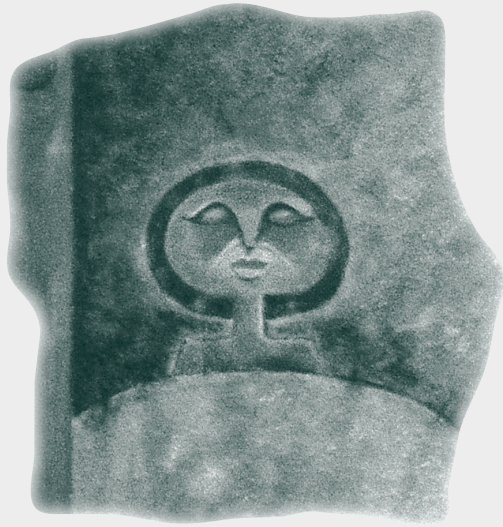

PART IV

Security



CHAPTER 8

Helping Poor People Manage Risk

To be well is to know what will happen with me tomorrow.

—Middle-aged man, Razgrad, Bulgaria

Poverty means more than inadequate consumption, education, and health. As the voices of the poor cry out, it also means dreading the future—knowing that a crisis may descend at any time, not knowing whether one will cope. Living with such risk is part of life for poor people, and today's changes in trade, technology, and climate may well be increasing the riskiness of everyday life. Poor people are often among the most vulnerable in society because they are the most exposed to a wide array of risks. Their low income means they are less able to save and accumulate assets. That in turn restricts their ability to deal with a crisis when it strikes.

Economic growth is one way of reducing the vulnerability of poor people. As their incomes rise, they are better able to manage risks. However, at any point in time those who are poor will see their vulnerabil-

ity lessened if mechanisms to reduce, mitigate, and cope with risks are available to them.

Poor people have developed elaborate mechanisms for dealing with risk. But the mechanisms are far from capable of eliminating vulnerability. Many of the mechanisms offer short-term protection at long-term cost, preventing any escape from poverty.

The policy response to vulnerability must be aimed at helping poor people manage risk better by reducing and mitigating risk and lessening the impact of shocks. Such policies address the immediate problems of shocks and the inability to cope with them. But they also lay the foundations for investment by poor people that can take them out of poverty. This report advocates a modular approach to risk management that adapts safety nets to the specific pattern of risk in each country and complements existing risk management arrangements. This chapter briefly reviews experience with seven tools especially relevant for poor people: health insurance, old age assistance and pensions, unemployment insurance and assistance, workfare programs, social funds, microfinance programs, and cash transfers.

Table 8.1
Main sources of risk

Type of risk	Covariant		
	Idiosyncratic Risks affecting an individual or household (micro)	Risks affecting groups of households or communities (meso)	Risks affecting regions or nations (macro)
Natural		Rainfall Landslide Volcanic eruption	Earthquake Flood Drought High winds
Health	Illness Injury Disability Old age Death	Epidemic	
Social	Crime Domestic violence	Terrorism Gang activity	Civil strife War Social upheaval
Economic		Unemployment Resettlement Harvest failure	Changes in food prices Growth collapse Hyperinflation Balance of payments, financial, or currency crisis Technology shock Terms of trade shock Transition costs of economic reforms
Political		Riots	Political default on social programs Coup d'état
Environmental		Pollution Deforestation Nuclear disaster	

Source: Adapted from Sinha and Lipton (1999) and World Bank (2000q).

A typology of risks

One way to understand risks better and design appropriate policy responses is through a typology of risks and shocks to which people are vulnerable (table 8.1). Risks can be classified by the level at which they occur (micro, meso, and macro) and by the nature of the event (natural, economic, political, and so on). Micro shocks, often referred to as idiosyncratic, affect specific individuals or households. Meso shocks strike groups of households or an entire community or village. These shocks are common (or covariant) to all households in the group. Shocks can also occur at the national or international level.

This distinction by level of risk is critical. A risk that affects an entire village, for example, cannot be insured solely within the village. It requires pooling with areas not subject to the risk. In practice, many shocks have both idiosyncratic and covariant parts, though most empirical studies find that the idiosyncratic part of income risk is large.¹ This chapter focuses on risks that usually have large idiosyncratic components: illness and injury, old age, violence, harvest failure, unemployment, and food price risk (box 8.1). Covariant risks are discussed in chapter 3 (box 3.2) and chapter 7 (war and civil strife) and chapter 9 (macroeconomic shocks and natural disasters).

The extent to which a risk is covariant or idiosyncratic depends considerably on the underlying causes. For

Box 8.1

Poor people's exposure to risk

Poor people are exposed to a wide range of risks.

Illness and injury

Poor people often live and work in environments that expose them to greater risk of illness or injury, and they have less access to health care (Prasad, Belli, and Das Gupta 1999). Their health risks are strongly connected to the availability of food, which is affected by almost all the risks the poor face (natural disasters, wars, harvest failures, and food price fluctuations; de Waal 1991). Communicable diseases are concentrated among the poor, with respiratory infections the leading cause of death (Gwatkin, Guillot, and Heuveline 2000). A recent study of poverty in India found that the poor are 4.5 times as likely to contract tuberculosis as the rich and twice as likely to lose a child before the age of two (World Bank 1998t).

Illness and injury in the household have both direct costs (for prevention, care, and cure) and opportunity costs (lost income or schooling while ill; Sinha and Lipton 1999). The timing, duration, and frequency of illness also affect its impact. A study of South India found that households can compensate for an illness during the slack agricultural season, but illness during the peak season leads to a heavy loss of income, especially on small farms, usually necessitating costly informal borrowing (Kocher 1995).

Old age

Many risks are associated with aging: illness, social isolation, inability to continue working, and uncertainty about whether transfers will provide an adequate living. The incidence of poverty among the elderly varies significantly. In most Latin American countries the proportion of people in poverty is lower for the elderly than for the population at large (IDB 2000). In contrast, in many countries of the former Soviet Union the incidence of poverty is above average among the elderly, particularly among people 75 and older (Grootaert and Braithwaite 1998; World Bank 2000l). Women, because of their longer life expectancy, constitute the majority of the elderly, and they tend to be more prone to poverty in old age than men (World Bank forthcoming a). The number of elderly people in the developing world will increase significantly in coming decades with the rapid demographic transition.

Consultations with poor people show that income security is a prime concern of the elderly, followed closely by access to health services, suitable housing, and the quality of family and community life. Isolation, loneliness, and fear all too often mark old people's lives (Narayan and others 1999). As an elderly woman in Ukraine put it, "If I lay down and died, it wouldn't matter, because nobody needs me. The feeling of being unnecessary, of being unprotected, is, for me, the worst of all."

Crime and domestic violence

Crime and domestic violence reduce earnings and make it harder to escape poverty. While the rich can hire private security guards and fortify their homes, the poor have few means to protect themselves against crime. In São Paulo, Brazil, in 1992 the mur-

der rate for adolescent males in poor neighborhoods was 11 times that in wealthier ones (Sinha and Lipton 1999). Poor people frequently voice their fear of violence and the resulting powerlessness, "I do not know whom to trust, the police or the criminals."

Crime also hurts poor people indirectly. Children exposed to violence may perform worse in school (Morrison and Orlando 1999). A study of urban communities in Ecuador, Hungary, the Philippines, and Zambia showed that difficult economic conditions lead to destruction of social capital as involvement in community organizations declines, informal ties among residents weaken, and gang violence, vandalism, and crime increase (Moser 1998). Violence and crime may thus deprive poor people of two of their best means of reducing vulnerability: human and social capital.

Rich and poor women alike are victims of domestic violence, but the incidence is often higher in poor households. In Santiago, Chile, 46 percent of poor women and 29 percent of wealthy women suffer from domestic violence; in Managua, Nicaragua, 54 percent and 45 percent (Morrison and Orlando 1999).

Unemployment and other labor market risks

Labor market risks include unemployment, falling wages, and having to take up precarious and low-quality jobs in the informal sector as a result of macroeconomic crises or policy reform. The first workers to be laid off during cutbacks in public sector jobs are usually those with low skills, who then join the ranks of the urban poor, a pattern observed in Africa and Latin America during the structural adjustment reforms of the 1980s and early 1990s (ECLAC 1991; Sinha and Lipton 1999). The East Asian crisis also had pronounced effects on labor markets, with real wages and non-agricultural employment falling in all affected countries (World Bank 1999j). As state enterprises in Eastern Europe and the countries of the former Soviet Union were privatized, poverty increased among displaced workers with low education and obsolete skills, not qualified to work in emerging industries. Wage arrears in Russia intensified the problem (Grootaert and Braithwaite 1998).

Fluctuations in demand for labor often disproportionately affect women and young workers. Most public sector retrenchment programs have affected women's employment more than men's (World Bank forthcoming a), and women are more likely than men to work for small firms, which tend to be more sensitive to demand fluctuations (Horton and Mazumdar 1999). As incomes fall, poor households try to increase their labor market participation, especially for women and children. This response has been documented in many countries (Horton and Mazumdar 1999; Grootaert and Patrinos 1999).

Harvest failure and food price fluctuations

Weather-related uncertainties (mainly rainfall), plant disease, and pests create harvest risk for all farmers, but technologies for reducing such risks (irrigation, pesticides, disease-resistant

(box continues on next page)

Box 8.1 Poor people's exposure to risk (continued)

varieties) are less available in poor areas. In 1994–96 less than 20 percent of all cropland was irrigated in low- and middle-income countries (only 4 percent in Sub-Saharan Africa).

Fluctuations in food prices are a related risk. Since poor households spend a large part of their income on food, even small price increases can severely affect food intake. Households that meet their food needs through subsistence agriculture are less vulnerable than households that have to buy all their food.

Liberalization of markets often boosts the price of staples—a benefit to small farmers if they are net sellers of food. Hurt are the urban poor and the landless rural poor, as net food buyers, and farmers who engage in seasonal switching, selling food after the harvest when food is plentiful and cheap and buying it when it is scarce and expensive (Sinha and Lipton 1999). Where transport facilities are good, traders can step in and equalize prices

over the year through arbitrage, but such infrastructure is lacking in many areas. In Madagascar the mean price of rice, the main staple, rose 42 percent and the variance increased 52 percent after the price liberalization of the 1980s. Two-thirds of rice farmers were hurt because they consumed more rice than they produced, and poverty deepened (Barrett 1996, 1998a).

For the rural poor, crop diversification and income diversification into nonfarm activities hold the greatest promise for reducing food price and harvest risks. Reducing consumption as food prices rise can have major and lasting adverse health effects, especially for children. Successive harvest failures because of insufficient monsoons in Sri Lanka in 1995 and 1996 led to increased indebtedness in 80 percent of households in eight villages, and 30 percent of households reported increased incidence of illness (Sinha and Lipton 1999).

example, job loss can be an individual risk, or it can be common to most workers in a country if it is the result of a macroeconomic crisis. The risk of becoming ill can be idiosyncratic, or it can have a large common component if there is an epidemic. The HIV/AIDS pandemic is a health risk at the global level, with devastating effects on poor people and poor countries (box 8.2).

