II Growth and Policies for Poverty Reduction

INTRODUCTION

A sharp reduction in poverty has been one of the most remarkable achievements of the rapid agricultural and economic growth in developing Asia during the last three decades. Whereas in 1975, 60 percent of Asians lived in poverty, this ratio had fallen to less than one in three by 1995. The total number of poor declined from 1,149 million in 1975 to about 800 million in 1995 (a reduction of 25 percent), despite substantial growth in total population during this period (Table II.1).

These impressive gains mask considerable diversity of experience among Asian countries, however. The most striking divergence can be observed between the poverty reduction in East and Southeast Asia, on the one hand, and in the group of South Asian countries, on the other. Whereas some countries in Southeast Asia have roared ahead from poverty to middle-class prosperity within a mere two decades, others, chiefly in South Asia, have lagged behind. In this chapter, we review in more detail the patterns of—and differential rates of performance in—poverty reduction in Asia and examine the forces driving this reduction.

B. TRENDS IN TOTAL POVERTY

Table II.1 summarizes trends in total poverty in Asia. In most of developing Asia, rapid agricultural and economic growth has led to a dramatic reduction in both absolute and relative poverty over the past three decades. Poverty reduction in East Asia over the past two decades has been especially remarkable. Based on a head-count index defined as the share of the population below a constant (1985 prices) $1[1]-per-day per capita income poverty line, poverty in East and Southeast Asia (including the PRC, Indonesia, Malaysia, the Philippines, and Thailand) declined by two thirds between 1975 and 1995. In 1975, 50 percent of the population lived in absolute poverty, while in 1995 only 20 percent was considered poor. Because populations continued to grow, the percentage decline in poverty translates into a 40-percent decline in the absolute number of poor people, from 517 million to 310 million.

Table II.1: Poverty in Asia in the 1970s and 1990s

	Poverty: persons below $1/day poverty line			
	(millions)		(percent)	
Country/Region	1975	1990s	1975	1990s
SE Asia*	**108.1**	**40.2**	**52.9**	**11.5**
Indonesia	87.2	21.9	64.3	11.4
Malaysia	2.1	< 0.2	17.4	< 1.0
Philippines	15.4	17.6	35.7	25.5
Thailand	3.4	< 0.5	8.1	< 1.0
South Asia	**472.2**	**514.7**	**59.1**	**43.1**
PRC	**568.9**	**269.3**	**59.5**	**22.2**
Asia Developing*	**1149.2**	**824.2**	**58.7**	**29.9**

* Note that regional figures refer only to those countries listed in the table. The benchmark is the international poverty line, US$1 per day (Purchasing Power Parity, 1985 dollars).

SE Asia and PRC – from Ahuja et al. 1997 (PRC data from 1978 for rural PRC only); 1990s data are for 1995.

South Asia – 1990s data are for 1993 (World Bank 1996). 1975 figures are author's estimates based on synthesis of national poverty line computations adjusted to the international poverty line of US$1 per day.

[1] $ indicates US dollars throughout the text.

Moreover, the rate of decline accelerated in the more recent decade: whereas the total number of people in poverty fell by 27 percent in 1975–85, the decline in 1985–95 was closer to 34 percent. This pace of poverty reduction was faster than in any other region of the developing world and, as a result, the share of the world's poor living in East and Southeast Asia has been declining (Ahuja et al. 1997).

The two most populous countries in East and Southeast Asia, the PRC and Indonesia, recorded substantial declines in poverty between 1975 and 1995, with the head-count index falling by four fifths in Indonesia and by more than half in the PRC. In absolute terms the number of poor was reduced by more than one third in the PRC and fell by almost three fourths in Indonesia. Comparing poverty reduction in Indonesia and India illustrates the impressive performance in East and Southeast Asia relative to that of South Asia. Indonesia's head-count index was 63 percent in 1970—well above the 49 percent value for India at that time. But by the mid-1990s, the percentage of the Indonesian population estimated to be below the poverty line had fallen to 11 percent, which was less than one third of India's head-count index.

Other countries achieved even larger proportional reductions in poverty between 1975 and 1995. The proportion of the population below the poverty line in Malaysia fell by 95 percent (from 17.4 percent to less than 1 percent) and in Thailand by about 90 percent (from 8.1 percent to less than 1 percent). On the other hand, in the Philippines, which had much slower growth throughout most of this period, the head-count index fell much more slowly, from 35.7 percent in 1975 to 25.5 percent in 1995, and the number of poor actually increased from 15.4 million to 17.6 million. In addition to slower growth, policies in the Philippines were more heavily biased against agriculture during most of this period and income distribution was more unequal than in other Southeast Asian countries. However, there have been signs of progress against poverty in the early 1990s following economic reforms; furthermore, the slowdown in growth and setback in poverty reduction during the East and Southeast Asian economic crisis beginning in 1997

(see Chapter IX) were less severe than elsewhere in Southeast Asia (De Haan and Lipton 1998).

Progress on poverty reduction has also been achieved in South Asia, but it started at a later date and lagged behind the rate of poverty reduction achieved in East Asia. Using the World Bank $1-per-day head-count index, 59 percent of the South Asian population was below the poverty line in 1975 (Table II.1). The head-count index improved to 43 percent in 1993 (World Bank 1996c). However, despite this improvement, the number of poor in South Asia continued to increase, from 472 million in 1975 to 515 million in 1993, due to population growth (Table II.1).

