



Poverty

The lives of the poor

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- Understanding the poor (Duflo, 2003)
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The economic lives of the poor (Banerjee and Duflo, 2007)

- The poverty line used in the paper is \$1.08 per person per day at the 1993 PPP exchange rate.
- The paper was based on household surveys conducted in 13 countries : Cote d'Ivoire, Guatemala, India, Indonesia, Mexico, Nicaragua, Pakistan, Panama, Papua New Guinea, Peru, South Africa, Tanzania, and Timor Leste (East Timor).

The economic lives of the poor (Banerjee and Duflo, 2007)

- The typical extremely poor family tends to be large. The median number of family members was 7 or 8, typically with large number of children.
- The average person living at under \$1 per day does not seem to put every available penny into buying more calories.
- Among the nonfood items, the poor spend significant amounts of money on, alcohol, tobacco, and festivals.

The economic lives of the poor (Banerjee and Duflo, 2007)

- The extremely poor spend very little on education. The expenditure on education generally hovers around 2 percent of household budgets.
- Children in poor households typically attend (dysfunctional) public schools or other schools that do not charge a fee.

The economic lives of the poor (Banerjee and Duflo, 2007)

- All over the world, a substantial fraction of the poor act as entrepreneurs in the sense of raising capital, carrying out investment, and being the full residual claimants for the resulting earnings.
- They operate an agricultural business, or a farm.
- Many poor households have multiple occupations. They can do some agricultural and be a daily laborer. They usually lack specializations.

The economic lives of the poor (Banerjee and Duflo, 2007)

- A main challenge for the poor who try to save is to find safety and a reasonable return.
- Semiformal savings institutions (such as self-help groups, ROSCAs, and microfinance institutions) is not nearly as common among the poor as one might have expected.

Poverty and Credit

- Poor households having an outstanding expensive debt from informal lending sources, e.g. relatives, local money lenders, shopkeepers.
- The fundamental feature of poverty is that it affects the access of the poor to formal markets
- The poor cannot obtain loans for investing in a productive activity because they lack collateral.

Poverty and Credit

- Consider a person with starting wealth W , which is used as collateral.
- Suppose the startup cost of the business is given by the amount I .
- The loan is repaid at interest rate r .
- The business needs to hire m workers, with wage w , to produce an output q .
- Profit is equal $q - wm$.
- Net profit is equal to $q - wm - (1 + r)I$

Poverty and Credit

- If you default on the loan:
 - You lose your collateral, an amount worth $W(1 + r)$
 - The expected cost of default is some fine, denoted by F , and a fraction λ of the profits from business.
- You will honor the loan if
 - $I(1 + r) \leq W(1 + r) + F + \lambda(q - wm)$
- Thus,
 - $W \geq I - \frac{F + \lambda(q - wm)}{1 + r}$
- Banks will only advance loans to an individual whose initial wealth is “high enough”. If initial wealth is lower, you cannot convince credibly the bank that you will repay your loan.

The economic lives of the poor (Banerjee and Duflo, 2007)

- The poor have little access to formal insurance.
- Social networks can provide informal insurance. These informal networks have only a limited ability to protect the households against risk.
- The consumption of poor households is strongly affected by variations in their incomes.
- These informal social networks are often not well-diversified. They often spread risk over households who live nearby and have similar incomes and occupations.

Understanding the lives of the poor

- Why So Little Specialization?
 - >> Risk-spreading?
 - >> Cannot borrow to build a bigger business that allows specialization ?
- Why So Many Entrepreneurs?
 - >> Cannot access a formal/informal labor market?
- Why Don't the Poor Invest More in Education?
 - >> Don't have the benchmark of the return to good education
- Why Don't the Poor Save More?
 - >> Saving at home is too hard?

Poor but rational?(Duflo, 2003)

- “Poor but efficient” (Schultz, 1964)
 - The poor have done their best, given their circumstances.
 - Schultz contends that the resource allocation in traditional agriculture is by and large efficient. There is not very much to be gained by reallocating factors.
 - Poor peasants are on the productive efficiency frontier.
 - The implication is to modernize the production technologies the poor need to depend on.

Poor but rational?(Duflo, 2003)

- “Poor but neo-classical(but not necessarily efficient)”
 - Poverty **changes the set of options available to individuals**. Accordingly, poverty affects behavior, even if the decision maker is neoclassical. Being neoclassical means being unboundedly rational, forward-looking, and internally consistent.
 - The “poor but neo-classical” research program systematically explored the structural constraints that poverty imposes on the decision-making of an unboundedly rational individual in an environment where information is incomplete.
 - Development economics tried to provide evidence **for market inefficiencies, and economic policies to alleviate them**.

