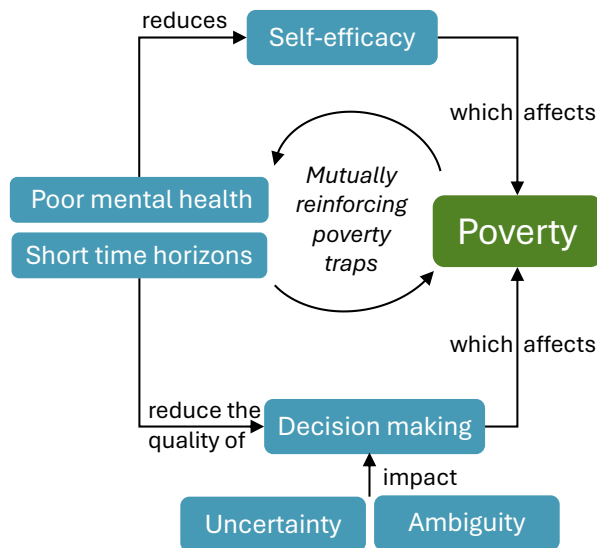


BEHAVIORAL ECONOMICS INSIGHTS FOR RESILIENCE, AGRICULTURE AND FOOD SECURITY

Key Takeaways from the February 2024 Behavioral Economics Forum

Development interventions are often based on the implicit assumption that people make decisions that maximize their economic well-being. That people know what they want and they understand their true capabilities. However, behavior in the real world often deviates from this assumption. Behavioral Economics studies these deviations. Gaining deeper insight into how people actually make decisions, Behavioral Economics opens the door to more effective interventions and programs.

Over the two days of the Behavioral Economics Forum organized by the [Feed the Future Innovation Lab for Markets, Risk and Resilience](#) in February 2024, economists and psychologists presented their research around behavioral economics with a focus on small-scale farmers in developing countries. To boost the effectiveness of rural development and resilience interventions, this document highlights key behavioral economics concepts, summary findings from research, and considerations for programs.



Behavioral Insights to Enhance the Adoption of New Technologies


Many farmers delay making productive investments, and then lack adequate cash to make optimal investments come planting time. As a result, they miss out on the value that inputs like fertilizer could offer to their yields and profits. Several behavioral factors shed light on why this happens.

All of us are limited in how much information we can take in, and agricultural and financial technologies (e.g., a new fertilizer, index insurance) can be quite complex. Because we have limited cognitive bandwidth, we are sometimes unable to absorb all the relevant information around these technologies. Further, evidence shows that stress consumes mental resources and leaves even less cognitive capacity for other tasks. Worrying about where our next meal may come from, for example, may limit the attention we are able to give to less immediate concerns.

Most of us tend to prioritize the present over the future. ‘Present bias’ means that we are disproportionately tempted by immediate gratification, giving up large future returns in order to enjoy goods today.


Present bias contributes to **short time horizons**. Research has shown that those who hold a negative view of the future tend to think about and plan for it even less.¹ This tendency can create a **poverty trap**, whereby people who expect they will be poor in the future make fewer plans and investments; the reduced investment in turn means future incomes are lower than they could be.


A number of methods to counteract present bias and short time horizons have been tested in development interventions.





Programming consideration

Times when many people may be under significant stress—such as the hungry season—may not be ideal for intensive learning activities or for asking people to make important, long-term decisions.

 **Featured research:** A commitment contract mechanism—in which 10-50% payment was due ahead of time, shortly after harvest when liquidity is high—increased farmer purchase of fertilizer. (Mali)²

 **Featured research:** A lockbox helped loan recipients improve the management of their funds over time and more successfully use the money for the intended purpose of agricultural investment. Those who received a lockbox also experienced higher and smoother consumption. Findings suggest that the lockbox supported users with mental accounting and reduced expectations of sharing loan funds with family and friends. (Kenya)³

 **Featured research:** An intervention that offered input subsidies and savings matching increased farmers' planning horizon. In turn, a longer time horizon increased optimism and farm investment. (Mozambique)⁴




Programming consideration

Employ mechanisms that reduce the impact of present bias (e.g., commitment arrangements, lockboxes, savings matching) to increase investment in the future.




Behavioral Insights to Make Insurance Programs More Effective

Insurance interventions have often seen surprisingly low engagement. One reason is that many people do not process information on risky outcomes in the way presumed by standard models of insurance demand. Some people are very averse to risk, as well as to the **ambiguity** of unclear probabilities. When considering whether to purchase index insurance, farmers face multiple layers of risk (“compound risk”). First, for every upcoming season, they face uncertainty around weather conditions that may cause crop losses. Most index insurance products come with an added uncertainty of whether the insurer’s measurement system will recognize a payout-triggering event that farmers experience (“basis risk”).

