On Risk-based Poverty Traps

Christopher B. Barrett and Heather Schofield

Cornell University

August 2025

Abstract: Much development policy has followed from the idea of poverty traps, the belief that the poor (and poor countries) lack capital and the ability to borrow, thus cannot invest sufficiently to build a better future for themselves. Poverty is thus self-reinforcing. This essay poses a complementary, alternate hypothesis, that poverty traps may be driven not only by lack of access to capital, but also (or instead) by differential exposure to uninsured risk and ability to cope with that risk. We explain the hypothesis and tease out prospective solutions to the possibility of risk-based poverty traps.

Keywords: behaviors, catastrophes, coping, disasters, insurance

Acknowledgements: Barrett acknowledges support from National Science Foundation grants DEB-2109293 and BCS-2307944 and many stimulating conversations with Michael Carter on this topic.

Many people suffer extended periods of material deprivation (Baulch and Hoddinott 2000; Addison et al. 2009). Motivated by this fact, development research has focused heavily on how to sustainably reduce poverty. Persistent poverty – the observation that many people cannot exit poverty rapidly without assistance – poses challenges for both policy and research because choices driven by individuals' environments and endowments may generate feedback effects, reinforcing deprivation. For example, the poor are less likely to adopt productivity-boosting technologies (Dercon and Christiaensen 2011), have higher rates of school dropout (Edmonds and Schady 2012), and face greater underemployment (Fafchamps 1993). This reinforcing feedback constitutes a 'poverty trap' (Azariadis and Stachurski 2005; Carter and Barrett 2006; Sachs 2006; Barrett et al. 2019).

The poverty trap idea has influenced much development thinking, ranging from the 'big push' macro-development strategies of post-World War 2 reconstruction and independence movements in post-colonial Africa, Asia, and Latin America (Rosenstein-Roden 1943; Murphy et al. 1989) to the microfinance revolution of the late 20th century, as well as the Millenium Villages program (Sachs 2006) and multi-faceted 'graduation' interventions (Banerjee et al. 2015, 2022; Bandiera et al. 2017). These efforts rest on a simple theory, that the poor (and poor countries) lack the minimum financial, human, and physical capital – and the ability to borrow – necessary to invest in building themselves a better future. They remain trapped in a low-level equilibrium, unable to achieve the higher standards-of-living enjoyed by those born into better circumstances, precisely because of their initial poverty.

This essay poses a complementary, alternate hypothesis motivated by the observation that poverty and uninsured risk are strongly correlated. Poverty traps may be driven not only by lack of access to capital, but also by differential exposure to uninsured risk. This reflects a combination of greater initial risk exposure — e.g., higher disease burden, extreme weather, occupations with greater income volatility or risk of injury — as well as limited or no ability to safeguard their future against such adverse shocks — e.g., lack of disability, health, flood, or unemployment insurance. Further, when insurance is available, poverty may lessen one's ability or willingness to pay (explicitly or implicitly) for risk-reducing amenities that yield safer food, housing, and water, ensuring more reliable work and income, or avoiding external risks such as extreme weather or interpersonal violence (Fafchamps 2003; Hill et al. 2013). A single disastrous misstep or misfortune, or a disaster befalling one's community, can spark a slide by even the non-poor into sustained destitution when uninsured individuals are unable to borrow to rebuild lost productive assets or when shocks are irreversible. Crucially, we hypothesize that causality may flow the other way as well --- from differential risk exposure to persistent poverty. That claim is broadly consistent with the observation that the past two decades' increased frequency and severity of major shocks – most notably the COVID-19 pandemic, but also rising conflicts and extreme weather events, food price spikes, etc. – has slowed the rate of poverty reduction worldwide and increasingly concentrated it especially in precarious places subject to climate, conflict, and disease shocks (Decerf et al. 2021; Hill et al. 2025).

What are risk-based poverty traps?

It is perhaps worth quickly, if only coarsely, establishing categories of poverty based on observed well-being dynamics to allow us to distinguish the population of interest. First, especially in places

where labor and financial markets function effectively and social protection programs offer broad coverage, much poverty is transitory, arising temporarily during periods of unemployment, illness, extreme adverse weather, etc. (Baulch and Hoddinott 2000; Addison et al. 2009; Barrett and Swallow 2006). I Among those who find themselves chronically poor, some will eventually exit poverty by migrating to a place where their capital endowments generate greater returns or after a long, sometimes-slow trajectory of accumulating productive financial, human, natural, physical, or social capital, yielding increased permanent income and improved well-being indicators (Kraay and McKenzie 2014; Ravallion 2015). The slowly progressing poor are, like the transitorily poor, not our focus.

We focus instead on those who have no reasonable expectation of exiting poverty in their lifetime and for whom the next generation(s) will likely remain mired in poverty. There exist two distinct – but not mutually exclusive – types of persistently poor people. The first is caught in a unique, low-level dynamic equilibrium standard of living driven by permanently low human capital leaving them incapable of economic independence. For example, those who suffer permanent cognitive or physical impairment(s) due to illness, injury, or acute malnutrition. Their only escape from poverty comes through others providing for them. Call these type I – for irreversible – poverty traps. The risk of falling into type I poverty traps increases as the perils of violence, workplace or traffic accidents, or acute infectious disease, rise and as access to quality health care, associated emergency services, and generous safety nets falls. Poorer communities disproportionally bear such risks. Poverty and risk exposure become mutually reinforcing through limited state fiscal capacity, and the resulting inability to invest in adequately inclusive and generous safety nets as well as physical and institutional infrastructure to reduce such risks (Barrett and Swallow 2006).

