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ABHIJIT V. BANERJEE
& ESTHER DUFLO

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rethinking poverty & the ways to end it

VINTAGE

Poor Economics

A Radical Rethinking of the Way to Fight Global Poverty

ABHIJIT V. BANERJEE
AND ESTHER DUFLO

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For our mothers,

Nirmala Banerjee and

Violaine Duflo

Foreword

Esther was six when she read in a comic book on Mother Teresa that the city then called Calcutta was so crowded that each person had only 10 square feet to

live in. She had a vision of a vast checkerboard of a city, with 3 feet by 3 feet

marked out on the ground, each with a human pawn, as it were, huddled into it.

She wondered what she could do about it.

When she finally visited Calcutta, she was twenty-four and a graduate student

at MIT. Looking out of the taxi on her way to the city, she felt vaguely disappointed; everywhere she looked, there was empty space—trees, patches of

grass, empty sidewalks. Where was all the misery so vividly depicted in the comic book? Where had all the people gone?

At six, Abhijit knew where the poor lived. They lived in little ramshackle houses behind his home in Calcutta. Their children always seemed to have lots

of time to play, and they could beat him at any sport: When he went down to play marbles with them, the marbles would always end up in the pockets of their

ragged shorts. He was jealous.

This urge to reduce the poor to a set of clichés has been with us for as long as there has been poverty: The poor appear, in social theory as much as in literature, by turns lazy or enterprising, noble or thievish, angry or passive, helpless or self-sufficient. It is no surprise that the policy stances that correspond to these views of the poor also tend to be captured in simple formulas: “Free markets for the poor,” “Make human rights substantial,” “Deal with conflict first,” “Give more money to the poorest,” “Foreign aid kills development,” and the like. These ideas all have important elements of truth, but they rarely have much space for average poor women or men, with their hopes and doubts, limitations and aspirations, beliefs and confusion. If the poor appear at all, it is usually as the dramatis personae of some uplifting anecdote or tragic episode, to be admired or pitied, but not as a source of knowledge, not as people to be consulted about what they think or want or do.

All too often, the economics of poverty gets mistaken for poor economics: Because the poor possess very little, it is assumed that there is nothing interesting about their economic existence. Unfortunately, this misunderstanding severely undermines the fight against global poverty: Simple problems beget simple solutions. The field of anti-poverty policy is littered with the detritus of instant miracles that proved less than miraculous. To progress, we have to abandon the habit of reducing the poor to cartoon characters and take the time to really understand their lives, in all their complexity and richness. For the past fifteen years, we have tried to do just that.

We are academics, and like most academics we formulate theories and stare at data. But the nature of the work we do has meant that we have also spent months, spread over many years, on the ground working with NGO (nongovernmental organization) activists and government bureaucrats, health workers and microlenders. This has taken us to the back alleys and villages where the poor live, asking questions, looking for data. This book would not have been written but for the kindness of the people we met there. We were always treated as guests even though, more often than not, we had just walked in. Our questions were answered with patience, even when they made little sense; many stories were shared with us. [1]

Back in our offices, remembering these stories and analyzing the data, we were both fascinated and confused, struggling to fit what we were hearing and seeing into the simple models that (often Western or Western-trained) professional development economists and policy makers have traditionally used to think about the lives of the poor. More often than not, the weight of the evidence forced us to reassess or even abandon the theories that we brought with us. But we tried not to do so before we understood exactly why they were failing

and how to adapt them to better describe the world. This book comes out of that

interchange; it represents our attempt to knit together a coherent story of how poor people live their lives.

Our focus is on the world's poorest. The average poverty line in the fifty countries where most of the poor live is 16 Indian rupees per person per day. 2

People who live on less than that are considered to be poor by the government of

their own countries. At the current exchange rate, 16 rupees corresponds to 36

U.S. cents. But because prices are lower in most developing countries, if the poor actually bought the things they do at U.S. prices, they would need to spend

more—99 cents. So to imagine the lives of the poor, you have to imagine having

to live in Miami or Modesto with 99 cents per day for almost all your everyday

needs (excluding housing). It is not easy—in India, for example, the equivalent

amount would buy you fifteen smallish bananas, or about 3 pounds of low-

quality rice. Can one live on that? And yet, around the world, in 2005, 865

million people (13 percent of the world's population) did.

What is striking is that even people who are that poor are just like the rest of us in almost every way. We have the same desires and weaknesses; the poor are no less rational than anyone else—quite the contrary. Precisely because they have so little, we often find them putting much careful thought into their choices: They have to be sophisticated economists just to survive. Yet our lives are as different as liquor and liquorice. And this has a lot to do with aspects of our own lives that we take for granted and hardly think about.

Living on 99 cents a day means you have limited access to information—newspapers, television, and books all cost money—and so you often just don’t know certain facts that the rest of the world takes as given, like, for example, that vaccines can stop your child from getting measles. It means living in a world whose institutions are not built for someone like you. Most of the poor do not have a salary, let alone a retirement plan that deducts automatically from it. It means making decisions about things that come with a lot of small print when you cannot even properly read the large print. What does someone who cannot read make of a health insurance product that doesn’t cover a lot of unpronounceable diseases? It means going to vote when your entire experience of the political system is a lot of promises, not delivered; and not having anywhere safe to keep your money, because what the bank manager can make from your little savings won’t cover his cost of handling it. And so on.

All this implies that making the most of their talent and securing their family's
future take that much more skill, willpower, and commitment for the poor. And
conversely, the small costs, the small barriers, and the small mistakes that most
of us do not think twice about loom large in their lives.

It is not easy to escape from poverty, but a sense of possibility and a little bit
of well-targeted help (a piece of information, a little nudge) can sometimes have
surprisingly large effects. On the other hand, misplaced expectations, the lack of
faith where it is needed, and seemingly minor hurdles can be devastating. A push
on the right lever can make a huge difference, but it is often difficult to know where that lever is. Above all, it is clear that no single lever will solve every problem.

