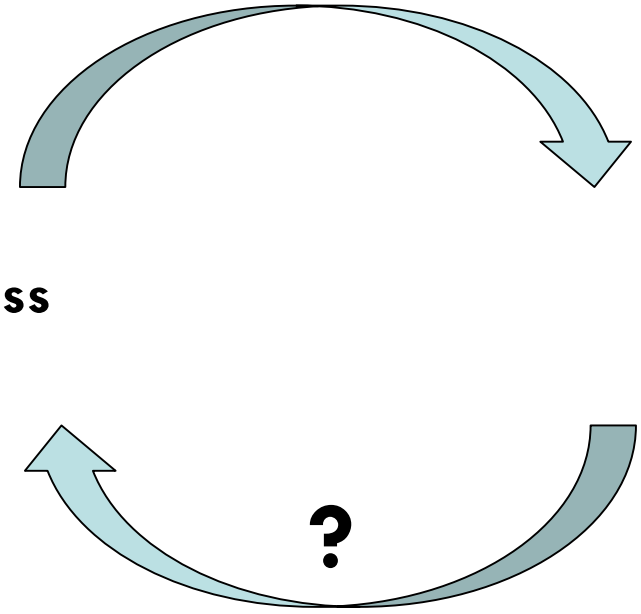
- stable traits (**standard economics**)?
- systematically shaped by the decision context via limited cognition and emotions (**behavioral economics**)?

Fundamental application: Psychology of poverty

- Does the environment of poverty and general scarcity affects people's decision-making through psychological channels?
- Intersection of behavioral economics and development economics

➢ Why important? Can help explaining persistence of inequality and poverty

Financial distress and psychological distress

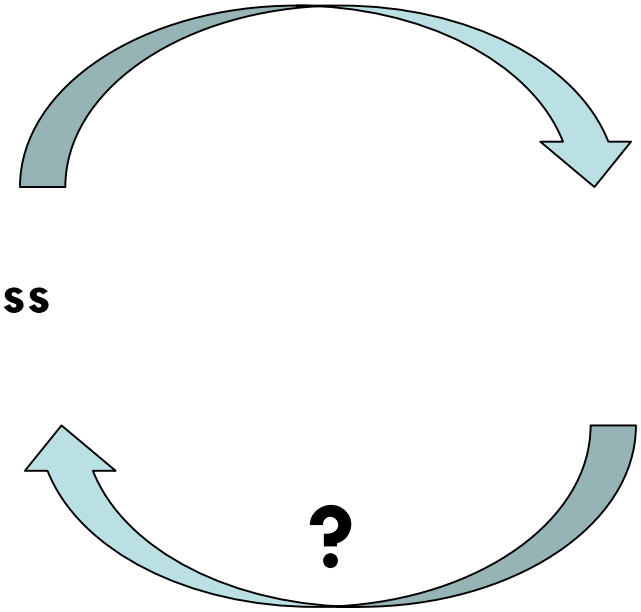


Does financial distress and psychological distress re-inforce each other?

Does psychological distress affect economic preferences and behavior?

Can it lead to a poverty trap?

Financial distress and psychological distress



How can psychological distress lead to financial distress?

1. Psychological distress consumes mental capacity.
2. Mental burden reduces attention, cognitive skills, self-control, etc.
3. This can lead to economically sub-optimum decision-making.

Empirical tests

Field experiments
India, Uganda, USA

Financial distress

(Sub-optimumal) economic decision-making

- Ability to solve new problems (Mani, Mullainathan, Shafir 2013)
- Self-control and time preferences: savings, health prevention, alcohol consumption (Bartos Bauer, Chytilová, Levely 2021)
- Productivity, planning (Kaur, Mullainathan, Oh, Schilabach 2021)

Poverty Undermines Cognitive Skills

Question: "Can similar financial problems have greater cognitive effects for the poor than the rich?"