The other type of risk-based poverty trap is less visible, arising from the subtle, insidious effects of multi-equilibrial systems, wherein households and individuals can, in principle, attain different equilibria. Optimal actions bifurcate depending on one's current conditions, leading to convergence over time by some people towards a non-poor, high equilibrium while others – who are perhaps only subtly different – converge instead towards a different, poor, low equilibrium (Nelson 1956: Mazumdar 1959: Stiglitz 1976:, Loury 1981; Banerjee and Newman 1993; Azariadis and Stachurski 2005; Carter and Barrett 2006; Barrett et al. 2019; Ikegami et al. 2019). Any combination of multiple market failures or health shocks cangive rise to these type M (for multiple equilibrium) poverty traps (Gross and Notowidigdo 2012).

Figure 1 offers a simple heuristic representation of Type I and Type M poverty traps.[1] The horizontal axis depicts an individual's[2] human capital, while the vertical axis similarly reflects all other, non-human forms of (financial, natural, physical, social, etc.) capital, both representable as scalars. Well-being increases as one accumulates more of either human or non-human capital, so the highest standards of living occur in the upper right corner, the lowest in the lower left corner. There exists some mapping from assets to living standards represented by the downward-sloping asset poverty line, to the left of which people are poor. Below some critical level of human capital, H, an individual with negligible non-human capital falls into the Type I poverty trap. To a limited degree, one can compensate for human capital disability through capital to access assistive

[1] For formal models, see Banerjee and Newman (1993), Azariadis and Stachurski (2005), or Ikegami et al. (2019).

[2] This could instead be a household or other aggregate unit. For conceptual simplicity, we focus on individual endowments and abstract away from collective choice.

technologies, hence the slope of the right frontier of the Type I poverty trap space. Those who fall into the Type M poverty trap fall to the right of the Type I poverty trap space but to the left of the "Micawber frontier', the dynamic poverty line that separates the long-term poor from those who in expectation eventually climb out of current poverty.[3] Those whose current endowments are to the right of the Micawber frontier in expectation accumulate more capital and ultimately attain the non-poor high-level equilibrium; those to its left do not.

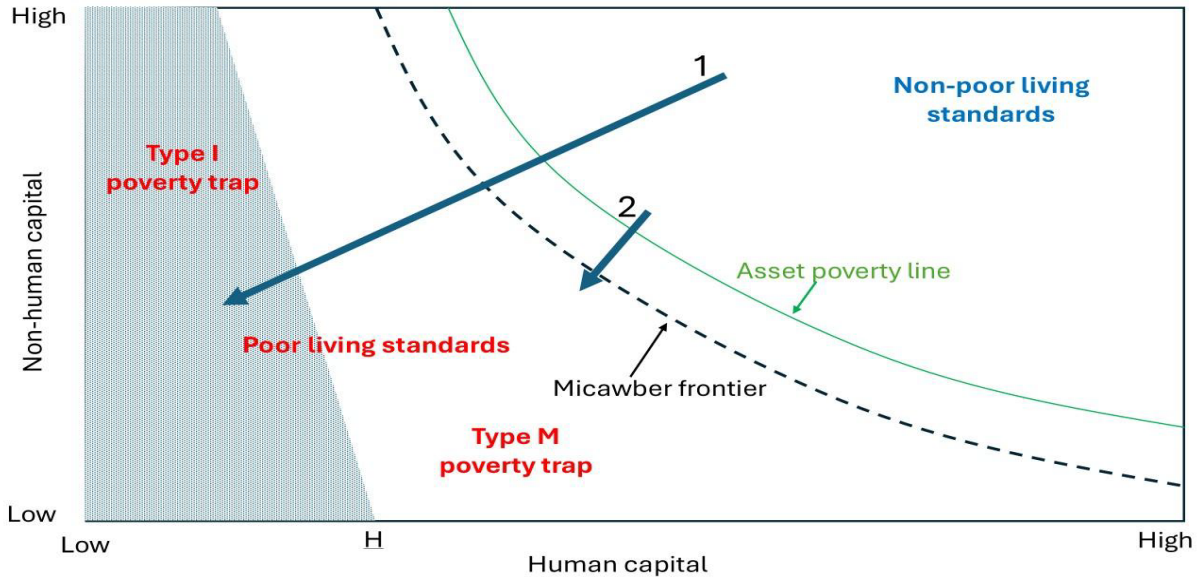

Figure 1: Heuristic representation of poverty traps

This simple heuristic permits relative straightforward – if necessarily over-simplified – representation of various mechanisms through which risk and shocks might affect poverty traps. We can represent the effects of various mechanisms, discussed in the next section, in three basic movements in Figure 1.