Knowing the source of shocks is important for preventing them, but identifying the source is not always straightforward. Many exogenous events can have similar effects on household income. A macroeconomic shock, a hurricane, or a civil war can all lead to severe decline in income and deplete a household's assets. But how a shock is transmitted to households is greatly affected by a country's institutions. Not every drought causes famine, illness, and death. The effect of a disaster depends on how well the government functions, whether there is peace or civil strife, how well the safety net and other institutions include the poor, and so on.

The typology can be refined by distinguishing the severity and frequency of shocks. Consumption smoothing is more difficult with repeated shocks, because households may have depleted their assets in coping with the initial shock, leaving them unable to absorb subsequent shocks.² And one shock might lead to another. A natural disaster could wipe out poor people's food supply, leaving them weak and susceptible to illness. Severity can range from catastrophic (a natural disaster, death of the breadwinner) to minor (a slight illness, a few days without work for casual laborers).

The nature and magnitude of vulnerability

Vulnerability affects everyone (box 8.3). Even well-paid civil servants are vulnerable to losing their jobs and sliding into poverty. For the poor, and for people just above the poverty line, vulnerability is a graver concern because any drop in income can push them into destitution. As a result, poor people are highly risk averse and reluctant to engage in the high-risk, high-return activities that could lift them out of poverty. One slip could send them deeper into poverty.

Large fluctuations in income are common for poor people.³ For South Indian villages estimates of the coefficient of variation of annual income from the main crops range between 0.37 and 1.01⁴ and are as high as 1.27 for total farm profits.⁵ In rural Ethiopia three of four households suffered a harvest failure over a 20-year period, resulting in significant fluctuations in farm income.⁶

Furthermore, because poor people have fewer assets and less diversified sources of income, these fluctuations affect them more than other groups. In South Indian villages an increase in risk (from the monsoon arriving too soon or too late) reduced farm profits for the poorest quarter of households by 35 percent but left the wealthiest farmers nearly unaffected.⁷ In Vietnam participants in the *Voices of the Poor* study said of harvest losses due to floods:

The wealthy can recover losses in one year, but poor people, who have no money, will never recover.

Box 8.2 AIDS and poverty

More than 34 million people worldwide are infected with HIV, and more than 18 million people have died of AIDS. More than 90 percent of people infected with HIV/AIDS are in the developing world. Cross-country evidence indicates that both low income and unequal distribution of income are strongly associated with HIV infection rates. Countries with high gender inequality also have higher infection rates. Sub-Saharan Africa has more cases of existing and new infections than the rest of the world combined, though the rate of increase is now steepest in Asia and in the countries of the former Soviet Union.

All 20 countries with the highest HIV prevalence are in Sub-Saharan Africa. In Botswana and Zimbabwe 1 in 4 adults is infected. In 10 other African countries more than 1 in 10 adults are infected. The effect on life expectancy will be devastating. Had AIDS not affected these countries, life expectancy would have reached 64 years by 2010–15. Instead, it will have regressed to 47 years, reversing the gains of the past 30 years. The impact on child mortality is also enormous. In Zambia and Zimbabwe 25 percent more infants are dying than would have without HIV.

Despite the strong correlation at the country level between poverty and AIDS, the evidence for individuals does not suggest that poor people are most likely to be infected. Indeed, early on, the disease struck mainly the better-off groups. Evidence for the 1980s and the first half of the 1990s indicates a positive correlation between HIV infection and education, income, and socioeconomic status, probably because wealthier and better-educated people were more likely to have multiple sexual partners. Non-sexual modes of transmission—intravenous drug use and mother-to-child transmission—are associated more with poverty. In recent years the profile of HIV-infected people has been changing rapidly, and AIDS is becoming a disease of poor people.

With the more educated responding to the information available on AIDS and adopting protective sexual practices (condoms), the share of new infections is rising among low-income and less educated people.

With 5 million people becoming infected annually, urgent action is needed to stop the spread of HIV/AIDS. Successful intervention programs require strong government commitment and partnerships with the private sector, NGOs, and community leaders. Interventions shown to be effective include conducting public information campaigns to change individual behavior and social norms for sexual contact; making condoms more available and affordable; providing voluntary counseling, testing, and treatment of sexually transmitted diseases; ensuring a safe blood supply; and taking measures to reduce mother-to-child transmission. In addition, care activities need to be scaled up to support the vast numbers of people infected and affected.

AIDS has a devastating impact on poor people. During the illness it leads to loss of labor and causes poor households to dispose of productive assets to pay for treatment. The impact of an adult death from AIDS is more severe in poor households. The recommended policy approach is to concentrate on poor households most in need of survivor assistance, focusing on the period immediately after a death, when food consumption has fallen but there has not yet been a permanently damaging impact.

The view that HIV/AIDS is a central development issue is embodied in the International Partnership against HIV/AIDS in Africa, launched in 1999 by the cosponsors of the Joint United Nations Programme on HIV/AIDS (UNAIDS), including the World Bank. In collaboration with African governments, the program aims to increase resources and technical support, establish targeted prevention and treatment efforts, and expand the knowledge base to assist countries.

Source: Ainsworth and Semali 1998; Basu 1995; Over 1998; Rugalema 1999; UNAIDS 2000; World Bank 1997d, 1999m.

Box 8.3 Some key terms: risk, risk exposure, and vulnerability

As traditionally defined and measured, poverty is a static concept—a snapshot in time. But insecurity and vulnerability are dynamic—they describe the response to changes over time. Insecurity is exposure to risk; vulnerability, the resulting possibility of a decline in well-being. The event triggering the decline is often referred to as a shock, which can affect an individual (illness, death), a community, a region, or even a nation (natural disaster, macroeconomic crisis).

Risk, risk exposure, and vulnerability are related but not synonymous. Risk refers to uncertain events that can damage well-

being—the risk of becoming ill, or the risk that a drought will occur. The uncertainty can pertain to the timing or the magnitude of the event. For example, the seasonal fluctuation of farm income is an event known in advance, but the severity is not always predictable. Risk exposure measures the probability that a certain risk will occur. Vulnerability measures the resilience against a shock—the likelihood that a shock will result in a decline in well-being. As this chapter explores, vulnerability is primarily a function of a household's asset endowment and insurance mechanisms—and of the characteristics (severity, frequency) of the shock.

In China 40 percent of an income decline is passed on as lower consumption for the poorest tenth of households, but only 10 percent for the richest third of households, because they have better access to insurance.⁸

One measure of the vulnerability of the poor and near-poor is how often a household falls below the poverty line. A study of seven countries for which panel surveys are available found that in six of them the “sometimes poor” group was significantly larger than the “always poor” group.⁹ A nine-year panel survey of households in South Indian villages found that 20 percent of households were poor in each of the nine years and that only 12 percent were never poor, with movement in and out of poverty the norm for the vast majority of households.¹⁰ These findings show both the high vulnerability and the strong resilience of poor households—the ability to escape poverty again after suffering an income shock. Relative income mobility can be quite large. In South Africa 29 percent of households in the poorest quintile moved up two or more quintiles from 1993 to 1998, while in Peru 37 percent of households did so between 1985 and 1990.¹¹

Another approach is to define long-term poverty as average long-term consumption below the poverty line and then to ask how much of measured poverty is transitory. This approach implicitly considers the duration and depth of transitions into and out of poverty. By this method about half the estimated poverty in South Indian villages¹² and about half the severe poverty in China are transitory.¹³

Both methods suggest that transitory poverty is a large part of total poverty in many settings. Generally, households with the fewest assets are most likely to be chronically poor. Education almost always reduces chronic poverty, but its effects on transitory poverty differ. Better educated households in Côte d’Ivoire and Hungary were found to recover better from downward income fluctuations, but in China education is not correlated with transitory poverty.¹⁴ The duration of transitory poverty also depends on the frequency of shocks: households are more likely to bounce back from a single shock than from repeated income shocks.¹⁵

Vulnerability is multidimensional, and poor households face manifold risks, so variations in income and consumption can occur for a variety of reasons. Rural households in Ethiopia, for example, face natural shocks such as harvest failure, health-related shocks such as illness or disability, and macro-level shocks such as the effects of

Table 8.2
Shocks faced by rural households in Ethiopia

Event	Percentage of households reporting a hardship episode in past 20 years
Harvest failure (drought, flooding)	78
Policy shock (taxation, forced labor)	42
Labor problems (illness, death)	40
Oxen problems (illness, death)	39
Other livestock problems (illness, death)	35
Land problems (land expropriation, reform)	17
Asset losses	16
War	7
Crime (theft, violence)	3

Source: Dercon 1999.

taxation, land expropriation, and war (table 8.2). Rainfall-induced income shocks have idiosyncratic components of 23 percent, but crop damage from other sources (pests, animals, weeds) have idiosyncratic components of 65–87 percent. Income shocks from illnesses have an even larger idiosyncratic component.¹⁶ The cumulation of different shocks is a source of significant stress for households:

As if land shortage is not bad enough, we live a life of tension worrying about the rain: will it rain or not? We live hour to hour.

—Woman, Kajima, Ethiopia

Responses to risk by households and communities

For poor people, dealing successfully with the range of risks they are exposed to is often a matter of life or death. To manage risks, households and communities rely on both formal and informal strategies (table 8.3). Informal strategies include arrangements that involve individuals or households or such groups as communities or villages. Formal arrangements include market-based activities and publicly provided mechanisms. Informal and formal strategies are not independent: public policies and the availability of formal mechanisms heavily influence how extensively informal arrangements are used and which kinds are used.

Table 8.3
Mechanisms for managing risk

Objective	Informal mechanisms		Formal mechanisms	
	Individual and household	Group based	Market based	Publicly provided
Reducing risk	<ul style="list-style-type: none"> ■ Preventive health practices ■ Migration ■ More secure income sources 	<ul style="list-style-type: none"> ■ Collective action for infrastructure, dikes, terraces ■ Common property resource management 		<ul style="list-style-type: none"> ■ Sound macroeconomic policy ■ Environmental policy ■ Education and training policy ■ Public health policy ■ Infrastructure (dams, roads) ■ Active labor market policies
Mitigating risk				
<i>Diversification</i>	<ul style="list-style-type: none"> ■ Crop and plot diversification ■ Income source diversification ■ Investment in physical and human capital 	<ul style="list-style-type: none"> ■ Occupational associations ■ Rotating savings and credit associations 	<ul style="list-style-type: none"> ■ Savings accounts in financial institutions ■ Microfinance 	<ul style="list-style-type: none"> ■ Agricultural extension ■ Liberalized trade ■ Protection of property rights
<i>Insurance</i>	<ul style="list-style-type: none"> ■ Marriage and extended family ■ Sharecropper tenancy ■ Buffer stocks 	<ul style="list-style-type: none"> ■ Investment in social capital (networks, associations, rituals, reciprocal gift giving) 	<ul style="list-style-type: none"> ■ Old age annuities ■ Accident, disability, and other insurance 	<ul style="list-style-type: none"> ■ Pension systems ■ Mandated insurance for unemployment, illness, disability, and other risks
Coping with shocks^a	<ul style="list-style-type: none"> ■ Sale of assets ■ Loans from money-lenders ■ Child labor ■ Reduced food consumption ■ Seasonal or temporary migration 	<ul style="list-style-type: none"> ■ Transfers from networks of mutual support 	<ul style="list-style-type: none"> ■ Sale of financial assets ■ Loans from financial institutions 	<ul style="list-style-type: none"> ■ Social assistance ■ Workfare ■ Subsidies ■ Social funds ■ Cash transfers

Note: The white shaded area shows household and community responses through informal mechanisms to improve risk mitigation and coping. The dark shaded area shows the publicly provided mechanisms for insuring against risk and coping with shocks—the social safety net.
a. Publicly provided coping mechanisms can also serve risk mitigating purposes if they are in place on a permanent basis.
Source: Adapted from Holzmann and Jorgensen (2000).