The case of India is illustrative of broad patterns in poverty reduction in South Asia. Datt (1998) and Datt and Ravallion (1997) report that the period of the early 1950s up to the mid-1970s was characterized by fluctuations in poverty without a real trend in either direction. The head-count index averaged 53 percent in 1971–75 (based on a poverty line of 49 rupees per capita per month at October 1973–June 1974 all-India rural prices), nearly the same level as it had been in 1951–55. However, between 1969–70 and 1993–94, the national head-count index declined to 35 percent, and both the depth and severity of poverty decreased. It thus took more than 20 years for the poverty incidence to finally fall below the values of the early 1950s. In Bangladesh, progress in poverty reduction has varied greatly over time, as poverty declined from 1983/84 to 1985/86, then increased until 1991/92 and declined again until 1995/96 (Wodon 1999). The record of poverty reduction in Pakistan is relatively good, despite a weak record on literacy and health improvements, especially for women. National poverty indicators show a reduction in poverty from 54 percent in 1962 to 23 percent in 1984, with much of the progress attributable to growth in the service sector, trade, and noncrop agricultural sectors and to rural-urban migration (De Haan and Lipton 1998).

Historical data are unavailable for the Central Asian countries, but during the early stages of the economic transition a dramatic fall in average real income (see Chapter VIII) has been accompanied by sharply worsening income distribution. World Bank and United Nations Development Programme

(UNDP) country poverty assessments in Kazakhstan, the Kyrgyz Republic, and Mongolia indicate a significant worsening of poverty since 1990 (De Haan and Lipton 1998). UNDP (1998) cites estimates of poverty, based on a $100/month per household poverty line for Central Asian economies in the mid-1990s. Thirty percent of the population in Kazakhstan is below the poverty line, 80 percent in the Kyrgyz Republic, 20 percent in Turkmenistan, and 50 percent in Uzbekistan.

Although poverty declined overall in East, Southeast, and South Asia, regional differences in poverty indicators within Asian countries are large and are not in general converging. In India (and Pakistan), regional differences in poverty have remained or increased; poverty and regional variability fell in Indonesia and Malaysia; and declines in poverty in the PRC and Thailand have been accompanied by rising regional poverty differences. In Malaysia and Indonesia, the decline in regional differences is due in part to initial active targeting by the Malaysian Government of the poorer population, and by population redistribution policies of the Indonesian Government. In the PRC, most poverty is confined to resource-constrained, remote "backward regions" and is due to differentials of investments in human capital, infrastructure, fiscal decentralization, natural and geographical advantages, and policies that favored coastal areas. In Thailand, the concentration of economic growth in Bangkok increased regional poverty differences (De Haan and Lipton 1998).

TRENDS IN RURAL POVERTY

Poverty in Asia remains overwhelmingly a rural problem. Estimates of rural poverty in Asian economies are not directly comparable across countries, because they are based on national poverty lines; estimates of head-count ratios in a consistent numeraire such as PPP-adjusted dollars are not available. Even within individual countries, there are usually many alternative poverty estimates using different poverty lines and

methodologies (see Tabatabai [1996] for a useful compendium of poverty estimates). However, there is enough consistency in the trends over time for most individual countries to get an overall picture of trends in rural poverty reduction. It appears from the available data that poverty has become more concentrated in rural areas over time and that urban poverty has declined more rapidly. Although rural poverty declined more in Southeast Asian countries and less in South Asian, rural poverty is predominant in both regions. In 1985, 79 percent of the Indian poor were located in rural areas; in Indonesia, 91 percent; in Malaysia and Thailand, 80 percent; and in the Philippines, 67 percent (World Bank 1990).

Who are the rural poor? The poor in rural areas tend to be illiterate and to depend on subsistence agriculture—often in resource-poor areas—and on (mostly low-skill) labor as their main asset. The rural poor also lack access to technology and credit; agricultural marketing costs are high because of distance to markets and poor rural infrastructure. Moreover, due to the small window of opportunity in rural areas, rural poverty has a large chronic component. A 1987/88 Bangladesh case study showed that the extremely poor owned less than half as much land, on average, as the nonpoor did. They also had less irrigated land and less land planted to high-yielding varieties; they depended on agriculture for a larger share of their income, compared to the nonpoor. Land ownership was a significant factor for determining absolute poverty. In the Philippines, the incidence of poverty was highest among farmers, and higher among self-employed households than among laborers. The rural poor households had a relatively larger family size, with more young and fewer well-educated household members. Poorer households had less access to use of modern agricultural technology, in part due to limited access to credit. Thus, there was only limited potential to increase productivity on the typically small land holdings. Moreover, access to social services, including health care and family planning, was constrained (Quibria and Srinivasan 1993).

Gender also influences poverty. Poor women typically have less income-earning employment and are more vulnerable

to poverty, because they have fewer self-employment assets and marketable skills. They also experience disparities in wage and employment options that arise from the relatively higher labor intensity involved in domestic chores and subsistence tasks and from sex gaps in access to schooling, physical inputs, and credit (Bardhan 1993). Although in most Asian countries women and female-headed households are only slightly likelier to be poor, rural settings tend to increase the gender difference. In India, in 1983, it was estimated that rural women had a 12 percent higher probability than men of being poor—whereas men dominated urban poverty. In addition, female poverty tends to be more persistent, another characteristic caused and reinforced by lack of opportunities in the rural environment (De Haan and Lipton 1998).