First, an individual can suffer a catastrophic health shock that pushes her beneath the frontier that defines the Type I poverty trap, like that depicted by arrow 1. As Krishna (2010) documents across a range of settings, many (non-poor) individuals are but one illness away from persistent poverty.

Second, even a modest shock, like that depicted by arrow 2, can lead to a collapse from a non-poor state into persistent poverty, in this case into a Type M poverty trap, perhaps from land, livestock or equipment losses due to natural disaster or conflict (Lybbert et al. 2004; Fiala 2015). Conversely, windfall gains could push someone the opposite direction. Indeed, those caught in type M poverty traps who are near enough to the Micawber frontier may rationally to take gambles with negative expected payoff – e.g., buying lottery tickets or taking on temporary, high risk-high return work – lured by the positive probability of a windfall that liberates the lucky from poverty (Lybbert and Barrett 2011). In expectation, such gambles rarely pay off. Thus on average, this

[3] The Micawber Frontier is named for Charles Dickens' *David Copperfield* character Wilkins Micawber who lived a precarious existence and famously opined that a knife's edge existed between high and low standards of living. See Carter and Barrett (2006) and Barrett et al. (2019) for more details.

choice reinforces poverty until losses accumulate sufficiently that the likelihood – and thus hope – of escape dims.

Third, the Micawber threshold could move up and to the right, expanding the capital space occupied by Type M poverty traps. This happens, for example, when the probability of asset loss increases or the expected returns to investments in either sort of capital falls. As we discuss below, this path 3 effect can also work in reverse when innovations that reduce or transfer risk or change behaviors move the Micawber frontier leftward, opening a pathway out of poverty.[4]

We intentionally depict arrows 1 and 2 as impacting the initially non-poor simply to underscore our point that uninsured risk exposure may be a critical mechanism behind poverty traps. Risk and poverty reinforce each other. And thus as uninsured risk exposure increases, so does the likelihood of poverty traps.

Note that risk can also affect current well-being independent of where individuals sit with respect to the relevant poverty traps frontier. That is, risk or shocks can temporarily shift the asset poverty line down and to the left by reducing the productivity of capital stock via market disruptions, changes in production patterns, or forcible displacement from sources of income (Kondylis 2008; Fiala 2015; Rockmore 2020). However, if a shock does not destroy productive capital or change assets' expected returns that govern forward-looking investment behavior, such shocks need not impact individuals' long-run poverty status, instead causing transitory poverty from which people, in expectation, escape. We abstract from those cases in the rest of the paper.

Mechanisms

We can use these simple heuristics to briefly summarize a range of mechanisms – broadly grouped into market imperfections and behavioral phenomena – associated with movement into or out of poverty traps. While some evidence exists supporting these mechanisms, many require further study.

Market imperfections

Financial market failures underpin standard theories of poverty traps. The inability or expense of borrowing prevents the poor from investing in sufficient capital or technology to generate returns sufficient not only to pay off the loan but to sustain a non-poor living standard (Stiglitz 1976; Dasgupta and Ray 1986, 1987; Banerjee and Newman 1993; Dasgupta 1997).

The same logic applies to the inability to insure against adverse shocks. Private insurance markets are largely inaccessible to the poor, especially in sparsely populated rural communities (Barnett et al. 2008; Carter et al. 2017). Yet poor people appear more (objectively and subjectively) exposed to conflict, crime, disease, price, weather or other shocks that can thrust them into either type I or type M poverty traps, i.e., path 1 or 2 movements in Figure 1 (Hill et al. 2025). Despite heavy risk exposure - indeed, partly because of it - insurance markets routinely fail for the poor.

[4] In principle, the frontier defining the Type I poverty trap boundary could shift rightward. We cannot think of realistic examples of such movements. Leftward movements – e.g., due to improved rehabilitative, restorative, and/or therapeutic care – seem more common.

The experience of adverse shocks can trap the poor. For many of the world's poor, life seems a Sisyphean struggle of interminable toil, regular setbacks, and futile efforts to advance as they lose accumulated assets to shocks or engage in distress sales to cushion income shocks. They commonly need many things to go right – appropriate seeds, adequate rains, health, high output market prices – each fraught with risk, leading to an O-ring problem (Kremer 1993) wherein a single, modest shock undercuts their efforts.

Moreover, merely the prospect of sufficiently adverse shocks can induce the poor not to make a likely-Sisyphean effort; the ex ante risk exposure suffices to trap them, even if no shock materializes. If uninsured risk exposure correlates negatively with standards of living, the poor are less likely to invest scarce resources in the hope of generating sustainable improvements in well-being, consistent with underemployment of the rural poor (Fafchamps 1993; McCullough 2017), as well as in apparent underinvestment in productive inputs due to risk exposure (Dercon and Christiaensen 2011; Karlan et al. 2014). This effect is reinforced by preferences (decreasing absolute risk aversion) that induces the poor to stick with low-return activities to minimize risk exposure (Yesuf and Bluffston 2007) and by the need for precautionary savings in low-return, liquid assets (Zimmerman and Carter 2003).

