

## Income-Related Equity

South Asia and Sub-Saharan Africa together have the highest incidence of income poverty (by the \$1-a-day poverty line) in the world. In terms of proportion, the incidence of income poverty in South Asia is 43 percent. In terms of number, South Asia is home to one third (515 million of 1.3 billion) of the income poor. East Asia, South Asia, Southeast Asia, and the Pacific together account for 960 million of the 1.3 billion income poor (UNDP 1997, 47). The proportion of income poor in less developed countries declined only slightly from 34 percent in 1987 to 32 percent in 1993, but the number of income poor increased from 1.2 billion to 1.3 billion. In general, the proportion of the income poor declined rather slowly in East and South Asia. But the “big five” in Asia, namely, Bangladesh, the PRC, India, Indonesia, and Pakistan, made impressive progress in reducing income poverty (UNDP 1997, 33).

## Income Distribution and Equality

Looking at the ratio of the income share of the top quintile to that of the bottom quintile in three groups of Asian economies (Table 17), the NIEs (7.0) have the lowest value compared with countries in the Association of Southeast Asian Nations (ASEAN) and South Asia. However, the ASEAN countries have the highest value (10.6), indicating that they are more unequal in income distribution than the higher-income NIEs and the lower-income South Asian countries. Taipei, China has the most equitable income distribution – better even than some countries outside the region such as Hungary (5.2) and Yugoslavia (5.9). Among the NIEs, income distribution is particularly unequal

### Box 2: Poverty and Illiteracy in Bangladesh

Bangladesh, with a 1994 GNP per capita of just \$230, is a very low-income country. The figure makes Bangladesh the 12th poorest among countries with at least 1 million population, even though at purchasing power parity the income becomes PPP\$1,350 with a similar ranking. The country is the largest among those poorer than the PRC and India: 119 million people live in Bangladesh.

Life expectancy is 55 years in Bangladesh. Illiteracy is high, at 78 percent of adult women and 65 percent of adult men. The infant mortality rate is 108 per 1,000. The Government places 50 percent, and the United Nations 85 percent, of the population below the poverty line.

Source: Todaro 1997, 412.

**Table 17: Percentage Share of Household Income by Quintile Group in Selected Asian Countries, 1970s and 1980s**

	Year	Bottom 20% Q1 (%)	Second quintile Q2 (%)	Third quintile Q3 (%)	Fourth quintile Q4 (%)	Top 20% Q5 (%)	Q5/Q1
<i>NIEs</i>							
		6.6	12.1	16.2	21.7	43.5	7.0
Hong Kong, China	1980	5.4	10.8	15.2	21.6	47.0	8.7
Korea, Republic of	1976	5.7	11.2	15.4	22.4	45.3	7.9
Singapore	1973	6.4	12.4	16.5	20.0	44.7	7.0
Taipei, China	1980	8.8	13.9	17.7	22.8	36.8	4.2
<i>ASEAN</i>							
		5.2	8.5	13.0	21.3	52.0	10.6
Indonesia	1976	6.6	7.8	12.6	23.6	49.4	7.5
Malaysia	1973	3.5	7.7	12.4	20.3	56.1	16.0
Philippines	1985	5.2	8.9	13.2	20.2	52.5	10.1
Thailand	1975/76	5.6	9.6	13.9	21.1	49.8	8.9
<i>South Asia</i>							
		6.0	9.5	13.8	19.9	50.9	8.8
Bangladesh	1981/82	6.6	10.7	15.3	22.1	45.3	6.9
India	1975/76	7.0	9.2	13.9	20.5	49.4	7.1
Nepal	1976/77	4.6	8.0	11.7	16.5	59.2	12.9
Sri Lanka	1980/81	5.8	10.1	14.1	20.3	49.8	8.6

Source: Extracted from Bautista 1990, 6, Table 2.

in Hong Kong, China. Among the four ASEAN countries shown, Thailand and Indonesia have achieved a degree of income distribution close to that of the NIEs, while Malaysia has the greatest income equality in the region. In South Asia, the degree of income distribution is close to that of the NIEs, except that Nepal's situation is close to that of Malaysia and the Philippines; Bangladesh's is close to Singapore's.

