

VI PROSPECTS AND CHALLENGES

Policymakers need to understand more than the current state of QOL in rural Asia. They need to grasp how it is changing, and to develop visions and strategies based on an understanding of the opportunities and roadblocks that lie ahead.

Rural dwellers face a continuing need for better access to basic infrastructure and services, especially clean water, sanitation, and health care. Table VI.1 shows rough estimates of the number of rural Asians that will be without access to these services in the first quarter of the next century. Although there is general improvement, in 2010 roughly half the rural populations of the PRC and India will still lack sanitation, and over a quarter will not have access to a safe water supply. Poverty will also remain a pressing problem, requiring productivity growth in all sectors, investment in human capital, and significant institutional and organizational change. Demography will continue to exert a profound influence on QOL. The demographic challenges of the next 50 years are explored in detail in this chapter. A discussion of HIV/AIDS shows the magnitude of the impact of health reversals. Unless the epidemic is fought with determination and commitment, it has the potential to destroy many key QOL gains made in the 20th century.

Policymakers must plan for a future that will bear only a partial resemblance to the past. This requires information, vision, and the political will to implement programs whose pay-offs will be realized in a longer time horizon than the typical democratic electoral cycle. This chapter explores four new challenges that Asia faces: globalization, democratization, the explosion of information technology, and increased decentralization. Each of these challenges places new emphasis

Table VI.1: Projections of Rural Asians Without Access to Basic Services (thousand)

	Projections for 2010 Number without access to			Projections for 2025 Number without access to		
	Sanitation	Safe Water	Health	Sanitation	Safe Water	Health
East Asia						
China, People's Rep. Of	335,746	205,099	90,684	271,300	191,302	0
Hong Kong, China	0	0	0	0	0	0
Korea, Dem. People's Rep. Of	2,727	2,302	0	3,066	3,726	0
Korea, Rep. Of	42	0	0	133	0	0
Southeast Asia						
Brunei Darussalam	43	64	0	69	120	0
Cambodia	4,947	3,154	3,029	4,518	2,673	2,494
Indonesia	44,730	23,920	19,280	36,771	22,453	0
Lao PDR	2,749	1,736	1,829	2,705	1,560	1,813
Malaysia	2,996	2,298	0	3,860	4,760	0
Mongolia	152	0	500	108	0	359
Myanmar	18,651	11,356	12,892	15,429	8,521	9,855
Philippines	6,008	676	7,508	5,266	1,444	0
Singapore	0	0	0	0	0	0
Thailand	30,226	24,884	0	29,125	29,249	0
Viet Nam	43,284	29,995	18,308	41,378	28,610	7,306
South Asia						
Bangladesh	59,651	38,321	38,841	51,374	30,463	33,121
Bhutan	1,713	1,293	380	2,129	1,642	0
India	382,452	238,082	231,423	323,422	195,550	98,382
Maldives	142	96	29	153	109	0
Nepal	17,051	12,152	7,336	18,488	12,924	6,257
Pakistan	44,428	22,735	41,206	39,935	17,747	29,100
Sri Lanka	8,123	5,470	2,987	6,970	4,717	0

Source: GDP projections from the IMPACT model of the International Food Policy Research Institute. Rural population projections from United Nations (1996)

on the creativity, enterprise, and resilience of people. Ongoing investment in human capital will be needed to complement economic restructuring and political change.

THE DEMOGRAPHIC CHALLENGE

Demography has played a major role in Asia's growth in recent decades, and will continue to do so well into the next century. It also has a critical influence on other QOL concerns such as family life, old-age security, distributive politics, and gender equity. This section examines population trends and discusses the implications for QOL in rural Asia. Unlike many of the other forces that are buffeting rural Asia, demographic change is highly predictable. Decision makers can use it today to plan for tomorrow, creating programs that benefit from salutary trends and that mitigate more troubling ones.

Rural versus Urban Population Growth

Even though rapid rates of urbanization are bringing down the urban to rural population ratio in Asia, rural populations will continue to grow in absolute terms. Figure VI.1 shows the size of the rural population in East Asia, Southeast Asia, South Asia, and Central Asia from 1950 projected to 2030. South Asia has the highest rural population in Asia, although the PRC has the most rural inhabitants, 880 million. However, as a result of its aggressive family planning program, the PRC is already seeing a decline in rural population and will soon be overtaken by India, which is still experiencing relatively high rural population growth.

In all regions, population growth rates have begun a steady decline (Figure VI.2), which is projected to continue until replacement-level fertility is achieved. This decline has been much steeper in East Asia than in any other region, again primarily because of the PRC's success in lowering fertility