Risk management strategies can be further classified as risk reduction and mitigation measures (actions in anticipation of a shock) and coping measures (actions in response to a shock).¹⁷ Risk reduction aims at reducing the probability of a shock or negative fluctuation. Individuals or households can sometimes take such action themselves (digging wells, getting vaccinated). But to reduce most risks effectively, action is also needed at the meso or macro level. The risk of flooding can be reduced if the community builds a dike or the government builds a dam. Sound economic and environmental policies, education and training, and other measures can also reduce a wide variety of risks (and are discussed elsewhere in the report).

Risk mitigation aims at reducing the impact of shocks. Households mitigate risk through diversification (acquiring assets whose returns are not perfectly correlated) and insurance. Common diversification strategies are planting different crops and plots, combining farm and nonfarm income in rural areas, and combining wage income and income from household enterprises in urban areas. Households can take most of these actions on their own—though group or government action (agricultural extension, infrastructure) can sometimes facilitate diversification. Households also mitigate risk through insurance, including self-insurance, informal insurance, and formal insurance—though market-based formal insurance plays a minor role for poor people.

Coping strategies aim to relieve the impact of a shock after it occurs. Actions by individuals include drawing down savings or selling assets, borrowing, and calling on support networks. Actions by government include activating the transfers or workfare mechanisms that constitute the social safety net. If these measures prove insufficient, households may need to reduce consumption or increase labor supply. Many of these coping responses force a high long-term cost on households for a short-term benefit.

This chapter focuses primarily on how to improve risk mitigation and coping by poor people. It examines households' and communities' own responses through informal mechanisms. The chapter then explores the conditions for public action to supplement poor people's own risk management efforts—and the forms this intervention can take. In particular, it discusses the range of safety nets that can be used for risk mitigation and coping (see table 8.3).

Mitigating risk through diversification

Many studies document how households throughout the developing world diversify their income sources to smooth the flow of income over time.¹⁸ A review of 25 studies in Africa shows that rural households receive an average of 45 percent of income from nonfarm activities, with the share ranging from 15 to 93 percent.¹⁹ Farmers also diversify across crops and plots and by working for other farmers.

Evidence suggests, however, that the net effect of these efforts is limited and that the variability of farmers' income remains high. The income options typically open to farmers tend to move together during crises. Drought, for example, reduces nonfarm income as well as harvest income because crop failure leads to a generalized drop in income that reduces demand for nonfarm services.²⁰

The range of income options available to farming households is often quite restricted. Evidence from Burkina Faso, Ethiopia, India, Kenya, and Tanzania shows entry constraints—including lack of working capital, skills, and inputs—for many activities that could allow farmers to diversify their incomes. Startup costs for setting up a shop or providing services are often 10–20 times the cost of other activities that poor people typically undertake, such as charcoal making, dung cake collection, or simple food processing, activities that provide only weak income diversification.²¹ As a result, poor farmers in Africa tend to be less effectively diversified than rich farmers (table 8.4).²² Poor farmers in other parts of the world have had more success in diversifying income sources. In Pakistan 55 percent of farmers' income in 1986–89 came from nonfarm sources, and this share was three times as high for poor as for rich farmers.²³ In Egypt as well, poor farmers were found to be more diversified than rich farmers.²⁴

Where the possibilities for effective diversification are limited, poor farmers will specialize in low-risk, low-return activities, making it hard to escape poverty. Poor

Table 8.4
Income diversification among African farmers

Country	Period	Average share of nonfarm income in total income (percent)	Ratio of rich farmers' nonfarm share to poor farmers'
Botswana	1985–86	77	2.5
Burkina Faso	1981–84	37	2.5
Ethiopia	1989–90	36	1.2
Gambia	1985–86	23	1.3
Malawi	1990–91	34	1.0
Mozambique	1991	15	2.5
Niger	1989–90	52	2.0
Rwanda	1990	30	5.0
Senegal			
North	1988–89	60	2.0
Central	1988–90	24	1.0
South	1988–90	41	2.6
Sudan	1988	38	1.0
Zimbabwe	1988–89	42	1.0

Source: Reardon 1997.

Indian farmers devote a larger share of land to traditional varieties of rice and castor than to high-return varieties.²⁵ Tanzanian farmers without livestock grow more sweet potatoes, a low-risk, low-return crop, than do farmers who own livestock. As a result, returns to farming per adult household member are 25 percent higher for the wealthiest group than for the poorest.²⁶ Poor farmers are at a further disadvantage because harvest shocks are typically covariant over a fairly large area. This limits the usefulness of group-based strategies and networks of mutual support, because all or most group members are likely to be affected simultaneously.²⁷

Mitigating risk through insurance

In principle, any shock with a probability that can be calculated from historical records is insurable. In practice, there are almost no insurance markets in developing countries because of problems of contract enforcement and asymmetric information. People, especially poor people, have to rely largely on self-insurance and informal insurance instead. These problems have been overcome in developed countries through strong legal and other institutions.

Self-insurance. Households insure themselves by accumulating assets in good times and drawing on them in bad. The strategy is effective if assets are safe and have a positive rate of return, especially if the rate of return exceeds the rate of time preference (of present consumption over future consumption). In practice, returns to assets may be negative, and many poor households have very high rates of time preference (they are “impatient,” often out of necessity), which impedes asset accumulation.²⁸

Another problem is that asset values and income are often covariant following a macro shock, so that the value of assets is lowest just when they are needed most. A drought that destroys a harvest may also weaken and kill cattle, which farmers in many poor countries use as a buffer stock. The terms of trade of assets relative to consumption goods may also deteriorate as a result of the shock, as everyone tries to sell assets and buy staples at the same time. Both supply and demand factors push down asset prices: the income shock induces everyone to sell assets, and the decline in purchasing power reduces demand (unless buyers from outside the shock zone show up). In good times the process works in reverse: everyone wants to buy the buffer asset, pushing up its price and making the strategy very costly.²⁹

Simulations with household risk models suggest that self-insurance quickly loses effectiveness when the correlation between income and the terms of trade of assets exceeds 0.5. Households then have to curtail the sale of assets during crises because they gain so little extra consumption in return. During the 1984–85 famine in Ethiopia asset terms of trade collapsed, and households cut their consumption drastically rather than sell assets.³⁰ During the 1981–85 drought in Burkina Faso livestock sales compensated for only 15–30 percent of the shortfall in crop income.³¹

Buying and selling cattle, though a common strategy for coping with income fluctuations, is not a feasible one for many poor households. Buying a cow requires a large, one-time outlay (and significant prior saving). In western Tanzania a cow costs about a fifth of mean annual crop income, explaining why only half of households own cattle.³² Where possible, poor households use smaller animals (goats, sheep) or more divisible items as buffer stocks. In three South Indian villages farmers held buffer stocks of grains and currency as their main risk management strategy.³³ In rural China, by contrast, households increased their holdings of unproductive liquid assets only slightly in response to income risk.³⁴

Because the indivisibility and riskiness of many assets (price risk, survival risk for cattle) limit asset-based risk management strategies, poor people need a wider range of assets and greater stability of asset values. This would allow them to take better advantage of opportunities for income growth (described in part II of this report). Savings accounts hold great promise as a divisible asset with a fixed value and positive return. Given some assurances about the safety of the financial institution holding the accounts, the main risk would be inflation. Several recent experiences have underscored the great demand by poor households for safe savings accounts. Bank Rakyat Indonesia has more than 16 million low-income depositors. SafeSave, an NGO in Dhaka, Bangladesh, has adapted the principles of a traditional rotating savings and credit association; its agents collect small sums of money daily for deposit in members’ accounts.³⁵

Informal insurance. Households also use group-based mechanisms of informal risk sharing that rely on the social capital of groups of households. Typically, informal insurance involves a mutual support network of members of a community or extended household, often within ethnic groups; among members of the same occupation; or between migrants and their households of origin.

Like consumption smoothing, which aims to equalize marginal utilities over time, group-based insurance aims to equalize marginal utilities across members of the group.³⁶ When one member's consumption falls, the others transfer resources to rebalance marginal utilities. These networks are effective only against shocks common to some members but not all. So the wider the group, the less likely a shock is to affect all members, and the more effective they all are at risk pooling.³⁷

A network operates through transfers, gifts, or loans between members, typically with expectations of reciprocity. Transfers respond to an emergency befalling a member of the network, thus serving risk management purposes, but they also fulfill a social function in forging community cohesion.³⁸ The importance of gifts and transfers varies greatly. In Bulgaria fewer than a fifth of households receive transfers; in Jamaica more than half do (table 8.5). In most countries the bulk of transfers goes to the poorest households, often representing a large share of income. Private transfers increase the poorest quintile's share of aggregate income by about 50 percent in Jamaica and Nepal and by almost 70 percent in Russia (figure 8.1).

The occurrence of transfers is not always a sign of adequate protection against crises. The key feature of informal insurance is reciprocity, self-enforced by the group. In sit-

uations of high economic stress, norms and social pressure may not be enough to ensure that members of the group do in fact transfer resources to other members. Informal insurance works best where people value future protection highly (rates of time preference are low) and fear of future exclusion from the insurance scheme keeps compliance high. But this works against poor people, who tend to value current consumption highly relative to future consumption (usually out of necessity). For this reason, poor people, even though they need insurance most, are more likely to drop out of informal arrangements. Informal insurance also works better when the rate of transfers is high (because frequent interactions create trust in future compliance) and shocks are idiosyncratic (because covariant shocks can wipe out the entire network's resources).³⁹

To determine the need for a formal safety net, researchers have tried to measure how well informal insurance works, but measurement has proved difficult. It is hard to distinguish between the effects of informal insurance and those of self-insurance. And because measurement requires information about consumption and trends for all members (or a statistically valid sample of them), it is especially difficult when a network extends past

Table 8.5
Private cash and in-kind transfers for poor households

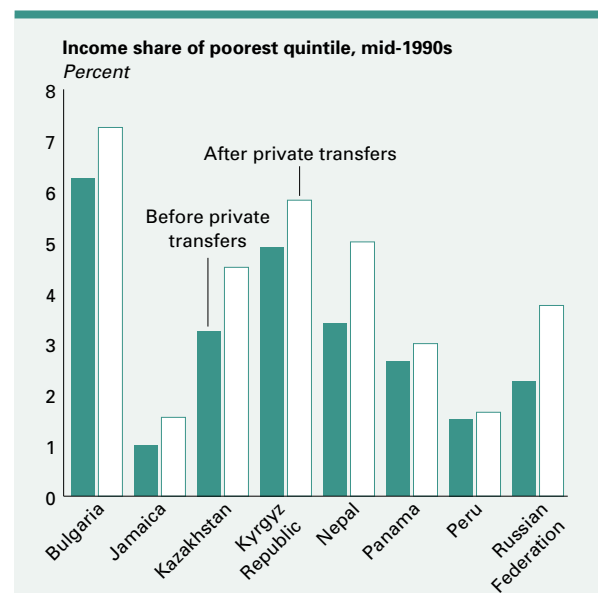
Percent

Country (year)	Share of households giving transfers	Share receiving transfers	
		All households	Poor households ^a
Jamaica (1997)	13.1	53.0	65.0
Nepal (1996)	17.4	44.7	55.3
Peru (1994)	14.3	37.3	46.7
Panama (1997)	15.5	37.8	40.9
Kazakhstan (1996)	20.2	27.5	33.8
Kyrgyz Republic (1996)	15.7	35.5	31.7
Russian Federation (1997)	23.7	25.2	31.5
Bulgaria (1995)	15.0	17.0	21.4

a. Households in the lowest quintile of the per capita income distribution.