Poor Economics is a book about the very rich economics that emerges from understanding the economic lives of the poor. It is a book about the kinds of theories that help us make sense of both what the poor are able to achieve, and
where and for what reason they need a push. Each chapter in this book describes
a search to discover what these sticking points are, and how they can be
overcome. We open with the essential aspects of people's family lives: what they

buy; what they do about their children's schooling, their own health, or that of their children or parents; how many children they choose to have; and so on.

Then we go on to describe how markets and institutions work for the poor: Can

they borrow, save, insure themselves against the risks they face? What do

governments do for them, and when do they fail them? Throughout, the book

returns to the same basic questions. Are there ways for the poor to improve their

lives, and what is preventing them from being able to do these things? Is it more

the cost of getting started, or is it easy to get started but harder to continue?

What makes it costly? Do people sense the nature of the benefits? If not, what makes it hard for them to learn them?

Poor Economics is ultimately about what the lives and choices of the poor tell us about how to fight global poverty. It helps us understand, for example, why microfinance is useful without being the miracle some hoped it would be; why

the poor often end up with health care that does them more harm than good; why

children of the poor can go to school year after year and not learn anything; why

the poor don't want health insurance. And it reveals why so many magic bullets

of yesterday have ended up as today's failed ideas. The book also tells a lot about where hope lies: why token subsidies might have more than token effects;

how to better market insurance; why less may be more in education; why good

jobs matter for growth. Above all, it makes clear why hope is vital and

knowledge critical, why we have to keep on trying even when the challenge

looks overwhelming. Success isn't always as far away as it looks.

1

Think Again, Again

Every year, 9 million children die before their fifth birthday.[1] A woman in sub-Saharan Africa has a one-in-thirty chance of dying while giving birth—in the developed world, the chance is one in 5,600. There are at least twenty-five countries, most of them in sub-Saharan Africa, where the average person is

expected to live no more than fifty-five years. In India alone, more than 50

million school-going children cannot read a very simple text.[2]

This is the kind of paragraph that might make you want to shut this book and,

ideally, forget about this whole business of world poverty: The problem seems too big, too intractable. Our goal with this book is to persuade you not to.

A recent experiment at the University of Pennsylvania illustrates well how

easily we can feel overwhelmed by the magnitude of the problem.[3] Researchers gave students $5 to fill out a short survey. They then showed them a flyer and asked them to make a donation to Save the Children, one of the world's leading charities. There were two different flyers. Some (randomly selected) students were shown this:

Food shortages in Malawi are affecting more than 3 million children; In Zambia, severe rainfall deficits have resulted in a 42% drop in maize production from 2000. As a result, an estimated 3 million Zambians face hunger; Four million Angolans—one third of the population—have been forced to flee their homes; More than 11 million people in Ethiopia need immediate food assistance.

Other students were shown a flyer featuring a picture of a young girl and these words:

Rokia, a 7-year-old girl from Mali, Africa, is desperately poor and faces a threat of severe hunger or even starvation. Her life will be changed for the better as a result of your financial gift. With your support, and the support of other caring sponsors, Save the Children will work with Rokia's family and other members of the community to help feed her, provide her with education, as well as basic medical care and hygiene education.

The first flyer raised an average of $1.16 from each student. The second flyer, in which the plight of millions became the plight of one, raised $2.83. The students, it seems, were willing to take some responsibility for helping Rokia, but when faced with the scale of the global problem, they felt discouraged.

Some other students, also chosen at random, were shown the same two flyers

after being told that people are more likely to donate money to an identifiable victim than when presented with general information. Those shown the first

flyer, for Zambia, Angola, and Mali, gave more or less what that flyer had raised

without the warning—$1.26. Those shown the second flyer, for Rokia, after this

warning gave only $1.36, less than half of what their colleagues had committed

without it. Encouraging students to think again prompted them to be less

generous to Rokia, but not more generous to everyone else in Mali.

The students' reaction is typical of how most of us feel when we are

confronted with problems like poverty. Our first instinct is to be generous, especially when facing an imperiled seven-year-old girl. But, like the Penn

students, our second thought is often that there is really no point: Our

contribution would be a drop in the bucket, and the bucket probably leaks. This

book is an invitation to think again, *again*: to turn away from the feeling that the fight against poverty is too overwhelming, and to start to think of the challenge

as a set of concrete problems that, once properly identified and understood, can

be solved one at a time.

Unfortunately, this is not how the debates on poverty are usually framed.

Instead of discussing how best to fight diarrhea or dengue, many of the most vocal experts tend to be fixated on the "big questions": What is the ultimate cause of poverty? How much faith should we place in free markets? Is

democracy good for the poor? Does foreign aid have a role to play? And so on.

Jeffrey Sachs, adviser to the United Nations, director of the Earth Institute at

Columbia University in New York City, and one such expert, has an answer to all these questions: Poor countries are poor because they are hot, infertile, malaria infested, often landlocked; this makes it hard for them to be productive

without an initial large investment to help them deal with these endemic

problems. But they cannot pay for the investments precisely because they are poor—they are in what economists call a "poverty trap." Until something is done

about these problems, neither free markets nor democracy will do very much for

them. This is why foreign aid is key: It can kick-start a virtuous cycle by helping poor countries invest in these critical areas and make them more productive. The

resulting higher incomes will generate further investments; the beneficial spiral

will continue. In his best-selling 2005 book, *The End of Poverty,* 4 Sachs argues that if the rich world had committed $195 billion in foreign aid per year between

2005 and 2025, poverty could have been entirely eliminated by the end of this period.

But then there are others, equally vocal, who believe that all of Sachs's

answers are wrong. William Easterly, who battles Sachs from New York

University at the other end of Manhattan, has become one of the most influential

anti-aid public figures, following the publication of two books, *The Elusive Quest for Growth* and *The White Man's Burden*. 5 Dambisa Moyo, an economist who previously worked at Goldman Sachs and at the World Bank, has joined her

voice to Easterly's with her recent book, *Dead Aid*. 6 Both argue that aid does more bad than good: It prevents people from searching for their own solutions,

while corrupting and undermining local institutions and creating a self-

perpetuating lobby of aid agencies. The best bet for poor countries is to rely on

one simple idea: When markets are free and the incentives are right, people can

find ways to solve their problems. They do not need handouts, from foreigners

or from their own governments. In this sense, the aid pessimists are actually quite optimistic about the way the world works. According to Easterly, there are

no such things as poverty traps.