Study 1: US, shopping center, activation of ideas on financial problems (priming)

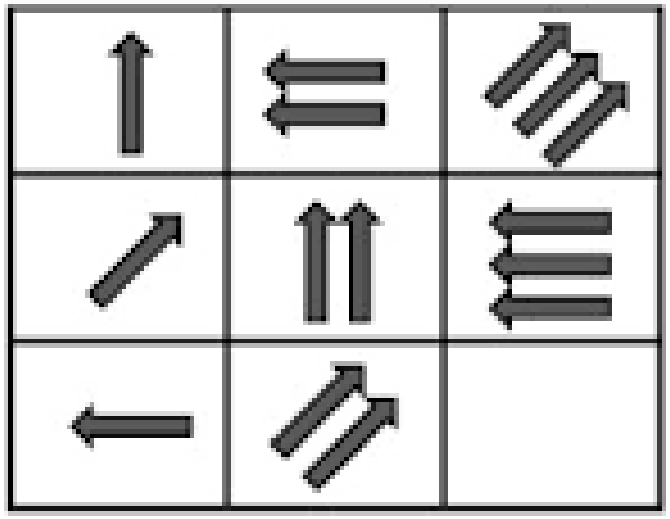
Two randomly selected groups:

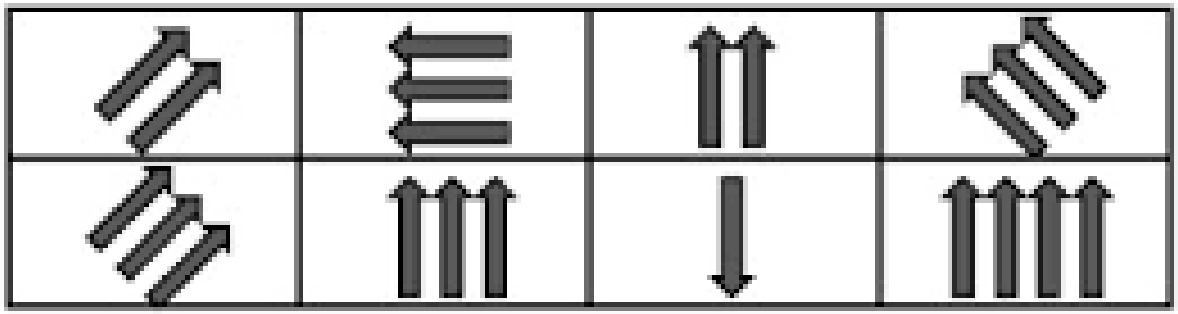
- Treatment of scenarios describing the significant negative shock in income / expenditure
- Control of scenarios describing a small negative shock in income/expenditure

Mani, A., Mullainathan, S., Shafir, E. & Zhao, J. Poverty impedes cognitive function. Science 341, 976 ©80 (2013).

