

# Lack of Hope and the Persistence of Poverty

Esther Duflo

Marshall Lecture 2012

## The “ultra-poor” program

- ▶ BRAC, the Bangladeshi MFI, designed a program for the “ultra-poor”
  - ▶ Transfer for one asset (e.g. cows, goats, sewing machine, etc.)
  - ▶ A stipend for a few weeks.
  - ▶ Lots of handholding (weekly meetings with educational topic, training on use of asset, mandatory savings)
- ▶ Program is being evaluated in several countries, including West Bengal with Bandhan, one of India’s fastest growing MFI

## Ultra-Poor program

- ▶ Main results for West Bengal (with replications in other countries as well):
  - ▶ Increase in Consumption sustained over time of 15% : much larger than value of asset.
  - ▶ Increase in various sources of income, *not* just income directly related to the asset given away.
  - ▶ The results on consumption persist more than a year after the program ended. Businesses expanded even more.
- ▶ Interpretation: Program seems to have unlocked a “poverty trap”.

## Poverty traps

- ▶ The source of a poverty trap is, over a range, a very steep relationship (or a step) between income today and income in the future
- ▶ Over a range, poor people become poorer and poorer, while above a threshold we enter a zone where their income grows faster than that of richer people (the more classical case or diminishing returns)
- ▶ Classical example is the nutrition based poverty trap: if you eat fewer than some minimum amount of calories, you are too weak to do meaningful work, you will thus not be able to earn enough to buy enough food to get even that many calories. Above some threshold, the body is fully functional, and there is the usual diminishing return to extra calories.

# What is the source of the poverty trap in the ultra-poor program?

- ▶ **Nutrition?**
- ▶ Increase in food consumption: 17%, larger for more expensive food items: they were not starving
- ▶ Credit constraint?
- ▶ Program run because MFI could not get them as client.
- ▶ Perhaps: mental health
- ▶ Better self-reported health, fewer self-reported symptoms of depression

## What is the source of the poverty trap in the ultra-poor program?

- ▶ Nutrition?
- ▶ Increase in food consumption: 17%, larger for more expensive food items: they were not starving
- ▶ Credit constraint?
- ▶ Program run because MFI could not get them as client.
- ▶ Perhaps: mental health
- ▶ Better self-reported health, fewer self-reported symptoms of depression

## What is the source of the poverty trap in the ultra-poor program?

- ▶ Nutrition?
- ▶ Increase in food consumption: 17%, larger for more expensive food items: they were not starving
- ▶ Credit constraint?
  - ▶ Program run because MFI could not get them as client.
  - ▶ Perhaps: mental health
  - ▶ Better self-reported health, fewer self-reported symptoms of depression

## What is the source of the poverty trap in the ultra-poor program?

- ▶ Nutrition?
- ▶ Increase in food consumption: 17%, larger for more expensive food items: they were not starving
- ▶ Credit constraint?
- ▶ Program run because MFI could not get them as client.
- ▶ Perhaps: mental health
- ▶ Better self-reported health, fewer self-reported symptoms of depression



## What is the source of the poverty trap in the ultra-poor program?

- ▶ Nutrition?
- ▶ Increase in food consumption: 17%, larger for more expensive food items: they were not starving
- ▶ Credit constraint?
- ▶ Program run because MFI could not get them as client.
- ▶ Perhaps: mental health
- ▶ Better self-reported health, fewer self-reported symptoms of depression

## What is the source of the poverty trap in the ultra-poor program?

- ▶ Nutrition?
- ▶ Increase in food consumption: 17%, larger for more expensive food items: they were not starving
- ▶ Credit constraint?
- ▶ Program run because MFI could not get them as client.
- ▶ Perhaps: mental health
- ▶ Better self-reported health, fewer self-reported symptoms of depression

## This lecture

Explore the possibility of a hope-based poverty trap: Does hope function as a capability? Intrinsic value but also what allows people to realize their potential? (like health, human capital, etc.). Three steps:

1. From the point of view of a rational decision maker: why dire perspectives can be self fulfilling
2. The impact of hopelessness on decision making abilities
3. What happens if people are self-aware but not fully rational?