Poverty and Insurance

- Within a village, the poor should be able to insure each other against the part of the risk that is not common across households.
- Townsend (1994) the incomes of different families within a village have ups and downs at very different times. This creates substantial scope for insurance. The consumption of all families within a village move very close together.
- This helped argue the village institution is fully efficient.
- Famous Townsend's insurance equation:

$$c_t^{*j} = \alpha^j + \beta^j \bar{c}_t + \delta^j \tilde{A}_t^j + \psi^j X_t^j + u_t^j$$

All household income variables should not be statistically significant.

Poverty and Insurance

- Later, the incompleteness of the insurance provided in the village was recognized.
- There are several reasons why insurance may be imperfect even in the village economy. First, villagers may be able to hide part of their output from others. Second, efforts cannot be perfectly monitored.
- Duflo and Udry (2004) Household members in Ivory Coast seem not to insure each other against variation in income that they can perfectly observe. Men seem to treat income coming from different sources differently, and do not use the windfall from one source to compensate for any shortfall from the other source.

Poverty and Insurance

- The household therefore seems to keep separate “mental accounts” (Thaler, 1994), treating different types of income differently.
- Different sources of income are allocated to different uses depending on their origins.
- The fact that these accounts respond differently to observable shocks in income is difficult to reconcile with imperfect observability, moral hazard, or limits on self-enforcing insurance schemes. The complexity of intra-household sharing arrangements seems to resist explanations based only on information and incentives.

Poverty and Agricultural investment

- If agricultural production is efficient, the investment, effort, and production on the land should not depend on who is tilling it.
- Agricultural productivity is 30% higher on land farmed by the owner. Tenancy arrangements are clearly inefficient.

Poverty and Agricultural investment

- Since land can serve as collateral, maximum permissible borrowing should be related to the value of the land. Very large investments (such as digging a new irrigation well) may not take place, even if they would be profitable eventually for a single farmer, but the choice of seeds, the use of fertilizer, the use of bullocks, etc., should be efficient.

Poverty and Agricultural investment

- Goldstein and Udry (1999) show that the rate of returns to growing pineapples greatly exceeds that of growing any of the other crops that are traditionally planted by farmers: The rate of return for growing pineapple is 531%, while it is only 21% for growing traditional crops.
- Yet, only 24.4% of male farmers, and almost none of the female farmers, grow pineapple. This is surprising, since pineapple growing requires a moderate initial investment, which could easily be covered by a loan secured by the land owned by these farmers.

Poverty and Agricultural investment

- Morduch (1993 and 1995) documents that poor farmers are less likely than richer farmers to use the high yielding varieties of seeds. They will prefer a safe strategy with a low return to a riskier strategy with a higher return. This means that the poor will tend to remain poor, while those who start with enough wealth will be able to accumulate more of it.

Poverty and Agricultural investment

- From an experiment done by Duflo, Kremer, and Robinson on fertilizer use in Western Kenya, it is clearly efficient for farmers to use some fertilizer on their land, but Kenyan farmers were not using the fertilizer.
- Farmers found it very difficult to save even the small amount of money necessary to purchase fertilizer.
- Fertilizer adoption was increased by the provision of option to buy fertilizer in advance, right after the harvest.
- Did farmers value the opportunity to commit their money to be used for fertilizer purchase because they knew that if they kept the money they would be tempted to use it on other things before the time for purchasing and using the fertilizer occurs (Laibson, 1991)?

Poor but rational?(Duflo, 2003)

- Poor but rational?
 - Many important facts can be accounted for in “poor but rational” framework, but there are many facts left to be explained.
 - A natural tendency would then be to turn to new hypotheses, incorporating insights of psychology to better understand economic decisions.

Poor but rational? (Duflo, 2003)

- Poor but rational?
 - Behavioral economists have argued that ways in which humans deviate from the standard economic model need to be incorporated into economic reasoning.
 - Their ability to analyze information, compute, and remember is limited.
 - Their willpower is also bounded.
 - They do not always make choices that are in their best interest in the long run.
 - Finally, they are not purely self-interested. Developing countries could then be seen as ideal testing grounds for some of these theories.