Whom should we believe? Those who tell us that aid can solve the problem?

Or those who say that it makes things worse? The debate cannot be solved in the

abstract: We need evidence. But unfortunately, the kind of data usually used to answer the big questions does not inspire confidence. There is never a shortage

of compelling anecdotes, and it is always possible to find at least one to support

any position. Rwanda, for example, received a lot of aid money in the years immediately after the genocide, and prospered. Now that the economy is

thriving, President Paul Kagame has started to wean the country off aid. Should

we count Rwanda as an example of the good that aid can do (as Sachs suggests),

or as a poster child for self-reliance (as Moyo presents it)? Or both?

Because individual examples like Rwanda cannot be pinned down, most

researchers trying to answer the big philosophical questions prefer multicountry

comparisons. For example, the data on a couple of hundred countries in the world show that those that received more aid did not grow faster than the rest.

This is often interpreted as evidence that aid does not work, but in fact, it could

also mean the opposite. Perhaps the aid helped them avoid a major disaster, and things would have been much worse without it. We simply do not know; we are

just speculating on a grand scale.

But if there is really no evidence for or against aid, what are we supposed to do

—give up on the poor? Fortunately, we don't need to be quite so defeatist. There

are in fact answers—indeed, this whole book is in the form of an extended answer—it is just that they are not the kind of sweeping answers that Sachs and

Easterly favor. This book will not tell you whether aid is good or bad, but it will

say whether particular instances of aid did some good or not. We cannot

pronounce on the efficacy of democracy, but we do have something to say about

whether democracy could be made more effective in rural Indonesia by changing

the way it is organized on the ground and so on.

In any case, it is not clear that answering some of these big questions, like whether foreign aid works, is as important as we are sometimes led to believe.

Aid looms large for those in London, Paris, or Washington, DC, who are

passionate about helping the poor (and those less passionate, who resent paying

for it). But in truth, aid is only a very small part of the money that is spent on the poor every year. Most programs targeted at the world's poor are funded out of their country's own resources. India, for example, receives essentially no aid. In

2004–2005, it spent half a trillion rupees ($31 billion USD PPP)[7] just on primary-education programs for the poor. Even in Africa, where foreign aid has

a much more important role, it represented only 5.7 percent of total government

budgets in 2003 (12 percent if we exclude Nigeria and South Africa, two big countries that receive very little aid). 8

More important, the endless debates about the rights and wrongs of aid often

obscure what really matters: not so much where the money comes from, but

where it goes. This is a matter of choosing the right kind of project to fund —

should it be food for the indigent, pensions for the elderly, or clinics for the ailing?—and then figuring out how best to run it. Clinics, for example, can be run and staffed in many different ways.

No one in the aid debate really disagrees with the basic premise that we should help the poor when we can. This is no surprise. The philosopher Peter Singer has

written about the moral imperative to save the lives of those we don't know. He

observes that most people would willingly sacrifice a $1,000 suit to rescue a

child seen drowning in a pond9 and argues that there should be no difference between that drowning child and the 9 million children who, every year, die before their fifth birthday. Many people would also agree with Amartya Sen, the

economist-philosopher and Nobel Prize Laureate, that poverty leads to an

intolerable waste of talent. As he puts it, poverty is not just a lack of money; it is not having the capability to realize one's full potential as a human being.[10] A poor girl from Africa will probably go to school for at most a few years even if

she is brilliant, and most likely won't get the nutrition to be the world-class athlete she might have been, or the funds to start a business if she has a great idea.

It is true that this wasted life probably does not directly affect people in the developed world, but it is not impossible that it might: She might end up as an

HIV-positive prostitute who infects a traveling American who then brings the disease home, or she might develop a strain of antibiotic-resistant TB that will eventually find its way to Europe. Had she gone to school, she might have turned

out to be the person who invented the cure for Alzheimer's. Or perhaps, like Dai

Manju, a Chinese teenager who got to go to school because of a clerical error at

a bank, she would end up as a business tycoon employing thousands of others (Nicholas Kristof and Sheryl WuDunn tell her story in their book *Half the Sky*).[11]

And even if she doesn't, what could justify not giving her a chance?

The main disagreement shows up when we turn to the question, "Do we know

of effective ways to help the poor?" Implicit in Singer's argument for helping others is the idea that you know how to do it: The moral imperative to ruin your

suit is much less compelling if you do not know how to swim. This is why, in *The Life You Can Save*, Singer takes the trouble to offer his readers a list of concrete examples of things that they should support, regularly updated on his Web site. [12] Kristof and WuDunn do the same. The point is simple: Talking about the problems of the world without talking about some accessible solutions is the

way to paralysis rather than progress.

This is why it is really helpful to think in terms of concrete problems which

can have specific answers, rather than foreign assistance in general: "aid" rather

than "Aid." To take an example, according to the World Health Organization

(WHO), malaria caused almost 1 million deaths in 2008, mostly among African

children.[13] One thing we know is that sleeping under insecticide-treated bed nets can help save many of these lives. Studies have shown that in areas where malaria infection is common, sleeping under an insecticide-treated bed net

reduces the incidence of malaria by half.[14] What, then, is the *best* way to make

sure that children sleep under bed nets?

For approximately $10, you can deliver an insecticide-treated net to a family

and teach the household how to use it. Should the government or an NGO give

parents free bed nets, or ask them to buy their own, perhaps at a subsidized price? Or should we let them buy it in the market at full price? These questions

can be answered, but the answers are by no means obvious. Yet many "experts" take strong positions on them that have little to do with evidence.