Gini coefficients show extreme variations within Asia. Figures in the 1980s showed that the Gini index of most DMCs varied between 30 and 40. A few achieved very low income disparities, such as Republic of Korea (15.9), Philippines (18.6), and Indonesia (27.3). Countries with high income disparities included the PRC (44.4), Nepal (57.9), Papua New Guinea (62.1), and India (65.8); Bangladesh's index was as high as 81.9. The years following the mid-1980s brought a decline in income disparity in some DMCs: between 1985 and 1996 Nepal dropped from 57.9 to 36.7, India from 65.8 to 29.7, and Bangladesh substantially from 81.9 to 28.3. However, some DMCs witnessed widening income disparity, such as the Philippines where the Gini index increased from 18.6 in 1985 to 42.9 in 1996 (Table 18), and Hong Kong, China, where it rose from 37.7 in 1971 to 42.1 in 1991. Figures for Hong Kong, China in 1991 also showed that the inequality of income distribution of working men (42.4) was higher than that of working women (38.3) (Lui 1997, 46, 54).

The growth in income inequality seems to be related to economic liberalization and growth. For example, in the PRC, the Gini index was 33 in 1979, which was lower than that in any other East Asian country. However, after a decade of economic liberalization and growth, the Gini index rose to 42, which was higher than those of Indonesia and the Republic of Korea. Inequality continues to rise in the PRC, especially along the coast (UNDP 1996, 59).

**Table 18: Gini Index in Selected DMCs**

<b>Country</b>	<b>1985</b>	<b>1996<sup>a,b</sup></b>
Cambodia	—	51.3
Papua New Guinea	62.1	50.9
Malaysia	37.9	48.4
Thailand	32.9	46.2
Philippines	18.6	42.9
China, People's Republic of	44.4	41.5
Nepal	57.9	36.7
Indonesia	27.3	36.5
Viet Nam	—	35.7
Kyrgyz Republic	—	35.3
Mongolia	—	33.2
Kazakhstan	—	32.7
Pakistan	—	31.2
Lao People's Democratic Republic	—	30.4
Sri Lanka	32.6	30.1
India	65.8	29.7
Bangladesh	81.9	28.3
Korea, Republic of	15.9	—

— Data not available.

<sup>a</sup> Data refer to the most recent year available.

<sup>b</sup> Table is sorted by this column heading.

Sources: Gertler and Rahman 1994, 168; Krongkaew, Tinakorn, and Suphachalasai 1996, 607, 612; World Bank 1999, 70-2.

## Capability Poverty

UNDP (1997, 16) advocates a capability perspective on poverty. This reconciles the notions of absolute and relative poverty, since relative deprivation in incomes and commodities can lead to an absolute deprivation in minimum capabilities. In 1996, UNDP introduced a multidimensional index of human deprivation known as the Capability Poverty Measure (CPM), as distinguished from income poverty. The CPM considers the lack of three basic capabilities, namely nourishment and health, healthy reproduction, and education, particularly in relation to female literacy. The UNDP observes that in most countries in South Asia, capability poverty is more widespread than income poverty. In Pakistan, only one third of the population is income poor, but three fifths are capability poor. In Bangladesh, 55 million people are income poor but 89 million are capability poor. In Sri Lanka, by contrast, capability poverty is less than income poverty. Thailand has been successful in reducing capability poverty to a level lower than income poverty, but it is the other way round in Indonesia (Table 19).

Referring to capability poverty and education, Tilak's analysis shows a clear positive relationship between poverty and illiteracy in Asia, i.e., the higher the percentage of poverty in a country, the lower the literacy rate (Figure 2).