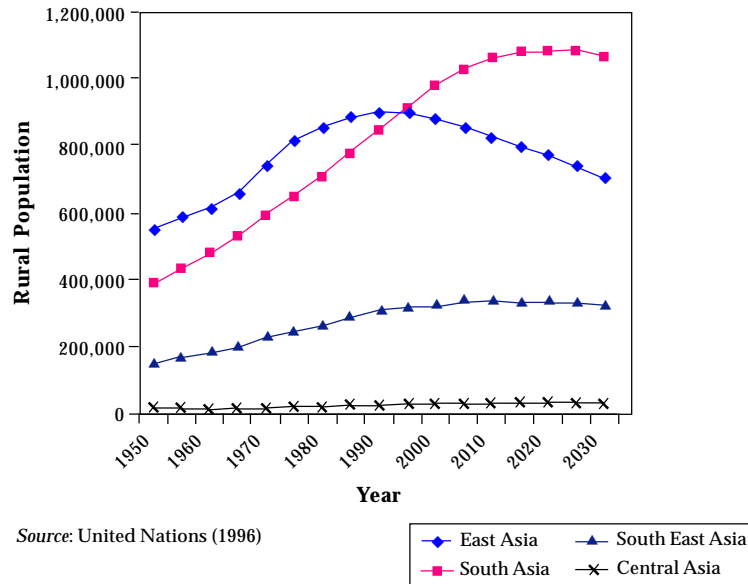


Figure VI.1: Rural Population Projections

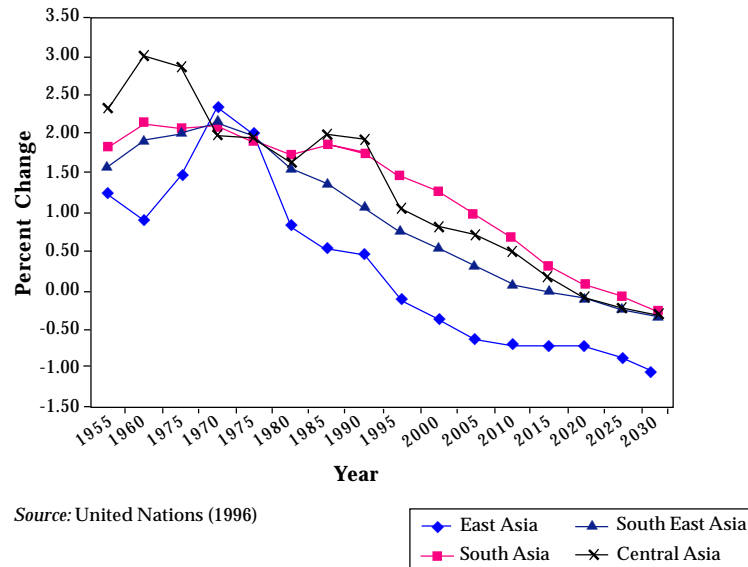


Figure VI.2: Average Annual Rate of Change in Rural Population

rates. Population growth rates in the other three regions are projected to remain positive for the next two decades. Thereafter, growth rates for all regions will be negative.

Populations continue to grow in both rural and urban sectors, although growth rates are declining (Figures VI.3 and VI.4). While absolute population is substantially higher in rural Asia, the rate of population growth is higher in urban areas, and thus the ratio of rural to urban population is declining steadily.

Table VI.2 presents projections of the size and growth of populations in Asia by country and shows the change in the share of the rural population, that is, the rate of urbanization. Rural-urban migration is important to economic growth because of the reallocation of labor from the low-productivity agricultural sector to the high-productivity industrial sector. This migration is important for the industrial sector as it provides a source of labor. For rural areas, remittances from workers in higher-paying urban jobs can contribute significantly to rural incomes and the ability to accumulate assets (Adams, 1998).

The demographic transition also leads to changes in a population's age structure. As fertility rates fall, the number of young children declines and the ratio of dependents to working-age people decreases. Declining fertility also creates a bulge in the age pyramid, because the cohort born immediately prior to the decline in fertility rates will be the largest cohort. When this large cohort reaches working age, dependency ratios will fall even further. As the ratio of workers to dependents increases, so will per capita income, even if per worker output remains constant. Recent work by the Asian Development Bank (ADB, 1997a), Bloom and Williamson (1998), and Bloom, Canning, and Malaney (2000) has shown that this demographic dividend has contributed significantly to the rapid rates of economic growth in East Asia, which had the earliest and most rapid demographic transition in Asia. Southeast Asia is just beginning to experience the economic growth impact of its changing demography. South Asia, where fertility declines have been the slowest, will gradually begin