Although the number of rural poor remains alarmingly high, many Asian countries were able to reduce the proportion of rural poor significantly during the 1980s, through a combination of rapid overall growth and more egalitarian policies (see below). Bangladesh has a very high incidence of rural poverty, but made considerable progress in poverty reduction during the 1980s: the incidence of poverty by head-count ratio dropped from very high levels of about 75 percent in the early 1980s to less than 50 percent in the last part of the decade (IFAD 1995). The incidence of rural poverty in India was higher than that of urban poverty throughout the 1960s and 1970s, but the figures began to converge by the end of the 1980s as rural poverty declined faster than urban poverty. However, despite the faster decline in rural poverty, poverty in India remains a predominantly rural phenomenon: in 1993–94, three out of every four poor people lived in rural areas (Datt 1998).

High economic growth rates in Indonesia in the 1970s and 1980s brought about a corresponding decline in the incidence of poverty both in absolute and in relative terms. The incidence of poverty in Indonesia as a whole declined from 39.8 percent in 1980 to 21.6 percent in 1987 and, in rural areas, from 44.6 percent in 1980 to 26.8 percent in 1987. Other East and Southeast Asian countries experienced significant declines in rural poverty

as well, but despite the high growth rates in many economies, rural poverty persists. Accelerated growth in Thailand has been associated with a rapid decrease in the overall incidence of poverty, but growth has been uneven, with wide and growing rural-urban income disparities, and the incidence of poverty in rural Thailand declined at a much slower pace than that in urban areas (IFAD 1995). Poverty combined with poor education and health is also a near-universal condition in the mostly rural areas of the Mekong River Basin. In the Lao People's Democratic Republic (PDR), for example, where poverty levels are particularly high, 65 percent of the population is considered to be living in conditions of poverty, and two thirds of this number in "severe poverty," defined as households spending 80 percent or more of their consumption budget on food, according to recent consumption and expenditure surveys (Chagnon 1996).

Sri Lanka is an exception in that there was no reduction in rural poverty between 1970 and 1990, with the headcount ratio remaining virtually constant (Quibria and Srinivasan 1993). Its strong human-resource base and natural endowments would suggest that Sri Lanka could have achieved substantially higher growth rates and poverty reduction. However, the recent history of ethnic conflict, political unrest, and protectionist economic policies has slowed rural growth and poverty reduction. The Philippines also made slower progress in reducing rural poverty than the rest of Southeast Asia, with a decline in rural poverty from 57 percent in 1971 to 52 percent in 1991 (Balisacan 1994). Relatively slow growth, unequal income distribution, and policies that were heavily biased against agriculture contributed to the slow reduction in poverty.

GROWTH AND POVERTY REDUCTION IN ASIA

Rapid agricultural and economic growth, together with direct social spending, is the basis of poverty reduction in Asia. Econometric analysis indicates that economic growth explains between one third and one half of poverty reduction in Asia.

De Haan and Lipton (1998) report, based on a summary of various studies on developing Asia, that a 1-percent growth in per capita GDP is associated with a decline in the incidence of poverty of 0.82 percent. Moreover, contrary to the expectation of many observers, economic growth often improves both the relative and absolute incomes of the poor. Ravallion and Chen (1997) show that income distribution improves as often as it worsens in growing economies, and Deininger and Squire (1996) report that periods of economic growth were associated with increasing inequality in 43 cases and with decreases in inequality in 45 cases. Periods of economic decline were associated with increases in inequality in five out of seven cases (De Haan and Lipton 1998).

Since poverty is largely a rural phenomenon and since many of the poor depend, directly or indirectly, on the farm sector for their incomes, growth that raises agricultural productivity and the returns to farm labor is particularly important in reducing poverty. The contrast between Indonesia and India illustrates this point. Between 1970 and 1987 poverty in Indonesia declined by 41 percentage points; over the same period the purchasing power of agricultural value added rose by 2.6 percent annually per rural dweller. Between 1984 and 1987, a period of especially rapid declines in poverty, purchasing power grew by 5.0 percent per capita per year. In contrast, poverty in India decreased by 11 percentage points, and agricultural purchasing power grew by less than 0.4 percent a year. Most of the decline in poverty in India—7 percentage points between 1977 and 1983—took place at a time when agricultural purchasing power was growing at 1.5 percent a year (World Bank 1996c).

Econometric analysis confirms the link between agricultural growth and rural poverty in India. Datt and Ravallion (1997) found that differences in the growth rate of average agricultural output per unit of crop area were important in explaining cross-state differences in rural poverty reduction between 1958 and 1994. By contrast, differences in an Indian state's growth rate in nonagricultural output did not explain poverty reduction, reflecting the weak connections between

urban economic growth and rural poverty reduction in India. Results showed that the urban poor also gained from rural growth, while the benefits to the urban poor of urban growth were partially dissipated by increasingly inequitable income distribution in urban areas. The initial endowments of physical infrastructure and human resources played a major role in explaining the trends in rural poverty reduction. Higher initial irrigation intensity, higher literacy rates, and lower initial infant mortality all contributed to higher long-term rates of poverty reduction in rural areas. A sizeable share of the variance in the trend rates of progress is attributable to differences in initial conditions of physical and human resource development—differences that reflect public-spending priorities (Datt and Ravallion 1997; Ravallion and Datt 1996).