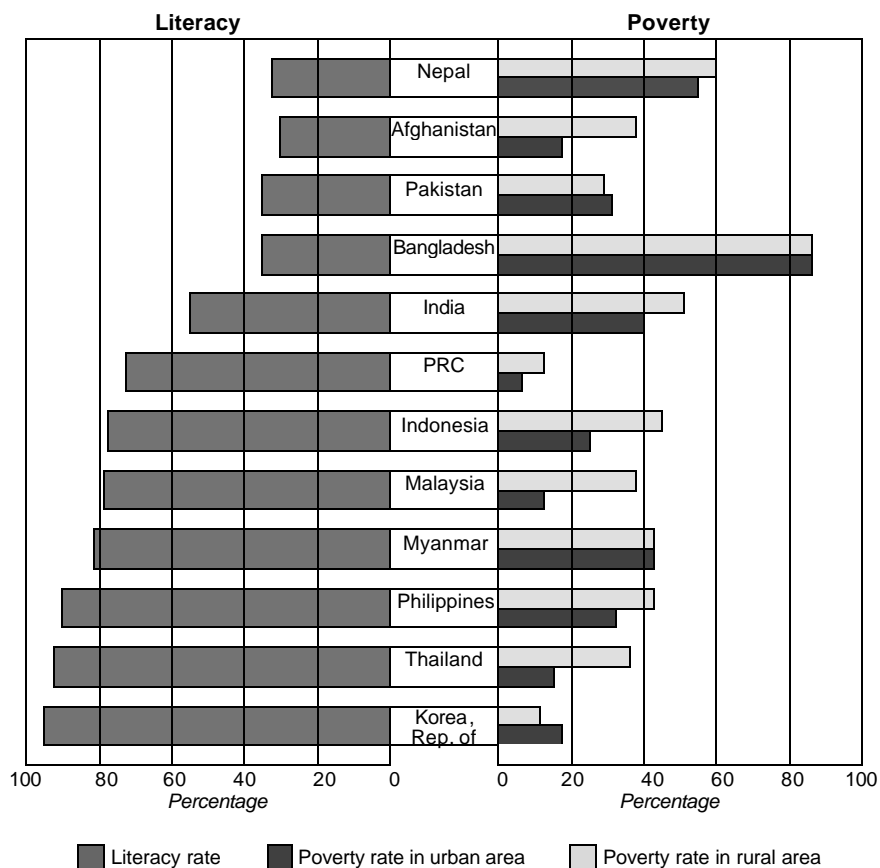
In Indonesia, there is an obvious difference in enrollment rates between the poor and the nonpoor. In 1987, among the 7-12 age group, net enrollment rates (NERs) were close to 90 percent for both the poor (87.3 percent) and

**Table 19: Capability Poverty and Income Poverty in Selected DMCs, 1993**  
(percent)

<i>Country</i>	<i>Population: capability poor</i>	<i>Population: income poor</i>
Bangladesh	76.9	47.5
China, People's Republic of	17.5	10.9
India	61.5	25.4
Indonesia	42.3	16.7
Pakistan	60.8	34.0
Sri Lanka	19.3	22.4
Thailand	21.1	21.8

Source: UNDP 1996, 27.

**Figure 2: Literacy and Poverty in Asia**



Source: Tilak 1994, 122.

the nonpoor (93.2 percent). However, as the children grew older, the gap became wider. Among the 13-15 age group, the NERs of the poor dropped to 58.4 percent, whereas the rates of the nonpoor dropped to 78.2 percent. Among the 16-18 age group, the rates of the poor dropped to 21.1 percent, whereas the nonpoor dropped to 52.8 percent. Thus while 90 percent of poor and nonpoor children get access to primary school, entry to senior secondary education is achieved by only one fifth of the poor, but half of the nonpoor. Accordingly, the illiteracy rates of the poor are higher than those of the nonpoor, and the difference between the poor and nonpoor among the older school age group is much wider than the other age groups. Illiteracy among the poor is two to three times that of the nonpoor (Table 20).

The gap between the poor and the nonpoor is also obvious in the Lao PDR. The NERs of the poorest are only half of the richest at the primary level; and their access to junior secondary education is significantly limited, with NER as low as 4 percent. Likewise, while illiterates account for half of the poorest age groups, they account for only one fifth of the 18-35 age group and even as low as 9 percent of the 35-55 age group among the richest (Table 21).

In Bangladesh, illiterates make up 85.5 percent of the poorest adult population, and 63.6 percent of the moderately poor population, but only 47.0 percent of the nonpoor. In respect of access to education, among the age group of 6-15, only 52.8 and 43.0 percent of the poorest are male and female students respectively. However, the proportions for the nonpoor male and female populations are respectively 70.0 and 61.8 percent. There is a large gap between the poorest and the nonpoor adult population with higher education. Only 9.7 percent of the poorest literate adults attain higher education, but the proportion for the nonpoor is 24.7 percent, i.e., nearly three times that of the poorest. The Bangladesh figures show that apart from a gap in enrollment between the poor and the nonpoor, females in general have lower enrollment rates than males, and poor females are obviously the most deprived group in the country (Table 22).