Source: Cox, Galasso, and Jimenez 2000.

Figure 8.1
Private transfers represent a large share of the income of the poor



Note: Quintiles are based on per capita income distribution. Transfers are those accruing to the poor. Data are for most recent year available.

Source: Cox, Galasso, and Jimenez 2000.

the boundaries of a village or other geographical entity. Evidence from Côte d'Ivoire, India, Thailand, and Uganda suggests that informal insurance exists, but is far from perfect.⁴⁰ Evidence from China and India indicates that the poor and the landless are much less protected from income fluctuations than the rich and the large landholders.⁴¹

Coping with shocks

When a shock hits, people cope by cashing in their insurance: selling livestock or other assets, or calling on support networks for transfers or loans. If these mechanisms fail or fall short, households may increase their labor supply, working more hours, involving more household members (women or children), or migrating to unaffected areas. If all else fails, households reduce consumption and go hungry.⁴²

The poor have fewer options than the wealthy for coping with shocks. Because they own fewer physical assets, poor people are more likely to increase their labor supply. If the shock is covariant and the local labor market has collapsed, migration is the only answer. And if the men in the household migrate, women and children may need to pick up the slack locally.⁴³

Coping with shocks often requires more than these economic responses. During a prolonged crisis people may delay marriage and childbearing, families may move in together (especially in urban areas), and people may resort to illegal activities (theft, robbery, prostitution). Ultimately, the social mechanisms meant to help households cope with shocks may come undone under the continuing pressure of a prolonged shock.

Effects within households

So far, the discussion of risk management has viewed the household as the unit of impact and decision. Yet risk sharing within the household may not be equal, and the burden of the household's response may fall disproportionately on the weakest members, especially women and children. Two situations are possible. A shock affecting the household as a whole may have different effects on different household members. Or an individual shock (illness, loss of job) may have different effects on consumption depending on whether the affected person is a man or a woman. There is more evidence on the first situation than the second.⁴⁴

Because poor households tend to have many children, children are more exposed to poverty and vulnerability than other groups. Children in poor households

are especially vulnerable to fluctuations in household income and consumption. They are more likely than other children to be underweight, so that further declines in food consumption can cause irreversible harm. In Bangladesh children's growth suffered during major floods.⁴⁵ In rural India child mortality rates increased in times of drought, especially in landless households.⁴⁶

The evidence on gender bias in the responses to such shocks is mixed. No such bias was found following floods in Bangladesh.⁴⁷ Studies in India, however, found that girls' nutrition suffered more than boys' during periods of low consumption in the slack agricultural season.⁴⁸ Price changes also were found to affect girls' consumption more than boys'.⁴⁹ For children under the age of two, rainfall shortages were associated with more deaths for girls than for boys.⁵⁰

Some studies have found that women suffer more than men from adverse shocks. Rising food prices led to larger reductions in nutrient intake for women than for men in Ethiopia and India.⁵¹ Cultural and traditional factors can increase women's exposure to risk. Divorced and widowed women in South Asia often face higher health risks and are more likely than married women to be poor because they lose access to their husband's property.⁵² In some African countries women may lose access to household land when their husband dies.⁵³ There is also evidence of a pro-male bias in household health and nutrition expenditures, but it is not clear whether the bias affects poor households more than others. A recent study in Pakistan found limited evidence that gender bias in health expenditures decreases with rising income.⁵⁴

On balance, the evidence points to important differences in intrahousehold effects from shocks. But the evidence comes mainly from South Asia. Whether similar effects occur elsewhere is still unknown.

The poverty trap and the long-term consequences of inadequate risk management

As households move closer to extreme poverty and destitution, they become very risk averse: any drop in income could push them below the survival point. The poorest households try to avoid this even if it means forgoing a large future gain in income. Despite facing the highest risk, they have the fewest resources for dealing with that risk. And forced onto the most marginal lands (floodplains, hillsides) and into areas with poor infrastructure, they are most at risk from natural disasters and usually far from health facilities.

Extreme poverty deprives people of almost all means of managing risk by themselves. With few or no assets, self-insurance is impossible. With poor health and bad nutrition, working more or sending more household members to work is difficult. And with high default risks, group insurance mechanisms are often closed off.

The poorest households thus face extremely unfavorable tradeoffs. When a shock occurs, they must obtain immediate increases in income or cut spending, but in so doing they incur a high long-term cost by jeopardizing their economic and human development prospects. These are the situations that lead to child labor and malnourishment, with lasting damage to children, and the breakdown of families.

In Côte d'Ivoire severe economic recession caused households, especially the poorest, to sharply increase the labor supply of children.⁵⁵ In rural India child labor was found to play a significant role in households' response to seasonal variations in household income.⁵⁶ In every part of the world participants in the *Voices of the Poor* study mentioned child labor as an undesirable coping mechanism. In Egypt children were sent to work in a storehouse packing vegetables. During periods of drought in Ethiopia children were taken out of school and sent to towns to be employed as servants, with their earnings sent back to their families. In the lean season in Bangladesh children work on farms, tend cattle, or carry out household tasks in exchange for food. Parents are often aggrieved by the undue physical labor of their children and worry especially about the vulnerability of girls to beatings and sexual assaults.⁵⁷

Inadequate risk management can also compromise nutrition in poor households. After the devastating floods of 1988 in Bangladesh, many households took out loans to meet consumption needs, but landless households were less able to do so and their children suffered more severe malnutrition.⁵⁸ A study of rural Zimbabwe found that the 1994–95 drought caused a 1.5–2-centimeter decline in annual growth among children one to two years old. Although this study found the reduction to be permanent, other studies have found evidence of catch-up during subsequent good periods.⁵⁹

What do households suffering these unfavorable long-term effects on the education and nutrition of their children have in common? Low asset endowments (physical, human, social) and little or no access to credit and insurance markets—a chronic trap for poor people, unable to accumulate enough assets to escape poverty. When households do not have some threshold of assets, they are

forced to engage in defensive actions to protect the assets they do have. One study estimated that poor households engaging in this strategy could have boosted their incomes by 18 percent with a more entrepreneurial management strategy (but one that requires access to credit).⁶⁰

Dysfunctional factor markets can also create or aggravate poverty traps. Take child labor. When a crisis strikes and households cannot borrow or when adult unemployment is high or wages low, children are pulled out of school and sent to work. The lost schooling leads to a lifelong loss in earning ability for these children. Failures in the credit or labor markets thus transmit poverty and vulnerability across generations.⁶¹

Policy responses for improving risk management

Since poor people cannot fully manage risk on their own, any poverty reduction strategy needs to improve risk management for the poor—reducing and mitigating risk and coping with shocks. The strategy should include formal and informal mechanisms, provided by both the public and the private sector.

In principle and excluding cost considerations, the best approach is to reduce the risk of harmful shocks.⁶² Next would be risk mitigation to reduce the possible impact of a shock. Coping would be a residual approach to address the failures of the first two.⁶³ In practice, different direct and opportunity costs may well change the ranking of options. Some risk reduction and mitigation strategies are prohibitively expensive, especially those for dealing with infrequent but catastrophic shocks.

Comparative cost data and cost-benefit analyses are generally not available to help policymakers choose from different types of risk management interventions. Furthermore, the distributional implications of different strategies need to be considered. A comparative study in India found that, at the margin, public work programs benefit the poorest quintile the most, while credit programs benefit the second and third poorest quintiles the most.⁶⁴

Most developing countries pay too little attention to risk reduction and mitigation and rely too much on interventions after disaster strikes. Efforts to cope with the Mexican peso crisis of 1995 and the East Asian financial crisis of 1997 have shown how difficult it is to put effective safety nets in place after the fact (chapter 9).

The balance needs to shift from policies for coping to those for reducing and mitigating risk. That means

ensuring that social safety nets such as workfare programs, targeted human development programs, and social funds are in place on a permanent basis and can be scaled up when a shock occurs (see table 8.3). Interventions following the 1998 floods in Bangladesh were effective because of the existing network of NGOs and other mechanisms ready to be activated to help poor people.⁶⁵ It also means providing better access to credit and financial assets, facilitating income diversification, managing labor market risk better (especially child labor), and providing health insurance. Such actions would allow poor people to pursue higher-risk, higher-return activities that could pull them out of poverty.⁶⁶ Social safety nets can also serve as an automatic compensatory mechanism for the unwanted distributional effects of policy reforms (chapter 4). By doing so, they will help make reform socially and politically feasible. While a new balance is needed, coping mechanisms will remain vital for dealing with unforeseen and infrequent shocks where it is prohibitively expensive to put mechanisms in place ahead of time.

Not every country needs to set up a comprehensive social safety net. But each does need to construct a modular system of programs based on its own patterns of risk and to cultivate a suitable mix of providers (public and private) and administrative arrangements (box 8.4). The first step in selecting and designing programs is to understand the general principles of how safety nets complement existing risk management arrangements. The next is to identify specific types of risk (illness, old age, unemployment) and the mechanisms for dealing with them.

General principles of safety nets and risk management

Reducing risk is possible for some categories of risk but not all. For example, building a dam can reduce the risk of flooding. Immunizations and other public health campaigns can reduce the risk of illness. Policies undertaken primarily for other purposes can also contribute to risk reduction. Good education policies, including scholarships for poor families, can reduce child labor. Environmental policies can limit deforestation, reducing damage from hurricanes and deaths from mudslides. Sound macroeconomic policies can reduce the risks of high inflation and unemployment.

But the focus in this chapter is primarily on mitigating risk (diversification and insurance) and on coping. Making a wider variety of crops and extension services

Box 8.4

Managing risk: the modular approach to social safety nets

Constructing a social safety net is far from an exact science, and the process will vary from country to country depending on the context, data availability, and political urgency. But the process should have certain analytic elements, including establishing the country context, constraints, and challenges; identifying sources of risk, vulnerable groups, and potential interventions; and identifying the optimal mix of programs. Malawi illustrates the mix of preferred programs that can result, depending on prevailing conditions.

Malawi is a low-income country, with more than half its population in severe poverty. The vast majority of the population depends on subsistence agriculture. There is little government revenue surplus to redistribute and limited administrative capacity to manage complex programs. There is no formal social safety net.

Identifying sources of risk and vulnerable groups

Vulnerable groups in Malawi were identified on the basis of a poverty analysis conducted in the early 1990s. Four groups were found to be most at risk: rural households with small landholdings, female-headed households, AIDS orphans and their relatives, and those who could not care for themselves. In addition, four major risks were identified: seasonal price increases and food shortages, periodic drought, large periodic macroeconomic shocks, and the threat of HIV/AIDS. Potential interventions to address these risks were developed.