In the PRC, the greatest progress in reducing poverty has occurred during periods of rapidly rising rural incomes. The most dramatic reduction in poverty occurred early in the 1980s, following reforms in agriculture. Between 1978 and 1985, the number of poor declined from 270 million to less than 100 million, according to the national poverty threshold of $0.60 per day (World Bank 1996c). Progress was also rapid relative to the international poverty line: a reduction from 569 million people in 1975 to 398 million in 1985 (Ahuja et al. 1997). Following this huge initial impact of agricultural reforms, progress in poverty reduction in the PRC has varied markedly, with the variations in the level of poverty directly related to the terms of trade for agriculture and to changes in government price policy for agriculture. The rate of poverty reduction slowed in the second half of the 1980s as rural incomes stagnated, due to declining gains in agricultural productivity combined with increased government intervention in agricultural markets, which reduced commodity prices. Relatively limited rural out-migration to fast-growing urban and coastal areas was a further constraint on poverty reduction. Thus, the number of poor declined relatively slowly from 1985 to 1993, from 398 million to 352 million (Ahuja et al. 1997). Large declines in poverty resumed in the 1990s, when a series of reforms in agricultural marketing policy (see also Chapters VII and VIII) improved the

terms of trade for agriculture and boosted farm incomes (Rozelle et al. 1998). The poverty count fell significantly each year during 1991–96 (Park, Wang, and Wu 1998). Between 1993 and 1995 alone, the number of poor fell from 352 million to 269 million, nearly double the decline of the previous eight years (Ahuja et al. 1997).

Rapid agricultural and economic growth was the driving force behind the dramatic reduction in poverty in most of Asia. Agricultural growth that raises agricultural productivity and the returns to farm labor has been particularly important in reducing poverty because of the high concentration of poverty in rural areas and the dependence of many of the poor on the farm sector for their incomes. All agricultural growth is not equally beneficial to the poor. For agricultural growth to be pro-poor, it will ideally have a number of key attributes; these include

- a technology package that can be profitably adopted on farms of all sizes—such as the green revolution technology;
- a relatively equitable distribution of land with secure ownership or tenancy rights (see also below);
- efficient input, credit, and product markets so that farms of all sizes have access to needed modern farm inputs and receive similar prices for their products;
- a labor force that can migrate or diversify into the rural nonfarm economy; and
- policies that do not discriminate against agriculture in general, and small farms in particular (for example, no subsidies for mechanization).

The spatial configuration of agricultural growth is also important. If the growth occurs mostly in irrigated and other high-potential areas, then significant poverty problems may persist in less-favored areas even as the rest of a country forges ahead. Striking the right balance between public investments in different types of agroclimatic areas is also critical if agricultural growth is to have broad poverty-reducing impacts. These problems are addressed in more detail in Chapter XI.

The financial and economic crisis of 1997 raised the possibility of a reversal in progress in both urban and rural poverty reduction in the region. But recent spikes in poverty in countries like Thailand and Indonesia are unlikely to derail these countries from their long-term path of declines in poverty (see Chapter IX). The crisis should, however, be an important reminder for the governments of Asian developing economies of the need to increase their spending efforts on the mostly rural poor, and in particular, on their education, health, and nutrition.

BEYOND GROWTH: POLICIES FOR POVERTY REDUCTION

Although economic growth is the primary driver for poverty reduction in Asia and explains up to one half the decline in poverty, policies and investments in the fields of education, health, and infrastructure are also essential for sustained poverty reduction. Moreover, many of the important positive economic trends and beneficial policies described in Chapter I and elsewhere in this book may bypass the truly poor, or benefit them only gradually. Lipton and Sinha (1998) argue that, while globalization is changing the outlook for the rural poor by raising average incomes, it also tends to increase income variability both across regions (leaving some regions and countries behind) and across time, thus increasing the vulnerability of those who can least afford it. Moreover, macroeconomic and trade policy is being transformed by liberalization and globalization, producing large gains for many in both rural and urban areas (see Chapter VII), but relatively little for poor farmers and landless laborers, who often lack the skills, health, information, or assets needed to seize the new opportunities. The poor are thus increasingly concentrated in regions ill-equipped to gain from globalization/liberalization, e.g., in remote, backward areas of India and China.

Under these circumstances, growth alone will not solve the poverty problem. Policies must also reach out directly to

the poor. Particularly important are investments in the human capital of the poor. Investments in health, nutrition and education not only directly address the worst consequences of poverty, but also attack some of the its most important causes. Even with rapid economic growth and active investment in social services, however, some of the poor will be reached slowly if at all. And even among those who do benefit to some extent, many will remain vulnerable to adverse events. These groups can be reached through income transfers, or through safety nets that help them through short-term stresses or disasters (World Bank 1990). In the remainder of this section, we will examine the role in alleviating poverty of investment in social services, rural infrastructure, land reform, and safety-net programs, including income transfers and income-generation schemes.

Education

As shown in Chapter I, education has a strong positive impact on economic growth. Education is also strongly linked to poverty reduction, through both direct and indirect influences. For agricultural areas, where most of the poor live, the direct impact of education works through the enhanced ability to adopt more advanced or complex technologies and crop-management techniques. Virtually all studies in this area confirm that better-educated farmers achieve higher rates of return on land (World Bank 1990). Education also encourages movement into more remunerative nonfarm work and induces migration to urban areas for industrial and service employment. The indirect effects of education are also significant: for example, educated mothers are more likely to ensure that their children receive an education and live healthily. Education of women, in fact, has powerful effects on nearly every dimension of development, from lowering fertility rates to raising productivity and improving environmental management (World Bank 1996c). These direct and indirect influences of education generate strong links between a region's or a country's educational attainment and its poverty reduction. This is especially true when primary

education reaches women and when there is a high rate of completion of elementary school. Success in reducing poverty is usually enhanced by increasing the proportion of educational resources going to primary education and to the poorest groups or regions (Lipton 1998).

