

Twelve

ON-THE-GROUND SOLUTIONS FOR ENDING POVERTY

The end of poverty will require a global network of cooperation among people who have never met and who do not necessarily trust each other. One part of the puzzle is relatively easy. Most people in the world, with a little bit of prodding, would accept the fact that schools, clinics, roads, electricity, ports, soil nutrients, clean drinking water, and the like are the basic necessities not only for a life of dignity and health, but also for economic productivity. They would also accept the fact that the poor may need help to meet their basic needs, but they might be skeptical that the world could pull off any effective way to give that help.

If the poor are poor because they are lazy or their governments are corrupt, how could global cooperation help? Fortunately, these common beliefs are misconceptions, only a small part of the explanation, if at all, of why the poor are poor. I have noted repeatedly that in all corners of the world, the poor face structural challenges that keep them from getting even their first foot on the ladder of development. Most societies with good harbors, close contacts with the rich world, favorable climates, adequate energy sources, and freedom from epidemic disease have escaped from poverty. The world's remaining challenge is not mainly to overcome laziness and corruption, but rather to take on geographic isolation, disease, vulnerability to climate shocks, and so on, with new systems of political responsibility that can get the job done.

In the next chapters, I lay out a strategy for ending extreme poverty by 2025. The strategy focuses on the key investments—in people and in infrastructure—that can give impoverished communities around the world, both rural and urban, the tools for sustainable development. We need plans, systems, mutual accountability, and financing mechanisms. But even before we have all of that apparatus—or economic plumbing—in place, we must first understand more concretely what such a strategy means to the one billion-plus people who can be helped. It is the bravery, fortitude, realism, and sense of responsibility of the impoverished and disempowered, for themselves and especially for their children, that give us hope, and spur us on to end extreme poverty in our time.

MEETING WITH THE RURAL POOR: SAURI, KENYA

Together with colleagues from the UN Millennium Project and the Earth Institute, I spent several days in July 2004 in a group of eight Kenyan villages known as the Sauri sublocation in the Siaya district of Nyanza Province, about forty-four kilometers from Kisumu, in western Kenya. We visited farms, clinics, a subdistrict and district hospital, and schools in Sauri and the environs. We met with international organizations working in the region, including ICRAF (the World Agroforestry Center), the UN Development Program, and the U.S. Centers for Disease Control and Prevention. The visit made vivid both why extreme poverty persists in rural areas and how it can be ended.

We found a region beset by hunger, AIDS, and malaria. The situation is far more grim than is described in official documents. The situation is also salvageable, but the international community requires a much better understanding of its severity, dynamics, and solutions if the crisis in Sauri and the rest of rural Africa is to be solved.

The situation is best understood through the voices of Sauri's struggling residents. In response to an invitation from our group, more than two hundred members of the community came to meet with us one afternoon (see photograph 2). Hungry, thin, and ill, they stayed for three and a half hours, speaking with dignity, eloquence, and clarity about their predicament. They are impoverished, but they are capable and resourceful. Though struggling to survive at present, they are not dispir-

ited but determined to improve their situation. They know well how they could get back to high ground.

The meeting took place on the grounds of a school called the Bar Sauri Primary School, under the auspices of a remarkable school headmistress, Ms. Anne Marcelline Omolo, who shepherds hundreds of hungry and impoverished schoolchildren, many of them orphans, through primary education and the travails of daily life. Despite disease, orphanhood, and hunger, all thirty-three of last year's eighth-grade class passed the Kenyan national secondary school exams. On a Sunday in July, we saw why. On their "day off" from school, this year's class of eighth graders sat at their desks from 6:30 A.M. until 6:00 P.M. preparing months in advance for this year's national examinations in November. Unfortunately, many who will pass the exams will be unable to take a position in a secondary school because of lack of funds for tuition, uniforms, and supplies. Nonetheless, to boost the fortitude of the eighth graders during the critical examination year, the community provides them with a cooked midday meal, with the fuel wood and water brought from home by the students (shown in photographs 3 and 4). Alas, the community is currently unable to provide midday meals for the younger children, who must fend for themselves. Many go hungry the entire school day.

The village meeting got underway on a Monday afternoon, with the villagers arriving on foot from several kilometers away. I introduced my colleagues and told the community of the Millennium Project's assignment from UN Secretary-General Kofi Annan to understand the situation of communities like Sauri, and to work with villagers to identify ways to help such communities to achieve the worldwide Millennium Development Goals of reducing extreme poverty, hunger, disease, and lack of access to safe water and sanitation. I also announced that thanks to a remarkable grant from the Lenfest Foundation in the United States, the Earth Institute at Columbia University would be able to put some of the ideas to work in Sauri and help the international community learn from the experience in Sauri for the benefit of villages in other parts of Africa and beyond. Several hours later, around 5:30 P.M., we all rose from a discussion that was distressing, uplifting, and profoundly challenging—challenging, most of all, for the rich world.

Whatever the official data may show about "stagnant" rural income in places like Sauri, stagnation is a euphemism for decline and death. Food output per person is falling; malaria is pervasive and in-

creasing; AIDS stalks the community and the region, with adult prevalence on the order of 30 percent, if not higher. Rudimentary springs for collecting water for household use are often dirty, especially later in the day after extensive morning use. An NGO from the UK helped install a few protected water points, but they are too few in number, far from many homesteads, and heavily congested, sometimes yielding little more than a trickle and therefore requiring several minutes to fill a jug. Rapid population growth in the past has made farm sizes small. Fertility rates are around six children per woman, and the villagers have no access whatsoever to family planning and reproductive health services or to modern contraceptives.

I canvased the group on the material conditions of the community, and received very perceptive accounts of the grim situation. Only two of the two hundred or so farmers at the meeting reported using fertilizer at present. Around 25 percent are using improved fallows with nitrogen-fixing trees, a scientific farming approach developed and introduced into Sauri by ICRAF. With this novel technique, villagers grow trees that naturally fix nitrogen, meaning that the trees convert atmospheric nitrogen, which most food crops cannot use directly, into a nitrogen compound that food crops can use as a nutrient. The leguminous (nitrogen-fixing) trees can be planted alongside maize or other food crops. By choosing the right timing for planting and the right combination of trees and crops, the farmer gets a natural substitute for chemical nitrogen fertilizer.

So far, just one fourth of Sauri farmers use the new method. It costs money to introduce the technique and one planting season is lost. Farmers may also need to add some nonnitrogen fertilizers, especially potassium, which is also costly, too costly for the impoverished farmers. All of these additional complications could easily be addressed, and the ICRAF technique could be scaled up throughout the village, if only there were additional financial resources available to ICRAF and the village to jump-start the process.

The rest of the community is farming on tiny plots, often no more than 0.1 hectares, with soils that are utterly exhausted of nutrients, and therefore biologically unable to produce an adequate crop. The soils are so depleted of nutrients and organic matter that even if the rains are good, with yields of around one ton of maize per hectare, the households still go hungry. If the rains fail, the households face the risk of

death from immunosuppression because of severe undernutrition. Stunting, meaning low height for one's age, is widespread, a sign of the pervasive and chronic undernutrition of the children.

The real shocker came with my follow-up question. How many farmers had used fertilizers in the past? Every hand in the room went up. Farmer after farmer described how the price of fertilizer was now out of reach, and how their current impoverishment left them unable to purchase what they had used in the past. A fifty-kilo bag of diammonium phosphate (DAP) fertilizer sells for around 2,000 Ksh (Kenyan shillings) (US\$25). At \$500 a ton, that is at least twice the world market price. A proper application might require two to four bags per hectare, or \$50 to \$100 per hectare, a cost vastly beyond what the household can afford. Credits to buy fertilizer are neither available nor prudent for these farmers: a single failed crop season, an untimely episode of malaria, or some other calamity can push a household that has taken on debt into a spiral of unending indebtedness and destitution.

In my mind I started the calculations as the conversation progressed. Scaling up an appropriate combination of agroforestry and chemical fertilizer inputs would cost some tens of thousands of dollars. Yes, the amount was out of reach of the villagers themselves, but would represent a low cost per person in villages like Sauri if donors would rise to the occasion. Fortunately, on this occasion, the Earth Institute was able to respond.