Identifying the optimal mix of risk management interventions

A cost-effectiveness analysis of existing programs was conducted before potential new interventions were ranked by priority. The results, together with consideration of the vulnerable groups, the risks, and the need to focus on productivity-enhancing interventions, led to the following modular system of programs:

- Public work (risk mitigation and coping).
- Transfers for orphans in poor communities (risk mitigation and coping).
- Nationwide nutrition program (risk reduction and coping).
- Targeted cash transfers to the needy (coping).

Source: World Bank forthcoming b.

available to farmers can help rural residents to diversify. Opening trading opportunities through investments in infrastructure and other means can also stimulate diversification. But liberalizing markets (say, by privatizing state commodity boards) can have mixed effects and will not always benefit poor people. Sometimes dealers step in between farmers and export traders and capture most of the gains from open trade.

Policies should also make it easier for poor people to build up assets while reducing the covariance between asset values and income. Covariance is a big problem in rural areas, where asset values (livestock) often move in tandem with farm income. This could be addressed through better integration of asset markets with the wider economy—by investing in transport infrastructure, disseminating price information, and removing structural and institutional market barriers. Macroeconomic stability promotes more stable asset prices, reducing inflation-driven deterioration in the terms of trade of assets relative to consumption goods. And easier access to credit would facilitate the acquisition of costly indivisible assets, such as cattle.⁶⁷

Another critical intervention is the provision of insurance, especially for covariant risk. Self-insurance has limits, mainly because poor people cannot accumulate enough assets, especially after successive shocks. And informal insurance, which relies on risk sharing across a community or network, is ineffective for covariant shocks.

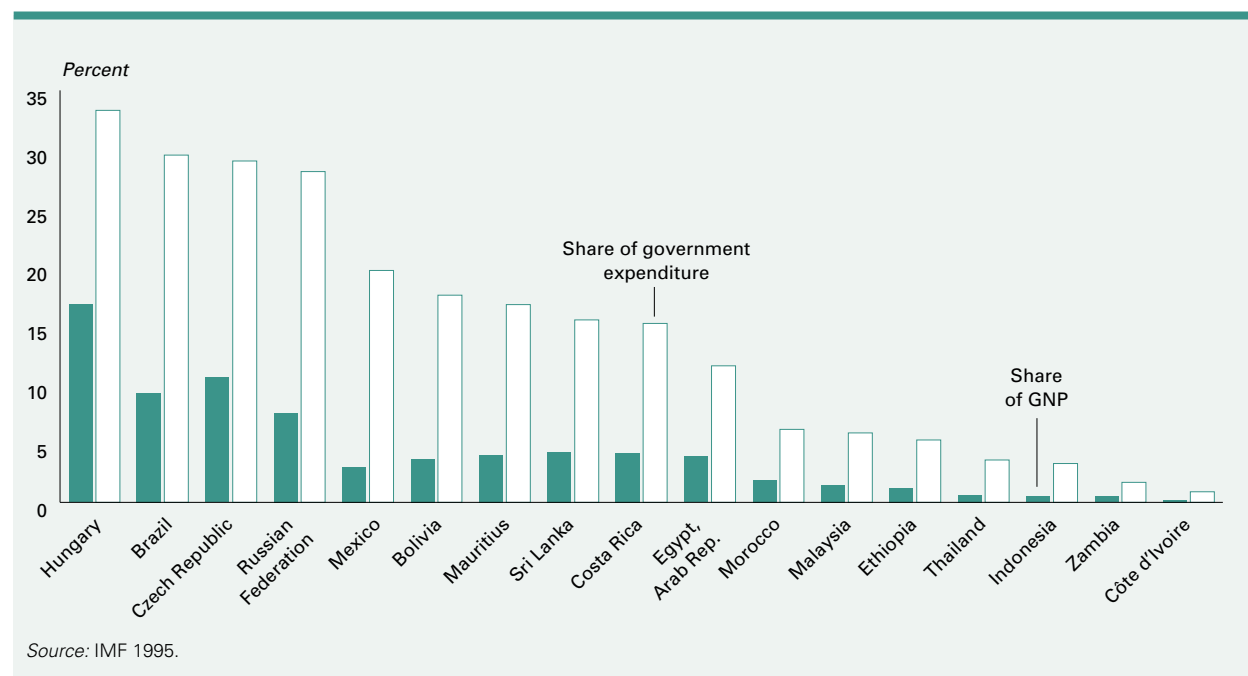
The first question with insurance is whether market or government provision is more cost-effective than informal mechanisms. Can the state provide less costly insurance for risks that are self-insured by poor people or insured through group-based risk sharing? Because the

public sector can pool risks over a larger area, the possibility exists for providing insurance at a lower cost than informal agents can (assuming that information problems can be dealt with; see below). Publicly provided insurance could thus yield a net gain to society—if the state is perceived as credible and the insurance scheme is fiscally sustainable.

But if trust in the state is low, few people will put their faith in the government system and give up their personal or group insurance. And even if credibility is not an issue, fiscal constraints may prevent the state from making payments during a crisis. People who had given up their informal insurance mechanisms would then be left worse off than before the state offered insurance. Relative cost-effectiveness, trust, and sustainability thus all need to be considered in deciding on government intervention.

Government spending on social safety nets varies considerably. Figure 8.2 illustrates this with one component: spending on social security by the central government. But costs are only part of the picture. These expenditures are also investments in human capital formation. By providing poor people access to basic services and allowing them to undertake higher-risk, higher-return activities, the investments can have positive effects on poverty and economic development. Costs are still likely to be an issue,

Figure 8.2
Central government spending on social security varied greatly in 1995



but they can often be reduced by more explicitly considering the role of private providers.⁶⁸

Concerns that formal safety nets will displace self-insurance or group-based mechanisms also need to be considered. Empirical estimates of this effect vary, so the country context is important. A study of the urban Philippines estimated that government-provided unemployment insurance would displace 91 percent of private transfers to the unemployed.⁶⁹ Another study estimated that providing a basic pension benefit to black South Africans displaced only 20–40 percent of private transfers to the elderly.⁷⁰ Studies of other countries also found displacement rates on the order of 20–40 percent.⁷¹

Displacements of private transfers need not imply a social loss. If poverty reduction objectives are considered along with insurance objectives, there may well be a net social gain, despite the displacements.⁷² In South Africa many of the displaced transfers were from young to old households, both of them poor. The new pension program left more money in the pockets of poor young households and also covered many elderly residents who had not been receiving private transfers. Overall, then, the pension scheme significantly strengthened South Africa's social safety net.⁷³

When should the state step in and provide a social safety net for poor people—and how? The general answer is that it depends on the types of shocks likely to occur and the kinds of private insurance arrangements in place.

- If informal arrangements insure adequately against idiosyncratic risk, the state should step in to insure against covariant risk. In most circumstances providing this coverage will improve overall risk management and increase welfare, without crowding out informal insurance.⁷⁴ But since households' overall risk exposure will have declined, self-insurance (precautionary savings or other asset buildups) may decline.⁷⁵
- Where informal insurance is ineffective—because of enforcement problems or because shocks are too frequent or too large—household welfare could be increased if the social safety net insured against both idiosyncratic and covariant risks. Whether coverage should come from the state or private insurers depends largely on the type of risk. The state is often best able to cover covariant risks, but most idiosyncratic risks may be better handled by private providers (communities, insurance firms). The government's role should then be to facilitate and, if necessary, regulate private provision.⁷⁶
- Where group-based informal insurance works well, the state should avoid safety net programs targeted to in-

dividuals or households. Most safety nets target specific types of people or households: the ill, the elderly, the women heading households with many children, and the like. The danger is that improving the risk position of one person belonging to a group-based insurance scheme creates an incentive to drop out of the group. If this leads to the collapse of the group scheme, members not covered by the safety net could end up worse off. The solution is to target broad groups (say, a credit program for the entire community or specific groups within it), although doing so can be difficult because insurance groups do not always coincide with communities or other easily identifiable target groups. Of course, if the safety net protects almost everyone, the disappearance of informal insurance arrangements may not matter, at least if the formal safety net is more cost-effective and sustainable.⁷⁷

In the end, decisions on safety nets need to weigh the negative effects of displacement against the positive effects of long-term improvements in the welfare of poor households. Safety nets are not the only way to improve poor households' ability to manage risk and to engage in higher-risk, higher-return activities. Stable macroeconomic policies may do more to reduce employment risk than public work programs. But sound economic policies may increase the risk for some categories of households. Trade liberalization may lower the cost of imported clothes and utensils, reducing demand for weaving and handicrafts—two activities with low entry costs frequently used by poor people to diversify income.⁷⁸ So the decision about providing safety nets needs to be viewed in the full context of economic and social policies and of the impacts on household risk.

Where there is a strong concern for the poor, especially the very poor, the formal-informal, public-private balance generally shifts in favor of public provision of insurance.⁷⁹ Concerns for sustainability and other incentives in group-based insurance and credit schemes generally work against inclusion of the poorest, who have a higher perceived risk of default.⁸⁰ Similar concerns tend to exclude poor people from market-based insurance. Thus public insurance provision is not likely to undercut any informal arrangements involving the poorest households.

Further strengthening the case for public intervention is the ineffectiveness of the insurance mechanisms used by poor people against repeated shocks—mechanisms that also tend to be costly.⁸¹ A study of six South Indian vil-

lages found that farmers sacrifice as much as 25 percent of average income to reduce exposure to harvest risk.⁸²

Several practical issues have to be considered in setting up state insurance programs. These include obtaining information about the people to be insured and dealing with the political economy issues in providing insurance.

Obtaining information about people to be insured is costly. That is why so many traditional credit and insurance institutions are local. Moneylenders or members of a rotating savings and credit association have a better chance of knowing who is a bad risk than would an outside insurance program.⁸³ Asymmetric information creates problems of moral hazard and adverse selection, leading to the underprovision of insurance (relative to the social optimum) by private providers.⁸⁴ Because information problems are especially acute for poor people, the social gains from government provision of insurance may be large.

Because the government has no comparative advantage in obtaining local information on who should be in-

sured, coproduction is frequently recommended: the government provides the financial and technical means, and local institutions or peer groups take care of implementation and monitoring. Or the government provides funds to communities, which are responsible for identifying poor beneficiaries (box 8.5).

The political economy may strengthen or weaken the case for publicly provided risk mitigation. The state may well be the best agent to provide insurance, but lack the necessary institutional strength, financial resources, or management capacity. Capacity building may then be required inside the government. The political support to allocate resources may also be lacking, since it requires getting the rich to support a program that does not benefit them. If the insurance program is not self-supporting, it may have to be funded out of general tax revenue, at the expense of other programs that benefit the rich. (Chapter 6 discusses the political economy of poverty reduction further.)

Box 8.5 Is targeting by the community a good idea?

In most social safety net programs the central government provides funds and sets the eligibility criteria, ostensibly guaranteeing equal treatment across the country. But local needs may vary across the country, and benefits may leak to ineligible households in varying degrees. In an effort to improve targeting, an increasing number of programs rely on communities to determine eligibility rules and identify beneficiaries. The success of this approach depends in part on the degree of social cohesion in the community and whether the community can be effectively mobilized in a consultative process to allocate benefits.