The cross-sectional evidence showing the strong education-growth-poverty reduction linkages, from household surveys and international data sets, is summarized in Gaiha (1994) and World Bank (1990). Evidence at the micro level also shows that education tends to reduce poverty. Wodon (1999) finds that, in Bangladesh, the educational level of both the household head and its spouse are important factors in reducing poverty. Jamison and Lau (1982) show that farmers and farm laborers improve their prospects of escaping poverty if they have some education (Lipton 1998). Singh and Hazell (1993) show that at the village level in India, there are strong synergistic interactions between better education, better health, higher earning power, and poverty reduction. They find that the combined effects of education plus land, or education plus bullock power, in reducing the incidence of poverty considerably exceed the sum of the individual effects, based on data for ten Indian villages over eight years (Lipton 1998).

Strategies to reduce the private cost of primary education for poor children in developing Asia include elimination of tuition and fees; introduction of vouchers that cover fees plus the costs related to school attendance; and the introduction of an augmented subsidy that covers fees, costs related to attendance, and opportunity costs forgone (i.e., students not working). The last measure has the best prospects to improve enrollment among the poorest. In Asia, an augmented subsidy was first introduced in Sri Lanka, and was later applied for poor girls in Bangladesh. Feeding programs at school have also enhanced the enrollment and retention rates among poor children in Bangladesh. Moreover, evidence of a strong association between female teachers and girls' enrollment suggests recruiting more female teachers, preferably from local communities (Hossain 1997).

Health and Nutrition

Investments in health and nutrition work together with education in poverty reduction. Such investments include development of safe drinking water, improved sewage disposal, and other sanitation measures, as well as immunization and public-health services. The effect of health and nutrition on productivity, and thereby on income enhancement and poverty reduction, is less well documented than the effect of education, but many studies now show positive effects of nutrition on agricultural productivity. Productivity impacts are most pronounced for activities in which most of the poor are engaged. For example, a study in India shows a significant link between wages and weight-for-height (a measure of short-term nutritional status) among casual agricultural laborers. In Sri Lanka, a significant positive effect of energy intake on real wages of laborers was found (World Bank 1990).

There is also a clear link between nutrition and education: better nutrition improves the learning ability and outcomes of children. Studies in the PRC, India, and other Asian countries show that protein-energy malnutrition contributes to lower test scores and poorer school performance. Micronutrient deficiency also weakens performance. In Indonesia, iodine deficiency reduced cognitive performance among children; in Thailand, provision of iodine supplements to schoolchildren has improved test scores. Investment in health and nutrition thus not only provides important health benefits, but also contributes to reducing poverty by boosting the productivity of the poor.

The private sector has a significant role to play in the delivery of health services, but there is a strong public-good rationale for interventions to improve health outcomes, particularly for the poor. Many essential public-health services are inexpensive and cost-effective, including immunization programs; provision of vitamins and micronutrient supplementation to school-age children; prevention programs for acquired immune-deficiency syndrome (AIDS), sexually transmitted diseases, and malaria; and community-based distribution of contraceptives. Moreover, basic health services,

especially when administered through rural health centers, are particularly effective in reaching the poor and induce significantly greater reductions in poverty than higher-level services (Lipton 1998; Ahuja et al. 1996; World Bank 1990).

Rural Infrastructure

Rural infrastructure plays a key role in reaching the large mass of rural poor. When rural infrastructure has deteriorated or is nonexistent, the cost of marketing farm produce can be prohibitive for poor farmers. Poor rural infrastructure also limits the ability of traders to travel to and communicate with remote farming areas, limiting market access from these areas and eliminating competition for their produce. Construction of rural roads almost inevitably leads to increases in agricultural production and productivity by bringing new land into cultivation or by intensifying existing land use to take advantage of expanded market opportunities. In addition to facilitating agricultural commercialization and diversification, rural infrastructure, particularly roads, consolidates the links between agricultural and nonagricultural activities within rural areas and between rural and urban areas (IFAD 1995).

Binswanger, Deininger, and Feder (1993), in a study of 13 states in India, found that investments in rural infrastructure lowered transportation costs, increased farmers' access to markets, and led to substantial agricultural expansion. Better roads also lowered the transaction costs of credit services, resulting in increased lending to farmers, higher demands for agricultural inputs, and higher crop yields. Fan, Hazell, and Haque (1998) extend these results to show that rural infrastructure is not only an important driver for total factor productivity growth (TFP), but also directly contributes to a substantial reduction in rural poverty (see Box II.1).

Box II.1: Returns on Public Investments in Rural Areas in India

Few studies have directly assessed the relative effects of alternative public investments on agricultural productivity growth and equity. Fan, Hazell; and Haque (1998) address these issues for the case of India, based on an econometric model and state-level data for 1970–93. They find that all the productivity-enhancing investments considered offer a "win-win" strategy for reducing poverty while at the same time increasing agricultural productivity. There appear to be no tradeoffs between these two goals. There are sizable differences, however, in the productivity gains and poverty reductions obtained for incremental increases in each expenditure item.