Behavioral phenomena

Elevated risk and shocks may also generate behavioral responses that reinforce poverty in a variety of ways. For example, shocks and high-risk environments may impair mental health, leading to depression and anxiety as well as trauma and post-traumatic stress (Ridley et al 2020; Ashraf et al. 2024)..

Poor mental health may in turn impair economic decision making and limit labor force participation, creating feedback loops which can perpetuate poverty – effects which persistent mental health impairment may exacerbate. For example, poor mental health may make individuals more pessimistic as well as sap energy and drive, and may lead them to forgo productive opportunities (De Quit and Haushofer 2016; Carvalho et al. 2025). Shocks, economic risk, and deprivation may also shape economic preferences such as one's taste for risk or impatience (Haushofer, Schunk, and Fehr 2013; Haushoffer and Fehr 2014, 2019; Carvalho et al 2016; Moya 2018). These changes may limit or alter investments, leading individuals in risky environments to invest in lower return activities, i.e., pushing their Micawber frontier rightward.

The effects of shocks may persist well beyond the shock itself (Schaner et al 2025; Friedman and Thomas 2009). For example, individuals who suffer a natural disaster or violence often perceive heightened risks of adverse events and behave more cautiously, even if there is no shift in objective risk exposure (Cameron and Shah 2015; Jakiela and Ozier 2019; Nasir et al. 2020) or become significantly more risk-seeking (Rockmore and Barrett 2022).

Beyond impacts on mental health and preferences, poverty and risk exposure may reduce aspirations and hope, leading individuals to forgo high-reward activities or longer term investments like education (Lybbert and Wydick 2018; Bernard et al 2014). Poverty and some (e.g., health) shocks can also induce stigma. The stress of social vigilance and avoidance of risk to social standing can generate a physiological stress response that impairs cognitive function, decision-making, and emotional regulation (Slavich 2020; Slavich et al. 2023). In turn, this stress and risk avoidance may impair mental health and limit engagement with high social risk but high

return activities (e.g., pursuing a non-traditional career). Finally, economic deprivation and shocks may impair cognition, limit attentional resources devoted to productive activities, and reduce labor supply and the ability to engage in the formal economy (Banerjee and Mullainathan 2008; Schilbach et al 2016; Boswell Dean et al 2019; Cefala et al. 2025). These changes may sustain poverty both through lower returns in the labor market and impaired economic decision-making.

Prospective solutions

Solutions to the problem of uninsured risk exposure that begets poverty traps can be grouped into three coarse categories. One can reduce risk exposure to reduce the likelihood of an adverse shock. Or one can transfer those costs to deconcentrate the burden shouldered by shock-affected persons. Finally, one can help people to better manage, behaviorally, the uninsured risk exposure they face.

Risk Reduction

Many low-cost strategies to reduce common risks confronting the poor already exist. For example, vaccines represent one of the most cost-effective interventions, preventing over 150 million deaths in the past 50 years (Shattock et al. 2024). Beyond mortality benefits, vaccines protect from catastrophic health shocks that can precipitate long-term destitution (Chang et al. 2018). Access to treatments for chronic diseases like HIV/AIDS and simple preventative measures, like vitamin A drops to prevent blindness among children, similarly prevents the irreversible morbidity or mortality that characterizes Type I poverty traps.

Because many of the world's poor work in agriculture, a sector especially exposed to weather, pest, and pathogen risk, agricultural innovation is another key area for risk reduction. Stress-adapted seeds, effective soil and water conservation practices, improved pest management, and diversified production systems stabilize agricultural output and reduce vulnerability to weather-related shocks (Hansen et al. 2019). Climate information services—e.g., weather forecasts and SMS early warning systems—or pricing information and futures and options markets to permit farmers to hedge production and price risk can likewise enable better-informed decisions and reduce risk exposure (Rosenzweig and Udry 2014, Belay and Ayalew 2020; Burlig et al. 2024).

Investments in public goods can also substantially reduce private risk exposure. For example, washed out bridges that are not rebuilt significantly reduce labor market earnings for affected populations, and broader welfare losses are substantially larger given indirect effects on farm investment, savings, labor market choice and risk management strategies across multiple domains (Brooks and Donovan 2020). Similarly, reliable electricity and water access, like improved air and water quality or traffic safety reduce health hazards and production uncertainties. Effective judicial systems and property rights protection safeguard productive assets.

Finally, diversifying income sources also provides natural insurance against shocks, though potentially at the cost of the returns to specialization. Beyond livelihood diversification, a key element of such diversification is geographic diversification via seasonal or short-term migration. Policies to facilitate these population shifts allow households to buffer against localized shocks.

Risk transfer

Even with efforts to reduce risk exposure, adverse shocks can still happen. Risk transfer – the ability to spread losses among many or over time – is therefore crucial.

The possibility that a catastrophic shock could cast people into poverty helps motivate not only private insurance against catastrophic losses, but also public safety net mechanisms, from effective emergency medicine systems, to humanitarian response systems that safeguard basic human rights, to peacekeeping and police systems. Informal safety nets through mutual insurance, informal credit, and altruistic gifts often fill in the gaps in formal market-based or public safety nets (Morduch 1995; Dercon 2005). Enhanced access to affordable insurance and effective social protection schemes thus hold broad appeal, but can be difficult and expensive to scale (Barnett et al. 2008; Carter et al. 2017; Gentilini 2024).