Poverty Undermines Cognitive Skills

Raven matrix - widely used test of intelligence and logic





Poverty Undermines Cognitive Skills

Spatial compatibility test =- ability to control intuition

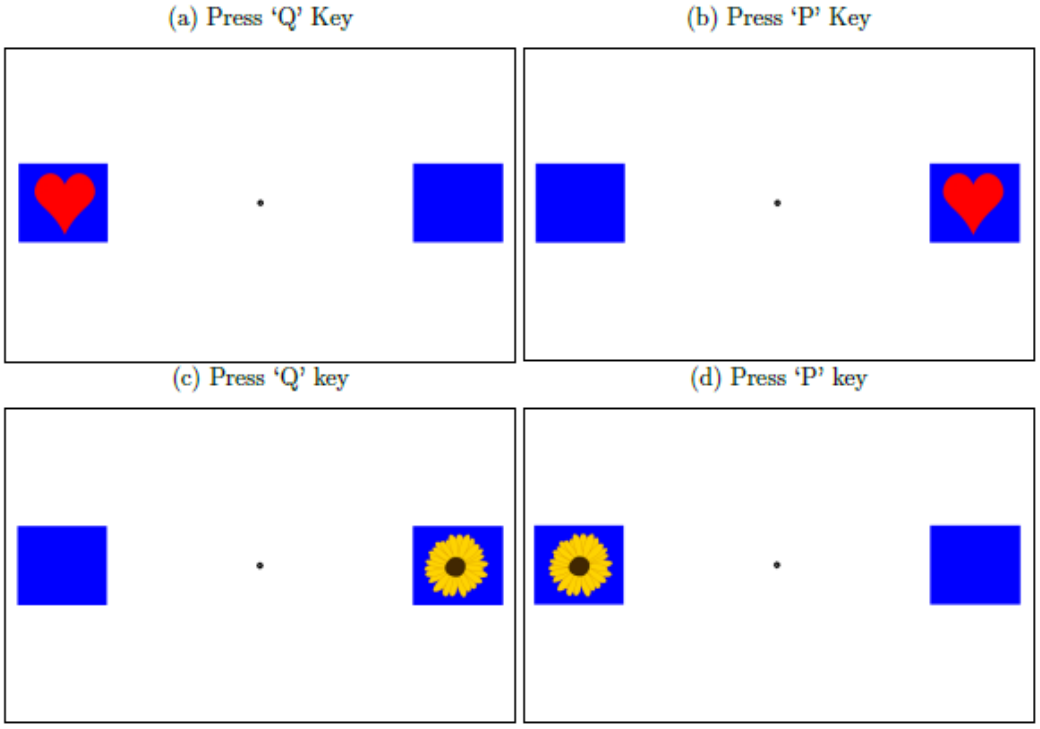


Figure C19: Hearts and Flowers Possible Stimuli and Responses

Note: The figure shows the four possible stimuli and responses for the hearts and flowers test. The test is designed to assess inhibitory control. Respondents see a series of hearts and flowers appear on the blocks. When a flower appears, the respondent must press the key on the opposite side of the keyboard. When a heart appears, the respondent must press the key on the same side of the keyboard.