As the afternoon discussion unfolded, the gravity of the community's predicament became more and more apparent. AIDS is ravaging the village, and nobody has yet had access to antiretroviral therapy. I asked how many households were home to one or more orphaned children left behind by the pandemic. Virtually every hand in the room shot up. I asked how many households were receiving remittances from family members living in Nairobi and other cities. The response was that the only things coming back from the cities were coffins and orphans, not remittances.

I asked how many households had somebody currently suffering from malaria. Around three fourths of the hands shot up. How many used antimarial bed nets? Two out of two hundred hands went up. How many knew about bed nets? All hands. And how many would like to use bed nets? All hands remained up. The problem, many of the women explained, is that they cannot afford the bed nets, which sell for a few dollars per net, and are too expensive even when partially subsidized

(socially marketed) by international donor agencies. How many in the community were using medicine to treat a bout of malaria? A few hands went up, but the vast majority remained down. A woman launched into an explanation that the medicines sell at prices well beyond what the villagers can afford.

A year or so ago, Sauri had a small clinic, as seen in photograph 5. The doctor has since left and the clinic is now padlocked. The villagers explained that they could not afford to pay the doctor and buy the medicines, so the doctor departed. Now they fend for themselves without health care or medicines. When malaria gets bad, and their children fall into anemia-induced tachycardia (rapid heartbeat), gasping for breath in small, ravaged bodies deprived of oxygen-carrying hemoglobin, they rush the child to the subdistrict hospital in nearby Yala. The mothers may carry the children on their backs or push them in wheelbarrows for several kilometers over dirt paths. Yet when we visited the Yala subdistrict hospital on our way from the village, we found a hospital with patients lying on cots in the halls—without running water, an in-house doctor (one visits only two afternoons per week), or even one complete surgical kit.

A few years back, Sauri's residents cooked with locally collected fuel wood, but the decline in the number of trees has left the sublocation bereft of sufficient fuel wood. The quarter or so households who are using the ICRAF system of improved fallows, based on leguminous trees, have a dedicated supply of fuel wood. Other farmer households do not. Villagers said that they now buy pieces of fuel wood in Yala or Muhandia (both a few kilometers away), a bundle of seven sticks costing around twenty-five shillings (thirty cents). These seven sticks are barely sufficient for cooking one meal. In our meeting with the villagers, I conveyed astonishment at the price, thirty cents per meal, for a community that earns almost no money at all. A woman responded that many villagers had in fact reverted to cooking with cow dung or to eating uncooked meals.

As this village dies of hunger, AIDS, and malaria, its isolation is stunning. There are no cars or trucks owned or even used within Sauri, and only a handful of villagers said they had ridden in any kind of motorized transport during the past year. Only three or four of the two hundred or so said that they get to the regional city of Kisumu each month, and about the same number said that they had been to Nairobi, Kenya's commercial and political capital, four hundred kilometers away, once

during the past year. There are virtually no remittances reaching the village. Indeed, there is virtually no cash income of any kind reaching the village. Given the farmers' meager production, farm output must be used almost entirely for the household's own consumption, rather than for sales in the market. The community has no money for fertilizers, medicines, school fees, or other basic needs that must be purchased from outside of the villages. Around half of the individuals at the meeting said that they had never made a phone call in their entire lives. (Ironically, and promisingly, our own mobile phones worked fine in the village, relying on a cell tower in Yala. Extending low-cost telephony to the village, for example based on a mobile phone shared by the community, would therefore pose no infrastructure problems.)

This year the rains are failing again, another disaster in an increasingly erratic climate, quite possibly a climate showing the increasing effects of long-term man-made climate change emanating from the rich world. The two roof-water harvesting cisterns at the school are now empty, and the farmers fear disaster in the harvest next month. The Kenyan government has already put out a worldwide appeal for emergency aid to fight imminent starvation in several provinces, including Nyanza.

This village could be rescued, and could achieve the Millennium Development Goals, but not by itself. Survival depends on addressing a series of specific challenges: nutrient-depleted soils, erratic rainfall, holoendemic malaria, pandemic HIV/AIDS, lack of adequate education opportunities, lack of access to safe drinking water and latrines, and the unmet need for basic transport, electricity, cooking fuels, and communications. All of these challenges can be met, with *known, proven, reliable, and appropriate* technologies and interventions.

The crux of the matter for Sauri sublocation can be stated simply and directly:

Sauri's villages, and impoverished villages like them all over the world, can be saved and set on a path of development at a cost that is tiny for the world but too high for the villages themselves and for the Kenyan government on its own.

African safari guides speak of the Big Five animals to watch for on the savannah. The international development community should speak of the Big Five development interventions that would spell the difference between hunger, disease, and death and health and economic development. Sauri's Big Five, identified by the villagers as well as by the UN Millennium Project, are

- **Agricultural inputs.** With fertilizers, improved fallows (with ICRAF's proven technologies), green manures and cover crops, water harvesting and small-scale irrigation, and improved seeds, Sauri's farmers could triple the food yields per hectare and quickly end chronic hunger. In addition, storage facilities would allow the village to sell the grain over the course of months, rather than all at once, thereby getting more favorable prices. Grain could be protected in locally made storage bins using leaves from the improved fallow species tephrosia, which has insecticide properties. These improvements would be of particular advantage for the women, who do the lion's share of African farm and household work.
- **Investments in basic health.** A village clinic with one doctor and nurse for the five thousand residents would provide free antimalarial bed nets; effective antimalarial medicines; treatments for HIV/AIDS opportunistic infections (including highly effective and low-cost Bactrim); antiretroviral therapy for late-stage AIDS; and a range of other essential health services, including skilled birth attendants and sexual and reproductive health services.
- **Investments in education.** Meals for all the children at the primary school could improve the health of the schoolchildren, the quality of education, and the attendance at school. Expanded vocational training for the students could teach them the skills of modern farming (for example, using improved fallows and fertilizer), computer literacy, basic infrastructure maintenance (electrical wiring, use and maintenance of a diesel generator, water harvesting, borewell construction and maintenance), carpentry, and the like. With a mere thousand households in Sauri, villagewide classes once a month could train adults in hygiene, HIV/AIDS, malaria control, computer and mobile phone use, and a myriad of other technical and enormously pressing topics. Without doubt, the village is ready and eager to be empowered by increased information and technical knowledge.
- **Power, transport, and communications services.** Electricity could be made available to the villages either via a power line (from Yala or Nyanminia) or an off-grid diesel generator. The electricity would power lights and perhaps a computer for the school; pumps for safe well water; power for milling grain and other food processing, refrigeration, carpentry; charges for household batteries (which could be used for

household illumination); and other needs. The villagers emphasized that the students would like to study after sunset but cannot do so without electric lighting. A village truck could bring in fertilizers, other farm inputs, and modern cooking fuels (for example, canisters of liquid petroleum gas [LPG], familiar from American backyard barbecues), and take out harvests to the market, transport perishable goods and milk for sale in Kisumu, and increase opportunities for off-farm employment for youth. The truck could rush women with child-birth complications and children with acute complications of anemia to the hospital. One or more shared mobile phones for the village could be used for emergencies, market information, and generally to connect Sauri with the outside world.

- **Safe drinking water and sanitation.** With enough water points and latrines for the safety and convenience of the entire village, women and children of the village would save countless hours of toil each day fetching water. The water could be provided through a combination of protected springs, borewells, rainwater harvesting, and other basic technologies. There is even the possibility of establishing links with an existing large-scale storage tank and pumping station a few kilometers away.

The irony is that the costs of these services for Sauri's five thousand residents would be very low. Here are some quick guesses, which colleagues at the Earth Institute are refining:

Fertilizers and improved fallows for the five hundred or so arable hectares would be roughly \$100 per hectare per year, or \$50,000 per year for the community.

A clinic, staffed by a doctor and nurse, providing free malaria prevention and care and additional free basic services other than antiretrovirals, would cost around \$50,000 per year. (Antiretrovirals would be provided by the Global Fund to Fight AIDS, TB, and Malaria, the U.S. Emergency Plan, and other programs.) School meals could be paid for communally out of just a small part of the incremental grain yields achieved through the application of fertilizers.

A village truck would be an annual inclusive running cost of perhaps \$15,000 per year if amortized over several years (or leased from manufacturer). Modern cooking fuel for the primary and secondary school students (numbering about a thousand) in the entire subcounty

would cost an additional \$5,000 per year. A few village cell phones and a grain storage facility would add perhaps \$5,000 per year, for a total of \$25,000 per year.