Markets beyond insurance can also enhance risk transfer. Mobile banking systems, for example, facilitate savings, access to short-term loans, and people's ability to make informal transfers (Suri 2017). Improved roads that enhance labor and commodity market integration help households smooth consumption in the face of production and asset shocks (Asher and Novosad 2020; Negi and Barrett 2025).

Behavioral coping mechanisms

Beyond reducing or transferring risk, interventions that help individuals better manage the psychological and behavioral impacts of risk limit the potential for feedback loops. For example, psychological interventions such as Problem Management Plus (PM+) and Cognitive Behavioral Therapy help individuals develop coping strategies (WHO 2018; Lund et al 2024). These evidence-based approaches teach skills for managing negative emotions, solving problems, and maintaining social connections during crises. By improving mental health outcomes and helping individuals cope, these relatively low-cost interventions can prevent a downward spiral whereby stress and depression impair decision-making and reduce labor supply. Although the efficacy of AI in this realm remains untested, AI-based counseling apps are proliferating and may provide a low-cost path to scale.

Behaviorally informed technologies can also help individuals make better choices despite risk exposure and its impacts on preferences and decision-making. For example, individuals may find it difficult to spread a lean harvest through the year. Yet, simple household tools to plan consumption over time and monitor it effectively help families stretch their resources and cope more effectively with agricultural risk (Augenblick et al. 2025).

Finally, schools and youth programs can serve as vehicles for building resilience and key life skills at scale. Alan and Ertac (2018) demonstrated that classroom-based programs can successfully and persistently foster patience in elementary school children. Similarly, a CBT-based intervention aimed at helping youth learn to take a moment to reflect before they act was highly effective at reducing a high-stakes behavior – crime – in stressful environments (Heller et al. 2017).

Conclusions

This essay proposes that poverty traps may arise as a consequence of uninsured exposure to catastrophic risk, not just due to initial, self-reinforcing poverty. Occasionally poor people beat the odds and escape destitution, while some non-poor suffer catastrophic misfortune and never recover. Because risk and poverty are correlated, we often overlook the central role risk plays when exploring the etiology of poverty traps.

This matters for policy. If no poverty traps exist, such that all poverty is transitory (over sufficiently long horizons), then costly, imperfect policy interventions become harder to justify. Furthermore, if poverty traps arise exclusively due to multiple market failures, then improving communications and transportation infrastructure and financial innovations should steadily reduce the population prevalence of poverty traps exposure. Both of those hypotheses seem difficult to reconcile with the hundreds of millions of persistently poor people in places plagued by a range of conflict, economic, health, and weather shocks.

Risk-based poverty traps, however, seem consistent with the broad empirical pattern of increasingly spatially concentrated persistent poverty in places facing multiple sources of risk,. Risk-based poverty traps imply a need to emphasize risk reduction and risk transfer strategies through technologies, policies, markets and institutions, along with efforts to enhance coping behaviors among exposed subpopulations. Indeed, the possibility of risk-based poverty traps has implicitly motivated much of the rapidly increased attention to and investment in building (development) resilience in order to prevent shocks from erasing the gains generated by effective development programming in low-income, risk-prone communities (Barrett and Constas 2014; Béné et al. 2014; Barrett et al. 2021). However, there is still much to done to probe the risk-based poverty traps hypothesis more carefully and solidify the conceptual and empirical bases for resilience and poverty reduction programming.

References

Addison, T., Hulme, D., & Kanbur, R. (Eds.). (2009). *Poverty dynamics: Interdisciplinary perspectives*. Oxford: Oxford University Press.

Alan, S., S. Ertac. "Belief in hard work and altruism: Evidence from a randomized field experiment." *Human Capital and Economic Opportunity Working Paper* (2017).

Alderman, H., Hoddinott, J., & Kinsey, B. (2006). Long term consequences of early childhood malnutrition. *Oxford Economic Papers*, 58(3), 450–474.

Asher, S., & Novosad, P. (2020). Rural roads and local economic development. *American Economic Review*, *110*(3), 797-823.

Ashraf, N., et al. (2024) *Learning to see a world of opportunities*. Working Paper. https://navaashraf. com/wp-content/uploads/2024/11/lswo_wp. pdf, 2024.

Augenblick, N., Jack, B. K., Kaur, S., Masiye, F., & Swanson, N. "Retrieval failures and consumption smoothing: A field experiment on seasonal poverty." Working paper (2025).

Azariadis, C., & Stachurski, J. (2005). Poverty traps, in Aghion, P., & Durlauf, S.N., eds., *Handbook of Economic Growth*, Vol. *1A*, 295-384. Amsterdam: North-Holland.

Bandiera, O., Burgess, R., Das, N., Gulesci, S., Rasul, I., & Sulaiman, M. (2017). Labor markets and poverty in village economies. *Quarterly Journal of Economics*, *132*(2), 811-870.