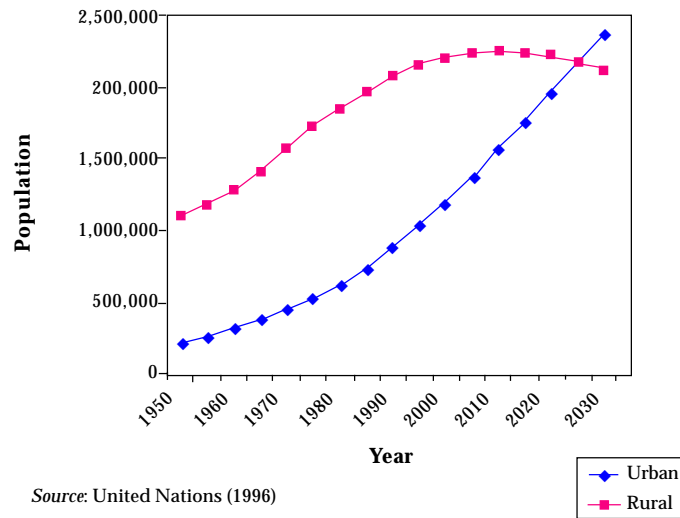


Fig.VI.3: Urban and Rural Population Projections for Asia

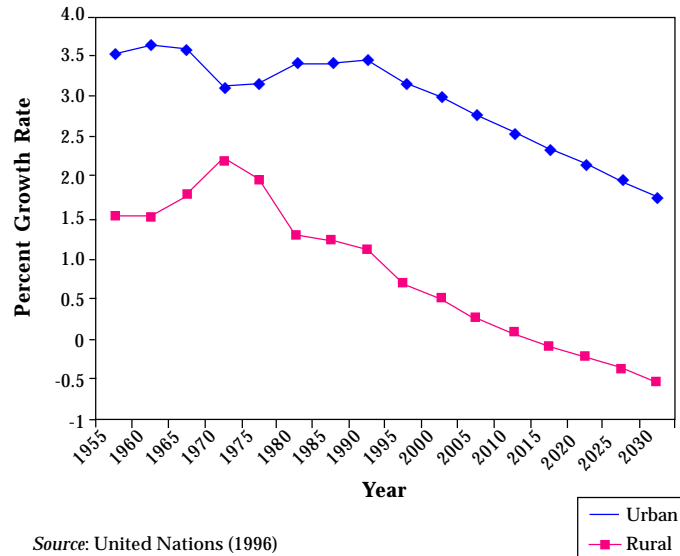


Fig.VI.4: Population Growth Rate Projections for Asia

Table VI.2: Projections of the Size and Growth of the Population of Rural Asia

	Rural Share of Total Population (%) 2010	Percent Change 1995–2010	Change in Share of Total Population 1995–2010	Rural Share of Total Population (%) 2025	Percent Change 2010–2025	Change in Share of Total Population 2010–2025
Asia	56.4	4.4	-9.0	47.6	-2.9	-8.8
East Asia	52.3	-7.9	-10.8	43.6	-10.5	-8.7
China, People's Rep. of	57.7	-7.5	-12.1	47.8	-10.2	-9.9
Korea, Dem. People's Rep. Of	33.3	3.1	-5.5	27.1	-8.0	-6.2
Hong Kong, China	3.5	-24.3	-1.4	3.0	-16.5	-0.6
Japan	19.1	-11.5	-2.8	15.7	-21.4	-3.4
Macau, China	1.0	0.0	-0.2	0.9	0.0	-0.1
Mongolia	31.6	8.6	-7.5	25.7	-0.5	-5.9
Korea, Rep. of	8.8	-47.4	-9.9	6.9	-18.7	-2.0
South Asia	66.8	16.0	-6.9	57.1	1.7	-9.6
Afghanistan	73.0	53.9	-7.1	63.4	18.4	-9.6
Bangladesh	72.5	14.0	-9.2	62.7	2.4	-9.8
Bhutan	90.1	41.7	-3.8	84.4	30.6	-5.7
India	67.0	13.5	-6.2	57.5	-1.0	-9.5
Maldives	66.8	48.4	-6.4	57.0	21.7	-9.8
Nepal	84.2	34.5	-5.5	76.6	20.0	-7.7
Pakistan	56.6	26.8	-9.1	47.1	11.5	-9.5
Sri Lanka	71.1	6.8	-6.8	61.4	-1.6	-9.8

(continued next page)

Table VI.2 (Cont.)

	Rural Share of Total Population (%) 2010	Percent Change 1995-2010	Change in Share of Total Population 1995-2010	Rural Share of Total Population (%) 2025	Percent Change 2010-2025	Change in Share of Total Population 2010-2025
Southeast Asia	56.5	5.0	-10.0	47.8	-1.6	-8.7
Brunei Darussalam	23.0	-3.3	-7.8	18.7	-3.4	-4.3
Cambodia	70.3	18.3	-9.3	60.5	8.8	-9.8
Indonesia	51.3	-3.8	-13.4	41.9	-6.0	-9.4
Lao PDR	70.5	35.7	-8.8	60.7	17.9	-9.8
Malaysia	36.4	2.2	-10.0	29.4	-2.7	-7.0
Myanmar	66.6	14.4	-7.6	56.7	0.2	-9.9
Philippines	34.5	-1.6	-11.4	28.1	-3.6	-6.4
Singapore	0.0	0.0	0.0	0.0	0.0	0.0
Thailand	73.8	2.2	-6.3	64.2	-6.9	-9.6
Viet Nam	77.9	20.9	-2.7	69.6	6.6	-8.3
Central Asia	49.0	10.9	-4.9	40.9	-0.3	-8.1
Kazakhstan	33.9	-10.7	-6.5	27.6	-9.0	-6.3
Kyrgyz Rep.	55.4	1.4	-5.8	45.9	-1.2	-9.4
Tajikistan	63.2	23.9	-4.6	53.3	6.2	-9.9
Turkmenistan	50.7	20.4	-4.4	41.8	-0.0	-8.9
Uzbekistan	53.1	18.5	-5.7	43.9	1.0	-9.2

Source: United Nations (1996)

to experience the effects of this transition as well, although its impact will be weaker because of the more gradual demographic transition.

While Asia as a whole has experienced and will continue to experience this boost from the changing age structure, rural areas within Asia have been less successful in accomplishing the necessary demographic transition. Table VI.3 shows that total fertility rates are considerably higher in rural than in urban areas in every country. This is a combination of higher wanted and unwanted fertility. Even though wanted fertility is higher in rural areas in almost every country, contraceptive prevalence is lower, and the unmet need for contraception in rural areas is also higher in most countries.

Strategies to Control Fertility

Accelerating the demographic transition in rural areas provides a way for countries to create a rural demographic dividend, thereby enhancing both growth and QOL in rural Asia. This requires targeting unwanted fertility aggressively and also exploring the factors that make people want large families.

