

story, and in many places not the central part. It should have been possible to tend to the problems of closed trading systems and excessive nationalization of industry without ignoring the problems of malaria and AIDS, mountain geographies, and inadequate rainfall. But alas, such a multifaceted approach did not enter the policy debate until very recently.

Sadly, there were self-serving and ideological aspects of the structural adjustment era's failures of advice and insufficient help. The self-serving aspect is clear. The responsibilities for poverty reduction were assumed to lie entirely with the poor countries themselves. Increased foreign financial assistance was deemed not to be needed. Indeed, foreign aid per person in the poor countries plummeted during the 1980s and 1990s. Aid per person in sub-Saharan Africa, for example, expressed in constant 2002 dollars, fell from \$32 per African in 1980 to just \$22 per African in 2001, during a period in which Africa's pandemic diseases ran rampant, and needs for increased public spending were stark. Donors thought they had done everything they could, with any remaining problems caused by issues beyond their responsibility.

The ideological aspects of the advice are plain enough. Conservative governments of the United States, United Kingdom, and elsewhere used international advising to push programs that found no support at home. Many African countries have heard an earful from the World Bank over the past two decades about privatizing their health services, or at least charging user fees for health and education. Yet most of the high-income-country shareholders of the World Bank have health systems that guarantee universal access, and all have education systems that ensure access to public education.

D I F F E R E N T I A L D I A G N O S I S F O R P O V E R T Y R E D U C T I O N

The Millennium Development Goals (MDGs) offer the world a chance to do better vis-à-vis the poorest countries after twenty years of failed structural adjustment policies. The MDGs state real goals that provide not only benchmarks for aid but also milestones for assessing the advice of the international agencies as well. The failures to meet the MDGs are failures of the rich countries as well as the poor, since both are responsible for their success. The fact that the MDGs are not being met throughout Africa, the Andean region, and Central Asia tells us that the

problems are more than simply those of governance. Many governments in these regions have shown boldness, integrity, and intelligence. Yet development continues to fail. A clinical economics approach will point the way to a better strategy.

The key to clinical economics is a thorough differential diagnosis, followed by an appropriate treatment regimen. In the course of a physical exam, the doctor runs through pages of questions: “Are you taking medications?” “Do you have allergies?” “Have you been operated on recently?” “Do you have a family history of the following diseases?” The clinical economist must do the same. In table 1, I describe a seven-part diagnostic checklist that should be part of the “physical exam” of any impoverished country.

The Extent of Extreme Poverty

The first set of questions involves the extent of extreme poverty. The clinical economist should make a set of poverty maps, using available or newly commissioned household surveys, geographic information systems data, national income accounts, and other information. What proportion of households live in extreme poverty? What proportion of households lack access to basic needs in schooling, health care, water and sanitation, electricity, roads, nutrition? What is the spatial distribution of poverty? Is poverty mainly urban or rural, and is it concentrated in a few regions or distributed evenly throughout the country? How does poverty relate to demographic conditions of the household (female- or male-headed household, number of children, health of household members) and to its asset ownership and economic activities (landless poor, smallholder farmer, commerce, industry, and so on)?

In the course of mapping poverty, the clinical economist should also identify key risk factors that may exacerbate poverty in the coming years. What are the demographic trends (births, deaths, internal and international migration) that may affect the numbers and distribution of the extreme poor? What environmental shocks and trends (sea level changes, coastal erosion, deforestation, land degradation, depletion of water aquifers, biodiversity loss) might impinge on poverty? What climate shocks (El Niño, long-term warming, chronic drought, extreme weather events) are likely to affect public health, disease, and agricultural productivity? What changes in infectious disease incidence and prevalence may weigh on the national or regional economies? How