According to the analysis, government expenditure on roads has by far the largest impact on poverty alleviation in rural areas, because it leads to new (non)agricultural employment opportunities, higher wages, and increases in productivity. If the government were to increase its investment in roads by 100 billion rupees (at 1993 constant prices), the incidence of rural poverty would be reduced by 0.87 percent. Moreover, the additional 100 billion rupees invested in roads would increase growth in TFP by 3.03 percent.

Second only to public investment in roads in alleviating rural poverty is investment in agricultural research and extension (R&E), which actually ranks first in its contribution to growth in TFP. Another 100 billion rupees of investment in R&E would increase growth in TFP by 6.98 percent and reduce the incidence of rural poverty by 0.48 percent. The effects of public investments in R&E on poverty alleviation are smaller than investments in roads because they only affect poverty through improved productivity and do not target the poor. If future investments in R&E were aimed more deliberately at the poor, they might well achieve a greater poverty impact (Fan, Hazell, and Haque 1998).

According to this analysis, other expenditures, including education, irrigation, and rural electrification, have lower but significant impacts on productivity and poverty reduction. Investments in irrigation and rural electrification have been essential in the past for sustaining agricultural growth. The levels of investment stocks achieved, however, may warrant maintenance of existing infrastructure rather than further increases.

Land Reform

Land reform can reduce poverty and enhance efficiency and growth though redistribution of land from large to small farms. However, not all policies that are labeled "land reform" increase productivity and reduce poverty; examples of policies that don't have the desired effects are enforced registration of individual titles, collectivization, state farming, prohibition of tenancy, and tenancy restriction in the absence of land distribution. The redistribution of land from big to small farms tends to sharply increase family labor use per hectare and, to a lesser extent, hired labor per hectare (Boyce 1987, Thiesenhusen and Melmed-Sanjak 1990). Lipton (1998), in a synthesis of the evidence, notes that the productivity and poverty reduction gains from genuine land reform are largest

- if land inequality is extremely large;
- if there are labor-intensive crop mixes and technical choices open to smallholders (and if choices of crop and method are considerable);
- if the rural person/land ratio is relatively high; and
- if complementary services (research, extension, credit, transport) are available (privately or publicly) to the new or enhanced smallholders.

A relatively equal land distribution in East and Southeast Asia, as compared to other developing regions, including most of South Asia, has contributed significantly to the strong record in poverty reduction in the region. Significant land reforms in the PRC, Viet Nam, Republic of Korea, and Taipei,China greatly improved the distribution of land in these countries, while Indonesia, Malaysia, and Thailand have historically had relatively small and widely-distributed land holdings (Ahuja et al. 1997).

There has also been some limited success with land reform in South Asia. India, where the incidence of poverty is highly correlated with lack of access to land, abolished the long-standing *zamindari* or "permanent settlement" system in the

mid-1950s, ending one of the most iniquitous land ownership systems. Under the *zamindari* system, introduced at the end of the 18th century, feudal lords were declared proprietors of the land, peasants were transformed into tenant farmers, and rents were collected by a series of intermediaries who ruthlessly squeezed the farmers. This system was common in most of North India and covered around 57 percent of total area cultivated (Mearns 1999). The states of Kerala (known for its low income inequality and history of broad-based social programs) and West Bengal (where broad participation has been a key) have been particularly aggressive in transferring land to the people. Bangladesh and Pakistan undertook similar efforts in the 1950s to reform systems similar to the *zamindari*, but only limited efforts have been made to redistribute land since then.

In Central Asia, genuine land reform is probably the most crucial policy required to reverse the increase in poverty after 1990. Necessary reforms include the development of the legal framework for property rights, the establishment of private farms, and genuine privatization of state and collective farms. Progress on these reforms is described in Chapter VIII.

Land reform is politically difficult and further reform is highly uncertain. Yet recent analysis provides encouraging results that more modest and politically feasible tenancy reforms may provide significant poverty reduction benefits. Besley and Burgess (1998) find that, in India, both tenancy reforms that register tenancy and stipulate tenancy conditions and reforms that eliminate intermediaries between owner and tenant were linked to poverty reduction and increased agricultural wages that benefit landless laborers. Thus, although the effects on poverty are likely to have been greater had large-scale redistribution of land been achieved, partial, second-best reforms, which mainly affect production relations in agriculture, can play a significant role in reducing rural poverty. Mearns (1999), based on analysis of the Indian experience with land rights, proposes a series of guidelines for policy reforms to increase access to land for the rural poor; these include

- a selective deregulation of land-lease (rental) markets;
- a reduction in official and informal transaction costs by improving the management of land registration and land records;
- the promotion of women's independent land rights; and
- a strengthening of the institutions of civil society to provide checks and balances for a successful land reform.

Safety-Net Programs

Safety nets are programs that protect a person or household against two adverse outcomes: chronic incapacity to work and earn (chronic poverty) and a decline in this capacity because of a temporary situation that threatens survival in the face of limited reserves (transient poverty). Transient poverty is caused by events such as a sharp fall in aggregate demand, expenditure shocks (due to economic recession or transition, during unavoidable cutbacks in public spending, or as a result of a decline in production in sectors from which workers cannot migrate), or poor harvests (due to drought, flood, or pests, especially when they affect prices and production over a wide area). These shocks or disasters often cause the rural poor to lose their usual sources of protection offered by informal transfers (Subbarao, Braithwaite, and Jalan 1995).