In the Philippines, the survival rates in primary education varied between 57 percent of the lower-income group (below P10,000 per year) and 89 percent of the higher-income group (above P30,000 per year) in 1982. In

### **Box 3: Education and Poverty**

Education is related to poverty at both micro and macro levels. At the micro level, illiterate individuals or households are less productive, join lower-paying occupations, and thus earn less and remain at very low levels of living, mostly below the poverty line. At the macro level, nations with illiterate or less educated masses cannot progress well, cannot increase their output substantially, and as a result remain with low standards of living. The impact of the relationship between poverty and education is further felt as education and other basic needs reinforce each other. Less educated households and nations are also characterized by high mortality rates and poor health.

Source: Tilak 1994, 115.

**Table 20: Net Enrollment Rates and Illiteracy Rates of Poor and Nonpoor in Indonesia, 1987**  
(percent)

Group	Net enrollment rates			Illiteracy rates		
	Age 7-12	Age 13-15	Age 16-18	Age 7-13	Age 14-29	Age over 29
Poor	87.3	58.4	21.1	20.1	16.3	49.7
Nonpoor	93.2	78.2	52.8	12.4	5.6	30.1

Source: World Bank figures, cited in Tjondronegoro, Soejono, and Hardjono 1996, 211, 213.

**Table 21: Net Enrollment Rates and Illiteracy Rates by Income Quintiles in the Lao PDR, 1993**  
(percent)

Income Quintiles	Net enrollment rates		Illiteracy rates	
	Primary	Junior secondary	Age 18-35	Age 35-55
Poorest	44	4	54	43
II	50	10	49	36
III	61	14	39	23
IV	68	18	39	20
Richest	78	28	23	9

Source: Chagnon 1996, 40, 42.

**Table 22: Education and Literacy of Poor and Nonpoor Households in Bangladesh, 1987/88**  
(percent)

	Extremely poor	Moderately poor	Non-poor
Age group 6-15 as students: Male	52.8	63.0	70.0
Age group 6-15 as students: Female	43.0	56.5	61.8
Illiterate adult members	85.5	63.6	47.0
Literate adult members with higher education	9.7	14.4	24.7

Source: Hossain, Mannab, Rahman, and Sen 1994, 110.

other words, the chance of school completion of children in the higher-income group was nearly twice that of the lower-income group (Gertler and Rahman 1994, 155). Quibria (1996, 35) points out that although there is an almost 100 percent enrollment of children aged between 7 and 10, the rate drops after that age, particularly among the poor. The quality of schooling in primary and secondary public schools, especially in rural areas, is weak. Tilak (1994, 120) comments that an increase in rural employment in the Philippines is confined to the agriculture sector and to a small percentage of the poor. Also, the spread of the benefits of growth is mainly confined to rich farmers. The lack of political will explains the poor progress of the country in the reduction of poverty and income inequalities.

In the Republic of Korea, enrollment rates in middle school, high school, and university/college were 100 percent, 88.9 percent, and 37.5 percent among the rural nonpoor; but were 93.8 percent, 40.0 percent, and 0 percent among the rural poor (Chung and Oh 1996, 329). In Viet Nam, the NERs of the richest 20 percent of the population decline from 86 percent to 56 percent, 28 percent,

and 7 percent accordingly from primary level, to junior secondary level, senior secondary level, and post-secondary level. However, the decline in NERs of the poorest 20 percent is from 68 percent, to 19 percent, 2 percent, and 0 percent respectively (ADB 1996e, 3). Enrollment rates in the Republic of Korea are generally higher than those in Viet Nam, but equally the rural poor in the Republic of Korea and the poorest 20 percent in Viet Nam have little access to higher education.