## Why bother to eat?

- ▶ Imagine a world where there is a nutrition-based poverty trap
- ▶ A very poor person knows that she will never be able to have a really good nutritional status
- ▶ She might decide that there is no point maximizing physical fitness, and chose other things instead.
- ▶ If she anticipated the ability to cross the threshold (e.g. wages are expected to go up) she might start eating a lot.
- ▶ Anticipations of future poverty exacerbate poverty

## The hope deficit and the poverty trap

- ▶ The same logic applies to any situation where there is a threshold to cross before investment become very profitable.
- ▶ e.g. minimum scale for a business: everything seems to suggest that there are “jumps” in the production function for small businesses
- ▶ If you know you will never get a loan to increase the business to a meaningful enough scale, why bother optimizing every business decision (especially if you have other issues to contemplate)?
- ▶ Note that it is rational not to be over-invested in the business: indeed the irrational people are the entrepreneurs, who exhibits optimism bias (Kahneman, Sharot)

## Hope deficit and “irrational” business decisions

- ▶ This can help explain “puzzles”
  - ▶ Why small stores run out of phone cards
  - ▶ Why farmers do not use fertilizer: perhaps the maximum gains are not worth it.
  - ▶ Why the impact of a training focusing on rules of thumb is larger than that of a more involved training.

## Fear of loss

- ▶ Symmetrically, fear of loss may lead to very conservative behavior:
  - ▶ Not using new technologies for fear of losing everything (Morduch)
  - ▶ Not migrating for long period of time for fear of losing access to social networks (Banerjee and Newman, 1998)

## The human cost

- ▶ Loss of income from being too conservative (Rosenzweig and Wolpin).
- ▶ More important: loss coming from lack of self discovery.
- ▶ If you do not throw yourself with complete dedication into a venture, how will you know if you would have been good at it?
- ▶ Particularly sad example: education.
  - ▶ Parents seem to believe returns to education are first low, then high beyond some threshold (though this is not really true).
  - ▶ This implies that investing in a little bit of education is not optimal: invest fully or not at all.
  - ▶ Some children may be branded as “stupid” and receive little investment: there is evidence that investment in education are inequality enhancing.



## Hope as an enabling capability

- ▶ Hope works as capability: we need hope to get going.
- ▶ It is also essential to the development of further capabilities, in particular education
- ▶ Beaman et al. West Bengal example. Policy of “reserving” seats for women leaders
  - ▶ Changes the aspirations of girls and their parents: reduces inequality between boys and girls
  - ▶ Changes the actual educational attainment of teenage girls (despite the lack of direct investment in education facilities by women leaders)
- ▶ BOP in North India (Jensen) lead to greater educational attainment.

## Decision outcomes or decision process?

- ▶ So far we have seen how the lack of perspective may change what people decide, assuming they all decide the same.
- ▶ We can go further and ask whether it changes *how* we decide.
- ▶ There is a connexion between this and some of the themes we explored in the first lecture: stress affects ability to perform on IQ type tests.
- ▶ Is there a biological mechanism behind this?
- ▶ A literature at the border between economics and neuroscience explores this.

## Depression and Poverty

- ▶ Strong correlation between depression (as measured by survey questions) and poverty
- ▶ Possible Mechanisms:
  - ▶ Living in a stressful environment (see MTO experiment)
  - ▶ Back to first lecture: lack in basic infrastructure (Morocco water provision: big decrease in stress).
  - ▶ Worry about the future (Haushofer and Cataneo: depression indicators increase in Kenya for households who experienced low rainfall)

## A vicious circle of depression and shocks

- ▶ Negative shocks, particularly those who are outside the control of an individual, are a factor of stress and depression (in humans and other species)
- ▶ In turn depression leads one to develop a “pessimistic explanatory style” (Seligman), which tends to promote passivity and lower resilience, which can be self-fulfilling
- ▶ The more negative shocks someone suffers, the more pessimistic they become, which makes them less likely to be able to avoid shocks and resist to them: vicious circle.