The first step to targeting unwanted fertility is to provide rural Asians with the wide access to family planning and reproductive health services that their urban compatriots usually enjoy. Bangladesh has made tremendous progress in ensuring contraceptive availability in isolated rural areas, by emphasizing community-based distribution and development. This has been achieved by the public sector working in partnership with NGOs and accessing the rich rural networks that many NGOs have developed.

Policymakers are also acknowledging that family planning services are best delivered as part of a package of reproductive health services that cater to clients' needs, rather than just attempting to control their fertility. The political and social context within which such services are provided not only has a direct effect on community QOL, but also determines the efficacy of the family planning program. India's family

Table VI.3: Fertility and Access to Contraception

	Total Fertility Rate		Wanted Fertility		Contraceptive Prevalence		Unmet Need	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
Bangladesh 1996-1997	3.4	2.1	2.2	1.5	47.6	62.1	16.6	9.9
India 1992-1993	3.7	2.7	2.9	2.1	33.1	45.3	20.3	17.1
Indonesia 1997	3.0	2.4	2.6	2.0	56.5	59.8	9.4	8.6
Kazakhstan 1995	3.1	2.0	2.8	1.9	44.9	47.0	11.0	10.9
Kyrgyz Rep. 1997	3.9	2.3	3.6	2.1	56.6	65.8	12.1	10.7
Nepal 1996	4.8	2.9	3.1	1.9	24.3	45.1	32.3	21.7
Pakistan 1990-1991	5.6	4.9	5.1	3.8	4.8	18.7	27.5	29.3
Papua New Guinea 1996	5.0	4.0	4.1	3.2	23.5	35.8	33.5	36.4
Philippines 1998	4.8	3.5	3.3	2.6	36.8	43.0	29.1	23.5
Sri Lanka 1993	2.3	2.0	1.8	1.8	68.3	62.7	27.5	22.2
Uzbekistan 1996	3.7	2.7	3.4	2.5	55.1	56.4	13.9	13.3
Viet Nam 1997	2.54	1.59			74.4	79.3		

Note: Urban numbers for Sri Lanka refer to the Colombo Metro area.
Source: Demographic and Health Surveys

planning program is still suffering from the excesses of the 1970s, during which coercion and emphasis on targets for sterilization drove the program. Only by supporting a more comprehensive reproductive health program can the Indian Government overcome continuing public mistrust and raise contraceptive prevalence rates in rural areas.

Addressing high levels of wanted fertility is a more complex issue. Patterns of declining fertility across the world show that people are quick to have smaller families when the economic and social conditions are right. In rural areas, however,

- health risks tend to be higher, encouraging people to have more children in order to insure against infant and child mortality (Table VI.4);
- the opportunity cost of raising children tends to be low, while children can be economically productive from an early age by working in agriculture; and
- there are fewer opportunities to concentrate resources on small numbers of children, as educational access and standards are currently lower than in towns.

Cost-effective ways of changing people's desired family size include

- raising the value of women's time through education and action to correct gender inequality in the labor market;
- measures to improve the health of children, allowing parents increased certainty about their survival, and also enabling them to learn more effectively in school, thus increasing the value of parental investment in education; and
- providing access to financial services, for example through microfinance programs, allowing adults to easily and safely save for their old age, thus reducing their expected dependence on large numbers of children.

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The benefits of demographic change are lessened in rural areas, however, by the tendency of young working-age people to migrate to towns and cities. Table VI.5 shows that dependency ratios are significantly higher in rural than in urban areas. While much of the difference is a result of higher

Table VI.4: Infant and Child Mortality

	Infant Mortality Rate		Child Mortality Rate	
	Rural	Urban	Rural	Urban
Bangladesh 1996–1997	91.2	72.7	43.7	25.3
India 1992–1993	85.0	56.1	37.6	19.6
Indonesia 1997	58.0	35.7	21.8	12.3
Kazakhstan 1995	42.1	39.2	10.2	4.3
Kyrgyz Rep. 1997	70.4	54.3	12.7	4.0
Nepal 1996	95.3	61.1	53.2	22.5
Pakistan 1990–1991	102.2	74.6	33.0	20.6
Papua New Guinea 1996	86.6	33.7	27.3	12.7
Philippines 1998	44.3	31.9	30.5	21.5
Sri Lanka 1993	24.0	20.8	5.8	5.5
Uzbekistan 1996	43.8	42.9	13.6	9.3
Viet Nam 1997	31	20		

Source: Demographic and Health Surveys

Table VI.5: Ratio of Rural to Urban Population in Different Age Groups

	Rural/Urban Ratio		
	<15 Years	15–64Years	65+Years
Bangladesh 1996–1997	1.17	0.88	1.43
India 1992–1993	1.14	0.91	1.19
Indonesia 1997	1.19	0.91	1.12
Kazakhstan 1995	1.38	0.89	0.67
Kyrgyz Rep. 1997	1.28	0.87	0.84
Nepal 1996	1.18	0.88	0.97
Pakistan 1990–1991	1.06	0.93	1.35
Papua New Guinea 1996	1.07	0.93	2.71
Philippines 1998	1.16	0.89	1.11
Sri Lanka 1993	1.14	0.93	1.19
Uzbekistan 1996	1.21	0.91	0.68

Source: Demographic and Health Surveys

rural fertility rates, a significant portion undoubtedly arises from age-selective migration. While migration also leads to higher remittances, policymakers need to be aware of the extra difficulty of diversifying rural economies when many of the best and brightest young people leave as soon as they are able.