Poverty Undermining Cognitive Skills

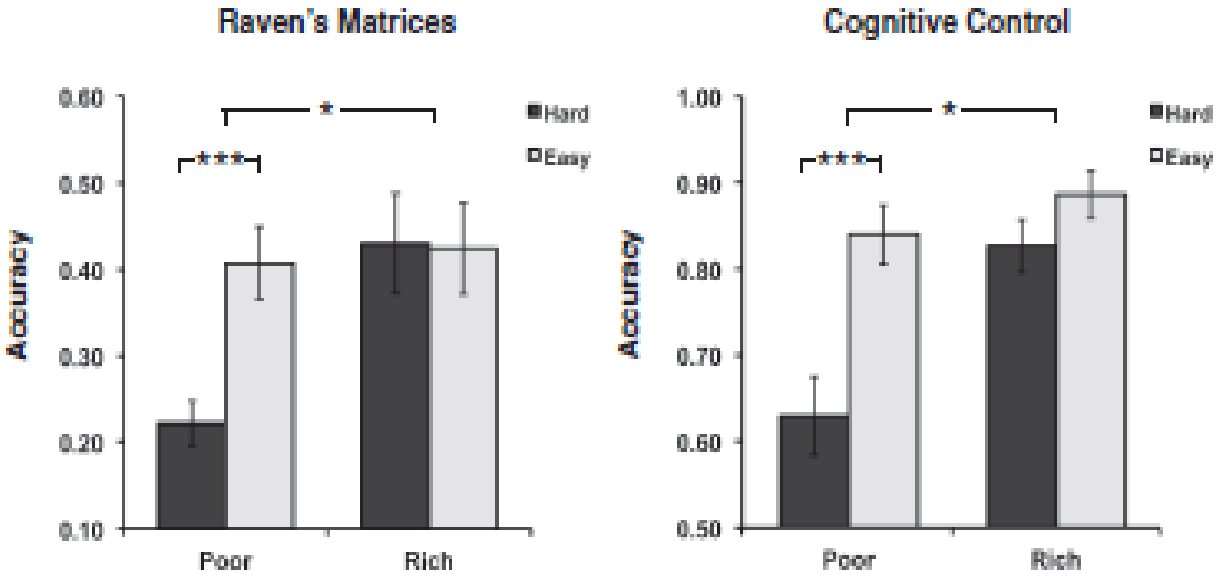


Fig. 2. Accuracy on the Raven's matrices and the cognitive control tasks in the hard and easy conditions, for the poor and the rich participants, when incentives were provided in experiment 3. (Left) Performance on Raven's Matrices task. **(Right)** Performance on cognitive control task. Error bars reflect ±1 SEM. Top horizontal bars show two-way interaction (poor versus rich × hard versus easy). $*P < 0.05$, $***P < 0.001$.

Mani, A., Mullainathan, S., Shafir, E. & Zhao, J. Poverty impedes cognitive function. Science 341, 976 ©80 (2013).

Poverty Undermines Cognitive Skills

Study 2: India, farmers, very seasonal income

- Cognitive skills are lower before harvest (little money, debts, etc.) than after harvest

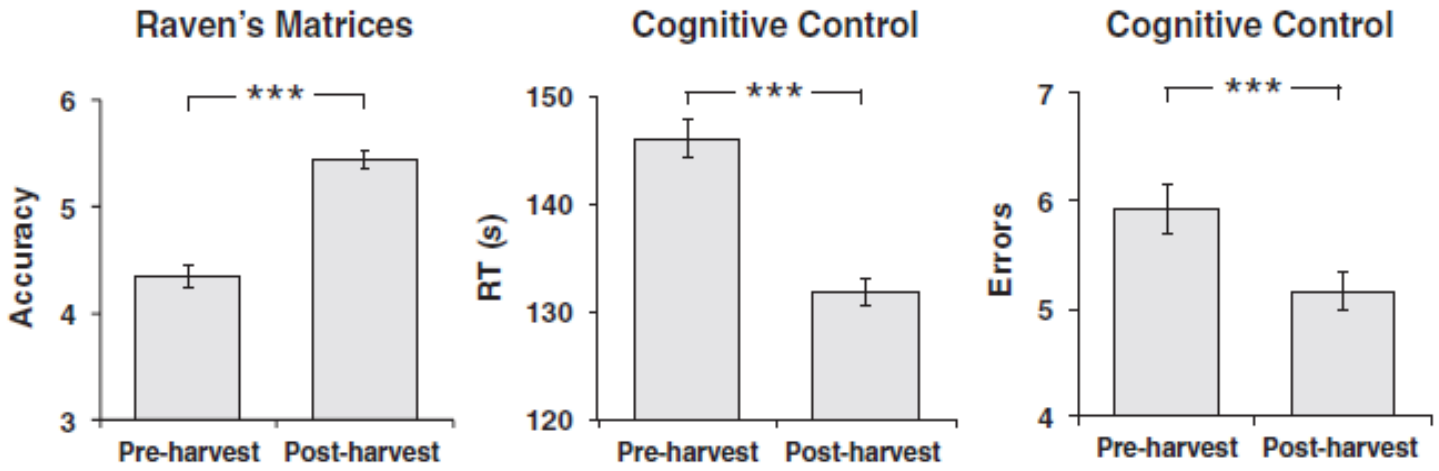


Fig. 4. Accuracy on the Raven's matrices and the cognitive control tasks for pre-harvest and post-harvest farmers in the field study. (**Left**) Performance on Raven's matrices task. (**Middle** and **Right**) Stroop task (measuring cognitive control) response times (RT) and error rates, respectively; error bars reflect ±1 SEM. Top horizontal bars show test for main effect of pre- versus post-harvest (***$P < 0.001$).

Mani, A., Mullainathan, S., Shafir, E. & Zhao, J. Poverty impedes cognitive function. Science 341, 976 ©80 (2013).