Targeting efficiency also depends on the entity charged with allocating benefits. In Uzbekistan quasi-religious community groups known as *mahallas* target child benefits and other types of social assistance to low-income families. They have considerable discretion over amounts and criteria for assistance. An external review concluded that benefits were targeted fairly well. In Armenia subsidies for

school textbooks are allocated locally by parent-teacher associations or the school principal. The program has not been formally evaluated, but informal appraisals suggest that the system has been well accepted by parents, and it may be expanded to other types of aid.

The Kecamatan Development Project in Indonesia provides block grants to 10,000 villages. Each community decides on the use of the funds through an extensive process of information dissemination, community facilitation, and proposal preparation and selection. Field assessments indicate that the process works best when both traditional and official community leaders are on board from the start (KDP Secretariat 1999).

In Albania the Economic Support Program helps poor rural households and people who lose their jobs in the transition. Local governments receive block grants to allocate within their communes. Local targeting compares favorably with that of safety net programs in other countries.

Advantages and disadvantages of allowing communities to allocate benefits

Advantages

Better information is available on needy households
Allocation criteria are adapted to local needs
Decentralized administration is more efficient
Community mobilization may build social capital

Disadvantages

Program may be used to serve interests of the elite
Participation of community leaders may have opportunity cost
Allocation rules may cause increased divisiveness in the community
Externalities across communities may not be taken into account

Source: Conning and Kevane 1999.

Box 8.6 Insurance options for the informal sector

The simple expansion of statutory coverage of formal sector social insurance programs (pensions, unemployment insurance, disability insurance) to small enterprises will not meet the risk management needs of the informal sector. Schemes need to accommodate the lower contributory capacity and greater earnings volatility of self-employed and informal workers.

Lines may need to be blurred between strict contributory self-financed insurance schemes and assistance paid out of general tax resources. Also called for are flexible partnerships between different providers: the state, private insurance companies, communities, NGOs, and organizations representing the informal sector workers.

Many contributory, and often self-managed, schemes for informal sector workers have emerged in recent years. They are either adapted from formal systems or based on cooperatives and mutual benefit societies. In some cases they complement indigenous risk management arrangements, such as burial and rotating savings and credit societies.

In the Indian state of Andhra Pradesh pension coverage has been given to about 425,000 home-based workers in the *beedi* (leaf-rolled cigarettes) industry, under the Employees' Provident Fund Act. A simple procedural mechanism—issuing identity cards—was crucial to success. In addition, a welfare fund for *beedi* workers was set up by the central government, funded through an earmarked tax collected from employers and manufacturers in the *beedi* industry. This delinks the collection of contributions and the

delivery of welfare services from individual employee-employer relationships, removing a major bottleneck to including informal sector workers in contributory schemes.

Several Indian states recently tried a more experimental group insurance scheme. In Gujarat about 20,000 landless agricultural laborers received life and accident insurance coverage. Most group insurance schemes are not fully self-financed and require state government contributions.

In surveys informal sector workers regularly single out health insurance as their greatest insurance need. In China rural health insurance covers hospital and primary health care costs through private and public contributions. Premiums paid by beneficiaries are supplemented through a village public welfare fund and government subsidies.

In Tanzania a pilot project in Dar es Salaam provides health insurance through five mutual associations of informal sector workers. In Igunga, a town in the northwest, a community health fund covering primary health care services has achieved 50 percent participation. Since the scheme relies on matching funds, sustainability remains an issue.

Key to the success of contributory insurance schemes for the informal sector are their organization around an association based on trust and mutual support (professional group, village) and the administrative capacity to collect contributions and provide benefits. Administrative capacity can be fortified by an umbrella organization that joins local groups and provides them with technical support.

Source: van Ginneken 1999.

Public risk mitigation may also reduce profit opportunities for the rich (from money lending) or undercut patron-client relationships between rich and poor by making the poor more independent.⁸⁵ Allowing the rich (or at least the middle class) to participate in some insurance programs and showing that insurance is less costly than other poverty reduction efforts can boost political support for publicly funded insurance. Above all, as chapters 5 and 6 argue, public risk mitigation will succeed only if poor people have a channel for dialogue with government on issues of risk and vulnerability.

Special considerations stem from the large (and growing) informal sectors in many developing countries (box 8.6). Employment in the informal sector in 12 Latin American countries rose from 50 percent of the economically active population to 54 percent between 1990 and 1997.⁸⁶ A large “gray” economy has sprung up during the economic transition in Eastern Europe and the former Soviet Union. Unemployment insurance will not reach workers in the informal sector, but social assistance

programs can. Community-based and integrated provision of insurance are two innovative approaches showing promise. Such programs recognize the strong links between labor market risks and other risks in the informal economy.⁸⁷ Packages that combine different types of insurance or assistance for the self-employed may be particularly attractive. In Chile many self-employed people participate in the pension system to get health insurance.⁸⁸

Specific instruments and the lessons of experience

While the general principles discussed here are useful in framing choices for policymakers, it is their application to specific cases and the lessons of experience that really matter. Many tools are available for public interventions to improve the ability of households to manage risk. The rest of this chapter covers seven tools especially relevant for poor people: health insurance, old age assistance and pensions, unemployment insurance and assistance, workfare programs, social funds, microfinance programs, and

cash transfers. Some of these instruments address primarily one type of risk—others are useful for a wide range of risks.

Health insurance. Several studies have shown that many households in developing countries cannot insure against major illness or disability. Significant economic costs are associated with these conditions, both in income losses and in medical expenses. The policy response should be to provide health insurance and to direct public health spending to facilities serving primarily poor people (or poor areas).⁸⁹

Some middle-income countries have set up universal health insurance, as Costa Rica and the Republic of Korea did in the 1980s. But most low-income countries can offer only limited health insurance, usually providing minimum benefits for all illnesses (“first dollar coverage”) rather than full insurance for infrequent but very costly illnesses.⁹⁰ This choice may look pro-poor (benefits are provided regardless of income and there is no deductible or copayment), but the evidence suggests that catastrophic illnesses and disabling injuries create much greater problems for poor people than frequent, minor illnesses. Households in Indonesia were able to smooth more than 70 percent of consumption fluctuations caused by moderate health shocks, but only 40 percent of those caused by large health shocks.⁹¹ An average hospital stay in Indonesia costs 131 percent of the annual income of the poorest quintile of households, but only 24 percent of the income of the richest quintile.⁹² In China households could smooth only 6 percent of consumption fluctuations caused by overall medical care costs, but 100 percent of fluctuations involving health care expenses of less than 50 yuan.⁹³

Public provision of insurance against catastrophic health risks could thus significantly improve the welfare of poor people where households are unable to insure against these risks themselves. The evidence further suggests that premiums can be quite low (because major illness is rare) and well below households’ willingness to pay.⁹⁴ Countries as diverse as Costa Rica and Singapore have implemented health insurance schemes with near universal coverage (box 8.7). Where administrative capacity or other constraints make catastrophic health insurance infeasible for poor people, subsidies for hospital care can be used instead. For this to be pro-poor, however, there must be equity in referrals and access to hospitals.⁹⁵ In both approaches the objective is to avoid a need for poor people to pay for medical emergencies through debt, distress sales of assets, or cuts in consumption.

Injuries and chronic illnesses that result in long-term disability affect an estimated 5–10 percent of people in developing countries.⁹⁶ Disability is associated with low education, poor nutrition, high unemployment and underemployment, and low occupational mobility—all factors that increase the likelihood of being poor. And being poor adds to the risk of becoming disabled. Much disability in developing countries is caused by injuries or by communicable, maternal, and prenatal diseases, some of them preventable. Medical prevention of disease becomes easier with rising incomes, of course.

In the long run policy efforts need to focus on prevention, especially on maternal and child health care. Programs to eradicate measles, to fight onchocerciasis (river blindness), and to reduce micronutrient deficiencies have already greatly reduced disabilities.⁹⁷ Preventive programs that keep simple diseases from becoming chronic disabilities are especially important for children.⁹⁸ War and civil conflict have also caused many disabilities. Land mine accidents have increased sharply over the past 15 years: a study of four war-affected countries found that 6 percent of households had a member who had been killed or permanently disabled by land mines.⁹⁹

People with disabilities incur extra medical costs and are often excluded from services and community activities.¹⁰⁰ Most people with disabilities depend on their families for support and cannot increase their labor supply in response to income crises. One study found that 61–87 percent of land mine victims went into debt to pay their medical bills, and 12–60 percent had to sell assets.¹⁰¹ Prevention and better health care hold the key to reducing disabilities in the future. Those who are already disabled need community-based rehabilitation programs and public transfers to the families that provide care.¹⁰²

Old age assistance and pensions. The risks associated with old age have social as well as economic dimensions, and policies need to address both. To reduce the social isolation of many of the elderly, social policies should facilitate access to community groups or associations that cater to the elderly. Proximity to health facilities is also a major concern, since elderly people have difficulty reaching faraway clinics.

On the economic side, many elderly are poor because they have been poor all their lives.¹⁰³ Poverty reduction policies that increase people’s income during their working lives will also make them better off during retirement. Well-functioning financial markets that facilitate saving and investment will help workers accumulate financial as-

Box 8.7**Two universal health insurance systems: Costa Rica and Singapore**

Costa Rica and Singapore have vastly different income levels and administrative capacity, but each has succeeded in establishing universal health care coverage. They also have some common characteristics that are helpful in targeting fee waivers to poor people, such as almost universal literacy and a system of formal documentation of vital events (births, marriages) and transactions (employment contracts, utility bills).

Costa Rica

In Costa Rica the public sector designs and carries out health care policies. The role of the private sector in health care is very limited: barely 2 percent of hospital beds in the country are in private facilities. The Costa Rican Social Security Fund was created in 1943, and coverage for health services was extended to the entire population in 1971. About 85 percent of the population actually participates. Funding comes through payroll deductions and voluntary, income-based contributions of the self-employed. Public spending on health care has remained high, ranging from 4.7 to 6.8 percent of GDP during 1975–93. Universal health insurance went hand in hand with health care strategies aimed at preventing disease, addressing specific risk factors, and extending service coverage to rural and urban areas. Health indicators responded. Between 1975 and 1990 infant mortality declined from 37.9 to 15.3 per 1,000 live births, and medically assisted births rose from 82.5 percent to 95.2 percent.

The 15 percent of the population not covered by the national health insurance program is concentrated at the lowest end of the income distribution. A free health insurance program covers more than three-fourths of this group. Eligibility is verified through systematic evaluations by social workers, based on documentation provided by applicants on household composition, earnings, and housing conditions. The administrative reviews of applicants are methodical and effective: 55 percent of program benefits go to the poorest quintile.

Equity concerns are further addressed in the primary health care reform started in 1995. The country has 800 health zones, each served by a comprehensive health care team that ensures universal access to primary care and suitable referral to higher-level facili-

ties. Each health care team is supported by a health committee set up by the community.

Still, all is not well in Costa Rican health care. Waiting times are long, and there have been complaints of improper treatment of users. As a result, many people entitled to public services go to private providers for low-cost procedures. And because eligibility is not linked to a specific number of premiums, some people pay premiums only when they need costly treatment. This violates the solidarity principle of an insurance system. Costa Rica has introduced reforms to deal with these problems.