Old-age Provision

The demographic dividend is a one-off, time-limited opportunity. A 'baby boom' generation must first be educated. It then enters the labor market, at which point the dividend can be collected if the extra workers are absorbed into productive employment. Finally, however, members of this enlarged cohort begin to retire and the old-age dependency burden rises.

The aging of Asia's population is a challenge that can only be met if it is faced now. The proportion of the elderly is already rising, rapidly in some cases, notably in the more developed economies of East Asia. The elderly are also living longer. This creates new stresses for the family and affects its ability to care for its members.

Both by tradition and necessity, the family in Asia has been the main source of support for the elderly. Children are typically responsible for the economic well-being of their parents. In addition, parents and their adult children are much more likely to live together than in the West (Bian et al., 1998). Such arrangements often entail two-way flows of intergenerational aid, at least while the aging parents remain relatively healthy. Adult children and their spouses benefit by living in the parents' home; parents either continue to work and bring income into the household, or assist as unpaid family helpers with agricultural or other domestic chores, or with child care.

This system faces increasing pressure. Lower fertility rates mean that people will have fewer children to support them in their old age, which is of great concern as there is a lack of well established social safety nets. The low coverage of most pension systems, especially in rural areas, could result in a huge burden being placed on the public purse. Some authors

(Eberstadt, 1998; Heller, 1998) point to the possibility of a crisis as early as 2015, when high dependency rates will begin to bite in countries such as the PRC, Republic of Korea, and Thailand.

Some evidence suggests that the unmet needs of the elderly will not increase catastrophically. People have smaller families because of the high chance their children will lead long lives and, with the number of Asians who claim to want no children or only one child hardly increasing (Knodel et al., 1992; Jiang, 1994), most old people are likely to have at least one surviving child. In Thailand, for example, old people with only one surviving child are almost as likely to live with him or her as those who have two children. In the PRC, Jiang (1994) has calculated that by 2030, when the first cohort affected by the one-child policy retires, only 2.5 percent of the rural elderly will be childless and only 1.7 percent of rural households will be responsible for more than one parent. While countries are likely to have millions of elderly with unmet needs, the situation will be manageable if policymakers begin planning for it now.

However, these analyses ignore the importance of cultural change caused by migration, urbanization, and the increase in number of the oldest old. While the Asian family is seen as a force promoting social stability and as a provider of social welfare for its members, demographic change is likely to strain this traditional institution. First, the intergenerational bargain of care giving may weaken. Moreover, with fewer siblings to share the cost of caring for aging parents, their individual financial obligations will increase (Eberstadt, 1998). The sense of responsibility that underlies this bargain is also likely to be undermined. While urban migration may mean more remittances flowing back to rural areas, a situation that is good for the elderly, it may also lead to the growth of nontraditional attitudes, including greater individualism. Such attitudes are typically associated with the processes of modernization and urbanization.

In addition, the growth of mass communications that emphasize individual lifestyles and personal autonomy may

also be weakening children's commitment to the bargain. Evidence from the focus groups and from various qualitative analyses (Chapter III and Appendix 3) suggest that people are concerned about whether their children will feel as obligated to meet their responsibilities as previous generations did. Survey data from India reveal differences in attitudes both across generations and across the urban-rural divide. Table VI.6 shows that in general, while people in India tend to agree on the mutual duties of parents and children, agreement is noticeably less in urban areas than in rural areas, and among the youngest cohort compared with those older than 65. This supports an interpretation that an attitudinal transformation toward family life, such as the advanced industrial countries have already experienced (Inglehart, 1997), may be under way. This bodes ill for continued reliance on the family as the sole means of welfare provision for the elderly in Asia.

New Solutions for Old People

The potential impact on the family of cultural change requires policy measures to ensure the welfare of the oldest citizens in the future. Some Asian countries are attempting to encourage traditional values through public campaigns or by passing filial piety laws to force children to meet their obligations to their parents. For example, in 1995 Singapore passed the Maintenance of Parents Act, designed to compel children to support their aging or infirm parents who are unable to support themselves (and to complement existing legislation requiring parents to support their children).

Another response to the changing needs of the elderly is to ensure that more people have access to savings and pension systems. In rural Asia, providers of credit such as NGOs and other microcredit organizations have typically not mobilized savings. This means that incentives and capacity building for managing deposits need to be created. In addition, financial market controls, so noticeably absent in the recent financial and economic crisis, must be put in place to ensure the soundness

Table VI.6: Attitudes Toward Duties and Responsibilities of Parents and Children in India, by Age and Residence. Percent Agreeing with Statements*

Age	Q.1 Children must always love and respect parents, regardless of their behavior	Q.2 Parents' duty is to do their best for their children, even at expense of their own well-being
18-24	88	75
25-34	87	87
35-44	89	81
45-54	89	84
55-64	90	85
65 and older	97	92
Residence		
Urban	88	82
Rural	95	90

* This Table reports answers to two different questions. Respondents chose between two formulations for each question and each column reports the percentage agreeing with the first statement in each question:

Q. 1 Regardless of what the qualities and faults of parents are, one must always love and respect them OR

One does not have the duty to respect and love parents who have not earned it by their behavior and attitudes.

Q. 2 Parents' duty is to do their best for their children even at the expense of their own well-being OR

Parents have a life of their own and should not be asked to sacrifice their own well-being for the sake of their children.