Table 1. Checklist for Making a Differential Diagnosis

I. Poverty Trap	Population density
Poverty mapping	Costs of connectivity to power, telecoms, roads
Proportion of households lacking basic needs	Arable land per capita
Spatial distribution of household poverty	Environmental impacts of population-land ratios
Spatial distribution of basic infrastructure (power, roads, telecoms, water and sanitation)	Agronomic conditions
Ethnic, gender, generational distribution of poverty	Temperature, precipitation, solar insolation
Key risk factors	Length and reliability of growing season
Demographic trends	Soils, topography, suitability for irrigation
Environmental trends	Interannual climate variability (e.g., El Niño)
Climate shocks	Long-term trends in climate patterns
Disease	Disease ecology
Commodity price fluctuations	Human diseases
Others	Plant diseases and pests
II. Economic Policy Framework	Animal diseases
Business environment	V. Governance Patterns and Failures
Trade policy	Civil and political rights
Investment policy	Public management systems
Infrastructure	Decentralization and fiscal federalism
Human capital	Corruption patterns and intensity
III. Fiscal Framework and Fiscal Trap	Political succession and longevity
Public sector revenues and expenditures by category	Internal violence and security
Percent of GNP	Cross-border violence and security
Absolute levels in comparison with international norms	Ethnic, religious, and other cultural divisions
Tax administration and expenditure management	VI. Cultural Barriers
Public investment needs to meet poverty reduction targets	Gender relations
Macroeconomic instability	Ethnic and religious divisions
Overhang of public sector debt	Diaspora
Quasi-fiscal debt and hidden debt	VII. Geopolitics
Medium-term public sector expenditure framework	International security relations
IV. Physical Geography	Cross-border security threats
Transport conditions	War
Proximity of population to ports, international trade routes, navigable waterways	Terrorism
Access of population to paved roads	Refugees
Access of population to motorized transport	International sanctions
	Trade barriers
	Participation in regional and international groups

might world-market fluctuations in key commodities affect extreme poverty and prospects for economic growth?

Economic Policy

The second set of questions involves the economic policy framework. These are more traditional questions, but they should be addressed systematically. What is the cost of doing business in the country (and in different regions within the country)? What is the coverage of key infrastructure (power, water, roads, transport services), focusing on sub-national regions, both urban and rural, as well as national averages? How are costs affected by the lack of infrastructure? What is the trade policy framework, and how are trade barriers impinging on the costs of production, especially for export-oriented businesses? What are the incentives in place for potential domestic and foreign investors, and how does the incentive system compare with the incentives in place in competitor countries? Is the government investing adequately in human capital through programs on nutrition, public health, disease control, education, and family planning?

The Fiscal Framework

The third set of questions homes in on the fiscal framework, since the budget must carry much of the burden of key investments in infrastructure and social services. What are the current levels of budget spending and public revenues? These should be measured both as a percent of GDP and in dollars per person. The share of public spending in GDP in various categories (health, education, infrastructure) gives a sense of the level of effort that a country is making to reduce poverty. The absolute spending, in dollars per person, gives a sense of the adequacy of the spending to ensure basic needs and to support the escape from a poverty trap. To what extent is the government hampered by an overhang of public sector debt inherited from the past? How much would debt relief contribute to the capacity of the government to expand public services? Are there hidden or off-balance-sheet lines on the public sector, such as debts of the central bank, or hidden losses of the commercial banking system that will have to be covered by the government's budget?

Physical Geography and Human Ecology

The fourth category of questions involves the physical geography and human ecology (meaning the interface of society with the physical environment). Economists are surprisingly untrained in this area, despite its fundamental importance in diagnosing and overcoming extreme poverty. What are the transport conditions in the country, on average and by subregion? How much of the population is proximate to seaports and airports, navigable rivers, paved roads, and rail services? What are the costs of transporting freight (such as fertilizers, food crops, machinery, industrial products) within the country and internationally, and how do those costs compare with competitor countries? What is the distribution of population between coastal and interior areas, rural and urban settlements, and densely and sparsely populated areas? How does population density in various parts of the country affect the costs of infrastructure, for example bringing the population into road, rail, power, and telecom grids?

How are agronomic conditions affected by the physical environment? What is the length of the growing season, and how does that affect crop choice, nutrition, and income levels? What are the patterns of soils, topography, hydrology, and land use affecting crop yields, suitability for irrigation, and costs of land improvements? How are agronomic conditions affected by interannual climate variability linked, for example, to the El Niño fluctuations? How are agronomic conditions affected by long-term trends such as global warming and changes in precipitation patterns, like the evident decline in rainfall in the African Sahel?