 **Featured research:** A lab-in-the-field experiment revealed prevalent aversion to uncertainty and complexity. The game simulated the conditions of an index insurance contract, in which farmers were subject to both the risk of a shock and the basis risk that a payout-triggering condition might not be paid. When researchers introduced an alternative contract mechanism without basis risk, they found participants were willing to pay more for it—even when the total risk they faced was equal to the index contract. Overall, 57% revealed themselves to be averse to compound risk and the ambiguity it brings. (Mali)⁵

Other people tend to be strongly attracted to potential payouts that are certain and strongly repelled by costs that are uncertain. Conventionally, insurance is marketed to farmers with certainty in cost (premium), which may quickly repel some farmers. Research suggests ways to craft insurance contracts that resonate with how many of us process information on risk and **uncertainty**.

 **Featured research:** In an experiment, farmers who revealed a strong preference for certainty also showed a preference for insurance “rebate” framing, in which the premium was forgiven in case of a payout-triggering event, with a trade-off of a smaller indemnity payout. (The refunded premium plus smaller indemnity payout equaled the value of the original indemnity payout.) Certainty-loving participants were willing to pay 50% more for this rebate framing, which rendered both costs and benefits of the insurance uncertain. (Burkina Faso)⁶



Programming consideration

Consider increasing the appeal of insurance contracts by making costs uncertain (i.e., a rebate framing that forgives premiums amid a payout-triggering event).

Financial products like insurance are complex and difficult to understand. A common behavioral economics tool, ‘nudges’ use behavioral methods to influence people’s choices—for example, when factors like complexity prevent people from making decisions that could make themselves better off. However, unlike nudging universally positive behaviors like handwashing, nudging insurance uptake can make some people worse off, as differences among people’s aversion to risk and ambiguity—as well as differing economic situations and risk exposure—mean that individual insurance products are not universally good for all.



Featured research: In an experimental economics lab at Georgia State University, researchers found that nudging did increase demand for an insurance product, but also decreased consumer welfare by pushing people to purchase contracts that did not match their needs and risk preferences.⁷



Featured research: Instead of a one-size-fits-all nudge, researchers provided tailored advice to herders on whether purchasing Index-Based Livestock Insurance would likely increase their welfare, given their individual situation and risk preferences. Insurance agents' standard sales incentive structure was replaced with one that incentivized adherence to the tailored advice. Herders tended to follow the advice when advised not to purchase the insurance.⁸



Programming consideration

Only encourage uptake of products with a demonstrated welfare benefit. Blanket nudging can be unethical.



Behavioral Insights to Enhance Self-Efficacy for Poverty Reduction

Experiences of poverty and poor mental health can complicate the assumptions of standard economics models, which assume that people know their capacities and have clear aspirations.

A mutually reinforcing relationship exists between poverty and poor mental health. Poor mental health can exacerbate the limited cognitive bandwidth and short time horizons discussed in the first section. The lived experience of poverty and its underlying structural causes may generate beliefs, preferences and behaviors that can undercut efforts to break the intergenerational cycle of chronic poverty.

Poor mental health is linked with reduced self-efficacy. Individuals suffering from depression tend to underestimate their capacities to shape their own futures, and then act in accordance with the hopelessness by lowering their effort.⁹



Featured research: An asset-building program targeted at the poorest women in pastoralist regions showed significant average impacts on assets and income sustained over time. However, the 20% of women who exhibited severe depressive symptoms did not exhibit any benefits in these metrics; rather, they drew down and consumed the assets given to them. (Kenya)¹⁰

Even more striking is the impact of exposure to violence on people's self-efficacy.



Featured research: A study of victims of violence found that those exposed to more severe violence felt more hopelessness in their prospects for upward economic mobility. The researchers' model demonstrated that psychological trauma and depression resulting from the experience of violence fed the hopelessness. As those affected exercised less effort in earning income, their pessimistic expectations become self-fulfilling and created a poverty trap. (Colombia).¹¹

The ramifications go beyond those directly exposed to violence, as the psychological effects of conflict and violence affect parenting and give rise to intergenerational trauma and psychological poverty traps. Secure, nurturing attachment between a caregiver and child can buffer the life-altering physiological effects of trauma and stress during early childhood development.



Featured research: Seeds of Attachment, a community-led stress-reduction program for caregivers of young children in conflict-affected settings, resulted in a significant decrease in stress and harshness in parenting and a significant increase in children's mental health and development. (Colombia)¹²



Programming consideration

Particularly in humanitarian and violent contexts, consider incorporating mental health interventions, including community psychosocial approaches. Traditional wealth building approaches alone may be insufficient to increase economic mobility.