Banerjee, A., Duflo, E., Goldberg, N., Karlan, D., Osei, R., Parienté, W., Shapiro, J., Thuysbaert, B. & Udry, C. (2015). A multifaceted program causes lasting progress for the very poor: Evidence from six countries. *Science*, *348*(6236), 1260799.

Banerjee, A., Karlan, D., Osei, R., Trachtman, H., & Udry, C. (2022). Unpacking a multi-faceted program to build sustainable income for the very poor. *Journal of Development Economics*, *155*, 102781.

Banerjee, A.V., and S. Mullainathan (2008). "Limited attention and income distribution." *American Economic Review* 98.2: 489-493.

Banerjee, A.V. and Newman, A.F. (1993). Occupational choice and the process of development. *Journal of Political Economy*, *101*(2), 274-298.

Barnett, B. J., Barrett, C. B., & Skees, J. R. (2008). Poverty traps and index-based risk transfer products. *World Development*, *36*(10), 1766-1785.

Barrett, C.B., Carter, M. R., & Chavas, J.-P., eds. (2019). *The Economics of Poverty Traps*. Chicago: University of Chicago Press.

Barrett, C. B., & Constas, M. A. (2014). Toward a theory of resilience for international development applications. *Proceedings of the National Academy of Sciences*, *111*(40), 14625-14630.

Barrett, C. B., Ghezzi-Kopel, K., Hoddinott, J., Homami, N., Tennant, E., Upton, J., & Wu, T. (2021). A scoping review of the development resilience literature: Theory, methods and evidence. *World Development*, *146*, 105612.

Barrett, C. B., & Swallow, B. M. (2006). Fractal poverty traps. *World Development*, *34*(1), 1-15.

Baulch, B., & Hoddinott, J. (2000). Economic mobility and poverty dynamics in developing countries. *Journal of Development Studies*, *36*(6), 1-24.

Belay, D. G., & Ayalew, H. (2020). Nudging farmers in crop choice using price information: Evidence from Ethiopian Commodity Exchange. *Agricultural Economics*, *51*(5), 793-808.

Béné, C., Newsham, A., Davies, M., Ulrichs, M., & Godfrey-Wood, R. (2014). Resilience, poverty and development. *Journal of International Development*, *26*(5), 598-623.

Bernard, Tanguy, et al. *The future in mind: Aspirations and forward-looking behaviour in rural Ethiopia*. Vol. 10224. London: Centre for Economic Policy Research, 2014.

Boswell Dean, E., F. Schilbach, and H. Schofield (2019). "Poverty and Cognitive Function" in C.B. Barrett, M.R. Carter, and J.-P. Chavas, eds., *The economics of poverty traps*. Chicago: University of Chicago Press.

Brooks, W., & Donovan, K. (2020). Eliminating uncertainty in market access: The impact of new bridges in rural Nicaragua. *Econometrica*, *88*(5), 1965-1997.

Burlig, F., Jina, A., Kelley, E. M., Lane, G. V., & Sahai, H. (2024). *Long-range forecasts as climate adaptation: Experimental evidence from developing-country agriculture*. National Bureau of Economic Research working paper 32173.

Callen, M., Isaqzadeh, M., Long, J. D., & Sprenger, C. (2014). Violence and risk preference: Experimental evidence from Afghanistan. *American Economic Review*, 104(1), 123–148.

Cameron, L., & Shah, M. (2015). Risk-taking behavior in the wake of natural disasters. *Journal of Human Resources*, *50*(2), 484-515.

Carter, M.R., & Barrett, C.B. (2006). The economics of poverty traps and persistent poverty: An asset-based approach. *Journal of Development Studies*, 42(2), 178–199.

Carter, M.R., de Janvry, A., Sadoulet, E., & Sarris, A. (2017). Index insurance for developing country agriculture: a reassessment. *Annual Review of Resource Economics*, *9*(1), 421-438.

Carvalho, L.S., D. de Walque, C. Lund, H. Schofield, V. Somville, and J. Wei (2025). "Psychological barriers to participation in the labor market: Evidence from rural Ghana." Working paper.

Carvalho, L.S., S. Meier, and S.W. Wang (2016). "Poverty and economic decision-making: Evidence from changes in financial resources at payday." *American Economic Review* 106.2: 260-284.

Cefala, L., Kaur, S., Schofield, H., & Shamdasani, Y. (2024) "Habit Formation in Labor Supply." Working paper.

Chang, A. Y., Riumallo-Herl, C., Perales, N. A., Clark, S., Clark, A., Constenla, D., ... & Verguet, S. (2018). The equity impact vaccines may have on averting deaths and medical impoverishment in developing countries. *Health Affairs*, *37*(2), 316-324.

Dasgupta, P. (1997). Nutritional status, the capacity for work, and poverty traps. *Journal of Econometrics*, 77(1), 5-37.

Dasgupta, P., & Ray, D. (1986). Inequality as a determinant of malnutrition and unemployment: Theory. *Economic Journal*, 96(384), 1011-1034.

Dasgupta, P., & Ray, D. (1987). Inequality as a determinant of malnutrition and unemployment: policy. *Economic Journal*, 97(385), 177-188.

Decerf, B., Ferreira, F. H., Mahler, D. G., & Sterck, O. (2021). Lives and livelihoods: estimates of the global mortality and poverty effects of the Covid-19 pandemic. *World Development*, *146*, 105561.