Because malaria is contagious, if Mary sleeps under a bed net, John is less likely to get malaria—if at least half the population sleeps under a net, then even

those who do not have much less risk of getting infected. 15 The problem is that fewer than one-fourth of kids at risk sleep under a net:16 It looks like the $10

cost is too much for many families in Mali or Kenya. Given the benefits both to

the user and others in the neighborhood, selling the nets at a discount or even giving them away would seem to be a good idea. Indeed, free bed-net

distribution is one thing that Jeffrey Sachs advocates. Easterly and Moyo object,

arguing that people will not value (and hence will not use) the nets if they get them for free. And even if they do, they may become used to handouts and refuse to buy more nets in the future, when they are not free, or refuse to buy other things that they need unless these are also subsidized. This could wreck well-functioning markets. Moyo tells the story of how a bed-net supplier was ruined by a free bed-net distribution program. When free distribution stopped, there was no one to supply bed nets at any price.

To shed light on this debate, we need to answer three questions. First, if people must pay full price (or at least a significant fraction of the price) for a bed net, will they prefer to go without? Second, if bed nets are given to them free or

at some subsidized price, will people use them, or will they be wasted? Third, after getting the net at subsidized price once, will they become more or less willing to pay for the next one if the subsidies are reduced in the future?

To answer these questions, we would need to observe the behavior of comparable groups of people facing different levels of subsidy. The key word here is “comparable.” People who pay for bed nets and people who get them for free are usually not going to be alike: It is possible that those who paid for their nets will be richer and better educated, and have a better understanding of why they need a bed net; those who got them for free might have been chosen by an NGO precisely because they were poor. But there could also be the opposite pattern: Those who got them for free are the well connected, whereas the poor and isolated had to pay full price. Either way, we cannot draw any conclusion from the way they used their net.

For this reason, the cleanest way to answer such questions is to mimic the randomized trials that are used in medicine to evaluate the effectiveness of new drugs. Pascaline Dupas, of the University of California at Los Angeles, carried out such an experiment in Kenya, and others followed suit with similar experiments in Uganda and Madagascar. [17] In Dupas’s experiment, individuals were randomly selected to receive different levels of subsidy to purchase bed nets. By comparing the behavior of randomly selected equivalent groups that were offered a net at different prices, she was able to answer all three of our questions, at least in the context in which the experiment was carried out.

In Chapter 3 of this book, we will have a lot to say about what she found.

Although open questions remain (the experiments do not yet tell us about whether the distribution of subsidized imported bed nets hurt local producers, for example), these findings did a lot to move this debate and influenced both the discourse and the direction of policy.

The shift from broad general questions to much narrower ones has another advantage. When we learn about whether poor people are willing to pay money for bed nets, and whether they use them if they get them for free, we learn about much more than the best way to distribute bed nets: We start to understand how poor people make decisions. For example, what stands in the way of more widespread bed net adoption? It could be a lack of information about their benefits, or the fact that poor people cannot afford them. It could also be that the poor are so absorbed by the problems of the present that they don’t have the mental space to worry about the future, or there could be something entirely different going on. Answering these questions, we get to understand what, if anything, is special about the poor: Do they just live like everyone else, except with less money, or is there something fundamentally different about life under extreme poverty? And if it is something special, is it something that could keep the poor trapped in poverty?

TRAPPED IN POVERTY?

It is no accident that Sachs and Easterly have radically opposite views on whether bed nets should be sold or given away. The positions that most rich-country experts take on issues related to development aid or poverty tend to be colored by their specific worldviews even when there seem to be, as with the price of the bed nets, concrete questions that should have precise answers. To caricature ever so slightly, on the left of the political spectrum, Jeff Sachs (along with the UN, the World Health Organization, and a good part of the aid establishment) wants to spend more on aid, and generally believes that things (fertilizer, bed nets, computers in school, and so on) should be given away and that poor people should be enticed to do what we (or Sachs, or the UN) think is good for them: For example, children should be given meals at school to encourage their parents to send them to school regularly. On the right, Easterly, along with Moyo, the American Enterprise Institute, and many others, oppose aid, not only because it corrupts governments but also because at a more basic level, they believe that we should respect people's freedom—if they don't want something, there is no point in forcing it upon them: If children do not want to go to school it must be because there is no point in getting educated.

These positions are not just knee-jerk ideological reactions. Sachs and

Easterly are both economists, and their differences, to a large extent, stem from a

different answer to an economic question: Is it possible to get trapped in poverty? Sachs, we know, believes that some countries, because of geography or

bad luck, are trapped in poverty: They are poor because they are poor. They have

the potential to become rich but they need to be dislodged from where they are

stuck and set on the way to prosperity, hence Sachs's emphasis on one big push.

Easterly, by contrast, points out that many countries that used to be poor are now

rich, and vice versa. If the condition of poverty is not permanent, he argues, then

the idea of a poverty trap that inexorably ensnares poor countries is bogus.

The same question could also be asked about individuals. Can people be

trapped in poverty? If this were the case, a onetime infusion of aid could make a

huge difference to a person's life, setting her on a new trajectory. This is the underlying philosophy behind Jeffrey Sachs's Millennium Villages Project. The

villagers in the fortunate villages get free fertilizer, school meals, working health

clinics, computers in their school, and much more. Total cost: half a million dollars a year per village. The hope, according to the project's Web site, is that

"Millennium Village economies can transition over a period from subsistence

farming to self-sustaining commercial activity." 18

On a video they produced for MTV, Jeffrey Sachs and actress Angelina Jolie

visited Sauri, in Kenya, one of the oldest millennium villages. There they met Kennedy, a young farmer. He was given free fertilizer, and as a result, the

harvest from his field was twenty times what it had been in previous years. With the savings from that harvest, the video concluded, he would be able to support

himself forever. The implicit argument was that Kennedy was in a poverty trap

in which he could not afford fertilizer: The gift of fertilizer freed him. It was the

only way he could escape from the trap.

But, skeptics could object that if fertilizer is really so profitable, why could Kennedy not have bought just a little bit of it and put it on the most suitable part

of his field? This would have raised the yield, and with the extra money

generated, he could have bought more fertilizer the following year, and so on.

Little by little, he would have become rich enough to be able to put fertilizer on

his entire field.

So is Kennedy trapped in poverty, or is he not?

The answer depends on whether the strategy is feasible: Buy just a little to start with, make a little extra money, and then reinvest the proceeds, to make even more money, and repeat. But maybe fertilizer is not easy to buy in small quantities. Or perhaps it takes several tries before you can get it to work. Or there are problems with reinvesting the gains. One could think of many reasons

why a farmer might find it difficult to get started on his own.