A combination of protected springs (with improved access), borewells (with pumps), and community taps connected to the large-scale storage system would provide access to water at ten convenient locations and cost around \$25,000 dollars.

Electricity could be provided to the school, the nearby clinic, and five water points by a dedicated off-grid generator or by a power line from Yala or Nyanminia for an initial cost of about \$35,000. For another \$40,000 in initial costs and recurring costs of \$10,000, every household could be provided with a battery/bulb assembly to light a small bulb for a few hours every night with the battery charging station connected to the village generator. The annualized costs would be \$25,000 per year.

Additional expenses would include scaling up educational activities, various costs of local management, technical advice from agricultural extension officers, and other related delivery services.

My Earth Institute colleagues and I estimated that the combined costs of these improvements would total around \$350,000 per year, or roughly \$70 per person per year in Sauri, for at least the next few years. The benefits would be astounding: decisive malaria control (with transmission reduced by perhaps 90 percent, judging from recent CDC bed-net trials in a neighboring area), a doubling or tripling of food yields per hectare with a drastic reduction of chronic hunger and undernutrition, improved school attendance, a reduction of water-borne disease, a rise in incomes through the sale of surplus grains and cash crops, the growth of cash incomes via food processing, carpentry, small-scale clothing manufacturing, horticulture, aquaculture, animal husbandry, and a myriad of other benefits. With anti-AIDS drugs added to the clinic's services, the mass deaths from AIDS, as well as the deluge of newly orphaned children, could also be stanched.

Sooner rather than later, these investments would repay themselves not only in lives saved, children educated, and communities preserved, but also in direct commercial returns. Consider the case of fertilizers, which are currently unused, since households lack access to storage, transport, credit, and a financial cushion against the risk of crop failures even if credit is made available. A fertilizer application of \$100 per hectare (such as two hundred kilos of DAP), combined with or substituted by improved fallows (as appropriate), could raise crop yields in a

normal season from one ton per hectare to three tons per hectare, with a marketable value of the increment of roughly \$200 to \$400 dollars per hectare, assuming that transport is available and there is a stable price for the maize crop. In a drought year, fertilizer and/or improved fallows would mean the difference between harvesting one ton and a failed crop (with attendant acute hunger, if not starvation). In the first few years, fertilizers and improved fallows should be given largely for free to the villagers to boost their own nutrition and health, and to build a small financial cushion. Later on it will be possible to share the costs with the community and, eventually, perhaps in a decade, to provide the fertilizer and improved fallows on a full commercial basis.

INTERNATIONAL DONORS AND VILLAGES LIKE SAURI

The international donor community should be thinking round the clock about one question: *how can the Big Five interventions be scaled up in rural areas like Sauri?* With a population of some thirty-three million people, of whom two thirds are in rural areas, Kenya would require annual investments on the order of \$1.5 billion per year for its Sauris, with donors filling most of that financing gap, since the national government is already stretched beyond its means. (More precise estimates of cost would have to be worked out in the context of detailed development plans as described in chapter 14.) Instead, donor support to Kenya is around \$100 million, or a mere one fifteenth of what is needed. Kenya's debt servicing to the rich world is around \$600 million per year, so its budget is still being drained by the international community, not bolstered by it.

This is all the more remarkable since Kenya is a new and fragile democracy that should be receiving considerable help from its development partners. Kenya, ironically, is also a victim of global terrorism caught in a war not of its own making. U.S. and Israeli targets on Kenyan soil have been hit in recent years, sending Kenya's tourist industry into a downward spiral and causing hundreds of deaths of Kenyans and massive property damage.

The UN Millennium Project is working with the government of Kenya to ensure that its poverty reduction efforts are bold enough to

achieve the Millennium Development Goals. This strategy will require much greater development assistance and deeper debt cancellation from the rich world to enable Kenya to invest in the Big Five—agriculture, health and education, electricity, transport and communications, and safe drinking water—not only in Sauri villages, but across impoverished rural Kenya. Yet when the Kenyan government recently proposed a national social health insurance fund, the very thing needed to scale up access to basic health care, donors quickly objected rather than jumped at the opportunity to examine how it could actually be accomplished.

The issue of corruption overshadows donor relations with the Kenyan government. Much of the corruption reflects holdouts from the earlier regime of more than two decades, corrupt officials who have not yet been weeded out. Part of the corruption is new and completely avoidable, but only if donors help Kenya to improve the functioning of the public administration, not by moralizing and finger pointing but by the installation of computer systems, published accounts, job training and upgrading, higher pay for senior managers so that they do not have to live off bribes and side payments, continued support for the government's already major efforts to improve the judicial system, empowerment of local villages to oversee the provision of public services, and some humility on the part of donors. Most donor governments have corruption inside their own governments and even in the provision of foreign aid (which is often linked to powerful political interests within the donor countries). The affliction is widespread, and needs to be attacked systematically and cleverly, but without useless and false moralizing.

Donors should sit down with the government leadership and say, "We'd like to help you scale up the Big Five in Kenya's villages to enable you to ensure that all of Kenya's rural poor have access to agricultural inputs, health, education, electricity, communications and transport, and safe water and sanitation. Together, let's design a budgetary and management system that will reach the villages and ensure a monitorable, governable, and scalable set of interventions across the country. We're prepared to pay if you are prepared to ensure good governance on such a historic project." Private international consulting firms could be brought in to help design these systems and to lend credibility to their implementation and performance.

With a little more forethought, donors and governments could take advantage of the crucial fact that villages like Sauri have a group moni-

toring and enforcement mechanism automatically built into village life that can help to ensure that aid to the village is well used. Just as experience with group lending in microfinance has been highly successful, projects that empower village-based community organizations to oversee village services have also been highly successful. Recent experiences with village governance in India, based on the *panchayats* (local councils), are but one notable example. In Sauri, the villagers jumped with eagerness at the invitation to form various committees (schooling, clinics, transport and electricity, farming) to help prepare for the actual investments and to ensure proper governance as they are put into place. Headmistress Omolo, who oversaw the formation of the committees, also ensured that the village women, with their special needs and burdens and even legal obstacles, would be well represented in each of the committees.

If donor officials would join the government of Kenya in meeting with the villagers and brainstorming with government officials, they could come up with dozens of fruitful approaches to ensure that aid actually reaches the villages. We need to be more creative in order to save the lives of millions of people now struggling to survive—and often failing—in the impoverished villages around the world. The donors and the government of Kenya can and should agree on a suitable and bold strategy. Kenya's new democracy, from the national government down to the villages, is prepared to govern the use of international help with transparency, efficiency, and equity if we can get the delivery mechanisms right and invest in the supporting information and reporting technologies.

MEETING WITH THE URBAN POOR: MUMBAI, INDIA

Several thousand miles from Sauri, Kenya, an impoverished community in Mumbai, India, struggles with the urban face of extreme poverty. A group that I met in June 2004 comes from a community that lives near the railway tracks. By near, I do not mean within range of the railway whistles as the train rolls through the city; I mean a community that lives within ten feet of the tracks. It may seem impossible, but the shacks of poster board, corrugated sheet metal, thatch, and whatever else it is hand are pushed right against the tracks, as seen in photograph 6. Chil-

dren and the old routinely walk along the tracks, often within a foot or two of passing trains. They defecate on the tracks, for lack of alternative sanitation. And they are routinely maimed and killed by the trains.

An energetic and charismatic social worker, Sheela Patel, who left academic research years earlier to work with communities like this one, has brought me to meet the group. She has pioneered the cause of community organization within the very poorest slums, such as those shown in photographs 7 and 8. The NGO that she founded, the Society for the Promotion of Area Resource Centres (SPARC), is our host today. The fifty or so people assembled around the room are mostly women in their thirties and forties, but they look much older after decades of hard physical work and exposure to the elements. They have come to meet with me, and also a group of visitors from Durban, South Africa, who are there to learn about community organization for slum dwellers and squatters.

The overarching theme of our discussion is not latrines, running water, and safety from the trains, but empowerment: specifically, the group is discussing how slum dwellers who own virtually nothing have found a voice, a strategy for negotiating with the city government. In the past few years, this particular group, with SPARC's support, has been negotiating arrangements to relocate away from the tracks to safer ground, in settlements with basic amenities like running water, latrines, gutters, even roads. Thousands have already been relocated, though thousands more wait to find new living quarters.