Thinking about economic problems amplifies the preference to pospone work and consume entertainment

Uganda, 300 farmers, income < $1/day

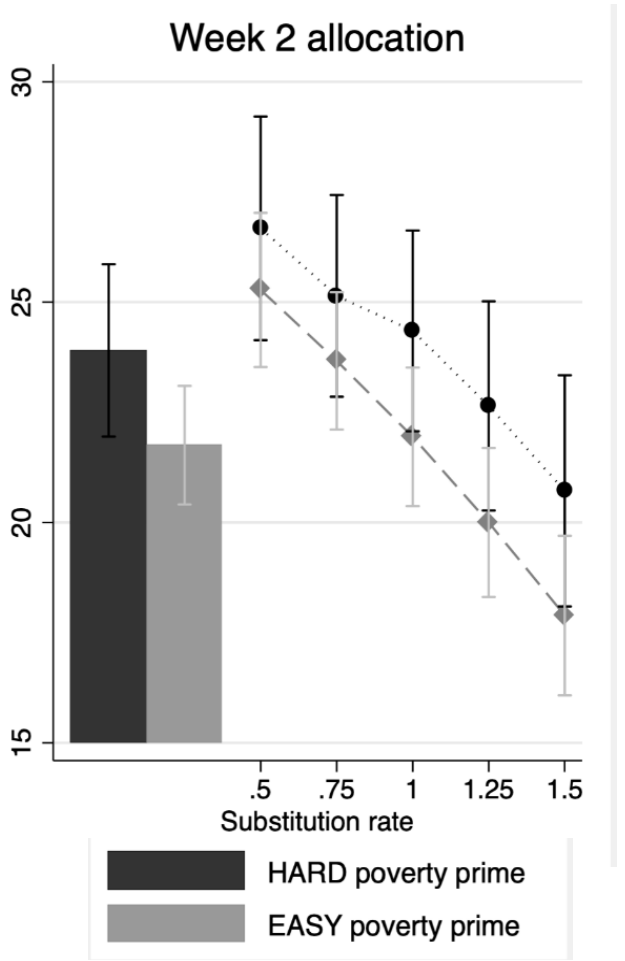
Experiment to Measure Patience

- Farmers decide whether (i) to work more this week and less next week or (ii) more next week and less now
- Instead of working, they can watch fun videos on the tablet (sports, local entertainers, etc.)

Two randomly selected groups:

- Hard scenarios describing a large loss of revenue
- Easy scenarios describing a small loss of revenue

Interpretation: Financial distress reduces self-control.



Bartoš, Bauer, Chytilová a Levels (2021): Psychological Effects of Converty on Time Preference, Economic Journal, 131 (638): 2357©2382.

Does financial distress reduce productivity?

Motivation. If financial distress leads to the need to think about problems during work, it can reduce the ability to plan and productivity.

India, rural areas, 408 workers

- 2 weeks work, produces plates from leaves for local restaurants, paid by number, main source of income
- Allows to measure (i) productivity every day and (ii) the ability to plan and focus (number of sheets, number of repairs)
- 70% has outstanding credit, 53% thinks about the financial situation during work