Source: World Values Study Group. World Values Survey, 1990-1993

of any pension schemes. This is particularly true in the Central Asian republics, where the total economic collapse of another former Soviet satellite, Albania, serves as a cautionary reminder about the need to have financial market regulations in effect before the public begins to invest its savings.

The elderly in rural Asia will need increased access to services, as well as financial resources, if they are to enjoy a reasonable QOL. The aging of the population and declining mortality and morbidity mean a growth in the numbers of the

oldest old, usually defined as those older than 75 or 80. This period of life is associated with decreasing functionality and mobility and greater dependence. The need for local services is especially acute for this population, because their limited mobility means they are less able to travel long distances to access services. In a study of the oldest old Chinese, Ho et al. (1997) found that participants, especially those age 90 and older, were at high risk of losing their mobility during the 18-month study period. This was associated with a higher incidence of depression and a decline in perceived QOL.

The growing population of the oldest old means rethinking policy options for several reasons. First, in the absence of services, cash resources alone will not meet this group's needs. Living alone, or even with an elderly spouse, may not be an option as aging progresses and mobility decreases. As fertility declines and urban migration increases, there will be an increasing unmet need for local caregivers. Second, the children of the oldest old are likely to be elderly themselves, which means that they themselves will have fewer economic resources from current earnings and a diminished ability to provide care.

Communities must be encouraged to take on the task of caring for their elderly members. This will not be easy, especially in an era of decentralization, when scant local budgets will be subject to demands from many groups. The elderly will need to find a voice within the system to make their needs heard and addressed. The rural health-care system will also need to be retooled to some extent. For example, village health workers and NGO staff, who tend to focus on children's and reproductive health, will need to be trained in geriatric medicine.

Gender Equity

Demographic change in parts of rural Asia is likely to lead to a changing sex ratio that has both positive and negative implications for gender equity.

Two trends point to a shortage of marriageable women in the future. First, as fertility declines, the number of people in succeeding cohorts is smaller than in preceding ones. As men tend to marry women slightly younger than themselves, this indicates a likely shortage of female spouses. Second, the growing sex imbalance in favor of men in parts of South Asia and the PRC, as a result in part of the neglect or worse of female children and the poorer treatment afforded women, is also creating a smaller supply of women. Such conditions may partially offset the lower social status that women hold in many societies. As the imbalance grows, women will be in shorter supply, and thus may have more bargaining power over when and whom they marry. With greater options, they may gain more authority within their households and in decision making.

A different demographic trend in rural areas points in the opposite direction. With the notable exception of the Philippines, men are more likely to migrate out of rural areas than women. This tends to shift the rural sex ratio of the working-age (and marriageable) population in favor of women. For married women whose spouses migrate, this may make them the de facto head of household and empower them in terms of decision making. For unmarried women, this may have a variety of consequences. In cultures where out-of-wedlock childbearing is becoming minimally tolerated, increased male migration may lead to more rural female-headed households if women decide to have children in the absence of a husband. However, as households that depend on female wages for support tend to be among the poorest, this could have negative consequences for rural poverty. Where bearing children outside marriage is unacceptable for women, unmarried women may simply be dependants in their families, with negative consequences for their status.

Demography changes the context within which the institution of gender is shaped. By understanding this changing context, policymakers have an opportunity to 'follow the grain', using policy tools to work for greater gender equity.

THE THREAT OF HIV/AIDS

HIV/AIDS is no longer the 'invisible epidemic', but a major health crisis that will potentially have a huge impact on rural Asia. Nearly every nation in the world is now feeling its presence and effects. In those countries affected the longest (especially in sub-Saharan Africa), life expectancy is declining rapidly, health budgets are being consumed by AIDS-related expenses, and children with AIDS fill pediatric wards.

Nevertheless, AIDS is invisible in an individual sense: HIV-positive adults go about their daily lives without symptoms for many years, introducing HIV to their spouses and other sexual partners, and to breastfed children. Without action to fight the AIDS epidemic now, rural Asians face the possibility of seeing their QOL make precipitous declines.

Asia is highly prone to the spread of HIV. Although first found in urban areas and among populations with specific high-risk behavior, HIV is making its way into rural areas, where it will find fertile ground, less hindered by some of the health care and educational weapons brought to bear against it in urban areas.

Although the most obvious impact of AIDS is on health and mortality rates, and thus on life expectancy, it can also affect many other dimensions of rural life. Because it strikes primarily adults during their most productive years rather than striking the youngest or weakest, like malaria and many other devastating diseases, it affects family income and savings, agricultural productivity, and parenting. Indirectly, it undermines the population's access to education and to economic opportunities of every kind through its role in reducing family income.

The Asian Epidemic

Although the HIV/AIDS epidemic began later in Asia than elsewhere, it has spread rapidly. In 1999, nearly one in

four newly infected people resided in Asia, which is also home to 6 million of the estimated 33.6 million adults and children living with HIV/AIDS in the world (UNAIDS and WHO, 1998). In Cambodia, Myanmar, Thailand, and parts of India more than 2 percent of the adult population are infected. Indeed, Cambodia, India, and Thailand are listed among the United Nations Population Division's most affected countries (UNAIDS and WHO, 1998). In the PRC, Malaysia, and Viet Nam, the number of HIV infections is rising fast. Table VI.7 shows the impact of the crisis on Asian countries. South Asia, driven almost entirely by India, has had the highest number of cumulative AIDS deaths, and the estimated number of individuals with HIV shows that the worst is yet to be felt.