The notion of large communities of people living within a few feet of the train tracks is startling enough for me this morning. It is, to be sure, a measure of the desperation of the poorest of the poor who arrive in cities to escape rural impoverishment, even famine, and then struggle to establish survivable conditions for themselves and for their children. But I'm even more startled to learn that there is actually a Railway Slum Dwellers Federation (RSDF), which has been organized by the community members, with the aid of SPARC, to negotiate with the municipality and the Indian Railways concerning their needs and interests. In addition to SPARC and the RSDF, a third NGO is represented at the meeting, Mahila Milan (Women Together), which focuses specifically on the needs of women slum dwellers.

As the women begin to talk, the realities of extreme urban poverty and the range of solutions come vividly to the fore. Each woman begins with a kind of testimonial to the power of group action. This testimony

Thirteen

MAKING THE INVESTMENTS NEEDED TO END POVERTY

At the most basic level, the key to ending extreme poverty is to enable the poorest of the poor to get their foot on the ladder of development. The development ladder hovers overhead, and the poorest of the poor are stuck beneath it. They lack the minimum amount of capital necessary to get a foothold, and therefore need a boost up to the first rung. The extreme poor lack six major kinds of capital:

- Human capital: health, nutrition, and skills needed for each person to be economically productive
- Business capital: the machinery, facilities, motorized transport used in agriculture, industry, and services
- Infrastructure: roads, power, water and sanitation, airports and seaports, and telecommunications systems, that are critical inputs into business productivity
- Natural capital: arable land, healthy soils, biodiversity, and well-functioning ecosystems that provide the environmental services needed by human society
- Public institutional capital: the commercial law, judicial systems, government services and policing that underpin the peaceful and prosperous division of labor

- Knowledge capital: the scientific and technological know-how that raises productivity in business output and the promotion of physical and natural capital

How to overcome a poverty trap? The poor start with a very low level of capital per person, and then find themselves trapped in poverty because the ratio of capital per person actually falls from generation to generation. The amount of capital per person declines when the population is growing faster than capital is being accumulated. Capital is accumulated, in turn, in a balance of two forces, one positive and one negative. On the positive side is the capital accumulated when households save a part of their current income, or have a part of their income taxed to finance investments by the government. Household savings are either lent to businesses (often through financial intermediaries such as banks) or invested directly in family businesses or equities traded in the market. Capital is diminished, or depreciated, as the result of the passage of time, or wear and tear, or the death of skilled workers, for example, because of AIDS. If savings exceed depreciation, there is positive net capital accumulation. If savings are less than depreciation, the capital stock declines. Even if there is positive net capital accumulation, the question for growth in per capita income is whether the net capital accumulation is large enough to keep up with population growth.

HOW THE POVERTY TRAP WORKS AND HOW FOREIGN AID HELPS OVERCOME IT

Figure 1 shows the basic mechanics of saving, capital accumulation, and growth, and figure 2 shows how a poverty trap works. In figure 1, we start on the left-hand side with a typical household. The household divides its income into consumption, taxation, and household savings. The government, in turn, divides its tax revenues into current spending and government investment. The economy's capital stock is raised by both household savings and by government investment. A higher capital stock leads to economic growth, which in turn raises household income through the feedback arrow from growth to income. We show in the figure that population growth and depreciation also negatively affect the accumulation of capital. In a "normal" economy, things proceed smoothly toward rising incomes, as household savings and govern-

ernment efforts, or it could be directed by the taxpayer to a qualifying charity or philanthropy that has registered programs in support of the Millennium Development Goals.

There are powerful reasons to take these steps, both out of enlightened self-interest of the rich nations and out of a deeper human need at the individual level. We will look at both of those powerful reasons in a later chapter.

Sixteen

MYTHS AND MAGIC BULLETS

Everything up to this point is fine and good, except for one matter: it ignores the human factor. Take the case of Africa. Africa needs around \$30 billion per year in aid in order to escape from poverty. But if we actually gave that aid, where would it go? Right down the drain if the past is any guide. Sad to say, Africa's education levels are so low that even programs that work elsewhere would fail in Africa. Africa is corrupt and muddled with authoritarianism. It lacks modern values and the institutions of a free market economy needed to achieve success. In fact, Africa's morals are so broken down that it is no surprise AIDS has run out of control. And here is the bleakest truth: Suppose that our aid saved Africa's children. What then? There would be a population explosion, and a lot more hungry adults. We would have solved nothing.

If your head was just nodding yes, please read this chapter with special care. The paragraph above repeats conventional rich-world wisdom about Africa, and to a lesser extent, other poor regions. While common, these assertions are incorrect. Yet they have been repeated publicly for so long, or whispered in private, that they have become accepted as truths by the broad public as well as much of the development community, particularly by people who have never worked in Africa. I use the case of Africa because prejudices against Africa currently run so high, but the same attitudes were expressed about other parts of the world before those places achieved economic development and cultural prejudices could not hold up. Napoleon famously declared, "History is a

fable often told." The same can be said about much of development thinking.

MONEY DOWN THE DRAIN

Former U.S. Secretary of the Treasury Paul O'Neill expressed a common frustration when he remarked about aid for Africa: "We've spent trillions of dollars on these problems and we have damn near nothing to show for it." O'Neill was no foe of foreign aid. Indeed, he wanted to fix the system so that more U.S. aid could be justified. But he was wrong to believe that vast flows of aid to Africa had been squandered. It is no surprise that there is so little to show for the aid to Africa, because there has in fact been so little aid to Africa!

Contrary to popular perception, the amount of aid per African per year is really very small, just \$30 per sub-Saharan African in 2002 from the entire world. Of that modest amount, almost \$5 was actually for consultants from the donor countries, more than \$3 was for food aid and other emergency aid, another \$4 went to servicing Africa's debts, and \$5 was for debt relief operations. The rest, \$12, went to Africa. Is it really a surprise that we do not see many traces of that aid on the ground? If we want to see the impact of aid, we had better offer enough to produce results.

Since the "money down the drain" argument is heard most frequently in the United States, it is worth looking at the same calculations for U.S. aid alone. In 2002, the United States gave \$3 per sub-Saharan African. Taking out the parts for U.S. consultants, food and other emergency aid, administrative costs, and debt relief, the aid per African came to the grand total of six cents. It's hardly shocking that Secretary O'Neill could find "nothing to show for it."

AID PROGRAMS WOULD FAIL IN AFRICA

Pessimism about Africans' ability to utilize aid is very deep, reflecting an amazing reservoir of deep prejudices. I have heard those prejudices for years and have come to expect them, always with sadness. Still, nothing prepared me for the amazing statements made by the new adminis-

tor of USAID, Andrew Natsios, a month after he took office in 2001. I had gone to Washington in the early weeks of the Bush administration to try to interest senior officials in a greatly expanded effort against AIDS in the developing world, especially Africa. I was propounding the idea, still highly controversial at the time, that antiretroviral treatment could be introduced effectively into a low-income setting. An enterprising *Boston Globe* reporter asked Mr. Natsios about these ideas. His answer stunned me.

Africans, he said, "don't know what Western time is. You have to take these [anti-AIDS] drugs a certain number of hours each day, or they don't work. Many people in Africa have never seen a clock or a watch their entire lives. And if you say, one o'clock in the afternoon, they do not know what you are talking about. They know morning, they know noon, they know evening, they know the darkness of night." He continued, "I'm sorry to say these things, but a lot of people like Jeffrey Sachs advocating these things [anti-AIDS drug treatment] have never worked in health care in rural areas in Africa or even in the cities."

This statement was extraordinary. The people of Sauri, Kenya, who arrived punctually at 2:30 P.M. for our Monday afternoon discussion, would have been chagrined to know how their lives had been compromised by such profound ignorance of a senior U.S. official. Not only did they know the time, they knew the nature of their predicament, whether it was the absence of anti-AIDS drugs or antimalarial bed nets, or fertilizers, or mobile phones. My colleagues and I battle these anti-African and antipoor attitudes regularly, even if they are rarely expressed in the unguarded terms that Andrew Natsios used. An argument on behalf of Africa must scale a sheer mountain of doubt before finding acceptance.