## Negative shock, stress, and ego-depletion

- ▶ Unexpected negative shocks appear to exacerbate self control problems (Haushofer, Schunk, and Fehr, 2012)
- ▶ Possible biological basis. Chemicals produced by stress affect prefrontal cortex, amygdala, and hippocampus.
- ▶ Individuals subjected to artificially stressful conditions produce more cortisol
- ▶ Field evidence that stress increases cortisol is still limited, but two interesting studies:
  - ▶ Fernal and Gunnar (2009). Children of PROGRESA beneficiaries have lower cortisol levels (linked to less depression in their mothers).
  - ▶ Haushofer et al (2011): People suffering from negative rainfall in Kenya have higher cortisol levels

## Before we move on...

- ▶ This literature is still in its infancy. The evidence is from biological mechanisms is very limited
- ▶ Link between stress induced chemical and economic decision making is tenuous (experiments in progress)
- ▶ Unclear whether there is habituation to poverty (i.e. poverty is different from a bad shock, repeated).
- ▶ Unclear what this means for policy (should we treat depression by moving people to safe neighborhoods or make people rich by giving them Prozac or psychotherapy or group psychotherapy?)
- ▶ But this provides a micro-foundation for the possibility of a poverty trap based on (shattered) hopes and shocks and opens a research agenda.

## Attitude towards the future

- ▶ In the first part of this lecture we showed that considering the future may lead to a rational response to hold back.
- ▶ In the second part we showed that depression could affect someone's ability to think about the future.
- ▶ A third possibility is that an individual could chose to avoid thinking about it, precisely because it is bleak.

## Avoiding the future

- ▶ This may be a way to protect one's sanity
- ▶ However this may prevent or affect important decisions about the future
- ▶ For example: health insurance (Zwane et al); burial insurance (Case and Menendez)
- ▶ Public health messaging: loss frame messages are more effective at encouraging behavior such as detection.
- ▶ Those who risk suffering the most negative shocks in the future (and know it) may spend the least time thinking about the future and hence may be least likely to be protected from them.



## Why are people not migrating during the hungry season

- ▶ We have already seen that fear of bad shocks could lead people to not migrate permanently
- ▶ The puzzle of low migration goes further than that
- ▶ Bryan, Chowdury and Mobarak (2012) provide men in Bangladesh with small incentives to migrate during the hungry season (the cost of the bus fare).
- ▶ Findings:
  - ▶ Very large return to migration for those who do migrate (\$8 dollar fare, \$100 dollars extra consumption)
  - ▶ Few people migrate. Even with the incentive, only 22 percentage points more people migrate
  - ▶ Half of those who tried once because of the experiment try again.
- ▶ Why are they not going to the city? Why do they stay home near starvation?

## Lack of perspective and loss aversion

- ▶ One possibility: extreme loss aversion
- ▶ Being pessimistic about the possibility that anything can change can may lead to large losses due to extreme conservatism

## Self aware about (lack of) self control

- ▶ Banerjee and Mullainathan (2010)
- ▶ Suppose you are subject to temptations: some things are only valued if you consume them today, but you don't look forward to having them.
- ▶ And you are self aware: you know temptations loom large
- ▶ Consider saving some amount towards a television
  - ▶ It is very painful today
  - ▶ You know that tomorrow you may squander the money
  - ▶ Why bother?
- ▶ If temptation goods are such that we are quickly satiated (tea, sweets, etc.), while the goods to look forward to are more expensive, then this can be the source of a poverty trap: the rich know that even if they want tea and sweets they will still have most of their savings left. For the poor, this will make a much bigger dent: they will be less likely to save.

## Savings and hope

- ▶ The poor should have no less reason to save than the rich: they may be poor today but they will be poor tomorrow as well.
- ▶ But savings depend on the perspective of the future: people who feel like they may be close to realizing their dreams have reasons to cut their “frivolous” consumption and invest in the future. Those who feel they have nothing to lose will tend to make decisions that reflect this desperation.
- ▶ This creates differences between rich and poor and also between poor people.
  - ▶ Karlan-Mullainathan: fruit vendor experiment.
  - ▶ Banerjee et al: microcredit and temptation goods

## Conclusion

- ▶ Hope operates a capability—A little bit of hope allows people to realize their potential. Hopelessness destroys both the will and the ability to invest in one's future and oneself.
- ▶ Policy implications
  - ▶ There is value in policy that removes the worst branch of the tree: minimum income, protection against health catastrophes
  - ▶ Importance of making the poor aware of opportunities and possibilities to affect aspirations
  - ▶ Goal post should be closer, so that their are achievable.