Although the common assumption has been that HIV is concentrated among urban sex workers and their clients, and drug injectors, the last round of sentinel surveillance in India (UNAIDS and WHO, 1998) found that, in a study of pregnant women (usually considered to be representative of the general population), conducted in urban areas of five states, more than 1 percent were infected. Evidence of HIV prevalence in rural areas is scarce, but a recent survey of households in Tamil Nadu found that 2.1 percent of the rural population were infected, three times the rate in urban areas. Furthermore, nearly 10 percent of the population surveyed had other sexually transmitted diseases, which would enable HIV to spread more easily. Table VI.8 shows that while HIV/AIDS prevalence among low-risk populations in Asia is still quite low, high rates among the high-risk groups in both rural and urban areas in several countries—notably Cambodia, India, Myanmar, and Viet Nam—indicate that HIV is poised to spread into the general population in both urban and rural areas.

Economic, social, and cultural conditions make Asia extremely vulnerable to the spread of HIV. Factors that contribute to rural Asia's vulnerability include high rates of multiple sexual partnering and of sexually transmitted diseases; continued widespread use of untested and contaminated blood and blood products; nonsterile medical practices such as reuse of injecting equipment without proper sterilization procedures;

Table VI.7: The Extent of HIV/AIDS in Asia

	Estimated Number of Adults Living with HIV/AIDS, end 1997	AIDS Deaths (Cumulative)	AIDS Orphans (Cumulative)	Male (%)	Dominant Mode of Transmission
East Asia	409,300	7,140	830		
China,					
People's Rep. of Korea, Dem. People's Rep. of	400,000	6,400	720	94	IDU
Hong Kong, China	3,100	490	110	91	Hetero
Mongolia	<100	...	...	...
Korea, Rep. of	3,100	250	<100	89	Hetero
Singapore	3,100	<500	<100	94	Hetero
Southeast Asia	1,557,300	349,310	74,330		
Brunei Darussalam	300	...	...	...
Cambodia	120,000	15,000	7,300	...	Hetero
Indonesia	51,000	3,900	1,000	78	Hetero
Lao PDR	1,000	210	150	60	Hetero
Malaysia	66,000	5,700	1,500	94	IDU
Myanmar	440,000	86,000	14,000	81	
Philippines	23,000	1,300	480	65	Hetero
Thailand	770,000	230,000	48,000	81	
Viet Nam	86,000	7,200	1,900	88	IDU
South Asia	4,215,000	372,600	127,010		
Afghanistan	...	...	...	...
Bangladesh	21,000	4,200	810	...	Hetero
Bhutan	...	...	...	...
India	4,100,000	350,000	120,000	...	
Nepal	25,000	1,700	750	58	
Pakistan	62,000	15,000	5,000	87	Hetero
Sri Lanka	6,700	1,700	450	69	
Central Asia					
Kazakhstan	2,500	<100	...	...	...
Kyrgyz Rep.	...	...	...	...	...
Tajikistan	...	...	...	...	...
Turkmenistan	...	...	...	...	...
Uzbekistan	...	<100	...	...	...

IDU = injecting drug users; Hetero = heterosexual contact.

Source: UNAIDS and WHO (1998)

Table VI.8: Estimates of HIV-1 Seroprevalence in Asia by Residence and Risk Group

Risk Category	Capital or Major City		Outside Major City	
	UL	UH	OL	OH
Bangladesh	0.0	1.2	...	...
Bhutan	0.0	0.0	...	...
Cambodia	3.2	44.4	3.2	27.3
China, People's Rep. of	0.0	73.2	...	...
Hong Kong, China	0.0	0.1	...	...
India	4.3	42.0	0.7	12.2
Indonesia	0.0	0.0	...	...
Kiribati	0.1	...	...	...
Korea, Rep. of	0.8	0.0	...	...
Lao PDR	0.8	1.2	...	...
Malaysia	0.0	29.5	0.1	0.9
Mongolia	0.0	0.0	...	...
Myanmar	1.0	31.0	1.5	9.0
Nepal	0.0	1.2	...	2.0
Pakistan	0.6	3.7	...	...
Papua New Guinea	0.2	1.9	0.0	0.0
Philippines	0.0	0.5	...	...
Singapore	0.0	3.7	...	...
Sri Lanka	0.0	0.0	0.0	...
Taipei, China	0.0	0.0	...	...
Thailand	2.0	15.9	...	...
Viet Nam	0.2	35.7	0.0	5.6

Note: These data pertain to specific low- and high-risk groups, in capitals/major cities and outside major cities. The risk codes are as follows:

UL — urban low risk; UH — urban high risk; OL — outside city low risk; OH — outside city high risk.

“Low risk” means pregnant women, blood donors, or other persons with no known risk factors.

“High risk” means prostitutes and clients, STD patients, or other persons with known risk factors.

The data for “Outside Major City” refer to some combination of areas that are rural, semi-rural, and peri-urban, as well as small urban centers. While it is intended to capture rural rates, this is somewhat difficult as inhabitants of the most remote rural areas do not generally have access to testing sites.

Data are for various years between 1993 and 1997.

Sources: US Bureau of the Census; UNAIDS and WHO (1998)

reliance on breastfeeding, which carries a 10 to 14 percent risk of HIV transmission from an infected mother to her child; low rates of condom use; low levels of education in some countries; high rates of internal migration; and extremely high proportions of the population in their sexually active years.