A psychological **poverty trap** occurs when we fail to aspire to wealth that appears beyond our reach, and the reduced effort in turn deepens poverty. However, our preferences and perceptions of our own abilities can change.



Featured research (continued): *In the aforementioned project with pastoralist women, only after receiving asset transfers that relaxed constraints to income generation did women begin to more highly value the prospect of upward mobility. (Kenya)¹³*



Featured research: *Some participants in a poverty graduation program received capital (cash), some participated in a psychosocial intervention (role model film and life skills training), and some received both. Consumption and food security were highest among those who received the psychosocial intervention—either alone or with cash. The program cost-effectiveness ratio was highest among those who received psychosocial intervention only. (Niger)¹⁴*

Aspirations and agency can be impacted in light-touch, low-cost ways to make poverty reduction programs more effective.

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References

- ¹ [Laajaj, R., 2017, "Endogenous time horizon and behavioral poverty trap: Theory and evidence from Mozambique." Journal of Development Economics, 127\(C\).](#)
- ² [Dillon, A. 2024. Behavioral insights from 'Making Markets' \(PowerPoint slides\). Northwestern University.](#)
- ³ [Mukherjee, S.W., Bergquist, L.F., Burke, M., Miguel, E. 2021. "Unlocking the Benefits of Credit through Saving." NBER Working Paper 29542.](#)
- ⁴ [Laajaj, R. 2017. "Endogenous time horizon and behavioral poverty trap: Theory and evidence from Mozambique." Journal of Development Economics, 187-208.](#)
- ⁵ [Elabed, G., Carter, M. 2014. "Compound-Risk Aversion, Ambiguity and the Demand for Microinsurance." Technical report, University of California, Davis." Working Paper, University of California, Davis.](#)
- ⁶ [Serfilippi, E., Carter, M., Guirkinger, C. 2019. Insurance Contracts When Individuals "Greatly Value" Certainty: Results from a Field Experiment in Burkina Faso. Journal of Economic Behavior & Organization, 731-743.](#)
- ⁷ [Harrison, G.; Morsink, K., and Schneider, M. 2020. "Do No Harm? The Welfare Consequences of Behavioral Interventions." CEAR Working Paper 2020-12, Center for the Economic Analysis of Risk, Robinson College of Business, Georgia State University.](#)
- ⁸ [Barrett, C., Gidey, T.G., Harrison, G., Jensen, N., Morsink, K., Son, H.H., Swarthout, J.T. 2024. "Tailoring Financial Advice and Sales Agent Incentives to Enhance Consumer Welfare?" \[Presentation\] Feed the Future Behavioral Economics Forum, Washington, D.C.](#)
- ⁹ [de Quidt, J. and Haushofer, J. 2019. "Depression Through the Lens of Economics: A Research Agenda" in C. Barrett, Carter, M., and Chavas, J. \(eds.\), The Economics of Poverty Traps. NBER, 127-152.](#)
- ¹⁰ [Zheng, G., Carter, M., Jensen, N., Krovetz, L. 2023. "Psychosocial Constraints, Impact Heterogeneity and Spillovers in a Multifaceted Graduation Program in Kenya." NBER Working Paper 31611.](#)
- ¹¹ [Moya, A., Carter, M. 2018. "Violence and the Formation of Hopelessness and Pessimistic Prospects of Upward Mobility in Colombia." NBER Working Paper 20463.](#)
- ¹² [Moya, A. 2024. "Addressing Psychological Constraints and Early Childhood Development in Conflict-Affected Settings." \[Presentation\] Feed the Future Behavioral Economics Forum, Washington, D.C.](#)
- ¹³ [Zheng, G., Carter, M., Jensen, N., Krovetz, L. 2023. "Psychosocial Constraints, Impact Heterogeneity and Spillovers in a Multifaceted Graduation Program in Kenya." NBER Working Paper 31611.](#)
- ¹⁴ [Bossuroy, T., Goldstein, M., Karimou, B., Karlan, D., Kazianga, H., Parienté, W., Premand, P., Thomas, C., Udry, C., Vaillant, J., Wright, K. 2022. "Tackling psychosocial and capital constraints to alleviate poverty." Nature.](#)
- ¹⁵ [Thomas, C. 2024. "Aspirations, Agency, and Mental Health: Strategies for Addressing Psychosocial Constraints for Poverty Reduction." \[Presentation.\] Feed the Future Behavioral Economics Forum, Washington, D.C.](#)



Programming consideration

Use evidence-supported strategies to increase aspirations and agency:

- Show participants that change is possible and engage them in envisioning optimistic, but realistic, futures.
- Communicate that participants are seen as capable, resourceful agents rather than helpless, needy beneficiaries.¹⁵

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