Corruption Is the Culprit

In the past, the overwhelming prejudices against Africa have been grounded in overt racism. Today the ever repeated assertion is that corruption—or "poor governance"—is Africa's venal sin, the deepest source of its current malaise. Both Africans themselves and outsiders level this charge. A senior human rights official of South Africa, speaking in full sincerity, stated the common view that "[poverty] is man made because poverty is the result of policy options that have been taken that impoverish some and enrich others. Inasmuch as poverty is man made,

so also do I believe that poverty can be eradicated." Almost any account of African poverty these days begins with the same assertion: poor governance is the major stumbling block.

By almost any standard, Africa's quality of governance is low. Property rights are difficult to enforce, violence and crime are high, corruption is perceived to be extensive. Although there is an undoubted basis for putting an emphasis on improved governance, the focus on corruption and governance is exaggerated, and seriously overstates the causal role of corruption and poor governance in Africa's laggard growth performance. The point is that virtually all poor countries have governance and corruption indicators that are below those of the high-income countries. Governance and higher incomes go hand in hand not only because good governance raises incomes, but also, and perhaps even more important, because higher income leads to improved governance.

As a country's income rises, governance improves for two major reasons. First, a more literate and affluent society is better able to keep the government honest by playing a watchdog role over government processes. Newspapers, television, books, telephones, transport, and now the Internet, all of which are vastly more available in rich countries, enhance this watchdog function and empower civil society. Second, a more affluent society can afford to invest in high-quality governance. When governments are backed by ample tax receipts, the civil service is better educated, extensive computerization improves information flows, and the public administration is professionally managed.

Africa's governance is poor because Africa is poor. Crucially, however, two other things are also true. At any given level of governance (as measured by standard indicators), African countries tend to grow less rapidly than similarly governed countries in other parts of the world. There is distinctly slower growth in Africa even after controlling for the quality of governance. Something else is afoot; as I have argued at length, the slower growth is best explained by geographical and ecological factors. Second, Africa shows absolutely no tendency to be more or less corrupt than other countries at the same income level. There is no evidence whatsoever that Africa is distinctly poorly governed *by the standards of very poor countries*.

There is an easy way to check both claims. First, we can examine Africa's governance measures once we have controlled statistically for income levels. It turns out that some African countries are better than expected given their income; others are average, and some others

indeed worse. On average, however, Africa's governance is typical for countries at the same level of income. The ranking of performers is shown in table 1, taken from a study that my colleagues and I recently published. We see that Africa's well-governed countries (whose governance scores are relatively high given the country's income level) include: Benin, Burkina Faso, Ghana, Madagascar, Malawi, Mali, Mauritania, and Senegal. The poorly governed countries (whose governance scores are relatively low given the country's income level) include: Angola, Burundi, Democratic Republic of the Congo, Sudan, and Zimbabwe.

Table 1: Governance Ratings and Household Consumption in Tropical Sub-Saharan Africa

Country	Rating Based on World Bank Governance Indicators, 2002*	Rating Based in Transparency International Index, 2003*	Freedom House Rating, 2003	Household Final Consumption Expenditure per Capita, 2000 (1980 = 100)
Benin	Good	NA†	Free	98.9
Burkina Faso	Good	NA†	Partly Free	111
Ghana	Good	Average	Free	92.8
Madagascar	Good	Good	Partly Free	64
Malawi	Good	Good	Partly Free	111.2
Mali	Good	Good	Free	95.3
Mauritania	Good	Good	Partly Free	104.8
Senegal	Good	Good	Free	99.6
Cameroon	Average	Average	Not Free	102.5
Central African Republic	Average	NA	Partly Free	NA
Chad	Average	NA	Not Free	NA
Congo, Rep.	Average	Average	NA	80.5
Côte d'Ivoire	Average	Average	Not Free	78.2
Eritrea	Average	NA	Not Free	NA
Ethiopia	Average	Good	Partly Free	NA
Guinea	Average	NA	Not Free	NA
Kenya	Average	Average	Partly Free	100.7
Mozambique	Average	Good	Partly Free	79.4
Niger	Average	NA	Partly Free	NA
Nigeria	Average	Average	Partly Free	NA
Rwanda	Average	NA	Not Free	83.9

Sierra Leone	Average	Good	Partly Free	43.9
Tanzania	Average	Good	Partly Free	NA
Togo	Average	NA	Not Free	112.4
Uganda	Average	Average	Partly Free	NA
Zambia	Average	Good	Partly Free	47
Angola	Poor	Poor	Not Free	NA
Burundi	Poor	NA	Not Free	65
Congo, Dem. Rep.	Poor	NA	Not Free	45.1
Sudan	Poor	Average	Not Free	NA
Zimbabwe	Poor	Average	Not Free	88.4
Liberia	NA	NA	Not Free	NA
Somalia	NA	NA	Not Free	NA

* Determined from the residuals of a regression of countries' governance indicators or scores on income per capita (at purchasing power parity); countries with residuals more than 1 standard deviation above or 1 standard deviation below the predicted value are categorized as "good" or "poor," respectively, and those with residuals within 1 standard deviation as "average."

† NA=not available.

Source: Sachs et al. (2004).

Comparing growth rates and the quality of governance, we find that better governed countries grew faster, but the relationship is not all that strong. There is a tendency for countries with low governance scores to grow less rapidly than countries with high governance scores, but there is a huge range of growth outcomes even among well-governed countries or poorly governed countries. The problem for Africa, however, is that African countries on average grow less rapidly than other developing countries at the same level of income and the same quality of governance, but in different parts of the world. To test this proposition, I have estimated the relationship between economic growth during 1980 to 2000 and the quality of governance during that period, using a large sample of developing countries. The statistical test also took into account the initial income of each country in 1980. The idea was to check whether African countries grew faster or slower than other developing countries once we had taken into account the quality of governance and initial incomes. The results are clear: African countries on average grew around 3 percentage points less rapidly than other developing countries at the same levels of governance and income. This slower growth caused, in my opinion, mainly by Africa's adverse geography and deficient infrastructure.

A Democracy Deficit

Another charge leveled against Africa and other poor regions is the absence of democracy. As with corruption, we need to "unpack" the evidence step by step. It is true that after achieving independence, most African countries fell into an authoritarian mold, as did most poor and newly independent countries around the world. In southern Africa, white minorities in South Africa and Rhodesia imposed authoritarian regimes on majority African populations. By the early 1990s, however, a little-heralded democratic revolution was sweeping the continent. One by one the long-ruling (and often highly corrupt and incompetent) founding generation gave way to multiparty elections. By 2003, Freedom House had categorized eleven African countries as "free," twenty as "partly free," and sixteen as "unfree." Africa's share of free and partly free countries, 66 percent, actually stands above the average for non-African low-income countries in 2003, 57 percent (thirteen countries out of twenty-three non-African low-income countries ranked by Freedom House).

Democratization, alas, does not reliably translate into faster economic growth, at least in the short term. The links from democracy to economic performance are relatively weak, even though democracy is surely a boon for human rights and a barrier against large-scale killing, torture, and other abuses by the state. The point is not that Africa will soar economically now that it is democratizing, but rather that the charge of authoritarian rule as a basic obstacle to good governance in Africa is passé.

Lack of Modern Values

Many people take for granted that poverty and wealth are simply a reflection of societal values. One recent study attributed African poverty to a dislike of work, suppression of individualism, and irrationality; another study identified the main obstacles to Mexican American upward mobility to be "resignation of the poor [to poverty]," "low priority of education," "fatalism," and "mistrust of those outside the family." The idea that whole societies are condemned to poverty because of their values has a long history, but one that is seldom useful.

Virtually every society that was once poor has been castigated for being lazy and unworthy until its citizens became rich, at which point their

new wealth was "explained" by their industriousness. Japan is a case at point, a society that was viewed as doomed to poverty when foreigners first arrived in the 1870s. The foreign press in Japan, such as the *Japan Gazette*, cautioned that Japan would never be rich because of the indolence of the society: "Wealthy we do not think it [that is, Japan] will ever become: the advantages conferred by Nature, with the exception of the climate, and the love of indolence and pleasure of the people themselves forbid it." Indeed, the same newspaper opined that economic reforms were bound to fail because of the deep corruption found in Japanese society: "The national banking system of Japan is but another example of the futility of trying to transfer Western growth to an Oriental habitat. In this part of the world principles, established and recognized in the West, appear to lose whatever virtue and vitality they originally possessed and to tend fatally towards weediness and corruption."