We will postpone trying to get to the heart of Kennedy's story until Chapter 8.

But this discussion helps us see a general principle. There will be a poverty trap

whenever the scope for *growing income or wealth at a very fast rate* is limited for those who have too little to invest, but expands dramatically for those who can invest a bit more. On the other hand, if the potential for fast growth is high

among the poor, and then tapers off as one gets richer, there is no poverty trap.

Economists love simple (some would say simplistic) theories, and they like to represent them in diagrams. We are no exception: There are two diagrams shown

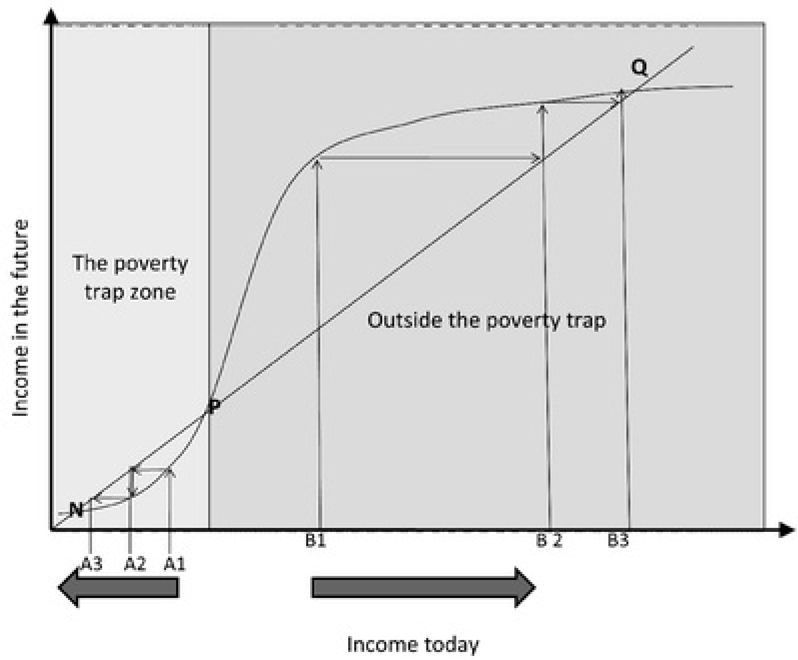
below that we think are helpful illustrations of this debate about the nature of poverty. The most important thing to remember from them is the shape of the curves: We will return to these shapes a number of times in the book.

For those who believe in poverty traps, the world looks like Figure 1. Your income today influences what your income will be in the future (the future could

be tomorrow, next month, or even the next generation): What you have today determines how much you eat, how much you have to spend on medicine or on the education of your children, whether or not you can buy fertilizer or improved

seeds for your farm, and all this determines what you will have tomorrow.

The shape of the curve is key: It is very flat at the beginning, and then rises



rapidly, before flattening out again. We will call it, with some apologies to the English alphabet, the *S-shape curve*.

The S—shape of this curve is the source of the poverty trap. On the diagonal

line, income today is equal to income tomorrow. For the very poor who are in the

poverty trap zone, income in the future is lower than income today: The curve is below the diagonal line. This means that over time, those in this zone become poorer and poorer, and they will eventually end up trapped in poverty, at point N.The arrows starting at point A1 represent a possible trajectory: from A1, move to A2, and then A3, and so forth. For those who start outside of the poverty trap

zone, income tomorrow is higher than income today: Over time they become

richer and richer, at least up to a point. This more cheerful destiny is represented

by the arrow starting at point B1, moving to B2 and B3, and so forth.

Figure 1: The S-Shape Curve and the Poverty Trap

Many economists (a majority, perhaps) believe, however, that the world

usually looks more like Figure 2.

Figure 2 looks a bit like the right-hand side of Figure 1, but without the flat left side. The curve goes up fastest at the beginning, then slower and slower.

There is no poverty trap in this world: Because the poorest people earn more

than the income they started with, they become richer over time, until eventually their incomes stop growing (the arrows going from A1 to A2 to A3 depict a possible trajectory). This income may not be very high, but the point is that there

is relatively little we need or can do to help the poor. A onetime gift in this world

(say, giving someone enough income that, instead of starting with A1 today, he

or she start with A2) will not boost anyone's income permanently. At best, it can

just help them move up a little bit faster, but it cannot change where they are eventually headed.

So which of these diagrams best represents the world of Kennedy, the young Kenyan farmer? To know the answer to this question we need to find out a set of

simple facts, such as: Can one buy fertilizer in small quantities? Is there something that makes it hard to save between planting seasons, so that even if Kennedy can make money in one season, he cannot turn it into further

investment? The most important message from the theory embedded in the

simple diagrams is thus that theory is not enough: To really answer the question

of whether there are poverty traps, we need to know whether the real world is better represented by one graph, or by the other. And we need to make this assessment case by case: If our story is based on fertilizer, we need to know some facts about the market for fertilizer. If it is about savings, we need to know

how the poor save. If the issue is nutrition and health, then we need to study those. The lack of a grand universal answer might sound vaguely disappointing,

but in fact it is exactly what a policy maker should want to know—not that there

are a million ways that the poor are trapped but that there are a few key factors

that create the trap, and that alleviating those particular problems could set them

free and point them toward a virtuous cycle of increasing wealth and investment.