## **Financial Burdens on the Poor: Fees and Household Expenditures**

While primary education in Asia is officially free of charge, in many countries unofficial fees are demanded at the secondary level (Bray 1996, 17). Also, all sorts of unofficial levies have put financial burdens upon parents at all levels. In some countries, such as Viet Nam, where post-primary schooling used to be free of charge, fees have been introduced because of economic stringency. An ADB report on human development in Viet Nam points out that the introduction of user charges is an access barrier for poor families in education. The costs of primary school textbooks and incidentals, which are around 83,000 dong per pupil, cannot be met by the poorer families. Forty percent of rural households indicate that excessive costs are the main reason for nonattendance at primary schools. In 1994, the NER of the poorest quintile was 67.7 percent, and the rates rose to 77.3 percent, 80.7 percent, 84.7 percent, and 86.2 percent to the richest quintile (ADB 1996e, 13).

Bray's (1996, 40-1) study of parental and community financing of education in East Asia also notes that in various parts of Asia, a substantial proportion of household incomes is spent on education: 3.3 percent of household incomes in Phnom Penh, Cambodia (1993/94); 29 percent of household incomes in the poorest part, 19 percent in middle-income parts, and 14 percent in rich parts in Guangdong, PRC (1994); 38 percent of per capita incomes in the poorest quintile and 17 percent in the richest quintile in Indonesia (1989); 6.1 percent of nonfood household expenditure in Mongolia (1995); 15.6 percent of average family incomes in Myanmar (1990); 46.7 percent of household incomes in terms of opportunity costs for the poorest and 1.9 percent for the top income group in the Philippines (1987); and 22.0 percent of nonfood consumption per primary student for direct costs among the poorest quintile in Viet Nam (1993). The opportunity costs for education are exceptionally high among the poorest quintile, but low among the richest quintile. This means that the financial pressure on families to support their children for education is still substantial among the poor in DMCs.

The issue of opportunity cost arises in relatively prosperous societies as well as impoverished ones. In the high-growth provinces of the Philippines, the problem of "low payoff, high opportunity cost" creates dropouts from secondary schools among the poor (World Bank 1996b, 115). The pressure on enrollments resulting from fast economic development is also notable in the PRC. For some years since the opening up of the economy, the notion that

“education is useless” has been held in fast-developing economic regions such as Guangdong, because people see faster rates of return in direct employment than in investment in education. Only when the economy has grown to such an extent that it requires more qualified human resources will people begin to look for attainment in higher education for a higher level job (Hook and Lee, 1998).

## Policy Implications

The relationships between education, poverty, and income inequalities are complex. In a nutshell, while poverty is a hindrance to attaining education, education is the means to break through poverty. Gertler and Rahman (1994, 129) remark that improving the human capital of the poor will not only redress these inequalities but may also help reduce economic poverty. Tilak (1994, 119-20) has identified a number of DMCs that have made substantial investments in human capital with resulting benefits of growth and reduction of poverty. For example, the Republic of Korea – where growth and equity went together – making education accessible to all citizens contributed significantly to increasing the supply of skilled and technical human resources in the short run, and to equitable income distribution in the long run. Although emphasizing growth more than social welfare, the Republic of Korea has spent large amounts on education and other social welfare programs.

Of course, much private and household money is part of the education investment, especially at the higher education level. Malaysia and Thailand have also pursued heavy investment in human capital and encouraged efficient labor-intensive growth in agriculture and industry, resulting in an obvious reduction of inequality. In Sri Lanka, decline in poverty and a reduction in inequality were the results of welfare state policies. Even under severe economic conditions, public subsidies in education and health have remained priorities in investment.

These remarks may lead to the following policy considerations:

- (i) *Population control and basic education should remain a priority.* The need for population control and basic education was highlighted above. This need is emphasized by the fact that although the proportion of the income poor has declined, their number has increased, and the poor, especially poor females, are vulnerable to school nonattendance and noncompletion.
- (ii) *Government intervention is required to ensure access by the poor.* Todaro’s remarks in Box 4 are noteworthy: compared with the rich, (i) the private costs of primary education are a greater burden for the poor, (ii) the expected benefits of primary education are lower for the income poor, (iii) the opportunity costs of labor are higher, and (iv) children of the poor are seldom able to proceed beyond the first few years of schooling. All these stress the need for government intervention to ensure access of the poor to resources and education facilities. Walton (1990, 4) points out that the effectiveness of national development strategies is strongly influenced by the extent to which public policy and intervention take

**Box 4: Education, Inequality, and Poverty**

There are two fundamental economic reasons why one might suspect that many less developed countries' education systems are inherently inegalitarian, in the sense that poor students have less chance of completing any given education cycle than more affluent students. First, the private costs of primary education (especially in view of the opportunity costs of child labor to poor families) are higher for poor students than for more affluent students. Second, the expected benefits of primary education are lower for poor students. Together, the higher costs and lower expected benefits of education mean that a poor family's rate of return from investment in a child's education is lower than it is for other families. The poor are therefore more likely to drop out during the early years of schooling.