DeQuidt, Jonathan, and Johannes Haushofer (2019). *Depression through the lens of economics: A research agenda* in C.B. Barrett, M.R. Carter, and J.-P. Chavas, eds., *The economics of poverty traps*. Chicago: University of Chicago Press.Dercon, S. (Ed.). (2005). *Insurance against poverty*. Oxford University Press.

Dercon, S., & Christiaensen, L. (2011). Consumption risk, technology adoption and poverty traps: Evidence from Ethiopia. *Journal of Development Economics*, *96*(2), 159-173.

Edmonds, E. V., & Schady, N. (2012). Poverty alleviation and child labor. *American Economic Journal: Economic Policy*, *4*(4), 100-124.

Fafchamps, M. (1993). Sequential labor decisions under uncertainty: An estimable household model of West-African farmers. *Econometrica*, 61,5: 1173-1197.

Fafchamps, M. (2003). *Rural Poverty, Risk and Development*. Edward Elgar Publishing.

Few, R., Ramírez, V., Armijos, M. T., Hernández, L. A. Z., & Marsh, H. (2021). Moving with risk: Forced displacement and vulnerability to hazards in Colombia. *World Development*, *144*, 105482.

Fiala, N. (2015). Economic consequences of forced displacement. *Journal of Development Studies*, *51*(10), 1275-1293.

Friedman, Jed, and Duncan Thomas. "Psychological health before, during, and after an economic crisis: Results from Indonesia, 1993–2000." *The World Bank Economic Review* 23.1 (2009): 57-76.

Gentilini, U. (2024). *Timely Cash: Lessons from 2,500 Years of Giving People Money*. Oxford University Press.

Gross, T., & Notowidigdo, M. J. (2011). Health insurance and the consumer bankruptcy decision: Evidence from expansions of Medicaid. *Journal of Public Economics*, *95*(7-8), 767-778.

Hansen, J., Hellin, J., Rosenstock, T., Fisher, E., Cairns, J., Stirling, C., ... & Campbell, B. (2019). Climate risk management and rural poverty reduction. *Agricultural Systems*, *172*, 28-46.

Haushofer, J., and E. Fehr (2014). "On the psychology of poverty." *Science* 344.6186: 862-867.

Haushofer, J., D., and E. Fehr (2019). "Negative income shocks increase discount rates."

Heller, S. B., Shah, A. K., Guryan, J., Ludwig, J., Mullainathan, S., & Pollack, H. A. (2017). Thinking, fast and slow? Some field experiments to reduce crime and dropout in Chicago. *Quarterly Journal of Economics*, *132*(1), 1-54.

Hill, Ruth Vargas, John Hoddinott, and Neha Kumar (2013). "Adoption of weather-index insurance: learning from willingness to pay among a panel of households in rural Ethiopia." *Agricultural Economics* 44, 4-5: 385-398.

Hill, S., Khadan, J., & Selcuk, P. (2025). *Fragile and Conflict-Affected Situations: Intertwined Crises, Multiple Vulnerabilities*. Washington: World Bank.

Ikegami, M., Carter, M. R., Barrett, C. B., & Janzen, S. A. (2019). Poverty traps and the social protection paradox, in Barrett, C.B., Carter, M. R., & Chavas, J.-P., eds. (2019). *The Economics of Poverty Traps*. Chicago: University of Chicago Press.

Jakiela, P., & Ozier, O. (2019). The impact of violence on individual risk preferences: Evidence from a natural experiment. *Review of Economics and Statistics*, *101*(3), 547-559.

Karlan, D., Osei, R., Osei-Akoto, I., & Udry, C. (2014). Agricultural decisions after relaxing credit and risk constraints. *Quarterly Journal of Economics*, *129*(2), 597-652.

Kondylis, F. (2008). Agricultural outputs and conflict displacement: Evidence from a policy intervention in Rwanda. *Economic Development and Cultural Change*, 57(1), 31–66.

Kraay, A., & McKenzie, D. (2014). Do poverty traps exist? Assessing the evidence. *Journal of Economic Perspectives*, *28*(3), 127-148.

Kremer, M. (1993). The O-ring theory of economic development. *Quarterly Journal of Economics*, *108*(3), 551-575.

Krishna, A. (2010). *One illness away: Why people become poor and how they escape poverty*. Oxford: Oxford University Press.

Loury, G. C. (1981). Intergenerational transfers and the distribution of earnings. *Econometrica*, 843-867.

Lund, C., Orkin, K., Witte, M., Walker, J. H., Davies, T., Haushofer, J., ... & Patel, V. H. (2024). *The effects of mental health interventions on labor market outcomes in low-and middle-income countries* (No. w32423). National Bureau of Economic Research.

Lybbert, T. J., & Barrett, C. B. (2011). Risk-taking behavior in the presence of nonconvex asset dynamics. *Economic Inquiry*, *49*(4), 982-988.

Lybbert, T. J., Barrett, C. B., Desta, S., & Layne Coppock, D. (2004). Stochastic wealth dynamics and risk management among a poor population. *Economic Journal*, *114*(498), 750-777.