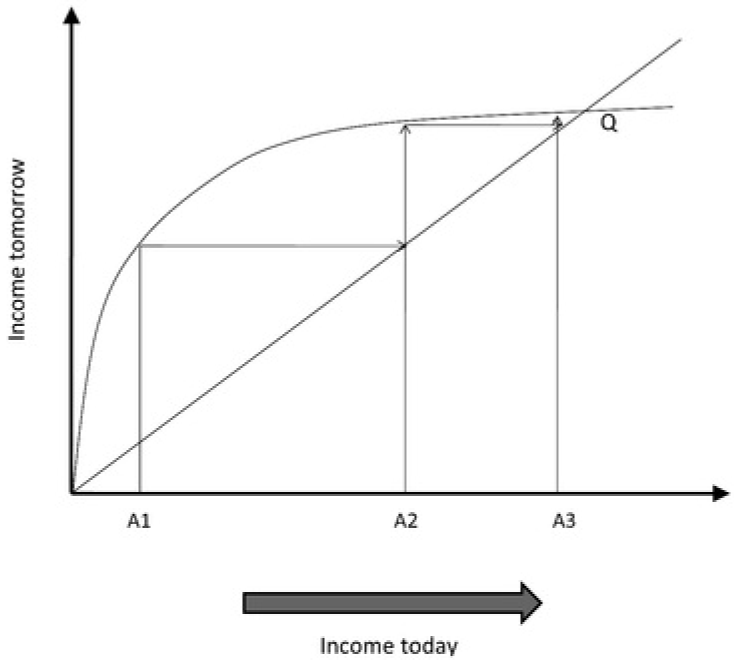


Figure 2: The Inverted L-Shape: No Poverty Trap

This radical shift in perspective, away from the universal answers, required us

to step out of the office and look more carefully at the world. In doing so, we were following a long tradition of development economists who have

emphasized the importance of collecting the right data to be able to say anything

useful about the world. However, we had two advantages over the previous

generations: First, there are now high-quality data from a number of poor

countries that were not available before. Second, we have a new, powerful tool:

randomized control trials (RCTs), which give researchers, working with a local

partner, a chance to implement large-scale experiments designed to test their theories. In an RCT, as in the studies on bed nets, individuals or communities are

randomly assigned to different “treatments”—different programs or different

versions of the same program. Since the individuals assigned to different

treatments are exactly comparable (because they were chosen at random), any

difference between them is the effect of the treatment.

A single experiment does not provide a final answer on whether a program

would universally “work.” But we can conduct a series of experiments, differing

in either the kind of location in which they are conducted or the exact

intervention being tested (or both). Together, this allows us to both verify the robustness of our conclusions (Does what works in Kenya also work in

Madagascar?) and narrow the set of possible theories that can explain the data (What is stopping Kennedy? Is it the price of fertilizer or the difficulty of saving

money?). The new theory can help us design interventions and new experiments,

and help us make sense of previous results that may have been puzzling before.

Progressively, we obtain a fuller picture of how the poor really live their lives, where they need help, and where they don’t.

In 2003, we founded the Poverty Action Lab (which later became the Abdul

Latif Jameel Poverty Action Lab, or J—PAL) to encourage and support other researchers, governments, and nongovernmental organizations to work together on this new way of doing economics, and to help diffuse what they have learned among policy makers. The response has been overwhelming. By 2010, J—PAL researchers had completed or were engaged in over 240 experiments in forty countries around the world, and very large numbers of organizations, researchers, and policy makers have embraced the idea of randomized trials.

The response to J—PAL's work suggests that there are many who share our basic premise—that it is possible to make very significant progress against the biggest problem in the world through the accumulation of a set of small steps, each well thought out, carefully tested, and judiciously implemented. This might seem self-evident, but as we will argue throughout the book, it is not how policy usually gets made. The practice of development policy, as well as the accompanying debates, seems to be premised on the impossibility of relying on evidence: Verifiable evidence is a chimera, at best a distant fantasy, at worst a distraction. "We have to get on with the work, while you indulge yourselves in the pursuit of evidence," is what hardheaded policy makers and their even harder-headed advisers often told us when we started down this path. Even today, there are many who hold this view. But there are also many people who

have always felt disempowered by this unreasoned urgency. They feel, as we do,

that the best anyone can do is to understand deeply the specific problems that afflict the poor and to try to identify the most effective ways to intervene. In some instances, no doubt, the best option will be to do nothing, but there is no

general rule here, just as there is no general principle that spending money always works. It is the body of knowledge that grows out of each specific answer and the understanding that goes into those answers that give us the best

shot at, one day, ending poverty.

This book builds on that body of knowledge. A lot of the material that we will

talk about comes from RCTs conducted by us and others, but we also make use

of many other types of evidence: qualitative and quantitative descriptions of how

the poor live, investigations of how specific institutions function, and a variety of evidence on which policies have worked and which have not. In the

companion Web site for the book, www.pooreconomics.com, we provide links to all the studies we cite, photographic essays that illustrate each chapter, and extracts and charts from a data set on key aspects of the lives of those who live

on less than 99 cents per person per day in eighteen countries, which we will refer to many times in the book.

The studies we use have in common a high level of scientific rigor, openness to accepting the verdict of the data, and a focus on specific, concrete questions of relevance to the lives of the poor. One of the questions that we will use these data to answer is when and where we should worry about poverty traps; we will find them in some areas, but not in others. In order to design effective policy, it is crucial that we get answers to such questions right. We will see many instances in the chapters that follow where the wrong policy was chosen, not out of bad intentions or corruption, but simply because the policy makers had the wrong model of the world in mind: They thought there was a poverty trap somewhere and there was none, or they were ignoring another one that was right in front of them.

The message of this book, however, goes well beyond poverty traps. As we will see, ideology, ignorance, and inertia—the three Is—on the part of the expert, the aid worker, or the local policy maker, often explain why policies fail and why aid does not have the effect it should. It is possible to make the world a better place—probably not tomorrow, but in some future that is within our reach—but we cannot get there with lazy thinking. We hope to persuade you that our patient, step-by-step approach is not only a more effective way to fight poverty, but also one that makes the world a more interesting place.

PART I

Private Lives

2

A Billion Hungry People?

For many of us in the West, poverty is almost synonymous with hunger. Other than major natural catastrophes such as the Boxing Day tsunami in 2004 or the Haiti earthquake in 2010, no single event affecting the world's poor has captured the public imagination and prompted collective generosity as much as the Ethiopian famine of the early 1980s and the resulting "We Are the World" concert in March 1985. More recently, the announcement by the UN Food and Agriculture Organization (FAO) in June 2009 that more than a billion people are suffering from hunger[1] grabbed the headlines, in a way that the World Bank's estimates of the number of people living under a dollar a day never did.