Singapore

Between 1984 and 1993 Singapore set up a three-tiered system of health insurance: Medisave, Medishield, and Medifund. The program insures against intermediate-level health risks through individual or household Medisave accounts. These mandatory savings accounts, part of Singapore's compulsory social security system, are funded by a 40 percent payroll tax (shared equally by employers and employees). Of this contribution, 6–8 percent is allocated to Medisave accounts, which can be used to pay hospitalization expenses of up to about \$170 a day. Individuals are expected to cover minor health costs out of pocket or through private insurance.

Catastrophic health risks are covered through Medishield, optional backup insurance for expenses exceeding the maximum coverage provided by Medisave. Eighty-eight percent of Medisave account holders have opted for Medishield coverage. The coinsurance rate is 20 percent, and the deductible amount varies with the comfort class of the medical facility.

Equity backup is provided through subsidies from Medifund, to remedy the nonprogressive nature of Medisave accounts and Medishield. A catastrophic health shock would cost 55 percent of annual per capita expenditures for the poorest quintile of households, and just 21 percent for the richest quintile. The Medifund subsidies are differentiated by class of facility and thus are self-targeted to poorer users. As a last resort, patients who are unable to pay all their medical bills can apply for a means-tested grant from their hospital Medifund committee, financed from the government's budget surplus.

Source: Grosh 1994; Prescott and Pradhan 1999; Sauma 1997.

sets over their lifetime. This is especially important for informal sector workers and the self-employed, who rarely participate in pension plans. Higher incomes and better risk management for today's prime-age workers will also help them support their parents financially.

Formal pension systems are limited in most developing countries, covering only 16 percent of the labor force in the developing world.¹⁰⁴ In the poorest countries in South Asia and Sub-Saharan Africa pensions cover less than 10 percent of the labor force.¹⁰⁵ Coverage can be increased through suitable reform, but this takes time: coverage rates above 50

percent of the labor force are usually seen only in countries with annual per capita income exceeding \$5,000.¹⁰⁶

The general recommendation for pension reform is to establish a multipillar system: combining a publicly managed defined-benefit plan with a privately managed defined-contribution plan, supplemented by voluntary retirement savings. The publicly managed plan, funded from general tax revenues, can address poverty and equity concerns. The privately managed plan, fully funded by participant contributions, serves as wage replacement after retirement.¹⁰⁷ Several countries, mainly in Latin

America and Eastern Europe, have multipillar pension systems. But successful management of such systems requires considerable administrative capacity.

Even a well-structured pension system will not initially reach the poor. Coverage in formal pension systems tends to be much greater for high-income workers: in Chile more than 40 percent of workers in the poorest income decile do not participate in the pension system, compared with fewer than 20 percent of workers in the richest decile.¹⁰⁸ In general, coverage is lowest among the poor, the uneducated, the self-employed, and women who have worked in the household rather than in the labor market for most of their lives.

Contributing to this lower coverage are market and institutional failures and incentives that discourage individuals from seeking coverage. The profile of risks that poor households face may mean that illness or harvest failure are of much more concern to them than old age income security. In a credit-constrained environment mandatory contributions to a pension system may be difficult for poor or self-employed households to meet. If in addition the public pension system lacks credibility, many households will continue to rely for old age income security on traditional informal arrangements, often based in the household, extended family, or tribe.¹⁰⁹

Addressing the needs of the elderly poor thus requires more than pensions. Preventive measures include facilitating saving and investment and providing poverty reduction programs during people's working lives. Different forms of direct and indirect support are needed for today's elderly. Programs can provide assistance to families that care for live-in elderly.¹¹⁰ Retraining and workfare programs adapted to older workers can make it easier for them to continue working.¹¹¹ And social assistance or social pensions should cover the poorest and the very old (categories that frequently overlap) and those without family support (box 8.8). Widows will often make up a large part of this group.¹¹²

Unemployment insurance and assistance. Labor market risk can be reduced significantly by improving the functioning of labor markets and by adopting sound macroeconomic policies. Many labor markets in developing countries are segmented (effectively barring entry to some groups) and excessively regulated. Reform of labor laws and regulations needs to balance greater efficiency in the labor market with promotion and enforcement of core labor standards to protect vulnerable workers (chapter 4). Eliminating the most exploitative forms of child labor

Box 8.8 Social pensions in Chile and Namibia

Countries as different as Chile and Namibia have established social pension schemes to cover the most vulnerable elderly. Chile has a multipillar pension system, with pensions that depend on years of employment and contributions. Gender differences in earnings and in years in the labor market lead to wide differences in pension payments. Take a woman with an incomplete primary education and with average tenure in the labor market who retires at her statutory retirement age of 60: she would receive only 29 percent of the pension of an equally qualified man who retires at his statutory retirement age of 65.

In addition to this formal pension system, the government finances a social assistance pension intended for poor women and men over 65 not covered by the formal system. Because the program is means tested rather than employment based, benefit amounts are not differentiated by gender. Since elderly women are generally poorer than elderly men, the program benefits women proportionately more than men, especially in rural areas.

Namibia administers a social pension program for individuals over age 60. Unlike Chile's program, Namibia's is universal, not means tested. In practice, 88 percent of eligible pensioners receive the pension. The social pension contributes significantly to poverty reduction. It is the main source of income for 14 percent of rural households and 7 percent of urban households.

The social pension program also indirectly helps children, because many elderly people in Namibia look after grandchildren and pay their school fees when the parents are away working or looking for work or because the children are AIDS orphans or disabled.

Source: Cox Edwards 2000; Subbarao 1998; World Bank forthcoming a.

should be a primary objective.¹¹³ In the informal sector, where laws and regulations are seldom applied, public action can complement customary informal arrangements to improve the environment in which workers operate.

Reform and enforcement need to be combined with programs of skill enhancement, job search assistance, and microenterprise development. Since experience with government-run training programs is mixed, partnerships with the private sector need to be explored.¹¹⁴ Labor markets can also be made more effective by improving relationships among labor market partners (employers organizations, trade unions, and government) and by strengthening collective bargaining and contracting.¹¹⁵

Even a well-functioning labor market will not fully eliminate the risk of unemployment or underemployment, however. Displaced workers will need unemployment benefits to protect them from large income losses and

poverty. In some countries the link between unemployment and poverty is very strong. A study of poverty in countries of Eastern Europe and the former Soviet Union found a 40–80 percent higher incidence of poverty among households that had one unemployed member than among households that had no unemployed member. Households with several unemployed members had poverty rates twice the national average or more in some countries.¹¹⁶ Typical unemployment programs in the region include retraining, wage subsidies, job counseling and referral services, public work and community employment, and small business creation programs.¹¹⁷

Unemployment insurance, the traditional means of mitigating the risk of job loss, is not appropriate for most developing countries because of their low administrative capacity and large informal sectors. The irregular and unpredictable earnings typical of the informal sector make it hard for workers to participate in a contributory insurance program.¹¹⁸ Many of the market and institutional failures discussed under pension systems apply also to unemployment insurance. Better options for assisting the unemployed are means-tested social assistance and public work programs (workfare).¹¹⁹ Means testing has proved difficult in most settings, but promising approaches that use easily observable indicators for targeting are being pilot tested.¹²⁰

Workfare programs. Public work programs are a useful countercyclical instrument for reaching poor unemployed workers. They can easily be self-targeting by paying wages below market rates. A well-designed and well-funded workfare program is a mix of risk mitigation and coping. To mitigate risk, the program must inspire confidence that it will continue to be available after a crisis. Only if the government is perceived as credible will such programs induce households to give up costly self-insurance or group insurance, freeing resources for other productive purposes.¹²¹ The program functions as a coping mechanism by providing jobs when a crisis strikes. Providing households with income following a crisis helps them avoid costly and damaging strategies (selling assets, reducing food intake). Some workfare programs—such as Trabajar in Argentina, the Temporary Employment Program in Mexico,¹²² and the Maharashtra Employment Guarantee Scheme in India—have succeeded in creating employment for poor people (box 8.9). Other programs not originally designed as workfare programs may actually perform very similar functions. This is the case for Mexico's self-targeted Probecat, which provides training to the urban unemployed.¹²³

Workfare programs are not necessarily an inexpensive way of delivering benefits to poor people. Their cost-effectiveness needs to be compared with that of alternative transfer programs. The cost per person-day of employment created varies greatly across countries, ranging from as low as \$1–2 in several South Asian programs to \$8 in Bolivia. The cost depends on the wage rate, type of projects undertaken, costs of local private contractors, and administrative effectiveness. Wages typically represent 30–60 percent of total costs.¹²⁴

Social funds. Social funds help finance small projects identified and implemented by poor communities, which usually provide cofinancing. Almost 50 countries, most in Latin America and Sub-Saharan Africa, operate social funds or similar entities. The world's largest is in Egypt. Recently, Eastern European and Central Asian countries have begun to set up social funds, with 10 already in operation or under preparation.

The first social fund was set up by the Bolivian government in 1987 as an emergency response to a general economic downturn. Generally, however, social funds are not coping instruments. Instead, they address a wide range of objectives, including infrastructure, community development, social services, and support for decentralization.¹²⁵ But some have been used to respond to emergencies—Hurricane Mitch in Central America (chapter 9), civil war in Cambodia, an earthquake in Armenia, drought in Zambia. Social funds have also gradually assumed a greater role in risk mitigation—supporting income generation projects, stimulating school enrollment and health center use, and strengthening the social capital of communities. They have proved to be flexible, quick to respond, and cost-effective. But the record is mixed when it comes to sustainability and poverty reduction.¹²⁶

Social funds use three targeting devices to reach poor people: investment selection (mainly basic services), project screening (to ensure that most beneficiaries are poor), and geographical targeting (of poor areas). The poverty targeting strategy and the demand-driven approach of social funds are sometimes in conflict. To enhance their effectiveness, many funds initially financed projects in better-off communities with good organizational skills. The poorest communities, which often have difficulties putting investment proposals together, received fewer benefits.

To address this problem, some social funds (Argentina, Chile, Mali, Romania) have supported capacity building in poor communities. Others have temporarily assumed some implementation responsi-

Box 8.9 Principles of successful workfare programs

In many programs for the poor a large share of benefits go to the nonpoor. This problem has stimulated interest in self-targeting schemes, such as public work programs (workfare), which have been especially effective. Two successful workfare programs are the Maharashtra Employment Guarantee Scheme in India and Trabajar in Argentina.

Launched during the severe drought of 1970–73, the Maharashtra scheme expanded rapidly to reach some 500,000 workers monthly. In a typical year the scheme provides 100 million person-days of employment. Argentina set up Trabajar II in the mid-1990s (as an expanded and reformed version of an earlier program) to cope with sharply rising unemployment, which reached 18 percent in 1996–97 and was concentrated among poor people.

Project selection

Both programs concentrate on infrastructure projects (roads, irrigation schemes, embankments). Local authorities, in collaboration with communities and NGOs, propose projects, which must use labor-intensive technologies, benefit the local community, and target poor areas.