Early in the twentieth century, sociological theories in the tradition of Max Weber tried to explain the lower incomes of Southern Europe and Ireland relative to Northern Europe on the basis of supposedly static values of Catholicism versus entrepreneurial values of Protestantism. After midcentury, the Catholic countries began to grow very rapidly, especially after malaria was controlled. By now, Catholic Italy and Ireland have overtaken the Protestant UK in per capita income. Similarly, Weber and his followers hypothesized that East Asian societies with Confucian values, notably China, would be unable to achieve economic progress. Later, when China and other countries of East Asia began to grow rapidly, "Asian values" were invoked as the explanation for success, turning the argument on its head. When Asia had a temporary economic crisis in 1997, Asian values were once again attacked as the culprit, but this interpretation quickly faded when economic recovery came a couple of years later. India's poverty was explained on the basis of Hindu social rigidities and mysticism, until of course, India became one of the fastest growing economies in the world in the 1990s.

In the wake of September 11, Islamic societies have been categorized by some Western observers to be unfit for modernity. The charges of cultural failure are legion: irrationality, fundamentalism, extreme bias against women, antipathy to science. Yet some of the fastest growing economies in the world in the past decade have been Islamic. Between 1990 and 2001, average annual per capita growth in Malaysia was 5.2 percent; in Bangladesh, 3.1 percent; Tunisia, 3.1 percent; and India,

sia, 2.3 percent. These countries also made great strides in equality of girls' education and literacy.

Culture-based predictions of social change are fragile and often incorrect even in the most culture-bound areas of human behavior, such as fertility choice. Consider the Iranian revolution, which by standard arguments should have led to massive discrimination against girls and women and a delay in the demographic transition to low fertility rates. Instead, since the revolution, Iran has achieved one of the world's fastest transitions to low fertility, with its total fertility rate falling from 6.6 in 1980 to 1985 to 2.5 in 1995 to 2000. This achievement was the result, in part, of a tremendous increase in girls' participation in school and in female literacy. One interpretation is that religiously conservative fathers had more confidence in sending their daughters to school after the revolution. Iran was not alone in the education and demographic transitions. Islamic countries such as Egypt, Jordan, Morocco, and Tunisia have all experienced tremendous increases in girls' schooling and significant declines in total fertility rates.

Cultural arguments hold two main problems. Most important, cultures change with economic times and circumstances. The role of women in the labor market, household fertility choices, school attendance of children, and other critical areas of economic behavior change dramatically as societies shift from villages to urban centers, farming to industry, and illiteracy to literacy. What look like immutable social values turn out to be highly malleable to economic circumstances and opportunities. Although not all cultural values change so easily, values deemed to be inimical to economic development are rarely, if ever, unalterable features of a society.

The second main problem with cultural interpretations is that they are usually made on the basis of prejudice rather than measurable evidence. The arguments tend to be circular. People are poor because they are lazy. How do we "know" they are lazy? Because they are poor. Promoters of these interpretations rarely understand that low productivity results not from laziness and lack of effort but from lack of capital inputs to production. African farmers are not lazy, but they do lack soil nutrients, tractors, feeder roads, irrigated plots, storage facilities, and the like. Stereotypes that Africans work little and therefore are poor are put to rest immediately by spending a day in a village, where backbreaking labor by men and women is the norm.

When social scientists try to measure cultural attitudes related to

work, child rearing, and education, stereotypes tend to collapse. In the World Values Survey, households around the world are asked the same questions in order to permit serious comparisons of cultures and values. The answers are eye-opening. When asked in 2000, for example, whether it is especially important for children to be encouraged at home to learn "hard work," 61 percent of Americans said yes, whereas 80 percent of Nigerians, 75 percent of South Africans, and 83 percent of Tanzanians responded affirmatively. This answer and others hardly demonstrated social values of laziness in Africa and other poor countries.

THE NEED FOR ECONOMIC FREEDOM

If good governance has become the dominant mantra of those looking for instant solutions to development problems, its closest rival is surely economic freedom. Once again, a basically correct insight—that market economies outperform centrally planned economies—has been taken to the extreme, and then used as a substitute for analysis. When communism fell and free-market reforms swept Eastern Europe, the former Soviet Union, and China, free markets were hailed as the victor in the long-running battle between markets and state planning. So far, so good. But free-market ideologues took the argument to extremes that are utterly unsupportable by evidence or good economic reasoning. First, they maintained that markets should rule every nook and cranny of the economy, not just the basic productive sectors of farms, factories, and service trades, but also health, education, social security, and core infrastructure like water, energy transmission, roads, and rail. Second, they argued that all shortfalls in growth can be accounted for by the absence of free markets. Aid, they posited, becomes superfluous, even dangerous (as a delay to market reforms). All that is needed is the will to liberalize and privatize!

The Heritage Foundation and *Wall Street Journal*, which joined forces to produce the *Index of Economic Freedom*, put it this way:

[A]chieving economic freedom is like building a car. What is the most important component of the car: the powerful engine, the transmission, the seats, the steering wheel, the brakes, or the tires?

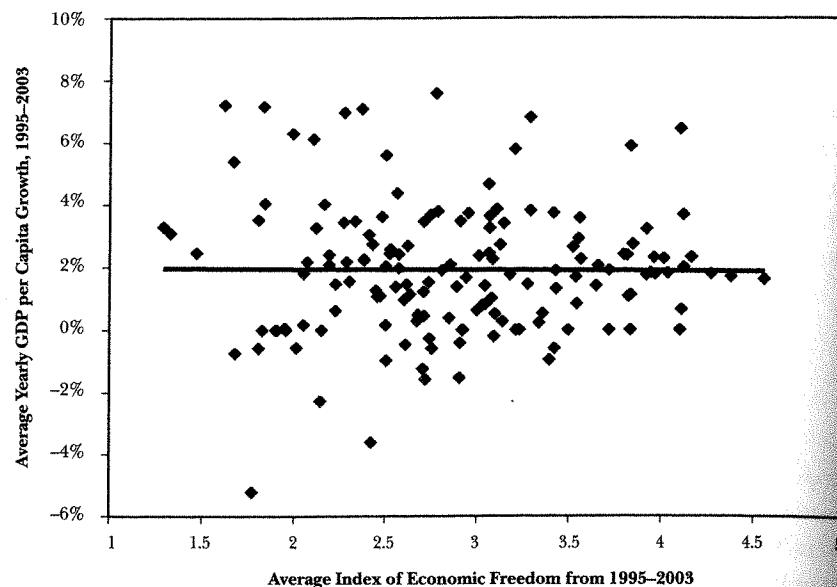
The question defies an answer, because without any one of these components, the car is unlikely to reach the desired destination. In similar fashion, ignore any one of the 10 factors of economic freedom, and abundant prosperity is likely to remain elusive. For that reason, we often refer to the 10 factors of the *Index* as a "10-step plan to end dependency." The 10 factors provide a road map, and only by sticking to the highlighted route can a country achieve economic freedom, prosperity, and self-sufficiency.

In fact, countries moving down the road map toward economic freedom have higher growth rates. As long as they keep progressing along the road map, their growth rate tends to be above the average for all countries. The faster they move (the greater the improvement in score), the higher the growth rate. Once countries decide to stop by the roadside or to retrace their steps, growth plummets. So the important message to the countries of the world is that they can help themselves just by starting to adopt economic freedom. The more economic freedom they adopt, the faster they grow or the longer they have superior growth. More growth in turn means that the average level of prosperity is increasing.

Here again is magical thinking. Economic development is like moving down a road: only one direction to travel, and the only question one of speed. The more economic freedom, as measured by a ten-part index, the faster the progress down the road. Any deviation from the straight and narrow, and growth collapses.

The prescription has the virtue of simplicity, and as philosopher Karl Popper would say, falsifiability. In other words, the proposition can be tested. Here is how. Let us look at the countries in the Heritage Foundation/*Wall Street Journal* index, and ask whether the central claim is merited. Does the index explain the rate of growth of the countries, so that those with high scores (meaning bad governance in the case of this index) see their growth rates "plummet"? Figure 1 shows the average value of the *Index of Economic Freedom* during 1995 to 2003 on the horizontal axis and the annual growth of per capita GDP during 1995 to 2003 on the vertical axis. A "line of best fit" shows the relationship between the index score and economic growth. If better governance translated directly into faster growth, then as one moves to the right of the graph we would see countries growing faster. This is clearly not the case.