Poor but rational? (Duflo, 2003)

- Poor but rational?
 - Being poor almost certainly affects the way people think and decide. Perhaps when choices involve the subsistence of one's family, trade-offs are distorted in different ways.
 - What is needed is a theory of how poverty influences decision-making, not only by affecting the constraints, but by changing the decision-making process itself.

A seminal paper on the psychological lives of the poor in *Science*

RESEARCH ARTICLE

Poverty Impedes Cognitive Function

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The poor often behave in less capable ways, which can further perpetuate poverty. We hypothesize that poverty directly impedes cognitive function and present two studies that test this hypothesis. First, we experimentally induced thoughts about finances and found that this reduces cognitive performance among poor but not in well-off participants. Second, we examined the cognitive function of farmers over the planting cycle. We found that the same farmer shows diminished cognitive performance before harvest, when poor, as compared with after harvest, when rich. This cannot be explained by differences in time available, nutrition, or work effort. Nor can it be explained with stress: Although farmers do show more stress before harvest, that does not account for diminished cognitive performance. Instead, it appears that poverty itself reduces cognitive capacity. We suggest that this is because poverty-related concerns consume mental resources, leaving less for other tasks. These data provide a previously unexamined perspective and help explain a spectrum of behaviors among the poor. We discuss some implications for poverty policy.

A variety of studies point to a correlation between poverty and counterproductive behavior. The poor use less preventive health care (1), fail to adhere to drug regimens (2), are tardier and less likely to keep appointments (3, 4), are less productive workers (5), less attentive parents (6), and worse managers of their finances (7–9). These behaviors are troubling in their own right, but they are particularly troubling

tential collision course is prone to neglect other planes in the air, the poor, when attending to monetary concerns, lose their capacity to give other problems their full consideration.

This suggests a causal, not merely correlational, relationship between poverty and mental function. We tested this using two very different but complementary designs (16, 17). The first is a laboratory study: We induced richer and poorer

larger monetary problems that also cause greater load. Perhaps the poor manage to restructure their lives so that they do not face as many cognitively challenging problems. Put simply, the laboratory study, although illustrating the mechanism, does not show its relevance in natural settings.

Our second study takes a different approach and allows us to assess what happens when income varies naturally. We conducted a field study that used quasi-experimental variation in actual wealth. Indian sugarcane farmers receive income annually at harvest time and find it hard to smooth their consumption (20). As a result, they experience cycles of poverty—poor before harvest and richer after. This allows us to compare cognitive capacity for the same farmer when poor (pre-harvest) versus richer (post-harvest). Because harvest dates are distributed arbitrarily across farmers, we can further control for calendar effects. In this study, we did not experimentally induce financial concerns; we relied on whatever concerns occurred naturally. We were careful to control for other possible changes, such as nutrition and work effort. Additionally, we accounted for the impact of stress. Any effect on cognitive performance then observed would thus illustrate a causal relationship between actual income and cognitive function in situ. As such, the two studies are highly complementary. The laboratory study has a great deal of internal

FINANCIAL CHALLENGES

(in a NJ mall...)



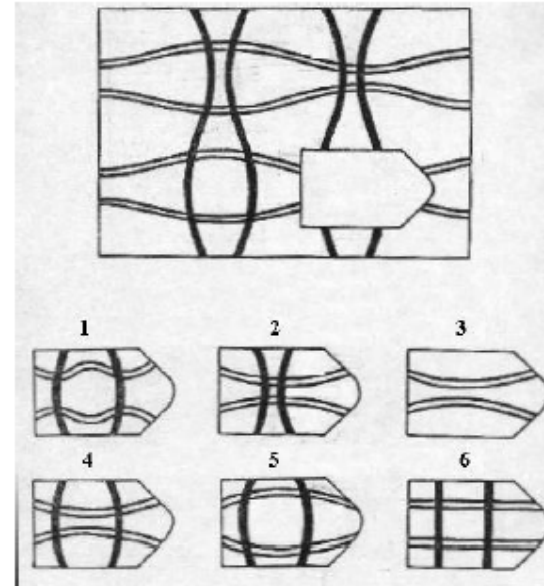
COGNITIVE CONTROL TASK

press the same side as the heart
press the opposite side as the flower



Measures cognitive control & executive function...

RAVEN'S PROGRESSIVE MATRICES



“Measures high-level observation skills, clear thinking ability, and intellectual capacity.”

https://cornell.qualtrics.com/jfe/form/SV_6Qh9XecT92QOZjD