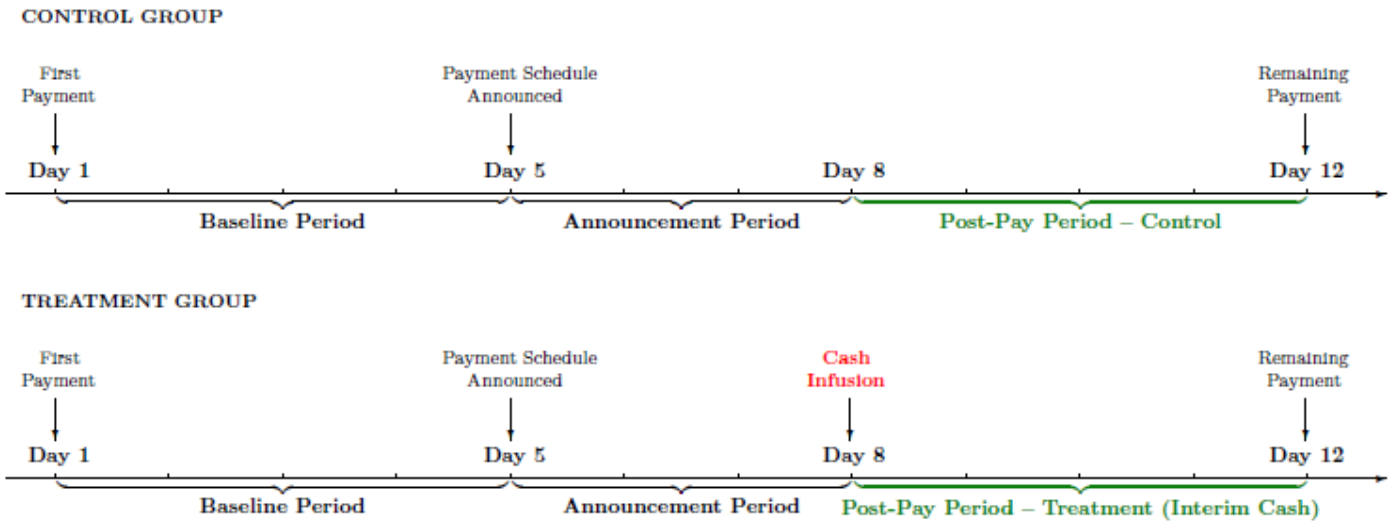
Kaur, Mullainathan, Oh, Schilbach (2021) Do financial chains make workers less productive? NBER working paper

Does financial distress reduce productivity?

Financial distress Effect

- Control group: earnings at the end of the two-week contract period
- Treatment: two instalments: (i) interim payment of the current income four days before the end of the contractual period and (ii) remainder on the last day of the contractual period

➢ 4 daily periods when T workers have more money and can pay off debts, etc.



Kaur, Mullainathan, Oh, Schilbach (2021) Do financial chains make workers less productive? NBER working paper

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What do you think are the estimated effects of the treatment? Does it increase productivity? If yes, by how much?

ⓘ Start presenting to display the poll results on this slide.

Does financial distress reduce productivity?

Main Results: Workers who received cash earlier

- Makes 7% plates more per hour of work, higher income
- They make fewer mistakes in production (higher attention)
- They state that they were more focused on work
- These effects especially for the poorer half of the sample
- Not due to higher calorie consumption

Interpretation: Financial distress reduces attention and working productivity

Kaur, Mullainathan, Oh, Schilbach (2021) Do financial chains make workers less productive? NBER working paper

Summary

Cognitive skills, productivity and self-control are not only determined by genes or education, but also by contextual factors and financial distresses

Implications

- Potentially large impact and temporary financial support to the poor can help them through better decision-making and productivity (maybe even break out of poverty trap)
- Trying to reduce complexity, help fill out forms, comments - very important especially for people in financial distress
- Information campaigns and programmes that require concentration should weigh time carefully. (e.g. be synchronized with the agricultural cycle, cognitive capacity the largest after harvest)

Open questions

1. Are these effects large enough to lead to poverty traps?

2. These effects are documented especially in developing countries. Is this also true for low-income groups in rich countries?

Readings

- Mullainathan, Sendhil, and Eldar Shafir. 2013. *Scarcity: Why Having Too Little Means so Much*. Time Books.
- Haushofer, Johannes, and Ernst Fehr. 2014. "On the Psychology of Poverty." *Science (New York, N.Y.)* 344 (6186): 862–67.
- Mani, Anandi, Sendhil Mullainathan, Eldar Shafir, and Jiaying Zhao. 2013. "Poverty Impedes Cognitive Function." *Science (New York, N.Y.)* 341 (6149): 976–80.
- Bartoš, Bauer, Chytilová a Levely (2021): Psychological Effects of Poverty on Time Preference, Economic Journal, 131 (638): 2357–2382.
- Kaur, Mullainathan, Oh, Schilbach (2021)"Do financial strains make workers less productive? NBER working paper