Figure 1: Growth and Governance



Index has been recalibrated so that higher values refer to better governance.
Source: Heritage/WSJ (2004); calculations from World Bank (2004).

Indeed, scoring well in the *Index of Economic Freedom* is not a ten-step plan to Nirvana, nor a very powerful explanation of differences in economic growth rates. There are many cases where the score on economic freedom is rather low, but economic growth is rather high, China being the notable case. On the other hand, there are many cases where the score on economic freedom is good, and yet economic growth is low, like Switzerland or Uruguay.

As for Africa, the same situation occurs as with governance. Africa grows less rapidly than would be explained by its score on economic freedom, indeed markedly so. As mentioned before, a formal statistical test of that proposition shows that African countries grew less rapidly than others at the same level of economic freedom, by about 3 percentage points per year. Once again, the factors of geography, disease, and levels of infrastructure, among others, none of which are captured in the “10-step plan” to prosperity, were taken into account. Economic freedom is definitely a plus for economic development, but alas, it is no magic bullet.

A Single “Mystery of Capital”?

Hernando de Soto, a Peruvian economist, has promoted and popularized one variant of the theme of economic freedom. De Soto argues that the security of private property, including the ability to borrow against land, represents the true “mystery of capital.” The poor in most of the developing world hold their assets, such as housing and land, he says,

... in defective forms: houses built on land whose ownership rights are not adequately recorded, unincorporated businesses with undefined liability, industries located where financiers and investors cannot see them. Because the rights to these possessions are not adequately documented, these assets cannot readily be turned into capital, cannot be traded outside of narrow local circles where people know and trust each other, cannot be used as collateral for a loan, and cannot be used as a share against an investment...

[The poor] have houses but not titles; crops but not deeds; businesses but not statutes of incorporation. It is the unavailability of these essential representations that explains why people who have adapted every other Western invention, from the paper clip to the nuclear reactor, have not been able to produce sufficient capital to make their domestic capitalism work.

De Soto is on to something interesting. His recent study, entitled the *The Mystery of Capital*, and his earlier study, *The Other Path (El Otro Sendero)*, have helped to focus policy attention usefully on squatters’ rights, on formalizing the informal economy, and reducing the transactions costs of contracting and gaining access to public services.

The problem with de Soto’s analysis, however, is that it relies on a single factor—the lack of titles and deeds—to explain single-handedly the failures of development. The subtitle to *The Mystery of Capital* claims that the book will explain “Why capitalism triumphs in the West and fails everywhere else.” The problem is that capitalism is *not* failing everywhere else. Many developing countries are growing rapidly, but others are stuck. Many that are growing especially fast, such as China and Vietnam, have certainly not solved the problem of titles and deeds! Many non-Western countries now at high-income levels, such as Japan, Korea, and Taiwan, followed distinctive pathways of legal development.

Most important, all single-factor explanations fail the scientific test of accounting for the observed diversity of development experience. Dozens of recent statistical studies have shown that difference in economic growth rates across countries depends on a multiplicity of factors: initial incomes, education levels, fertility rates, climate, trade policy, disease, proximity to markets, and the quality of economic institutions, just to name a few of the relevant variables. The real challenge is to understand which of these many variables is posing particular obstacles in specific circumstances—what I mean precisely by “differential diagnosis.”

A SHORTFALL OF MORALS?

The AIDS pandemic has ravaged Africa as it has no other place in the world. This tragedy has also unleashed long-standing assumptions about sexual licentiousness and irresponsibility in Africa that have led many to presume that a crisis of culture and morality lies at the core of Africa's problems. If men are so unfaithful to their spouses, and family life has broken down to such an extent, what future could there be for Africa no matter how much aid is given? This is a tough question to broach in public, but it is asked repeatedly in private. It merits an answer, if only to better understand and thereby better control the AIDS pandemic. The answer is surprising, far from what is commonly supposed.

As I noted in chapter 10, the reasons for Africa's extremely high prevalence rates are not well understood or agreed. The simplest explanations just do not work. A common view is that Africans have more sexual partners, and therefore more risk of transmitting the disease. But here is the conclusion of a recent survey of the most careful epidemiological studies from *The Lancet*, a leading UK medical journal:

Although sexual cultures do vary from region to region, the differences are not so obvious. Demographic surveys and other studies suggest that, on average, African men typically do not have more sexual partners than men elsewhere. For example, a comparative study of sexual behaviour found that men in Thailand and Rio de Janeiro were more likely to report five or more casual sexual partners in the previous year than were men in Tanzania, Kenya, Lesotho, or Lusaka, Zambia. And very few women in any of these

countries reported five or more partners a year. Men and women in Africa report roughly similar, if not fewer, numbers of lifetime partners than do heterosexuals in many western countries.

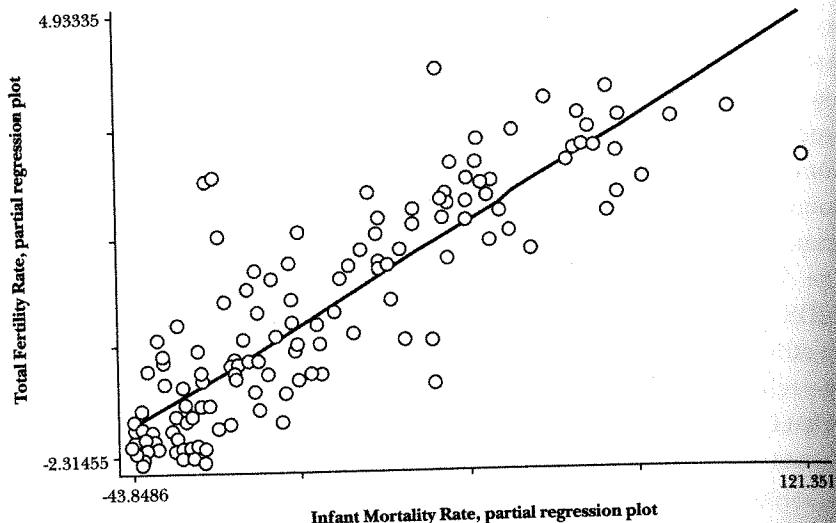
There are many hypotheses, and few hard conclusions, about what can explain Africa's extraordinarily high transmission of the disease. Perhaps details of the sexual networks (such as the timing of having multiple sexual partners or the large number of African migrant male workers who are away from their families for long periods) account for some of the differences. The extent of male circumcisions may explain some of the difference (since circumcision seems to protect against transmission of the disease). The extent of other untreated diseases in the African population may be conducive to a faster transmission of AIDS. The viral type of HIV in parts of Africa may differ from the virus in other parts of the world. The fact is that nothing sure is known about the relative importance, or importance at all, of these possible factors. What is known is that the simple, broad-based attacks on African morals do not hold up to scientific scrutiny.

Saving Children Only to Become Hungry Adults?

I have been asked dozens of times if help for Africa would ultimately backfire in an even greater population explosion. Would greater child survival rates not translate directly into more adult hunger and suffering? Usually the questioner begins sheepishly, apologizing for what is to come. Then he or she explains that they do not want to sound callous, but that they really need to understand the issue. This is a very fair question. After all, Thomas Malthus asked almost the same one two hundred years ago.