Whereas in many Asian developing countries strong informal safety nets, including effective family-support systems and private income transfers, play a significant supporting role in cushioning the worst impacts of transient poverty, Central Asia under the Soviet system relied mainly on formal state-sponsored programs of social assistance. The collapse of the Soviet system has put considerable pressure on these systems (see Box II.2).

Safety-net programs usually provide either direct transfers of income to the poor or attempt to generate income. They include food subsidies, public-works programs, and credit programs aimed at the poor. Subbarao et al. (1997) and Lipton (1998) provide excellent syntheses of cross-country experience with safety-net programs; this section draws heavily upon these studies.

Food subsidies, including open general subsidies, quantity rationing, and food stamps, have been utilized for more than four decades in some Asian countries. Untargeted food—and other—transfer programs require large subsidies and have proven to be fiscally unsustainable, as they create explicit tradeoffs between spending on safety-net programs and investments for growth. Moreover, these programs are politically difficult to scale down or abandon. In Sri Lanka, for example, the universal ration program in operation prior to 1979 cost the government up to 5 percent of GDP. The unsustainably high cost drove the government to institute food-stamp programs, cutting costs to a still-substantial 1.3 percent of GDP. The Philippines and India have also cut back food-subsidy programs due to fiscal tightness and poor cost-effectiveness. India is slowly reforming its expensive and poorly targeted nationwide program, the Public Distribution System. But India also has some innovative and better-targeted programs, such as the Integrated Child Development Services and the Tamil Nadu Nutrition Program.

Targeted approaches to food subsidies are more cost-effective than universal schemes, but it is politically infeasible and administratively difficult to run finely targeted programs in countries where the incidence of poverty is high and households in dire need are difficult to separate from those that are not or are less so. Moreover, targeted systems such as food stamps often create disincentives to work and cause other kinds of consumption distortions. Approaches that impose an obligation on the part of the recipient (such as a labor or time requirement) are best in screening out the nonneedy. But such obligations should not be so onerous that they significantly increase transaction costs. In general, the poor should be supported with minimal distortions, local communities should be involved, and the approach should be demand-driven. A promising approach, although administration-intensive, is food transfers targeted to women and children, along with other services (such as immunization).

Unlike cash and in-kind transfers, such as food subsidies, income-generation programs oblige the recipient to exchange labor time for an income transfer. Two programs have been used

Box II.2: Safety Nets in Central Asia

Safety-net programs in Central Asia were built around comprehensive public social insurance programs, particularly universal pension systems and formal family assistance. The major goal of the family-assistance program was to maintain a level of per capita income as family size increased or to supplement wages. Many of these programs were typically administered by the state enterprises and were almost universal. However, some of the weakly targeted cash transfers had eroded in real terms over the years.

When the Central Asian economies collapsed at the beginning of the 1990s, output contracted, real incomes declined sharply, and unemployment and inflation rose rapidly. Some jobs were artificially maintained, generating a new echelon of working poor. As a result, rising numbers of newly poor have spread throughout the society. Pensions and other benefits depreciated significantly. The elimination of widespread price subsidies, incompatible with the transition to market economies, the withdrawal of subsidies on items such as housing, heating, and food, and the reduction in the quality and availability of social services hurt people who often had low fixed incomes. Unemployment benefits often had to be newly introduced. Due to the precarious financial situations of these countries in transition, any assistance and transfer program that imposes a heavy fiscal burden has little chance of being sustained. As poverty is correlated with family size to some extent in all Central Asian republics, reformed family-assistance programs have been identified as likely contenders for targeting the larger

(continued next page)

widely: labor-intensive public works and credit-based self-employment (livelihood) programs. Public-works programs provide mainly current benefits and in most countries offer only temporary employment during off-seasons, when agricultural work is limited. However, long-run benefits can be generated

Box II.2 (continued)

number of poor people. However, the line between redressing an old instrument to effectively target the poorest at a low administrative cost and simply maintaining an ongoing assistance program in the face of political backlash is difficult to draw. The Kyrgyz Republic, for example, has discontinued family assistance to children above age 18 and introduced means testing for assistance, which is crucial to minimize costs. However, means testing has become more difficult as informal employment and other means of increasing income have risen sharply following the contraction of the economies.

Moreover, although family and other assistance might have increased as a share of GDP following the economic decline—as it did in the Kyrgyz Republic—the plunge in GDP and high inflation have prevented social assistance programs from adequately protecting the people in greatest need. In addition, when a large number of families is qualified for assistance—about 80 percent of families with children qualify in the Kyrgyz Republic—total available resources are thinly spread and the impact on poverty is minor. Thus, in the Kyrgyz Republic, slightly more than 40 percent of the transfers go to the nonpoor.

The fiscal necessity of reducing entitlements like pensions still needs to be better balanced with the need to reach the newly poor. Adopting a more structured approach to identifying the newly poor requires an institutional capacity that is often not in place. Creating acceptance among the population of targeting resources to the poorest of the poor is proving similarly difficult, but effective policies are badly needed, with large numbers of people in Central Asia living in poverty with little or no social support.

if the public works themselves are designed to build up assets (savings, physical capital, skills, health, or infrastructure) owned by, or providing future employment income to, the poor. For example, India's Million Wells Scheme and its successors built irrigation wells on small and marginal farms, creating durable

assets and enabling poor farmers to generate subsequent self-employment income. Some forms of village infrastructure, such as the drought management works favored by some public-works programs in India in the early 1980s and again recently, directly help the poor, as can human capital creation, for example employment schemes to build primary schoolrooms.