Lybbert, T.J., and B. Wydick (2018). "Poverty, aspirations, and the economics of hope." *Economic Development and Cultural Change* 66.4: 709-753.

Mazumdar, D. (1959). The marginal productivity theory of wages and disguised unemployment. *Review of Economic Studies*, 26(3), 190-197.

McCullough, E. B. (2017). Labor productivity and employment gaps in Sub-Saharan Africa. *Food Policy*, *67*, 133-152.

Morduch, J. (1995). Income smoothing and consumption smoothing. *Journal of Economic Perspectives*, 9(3), 103-114.

Moya, Andrés. "Violence, psychological trauma, and risk attitudes: Evidence from victims of violence in Colombia." *Journal of Development Economics* 131 (2018): 15-27.

Murphy, K. M., Shleifer, A., & Vishny, R. W. (1989). Industrialization and the big push. *Journal of Political Economy*, *97*(5), 1003-1026.

Nasir, M., Rockmore, M., & Tan, C. M. (2020). Do the lessons from micro-conflict literature transfer to high crime areas?: Examining Mexico's war on drugs. *Journal of Development Studies*, *56*(1), 26-44.

Negi, D.S., & Barrett, C.B. (2025). How do low-income rural households smooth consumption? Working paper.

Nelson, R. R. (1956). A theory of the low-level equilibrium trap in underdeveloped economies. *American Economic Review*, 46(5), 894-908.

Ravallion, M. (2015). *The economics of poverty: History, measurement, and policy*. Oxford: Oxford University Press.

Ridley, M., Rao, G., Schilbach, F., & Patel, V. (2020). Poverty, depression, and anxiety: Causal evidence and mechanisms. *Science*, *370*(6522), eaay0214.

Rockmore, M. (2017). The cost of fear: the welfare effect of the risk of violence in northern Uganda. *World Bank Economic Review*, *31*(3), 650-669.

Rockmore, M. (2020). Conflict-risk and agricultural portfolios: evidence from Northern Uganda. *Journal of Development Studies*, *56*(10), 1856-1876.

Rockmore, M., & Barrett, C. B. (2022). The implications of aggregate measures of exposure to violence for the estimated impacts on individual risk preferences. *World Development*, *157*, 105925.

Rosenstein-Rodan, P. N. (1943). Problems of industrialisation of eastern and south-eastern Europe. *Economic Journal*, *53*(210-211), 202-211.

Rosenzweig, M.R., and C. Udry (2014). "Rainfall Forecasts, Weather, and Wages over the Agricultural Production Cycle." *American Economic Review* 104 (5): 278–83.

Sachs, J. D. (2006). *The end of poverty: Economic possibilities for our time*. New York: Penguin.

Schaner, S., H. Schofield, and J. Lee (2025). "Aggregate health shocks have long-lasting mental health effects: Evidence from Covid-19 surges in India" Working paper

Schilbach, F., H. Schofield, and S. Mullainathan (2016). "The psychological lives of the poor." *American Economic Review* 106.5: 435-440.

Shattock, A. J., Johnson, H. C., Sim, S. Y., Carter, A., Lambach, P., Hutubessy, R. C., Thompson, K.M., Badizadegan, K., Lambert, B., Ferrari, M.J., Jit, M., Silal, S.P., Hounsell, R.A., WHite, R.G., Mosser, J.F., Gaythorpe, K.A.M., Trotter, C.L., Lindstrand, A., O'Brian, K.L. & Bar-Zeev, N. (2024). Contribution of vaccination to improved survival and health: modelling 50 years of the Expanded Programme on Immunization. *The Lancet*, *403*(10441), 2307-2316.

Shemyakina, O. (2011). The effect of armed conflict on accumulation of schooling: Results from Tajikistan. *Journal of Development Economics*, 95(2), 186–200.

Slavich, G. M. (2020). Social safety theory: a biologically based evolutionary perspective on life stress, health, and behavior. *Annual Review of Clinical Psychology*, *16*(1), 265-295.

Slavich, G. M., Roos, L. G., Mengelkoch, S., Webb, C. A., Shattuck, E. C., Moriarity, D. P., & Alley, J. C. (2023). Social Safety Theory: Conceptual foundation, underlying mechanisms, and future directions. *Health Psychology Review*, *17*(1), 5-59.

Stiglitz, J. E. (1976). The efficiency wage hypothesis, surplus labour, and the distribution of income in LDCs. *Oxford Economic Papers*, 28(2), 185-207.

Suri, T. (2017). Mobile money. *Annual Review of Economics*, *9*(1), 497-520.

World Health Organization. "Problem Management Plus (PM+) Individual psychological help for adults impaired by distress in communities exposed to adversity." 2018.

Yesuf, M., & Bluffstone, R. (2007). Risk Aversion in Low Income Countries Experimental Evidence from Ethiopia. *American Journal of Agricultural Economics* 91,4: 1022-1037.

Zimmerman, F. J., & Carter, M. R. (2003). Asset smoothing, consumption smoothing and the reproduction of inequality under risk and subsistence constraints. *Journal of Development Economics*, *71*(2), 233-260.