Elaborating on this point, the higher opportunity costs of labor to poor families means that even if the first few years of education are free, they are not without cost to the family. Children of primary school age are typically needed to work on family farms, often at the same time as they are required to be at school. If children cannot work because they are at school, the families either suffer a loss of valuable subsistence output or are required to hire paid labor. In either case, there is a real cost to a poor family of having an able-bodied child attend school when there is productive work to be done on the farm – a cost not related to tuition and of much less significance to higher-income families, many of whom live in urban areas where child work is not needed.

As a result of these high opportunity costs, school attendance, and therefore school performance, tends to be much lower for the children of poor families than for those from higher-income backgrounds. Thus in spite of the existence of free and universal primary education in many countries, children of the poor are seldom able to proceed beyond the first few years of schooling. Their weak school performance may have nothing to do with a lack of cognitive abilities: it may merely reflect their disadvantaged economic circumstances.

Source: Todaro 1997, 396.

account of the needs and circumstances of the poor and involve them in the design and implementation of programs. Success in poverty reduction has everywhere been associated with a combination of creating income-earning opportunities for the poor and strong support for human resource development.

- (iii) *The efficiency of government subsidies in redistributing income should be improved.* Government subsidies are available in most countries for social services, including education. However, usually these subsidies are more accessible to the nonpoor. For example, public schools and health care facilities tend to be located in cities and are closer to the nonpoor. Even when facing the same accessibility of services and facilities, the nonpoor tend to use these services and facilities more than the poor due to better awareness of the services and income effects. Since government subsidies per student increase significantly with increased level of education, those who manage to stay longest in the education system, who are usually the rich, can enjoy larger shares of public subsidies to education. This suggests that government social and education subsidies

are not well enough targeted and therefore not efficient at redistributing income (Gertler and Rahman 1994, 139, 153). For example, Lucas and Verry (1996, 570) observe that the expansion of tertiary education in the 1980s in Malaysia actually benefited the relatively wealthy within each community rather than the poor, and recommend that upgrading the quality of basic education, especially in rural areas where poverty is concentrated, might reduce the unequal distribution of income more directly. To realize targeted education welfare for the poor, corresponding measures may include the following:

- Open new facilities, including schools, closer to households in need, so as to reduce access costs, and improve the quality of schooling inputs.
- Pro-poor biased subsidies can be adopted, such as channeling all or the largest share of subsidies to primary education and lower secondary education. However, care should be taken to avoid subsidies to higher education becoming pro-rich, which can easily offset the pro-poor policy.
- Subsidies may be targeted, e.g., through scholarships and stipends, rather than made indiscriminate e.g., through general subsidization in the form of low fees in higher education. The need to discriminate in distribution of direct subsidies assumes that subsidies in the form of scholarships can change private and social rates of return substantially, and can even change the relative rank order of the rates of return according to different groups of population (Tilak 1994, 131).
- School construction activities and the suspension of fees for poor families may be necessary to help them to attend school. There has been successful experience in Indonesia, for example (Tilak 1994, 118).
- Food-for-Education programs may encourage retention and improve the health of children in poor families. Some successes have been reported in Bangladesh, for example (Mingat and Chuard 1996, 79).

**Box 5: Government Measures to Reduce Poverty in the Republic of Korea**

The role of the government is important in ensuring the welfare of the poor, because it is unlikely that the private sector will take over this role totally. For this reason, the Government of the Republic of Korea implements various assistance policies.

The poverty reduction programs include ones to enlarge employment opportunities and to provide social security benefits. Among them are medical insurance and health care, national pensions, industrial accident insurance, and minimum wages. A livelihood assistance system assists the poor directly, and includes medical aid, tuition fee assistance, vocational training, and long-term low-interest loans.

Source: Chang 1991, 18.