This association of poverty and hunger is institutionalized in the UN's first Millennium Development Goal (MDG), which is "to reduce poverty and hunger." Indeed, poverty lines in many countries were originally set to capture the notion of poverty based on hunger—the budget needed to buy a certain

number of calories, plus some other indispensable purchases (such as housing).

A "poor" person was essentially defined as someone without enough to eat.

It is no surprise, therefore, that a large part of governments' effort to help the

poor is posited on the idea that the poor desperately need food, and that quantity

is what matters. Food subsidies are ubiquitous in the Middle East: Egypt spent $3.8 billion in food subsidies in 2008–2009 (2 percent of the GDP).2 Indonesia has the Rakshin Program, which distributes subsidized rice. Many states in India

have a similar program: In Orissa, for example, the poor are entitled to 55

pounds of rice a month at about 4 rupees per pound, less than 20 percent of the

market price. Currently, the Indian parliament is debating instituting a Right to Food Act, which would allow people to sue the government if they are starving.

The delivery of food aid on a massive scale is a logistical nightmare. In India,

it is estimated that more than one-half of the wheat and over one-third of the rice

get "lost" along the way, including a good fraction that gets eaten by rats.3 If governments insist on such policy despite the waste, it is not only because hunger and poverty are assumed to go hand in hand: The inability of the poor to feed themselves properly is also one of the most frequently cited root causes of a

poverty trap. The intuition is powerful: The poor cannot afford to eat enough; this makes them less productive and keeps them poor.

Pak Solhin, who lives in a small village in the province of Bandung,

Indonesia, once explained to us exactly how such a poverty trap worked.

His parents used to have a bit of land, but they also had thirteen children and

had to build so many houses for each of them and their families that there was no

land left for cultivation. Pak Solhin had been working as a casual agricultural worker, which paid up to 10,000 rupiah per day ($2 USD PPP) for work in the

fields. However, a recent hike in fertilizer and fuel prices had forced farmers to

economize. According to Pak Solhin, the local farmers decided not to cut wages

but to stop hiring workers instead. Pak Solhin became unemployed most of the

time: In the two months before we met him in 2008, he had not found a single

day of agricultural labor. Younger people in this situation could normally find work as construction workers. But, as he explained, he was too weak for the most physical work, too inexperienced for more skilled labor, and at forty, too old to be an apprentice: No one would hire him.

As a result, Pak Solhin's family—he and his wife, and their three children—were forced to take some drastic steps to survive. His wife left for Jakarta, approximately 80 miles away, where, through a friend, she found a job as a maid. But she did not earn enough to feed the children. The oldest son, a good student, dropped out of school at twelve and started as an apprentice on a construction site. The two younger children were sent to live with their grandparents. Pak Solhin himself survived on about 9 pounds of subsidized rice he got every week from the government and on fish that he caught from the edge of a lake (he could not swim). His brother fed him once in a while. In the week before we last spoke with him, he had had two meals a day for four days, and just one for the other three.

Pak Solhin appeared to be out of options, and he clearly attributed his problem to food (or, more precisely, the lack of it). It was his opinion that the landowning peasants had decided to fire their workers instead of cutting wages because they thought that with the recent rapid increases in food prices, a cut in wages would push workers into starvation, which would make them useless in the field. This is how Pak Solhin explained to himself the fact that he was unemployed.

Although he was evidently willing to work, lack of food made him weak and listless, and depression was sapping his will to do something to solve his

problem.

The idea of a nutrition-based poverty trap, which Pak Solhin explained to us,

is very old. Its first formal statement in economics dates from 1958. 4

The idea is simple. The human body needs a certain number of calories just to

survive. So when someone is very poor, all the food he or she can afford is barely enough to allow for going through the motions of living and perhaps earning the meager income that the individual originally used to buy that food.

This is the situation Pak Solhin saw himself in when we met him: The food he

got was barely enough for him to have the strength to catch some fish from the

bank.

As people get richer, they can buy more food. Once the basic metabolic needs

of the body are taken care of, all that extra food goes into building strength, allowing people to produce much more than they need to eat merely to stay alive.

This simple biological mechanism creates an S—shaped relationship between

income today and income tomorrow, very much as in Figure 1 in the previous chapter: The very poor earn less than they need to be able to do significant work,

but those who have enough to eat can do serious agricultural work. This creates

a poverty trap: The poor get poorer, and the rich get richer and eat even better,

and get stronger and even richer, and the gap keeps increasing.

Although Pak Solhin's logical explanation of how someone might get trapped

in starvation was impeccable, there was something vaguely troubling about his narrative. We met him not in war-infested Sudan or in a flooded area of

Bangladesh, but in a village in prosperous Java, where, even after the increase in

food prices in 2007–2008, there was clearly plenty of food available, and a basic

meal did not cost much. He was clearly not eating enough when we met him, but

he was eating enough to survive; why would it not pay someone to offer him the

extra bit of nutrition that would make him productive in return for a full day's work? More generally, although a hunger-based poverty trap is certainly a

logical possibility, how relevant is it in practice, for most poor people today?

ARE THERE REALLY A BILLION HUNGRY

PEOPLE?

One hidden assumption in our description of the poverty trap is that the poor eat as much as they can. And indeed, it would be the obvious implication of an S—shaped curve based on a basic physiological mechanism: If there was any chance that by eating a bit more, the poor could start doing meaningful work and get out of the poverty trap zone, then they should eat as much as possible.

Yet, this is not what we see. Most people living with less than 99 cents a day do not seem to act as if they are starving. If they were, surely they would put every available penny into buying more calories. But they do not. In our eighteen-country data set on the lives of the poor, food represents from 36 to 79 percent of consumption among the rural extremely poor, and 53 to 74 percent among their urban counterparts. [5]

It is not because all the rest is spent on other necessities: In Udaipur, for example, we find that the typical poor household could spend up to 30 percent more on food than it actually does if it completely cut expenditures on alcohol, tobacco, and festivals. The poor seem to have many choices, and they don't elect to spend as much as they can on food.