Wage rate and self-targeting

To ensure that most participants are poor and to maintain incentives for workers to move on to regular work when it becomes available, programs should pay no more than the average wage for unskilled labor. Trabajar set the wage rate at about 75 percent of average monthly earnings from the main job of the poorest 10 percent of households in Greater Buenos Aires. The Maharashtra scheme uses the average wage rate of rural unskilled labor. Both programs have been highly successful in reaching the poorest of the poor. About 9 of 10 Maharashtra scheme participants were living below the local poverty line; 4 of 5 Trabajar participants were poor by Argentine standards. For the poorest 5 percent of participants, program benefits were 74 percent of their pre-program income.

Source: Jalan and Ravallion 1999c; Lipton 1998; Ravallion 1991, 1999a.

Benefits to the poor

Since poor people can rarely afford to be totally idle, they often give up some form of income to join a workfare scheme. Estimates suggest that forgone income could represent as much as 50 percent of the wages paid by workfare schemes. But because the employment is guaranteed, it provides major insurance benefits to poor people. Incomes in villages where the Maharashtra scheme operates have just half the variability of incomes in villages without the scheme. Poor people also derive indirect gains from a workfare program if the infrastructure created by the program benefits them. Experience is mixed. In some cases better-off households have appropriated the assets created (not an unqualified liability, since it may increase the political acceptance of the scheme by the rich, apparently the case in Maharashtra).

Principles of success

Workfare programs can improve their effectiveness by adhering to several principles.

- The wage rate should be determined by the local market wage for unskilled labor, not by the program's budget. If resources are insufficient to meet demand, the program should target areas with a high concentration of poor people. Using additional eligibility criteria should be avoided.
- Wage schedules should be gender neutral. Women can be encouraged to participate through suitable project selection, decentralized work sites, and the provision of child care.
- Labor intensity should be higher than the local norm for similar projects.
- Communities should be involved in project selection to maximize the capture by the poor of indirect benefits of the infrastructure created.
- To get the most risk mitigation, the program should be available at all times, expanding automatically during crises as demand increases.

bilities while communities increased their capacity (box 8.10). Several funds are improving their poverty targeting. In Malawi and Zambia social funds are introducing poverty mapping to identify pockets of poverty.¹²⁷ Beneficiary assessments have identified community orientation (responsiveness to community priorities, helpfulness in promoting social cohesion) as one of the strengths of social funds.¹²⁸

Microfinance (credit, savings, and insurance). Microfinance programs can help poor households smooth consumption during an adverse shock. Access to credit may help them avoid distress sales of assets and replace productive assets destroyed in a natural disaster. But microfinance programs do more than help households cope with

shocks—they can also provide capital to create or expand microenterprises. Microfinance thus helps households diversify their sources of income and reduces their vulnerability to income shocks. Microfinance programs have been especially important for women and households headed by women, who often have difficulty getting credit. However, microfinance institutions, depending on their size and diversification, are unlikely to be effective against large covariant shocks (chapter 4).

Microfinance programs have been more successful in reaching moderately poor and vulnerable (not necessarily poor) households than extremely poor households. Most programs reach clients just above or just below the poverty line. Efforts to direct microcredit programs ex-

plicity to poor households often fail, although there is evidence that some programs successfully use geographic targeting to reach poor people.¹²⁹ Having appropriate local groups identify beneficiaries or targeting beneficiaries by size of landholdings (as in the 0.5-acre limit used by Grameen Bank) has proved more successful.¹³⁰

Empirical studies find that clients often use loans to reduce risk rather than to cope with shocks, meaning that loans are not usually “diverted” to consumption. Poor and nonpoor clients alike use loans to smooth consumption by smoothing income flows, mainly by increasing diversification. Loans help households accumulate a variety of assets: physical and productive (vehicles, equipment, housing, livestock), financial (savings accounts), human (education, health care), and social (contributions to funerals and weddings or to networks of mutual support).¹³¹

As a risk management tool, the key strength of microfinance programs is the knowledge that loans will be available in time of need, making it possible for households to dispense with less effective and less desirable strategies (child labor, money under the mattress). There is a parallel here with employment guarantee schemes: the confidence in future availability is the key to the success of microfinance programs as a risk management tool.

The availability of microfinance services enables poor households to move from reactive to proactive approaches: they can plan to mitigate risk. Most clients, well aware of this benefit, go to great lengths to repay their loans so

Box 8.10 The Eritrean Community Development Fund

After the war of independence, the government of Eritrea promised to provide each province with basic economic and social infrastructure. But many poor communities lacked the capacity to implement the projects themselves. Eritrea’s innovative solution was to combine social fund and public work mechanisms in the Eritrean Community Development Fund. The fund combines the bottom-up selection of projects with the top-down selection of intervention areas. Contracting procedures are kept flexible to reach even communities without implementation capacity. If a community cannot form a project committee to supervise a project, the fund takes over procurement, contracting, and technical supervision. If necessary, the fund even manages the community’s contribution. This flexible approach is combined with an ambitious capacity-building program, which trains community and local government staff in project design, maintenance, and operation.

Source: Frigenti, Harth, and Huque 1998.

that they do not lose access to future loans. Clients continued to repay loans even during and after the floods in Bangladesh.¹³² Evidence suggests that microcredit has especially improved the lives of poor women, by strengthening their bargaining position with their husbands, boosting their self-confidence, and increasing their participation in public life.¹³³

The success of microfinance in reducing vulnerability through income diversification and asset accumulation suggests that these programs should be a priority for government and donor support.¹³⁴ But expanding the client base to poorer households remains a challenge. To some degree, microfinance products could be redesigned to reach poorer households. Loan size and repayments could be made more flexible to better match the income flows and repayment capacity of borrowers.¹³⁵ There probably is a practical limit to this accommodation, since at some point the increasing costs of making such loans will undermine the sustainability of microfinance institutions. The very poorest may well be more effectively helped with targeted cash transfers.

Program effectiveness would be increased by combining microcredit with savings and insurance products so that clients would not have to take out loans to cope with illness or death (box 8.11). Bank Rakyat Indonesia and SafeSave in Bangladesh demonstrate the potential of combining

Box 8.11 The Self-Employed Women’s Association of India

Established in 1972, the Self-Employed Women’s Association (SEWA) is a registered trade union for women in India’s informal sector. SEWA’s 220,000 members are hawkers, vendors, home-based workers, and laborers. In addition to its conventional labor union functions (ensuring minimum wages and work security), SEWA provides legal aid and operates a bank and a social security scheme. The bank offers savings accounts and loans to members. The social security scheme, which insures about 14 percent of SEWA members, covers health, life, and asset insurance. Slightly more than half the cost of the insurance program is covered by premiums. The rest is financed by SEWA and a public subsidy. SEWA views this arrangement as a first step toward increased contributions by members and self-sustainability. The combination of banking, insurance, and union services has helped increase SEWA’s membership and raise the incomes of its members. SEWA now plans to expand health benefits and add a pension component.

Source: Lund and Srinivas 1999b; Mirai Chatterjee, general secretary, SEWA, email communication, 3 May 2000.

microcredit with savings. Other microfinance programs have successfully introduced life insurance, at low rates and with limited benefits (burial costs and repayment of debts).¹³⁶

Cash transfers. Cash transfers (excluding transfers through such contributory systems as regular pensions and unemployment insurance) include social assistance payments for the elderly, child allowances, targeted human development programs, and fee waivers for basic services. In countries with large informal sectors, where formal unemployment insurance is not feasible, means-tested social assistance is an important way of assisting the unemployed and underemployed.

The role of cash transfers in a social risk management strategy depends on a country's income. In high-income countries cash transfers are part of social insurance, offering a broad guarantee of minimum income. In transition economies family assistance payments represented 0.4–5.1 percent of GDP in 1992–93. Cash social assistance programs operate in only a few Asian countries, where they account for less than 1 percent of GDP, and are negligible in Africa and Latin America.

Cross-country experience suggests that family assistance and targeted social assistance are effective for reducing poverty in the short term, especially in countries with relatively little poverty. The difficulty is finding an appropriate targeting mechanism compatible with the country's administrative capacity. Decentralized solutions may be preferable if communities have better information on who is needy (see box 8.5).¹³⁷

Targeted human development programs for poor households with children transfer income in cash or in kind on the basis of such observable criteria as children's age, attendance in school, or participation in a health care program. They thus serve the dual objectives of poverty reduction and human development. When effective, they prevent the long-term damage to children that occurs when households, unable to adequately manage risk, respond to shocks by underfeeding their children or pulling them out of school to work.

In the Bangladesh Food-for-Education program the transfer to a household of 100 kilograms of rice increased the probability of boys' schooling by 17 percent and girls' schooling by 160 percent.¹³⁸ The Brazilian Bolsa Escola program targets scholarships to regions and communities where child labor is greatest, seeking to keep children in school by compensating parents for the income children would have earned. The Mexican scheme Progresa provides health and education benefits for 2.6 million households in 2000. Eval-

uation results suggest that the program is able to target benefits to the poorest households and that it has raised the enrollments of children in beneficiary households (see box 5.5 in chapter 5).¹³⁹

Fee waivers can be effective in counteracting falling school enrollment in the aftermath of a crisis or shock. Following the crisis in Indonesia, primary school enrollment of boys in the poorer areas of Jakarta fell 8.3 percent and junior secondary enrollment fell countrywide, with the greatest drops in poorer areas. In 1998 the Indonesian government abolished entrance fees for public schools and lowered monthly fees and exam fees at the primary level, providing relief for many parents who had fallen behind on fee payments as a result of the crisis. An individual scholarship program and block grants to schools, both targeted to poorer areas, supplemented the fee waivers to restore school enrollment rates.¹⁴⁰

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Poor people are exposed to a wide array of risks that make them vulnerable to income shocks and losses of well-being. This chapter argues that helping poor people manage risk is thus an essential part of poverty reduction programs—and should complement efforts to increase average income and improve the distribution of income, which are discussed elsewhere in this report. The focus has been on risks occurring primarily at the individual, household, and community (micro and meso) levels, such as illness and injury, crime and domestic violence, old age, harvest failure, and fluctuations in food prices and demand for labor. (Chapter 9 discusses macro-level risks such as macroeconomic crises and natural disasters.)

Poor people respond to their risk exposure through diversification of assets and sources of income and various types of self-insurance (buffer stocks, savings) and informal insurance (networks of mutual support)—all means to reduce the risk or soften its impact. Where these preemptive mechanisms prove inadequate, households cope with shock by increasing or diversifying labor supply (child labor, migration), selling assets, or reducing consumption.

These mechanisms work, but not well enough. Volatility in household income remains high in many areas, and many households suffer episodic declines in well-being. Some recover, but not all do. Shocks common to a large area, which can wipe out an entire network's re-

sources, are most likely to overwhelm the risk management tools of poor households. And because shocks do not affect all members of poor households equally, with women and children frequently the most at risk, inadequate risk management can cause long-term harm to children through malnourishment, child labor, and loss of schooling.

In most developing countries today, risk management emphasizes interventions after a disaster strikes. The balance needs to shift to favor policies to reduce and mitigate risk. Health, environmental, labor market, and macroeconomic policies can all reduce risk. And safety

nets put in place before adverse shocks hit can serve both risk mitigation and coping purposes.

To counter the incentive and information problems that exclude poor people from many market-based insurance mechanisms, the state has a special role in providing or regulating insurance and setting up safety nets. This report advocates a modular approach that adapts the safety net to the specific pattern of risk in each country or area and complements existing risk management arrangements. Many solutions will involve partnerships among poor communities, the private sector, and the state.