How are ecosystem functions changing, and perhaps degrading, over time? Is deforestation threatening the functioning of ecosystems (for example, by exacerbating flooding and land degradation) and the livelihoods of the poor (for example, by exhausting the supplies of fuel wood)? Is the loss of biodiversity threatening ecosystem functions (for example, by reducing the pollination of agricultural products)? Are invasive species affecting the fertility of the land and fisheries? Is the introduction of toxins into the environment threatening the air and drinking water?

How does the ecology affect the burden of disease and its change over time? Malaria is a disease heavily conditioned by climate and mosquito species. Is malaria transmission epidemic or endemic (year-round), and is it changing over time as a result of population move-

ments and climate change? What are the key patterns of animal disease that may have major effects on agricultural productivity (such as African sleeping sickness, a classic example)? What plant pests and diseases pose the gravest threats to livelihoods, international trade, and human health?

Patterns of Governance

The fifth category of the differential diagnosis involves patterns of governance beyond the specifics of the budget process and detailed economic policies. History has shown that democracy is not a prerequisite for economic development. On the other hand, a regime that is despotic, arbitrary, and lawless will easily destroy an economy. Is there a rule of law, or only the arbitrary command of a dictator? Do the systems of public management—for registering businesses, trading property, defending contracts, bidding for government tenders—work effectively? Are public services such as water and sanitation, power, and basic health and education efficiently provided (given the resources at hand), or are they subject to massive waste and fraud? Is corruption rampant, and at what levels of government? Is the succession of power from one government to the next regularized, or subject to the whim and abuse of the current rulers? Are public services run on behalf of a narrow elite, a subregion of the country, or particular ethnic groups?

Cultural Barriers to Economic Development

The sixth category of issues involves possible cultural barriers to economic development. Is the society torn apart by class, caste, ethnicity, religion, or gender inequity? Do women and girls face severe discrimination in personal rights (for example, sexual and reproductive choices) and access to public services (education, health facilities, family planning services)? Are women deprived either legally or informally of the right to own and inherit property? Can women participate with substantial equality of opportunity in the economy beyond home production? Do cultural norms and practices define limits to the economic opportunities of minority groups? Is interethnic violence rampant? What role, if any, is played by a diaspora, such as the offshore Chinese and Indian communities, in terms of investment, remittances, and social networking?

Geopolitics

The final category of the differential diagnosis involves geopolitics, the country's security and economic relations with the rest of the world. Is the country part of a security bloc that might define or limit its economic possibilities? Is the country subject to international sanctions, and if so, what are the consequences of the sanctions for economic development? Are there critical cross-border security threats, such as refugee movements, terrorism, or cross-border warfare? Do the contiguous neighbors cooperate regarding cross-border infrastructure? Is there an effective regional trade group, and if so, is it supporting an overall expansion of trade or merely a diversion of trade from nonmembers? What trade barriers in the rich world seriously impede development prospects?

The checklist is long. Answers to these questions cannot be ascertained in a fifteen-minute checkup at a clinic, nor, in practice, can they be addressed by a single international agency like the IMF. The answers must be systematic, continually updated, and put into a comparative framework for sound analysis. Many institutions, both within the low-income countries and internationally, should cooperate to address these diagnostic issues. Not only the IMF and World Bank, but also the specialized United Nations institutions such as the World Health Organization, UNICEF, the Food and Agriculture Organization, and many others, should cooperate in the diagnostics.

EDUCATION OF AN ECONOMIST

A differential diagnosis is the beginning, not the end, of the process. The next steps, of course, are to design programs and institutions to address the critical barriers to poverty reduction that are identified through the differential diagnosis. These strategies will be much more effective if the right questions are asked from the start. Questions, I trust, that will be evident later in this book.

It took me a long time to appreciate the need for a new approach to development economics. I did not have the benefit of hindsight—or a comprehensive diagnostic checklist—when I went on my first economic house call. In fact, when I arrived in La Paz, Bolivia, in July 1985, I had

almost no checklist at all. I was there for a specific problem in a specific place. I had no idea that during the trip I would be involved with the very issues that were to become the centerpiece of my research and practical work for the next twenty years. These were issues that, much to my surprise, I had not been truly trained to address.