Cross-country experience indicates that public works can be a very effective means of consumption smoothing for poor households. Improved targeting can be achieved through various methods: self-targeting through type of work, form of payments, and level of wage; targeting of women through piece rates, location of work, or provision of daycare; and geographic targeting of regions adversely affected by shocks. Program wages should be close to the prevailing market wages for unskilled labor in order to minimize labor-market distortions. Careful attention should be given to the quality of assets created and their maintenance to improve program cost-effectiveness.

Credit programs for the poor have been undertaken both in response to transitional poverty resulting from economic shocks or natural disasters and to address chronic poverty in low-growth situations. Most credit programs aim to provide an income stream over the medium term, but, as will be described in more detail in Chapter III, public credit programs have usually had highly negative impacts on financial markets and have not been particularly effective in reaching target clients. Unlike other social assistance programs, credit programs require high, specialized levels of financial and managerial capacity. In addition, since credit is fungible, the funds may be used for purposes other than those for which they are intended.

The generally poor performance of massive, subsidized, state-directed credit in the 1970s and 1980s taught important lessons for improved performance of targeted credit:

- transaction costs for the poor should be reduced by simplifying loan-processing procedures to avoid delays and repeat visits;
- interest rates should not be subsidized;
- reliance on program-manager (bureaucrat) or income-

based identification of potential beneficiaries should be replaced by a reliance on communities, nongovernment organizations (NGOs), and other local groups;
- savings should be promoted as an integral part of the program; and
- covariant risks to borrowers and lenders should be mitigated through group lending, small loans, and repeat loans to those who promptly repay.

It should also be recognized, however, that even with appropriate reforms, the most successful credit programs have had only a modest record in reaching the ultrapoor. Therefore, caution should be exercised in using targeted credit interventions as a poverty-reducing tool. As will be shown in more detail in Chapter III, interventions in financial markets are usually a poor second-best approach for dealing with important social problems that require more direct policies.

CONCLUSIONS

Poverty has declined rapidly during the last three decades in developing Asia, but large pockets of poverty remain in virtually all developing countries in the region. Rural poverty has been particularly neglected in the past, because the rural poor are more dispersed, are more difficult and more expensive to target and reach out to, and are generally of less political interest. However, reaching out to the rural poor not only increases their well-being and future incomes, but also furthers overall agricultural and economic growth in the region.

Indonesia, Malaysia, and Thailand demonstrate the benefits of an appropriate balance between policies that spur growth and policies that enable the poor to participate in growth. All three countries achieved rapid and sustained growth in GDP that was relatively labor-intensive—with agriculture playing a leading role—which generated demand for labor, thereby benefiting the poor. These countries also provided for adequate

social expenditures. As a result, they have achieved universal primary education and their infant-mortality rates are lower than those of many countries with similar incomes. The improvement in the skills and quality of the labor force enabled the poor to seize the opportunities provided by economic growth (World Bank 1990). In other countries the creation of opportunities for the poor and the development of their capacity to respond have not always been so well balanced. Pakistan also had rapid GDP growth, but reduction in poverty has been much smaller and slower than in East and Southeast Asia. Pakistan has one of the lowest rates of primary-school enrollment in the world, leading to a failure to improve the skills of the labor force that has limited the ability of the poor to benefit from growth.

Growth alone, then, will not be sufficient to meet the needs of South Asia's poor. Moreover, in Pakistan (as well as Bangladesh and India) social indicators are among the worst in the developing world; in many parts of the region, the economic growth of the 1980s was not accompanied by concomitant improvements in living standards. Out of every 12 children born in South Asia, at least one is expected to die before reaching the age of one; nearly half of all children do not finish primary school. The status of women is of particular concern: in many parts of South Asia, they are less well educated, fall ill more frequently, have a shorter life expectancy, and work far longer hours than men. Increasing women's access to services—particularly to basic education, health services, nutrition, water and sanitation, and family planning—and improving the quality of those services are essential (World Bank 1990, 1996c).

Thus, it is possible to have economic growth without adequate social progress. Conversely, at least some social indicators can be improved even in the absence of rapid economic growth. The experience of Sri Lanka shows that remarkable social progress can be achieved even at low levels of income. The benefits of Sri Lanka's long-standing support for social services can be seen in its under-five mortality rate, which was 66 per thousand in 1980, an impressive achievement for a low-income country. Infant mortality rates have fallen from

48 per 1,000 live births in 1970 to 16 per 1,000 in 1996, while life expectancy at birth has climbed from 67 to 75 years for women and 65 to 71 years for men over the past three decades (World Bank 1999). But slow economic growth makes it impossible to reduce poverty itself. This suggests that specific public policies can make the poor better off in some important aspects, such as reduced child mortality, but raising the incomes of the poor and thus lifting people above the poverty line require broad-based economic growth. The evidence shows that the countries that have been most successful in attacking poverty have achieved rapid agricultural growth and broader economic growth that makes efficient use of labor; they have also invested in the human capital of the poor. Rapid and relatively labor-intensive economic growth provides the poor with opportunities to use their most abundant asset, their labor. Investment in human capital improves their immediate well-being and increases their capacity to take advantage of the newly created possibilities (World Bank 1990).