This is evident from looking at how poor people spend any extra money that they happen upon. Although they clearly have some unavoidable expenses (they

need clothes, medicines, and so forth) to take care of first, if their livelihoods depended on getting extra calories, one would imagine that when a little bit more

spendable money is available, it would all go into food. The food budget should

go up proportionally faster than total spending (since both go up by the same amount, and food is only a part of the total budget, it increases by a bigger proportion). However, this does not seem to be the case. In the Indian state of Maharashtra, in 1983 (much before India's recent successes —a majority of

households then lived on 99 cents per person per day or less), even for the very

poorest group, a 1 percent increase in overall expenditure translated into about a

0.67 percent increase in the total food expenditure.6 Remarkably, the relationship was not very different for the poorest individuals in the sample (who earned about 50 cents per day per person) and the richest (who earned around $3 per day per person). The Maharashtra case is pretty typical of the relationship between income and food expenditures the world over: Even among the very

poor, food expenditures increase much less than one for one with the budget.

Equally remarkable, even the money that people spend on food is not spent to

maximize the intake of calories or micronutrients. When very poor people get a chance to spend a little bit more on food, they don't put everything into getting more calories. Instead, they buy better-tasting, *more expensive* calories. For the poorest group in Maharashtra in 1983, out of every additional rupee spent on food when income rose, about half went into purchasing more calories, but the rest went into more expensive calories. In terms of calories per rupee, the millets (*jowar* and *bajra*) were clearly the best buy.Yet only about two-thirds of the total spending on grains was on these grains, while another 30 percent was spent on rice and wheat, which cost on average about twice as much per calorie. In addition, the poor spent almost 5 percent of their total budget on sugar, which is both more expensive than grains as a source of calories and bereft of other nutritional value.

Robert Jensen and Nolan Miller found a particularly striking example of the "flight to quality" in food consumption. [7] In two regions of China, they offered randomly selected poor households a large subsidy on the price of the basic staple (wheat noodles in one region, rice in the other). We usually expect that when the price of something goes down, people buy more of it. The opposite happened. Households that received subsidies for rice or wheat consumed *less* of those two items and ate more shrimp and meat, even though their staples now cost less. Remarkably, overall, the caloric intake of those who received the subsidy did not increase (and may even have decreased), despite the fact that their purchasing power had increased. Neither did the nutritional content improve in any other sense. The likely explanation is that because the staple formed such a large part of the household budget, the subsidies had made them

richer: If the consumption of the staple is associated with being poor (say, because it is cheap but not particularly tasty), feeling richer might actually have

made them consume *less* of it. Once again, this suggests that at least among these very poor urban households, getting more calories was not a priority: Getting better-tasting ones was. [8]

What is happening to nutrition in India today is another puzzle. The standard

media story about it is about the rapid rise of obesity and diabetes as the urban

upper-middle classes get richer. However, Angus Deaton and Jean Dreze have

shown that the real story of nutrition in India over the last quarter century is not

that Indians are becoming fatter: It is that *they are in fact eating less and less*. [9]

Despite rapid economic growth, there has been a sustained decline in per capita

calorie consumption; moreover, the consumption of all other nutrients except fat

also appears to have declined among all groups, even the poorest. Today, more

than three-fourths of the population live in households whose per capita calorie consumption is less than 2,100 calories in urban areas and 2,400 in rural areas—

numbers that are often cited as “minimum requirements” in India for individuals

engaged in manual labor. It is still the case that richer people eat more than poorer people. But at all levels of income, the share of the budget devoted to food has declined. Moreover, the composition of the food basket has changed, so

that the same amount of money is now spent on more expensive edibles.

The change is not driven by declining incomes; by all accounts, real incomes

are increasing. Yet, though Indians are richer, they eat so much less at each level

of income that they eat less on average today than they used to. Nor is it because

of rising food prices—between the early 1980s and 2005, food prices declined relative to the prices of other things, both in rural and urban India. Although food prices have increased again since 2005, the decline in calorie consumption

happened precisely when the price of food was going down.

So the poor, even those whom the Food and Agriculture Organization would

classify as hungry on the basis of what they eat, do not seem to want to eat much

more even when they can. Indeed, they seem to be eating less. What could be going on?

The natural place to start to unravel the mystery is to assume that the poor must know what they are doing. After all, they are the ones who eat and work. If

they could indeed be tremendously more productive, and earn much more by

eating more, then they probably would when they had the chance. So could it be

that eating more doesn't actually make us particularly more productive, and as a

result, there is no nutrition-based poverty trap?

One reason the poverty trap might not exist is that most people have enough to

eat.

At least in terms of food availability, today we live in a world that is capable

of feeding every person that lives on the planet. On the occasion of the World Food Summit in 1996, the FAO estimated that world food production in that year

was enough to provide at least 2,700 calories per person per day. 10 This is the result of centuries of innovation in food supply, thanks no doubt to great innovations in agricultural science, but attributable also to more mundane factors

such as the adoption of the potato into the diet after the Spanish discovered it in

Peru in the sixteenth century and imported it to Europe. One study finds that potatoes may have been responsible for 12 percent of the global increase in population between 1700 and 1900. 11

Starvation exists in today’s world, but only as a result of the way the food gets shared among us. There is no absolute scarcity. It is true that if I eat a lot more than I need or, more plausibly, turn more of the corn into biofuels so that I can heat my pool, then there will be less for everybody else.[12] But, despite this, it seems that most people, even most very poor people, earn enough money to be able to afford an adequate diet, simply because calories tend to be quite cheap, except in extreme situations. Using price data from the Philippines, we calculated the cost of the cheapest diet sufficient to give 2,400 calories, including 10 percent calories from protein and 15 percent calories from fat. It would cost only 21 cents at PPP, very affordable even for someone living on 99 cents a day. The catch is, it would involve eating only bananas and eggs.... But it seems that so long as people are prepared to eat bananas and eggs when they need to, we should find very few people stuck on the left part of the S—shaped curve, where they cannot earn enough to be functional.

This is consistent with evidence from Indian surveys in which people were asked whether they had enough to eat (i.e., whether “everyone in the household got two square meals a day” or whether everyone eats “enough food every day”).