The answer is that a concerted effort to end extreme poverty in Africa would be the best guarantor of ending today's population explosion, and doing so quickly, voluntarily, and in a way that empowers households to meet their personal objectives of human betterment. Poverty is the biggest risk factor in rapid population growth by far. Indeed, with a few exceptions in the Middle East, all of the places in the world where fertility rates remain very high—above 5.0—are in poor and largely rural countries. Fertility rates are the result of household circumstances. All of the basic factors that contribute to poverty tend to

**Figure 2: Relationship of Infant Mortality Rate (X Axis) and Total Fertility Rate (Y Axis),
148 Countries, 1995 (partial-regression plot)**
coef=.04065342, se=.00184397, t=22.05



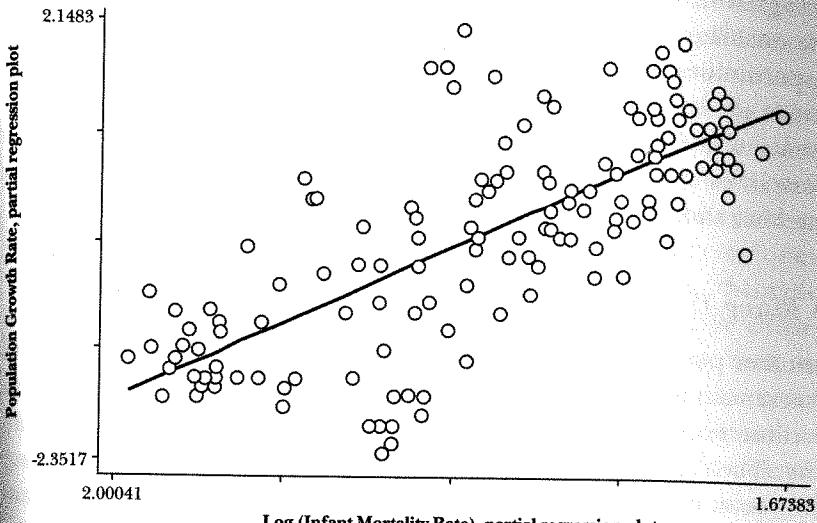
Source: CMH (2001).

contribute to high fertility rates. High fertility rates, in turn, are a factor in causing the poverty trap.

As I have noted before, fertility rates depend on several factors. First, when children die in large numbers, households tend to have many more children to compensate for the risk. Because the parents are risk averse, and want to ensure with very high probability at least one surviving child (and often at least one surviving son), they overcompensate in a statistical sense. The places with a high child mortality rate tend to be the places with a very high total fertility rate, as shown in the scatter plot in figure 2. For 148 countries in the year 1995, we plot one point per country, showing the child mortality rate on the horizontal axis and total fertility rate on the vertical axis. The strong upward line shows the strong tendency of societies with a high child mortality rate to have a high total fertility rate as well.

Figure 3 shows that the total fertility rate more than compensates. In this figure, we plot the child mortality rate on the horizontal axis and compare with the total population growth rate on the vertical axis.

**Figure 3: Relationship of Log (Infant Mortality Rate) and Population Growth Rate,
148 Countries, 1995 (partial-regression plot)**
coef=.85216147, se=.06278833, t=13.57



Source: CMH (2001).

indeed, the places with high child mortality rates also have high overall population growth rates, contrary to conventional beliefs.

Fertility rates come down as economic development proceeds. As more children survive, households "risk" having fewer children, confident that each child is much more likely to survive. As households move from subsistence agriculture to commercial farming and especially to urban life, they also choose to have fewer children. This is partly because children are no longer so valuable as farmworkers. As households obtain modern amenities such as piped water or well water close to the home or a cookstove that uses gas canisters rather than fuel wood, children are not needed to fetch the water and wood. As households put their children in school, the expense of raising each child rises. Households decide to have fewer children and to invest more in each of them. As mothers find improved economic opportunities out of the household and off the farm, the time expense of raising children (in terms of wage income) rises as well. And, of course, as households are able to obtain modern health services, including family planning and modern

contraceptives, they are able to follow through on their changing desires about family size.

All of these factors explain why most of the world has achieved a marked reduction of total fertility rates and a sharp slowdown in population growth. This phenomenon has not yet come to rural Africa, where the enabling conditions—child survival, girls' education, women's job opportunities, access to water and modern cooking fuels, and access to family planning and contraception—are not yet in place. The investments to end extreme poverty in Africa (and elsewhere) are the very same investments that will produce a rapid and decisive drop in fertility rates in a short period of time.

A Rising Tide Lifts All Boats

Another pervasive illusion, held by the champions of globalization, is that remaining problems of extreme poverty will take care of themselves because economic development will spread everywhere. A rising tide lifts all boats, as the old expression puts it. If the rising tide is not lifting your boat, it is probably your own fault. The forces of globalization are sufficiently strong that everyone can benefit if they can just behave themselves.

In real geographical terms, the rising tide of globalization has lifted most economies that lie at the water's edge. Those societies are, quite literally, the places that have boats in the water. The free-trade zones that fueled the initial industrialization of Asia, for example, were all on the coastline. But a rising tide does not reach the mountaintops of the Andes or the interior of Asia or Africa. Market forces, as powerful as they are, have identifiable limitations, including those posed by adverse geography. Even worse, when economic progress does not reach a country, the economic conditions can worsen as population growth and capital depreciation (including the depreciation of natural capital) lead to falling ratios of capital per person.

Nature Red in Tooth and Claw

The last myth worthy of mention is the social Darwinist myth, often a modern economist's myth, which warns against soft-hearted liberalism on the grounds that "real life" is competition and struggle, of "nature red in tooth and claw" in Tennyson's evocative phrase. Social Darwinism

that economic progress is the story of competition and survival of the fittest. Some groups dominate; other groups fall behind. In the end, life is a struggle, and the world today reflects the outcome of that struggle.

Despite the fact that much of free-market economic theory has championed this vision, economists from Adam Smith onward have recognized that competition and struggle are but one side of economic life, and that trust, cooperation, and collective action in the provision of public goods are the obverse side. Just as the communist attempt to banish competition from the economic scene via state ownership failed miserably, so too would an attempt to manage a modern economy on the basis of market forces alone. All successful economies are mixed economies, relying on both the public sector and the private sector for economic development. I have explained the underlying theoretical reasons why markets and competition alone will not provide efficient levels of infrastructure, knowledge, environmental management, and goods. Just as that is true at the national level, it is also true internationally. Without cooperation, a collection of national economies will not provide efficient levels of investment in cross-border infrastructure, knowledge, environmental management, or merit goods among the world's poor.

There is broad consensus on the case for public goods at the national level, even if there are heated debates on exactly where to draw the line between public and private activities. Even the most hard-nosed conservatives in the United States support public financing of education, medical research, and many kinds of health care. Public spending in the United States is around 30 percent of GDP when expenditures at the local, state, and federal level are combined, and there is no serious prospect of any real reduction in that proportion. Yet when it comes to countries to spend on the international level, suddenly even 0.7 percent of GDP looks burdensome and highly controversial. The same arguments that have prevailed at the national level—making the case for a mixed economy—will sooner or later, and hopefully sooner, prevail in international relations as well.

Eliminating poverty at the global scale is a global responsibility that will have global benefits. No single country can do it on its own. The hardest part is for us to think globally, but that is what global society in the twenty-first century requires. The philosophy of the Millennium Development Compact, which was both developed and ratified globally, can serve as an underpinning to this international effort.

MAKING THE CASE FOR ACTION

I reject the plaintive cries of the doomsayers who say that ending poverty is impossible. I have identified the specific investments that are needed; found ways to plan and implement them; shown that they can be affordable; and addressed the counsels of despair who claim that the poor are condemned by their cultures, values, and personal behaviors. But will the world act? What, after all, is in it for the rich countries? Why should they care? When has the world ever acted simply because it's the right thing to do? These are the final questions of my inquiry.

Seventeen

WHY WE SHOULD DO IT

Will the rich world act to help save the poor? The cynics say no. Why should we? Poverty is not our problem; it is theirs. What can the poor do to us, or for us? When has any country done anything out of altruism for others? How can we fight poverty when we have to fight terrorism? How can politicians ask the public to give more for Africa when the public is already feeling squeezed economically? These are questions I hear daily.

They are also particularly American questions these days. Many Americans do not see economic assistance as having much to do with their national security. For that they have put their faith in the military. The United States is spending thirty times more on the military than on foreign assistance in 2004, \$450 billion compared with \$15 billion. Only Greece comes anywhere close to that lopsided ratio, as figure 1 shows using the most recent available data for the year 2002 (before much of the current U.S. military buildup).

The American investment decision to back military rather than other approaches to international relations reflects several mistaken ideas. The first is that we are already doing all that we can do to help the poor. Public opinion research conducted over the past decade illustrates, time and again, that the American public greatly overestimates the amount of federal funds spent on foreign aid. In a 2001 survey, the Program on International Policy Attitudes (PIPA) at the University of Maryland reported that Americans, on average, believed that foreign aid accounts for 20 percent of the federal budget, roughly twenty-four times the actual figure. PIPA found essentially the same result in surveys in the mid-1990s.