Rural-urban-rural migration probably contributes significantly to the spread of HIV into rural communities. Men who migrate to urban areas are without the companionship and constraints provided by their home environments, and are often exposed to the commercial sex industry, while female urban migrants may be introduced to it as service providers. Both groups may also be introduced to injecting drug use, another major source of infection in areas where HIV is well established. When they return to their rural communities, either permanently or for short visits, they introduce their newly acquired infections to their spouses and other sexual partners. A study of long-haul truckers in Thailand (Giraud, 1993) found that 86 percent of the single men and 63 percent of the married men had had commercial sex within the six months before the survey, and an estimated 3 to 5 percent were HIV-infected as early as 1991. A 1995 report by Thailand's Ministry of Health (cited in Bloom and Godwin, 1997, p. 54) indicated that 60 percent of AIDS cases were laborers and agricultural workers, with half the reported cases in the northern provinces, primarily in rural areas.

Trucking routes serve as a major conduit for HIV transmission between nations. The population of Lao PDR is 70 percent rural, but HIV rates are highest along the northwestern trading corridor that borders the PRC, Myanmar, and Thailand (Zola, 1993), whence the spread to rural areas is inevitable. In other nations of Southeast Asia, including Malaysia and Viet Nam, HIV/AIDS cases are concentrated among injecting-drug users, and the need to intervene with this group to contain the spread of HIV remains (World Bank, 1997a).

Table VI.9 shows projected rates of HIV infection in three Asian countries. While Thailand is expected to succeed

Table VI.9: Projected Rates of HIV Infection in Cambodia, Myanmar, and Thailand

Year	Cambodia	Myanmar	Thailand
1990	1.27	0.82	0.58
2000	2.53	2.24	1.17
2010	2.86	2.85	0.73

Sources: Data for Cambodia and Myanmar from the US Bureau of the Census International database. They are estimated using the ivgAIDS model. The projections for Thailand are the medium intervention scenario published by the National Economic and Social Development Board, Thailand.

in bringing down infection rates by 2010, both Cambodia and Myanmar can expect to see dramatic increases in infection rates.

Impact of HIV/AIDS on QOL

Treating HIV/AIDS imposes a heavy economic burden. Notwithstanding the inaccessibility of the expensive (approximately US\$16,000 per person per year) drug 'cocktails' currently used to treat those in wealthy industrial countries, the cost of detecting HIV infection and treating its clinical manifestations, for example, pneumonia, tuberculosis, diarrhea, and fever, is significant and well in excess of per capita public expenditures on health care in Asia. In addition, access to health-care centers is extremely limited in many areas, and transportation costs for those seeking care can consume a nontrivial share of household income.

Perhaps even more important than the direct medical costs of AIDS, however, are the indirect costs embodied in the loss of income and output among those affected. Because heterosexual sex is the dominant transmission category for HIV, AIDS tends to affect working-age adults disproportionately, thereby greatly exacerbating the economic burden imposed by the medical care costs associated with the disease (Bloom, Bloom and River Path Associates, 2000). While few estimates of the macroeconomic impact of the

disease in Asia are available, simulation models of the impact of AIDS on economic growth in Africa suggest a significant negative effect of the disease on the growth rate of per capita GDP.¹⁶

As those Asians with HIV begin to develop AIDS, Asia will begin to feel the economic impact. For example, observing that traditional Lao PDR farmers depend heavily on labor inputs, Zola (1993) anticipated that the spread of AIDS among young men and women would require children and older family members to take up the tasks abandoned by AIDS victims. As skilled and experienced farmers die, the tasks they once performed will be accomplished with less skill, if at all, reducing households' already scant economic resources. Likewise, as women's energies are directed toward caring for ailing family members, their household tasks will be delegated to the very young or the very old, or will be neglected altogether.

Pitayanon et al. (1997) analyzed the impact of an adult AIDS death on the economic well-being of rural households in northern Thailand. They found that the average yearly income of a household that had experienced an HIV/AIDS death was 66 percent of that of a comparable household that had not experienced such a loss. Furthermore, the direct medical care cost for each HIV/AIDS patient was equivalent to about six month's worth of the average household's income. A significant minority of the households also experienced social discrimination, including loss of employment of other household members and children being forced to leave school. Many households were able to cope with their economic losses by drawing upon their savings or by selling assets, but the poorest 52 percent saw a reduction in current household expenditures, and 29 percent claimed that this reduction had a serious effect on their welfare. Most noteworthy, their expenditures on food

¹⁶ Cuddington and Hancock (1994), Cuddington (1993), Over (1992). See also Bloom and Mahal (1998), who present econometric evidence that the pace of national economic growth was not significantly impeded by AIDS during the early years of the global pandemic (1980–1992).

and beverages dropped by 42 percent. About 45 percent received subsidies from institutions other than the family, although HIV/AIDS-related illnesses are not covered by private health insurance and employers' health insurance, so claims were often made by reporting some other cause of death.

Opportunities for Action

Asian policymakers are generally unprepared for the spread of AIDS (Bloom and Godwin, 1997). Thailand alone has taken early and aggressive action to confront the epidemic and reduce its impact. This effort has led to substantial success in slowing the spread of the disease: HIV prevalence among Thai military conscripts dropped after a national campaign to promote condom use and reduce commercial sex (World Bank, 1997a). Nonetheless, by 2000 almost one million Thai children will have at least one parent with HIV (Brown and Sittitrai, 1995). In many other Asian countries, AIDS is not a policy priority, despite its devastating potential. Unless this changes, they will not be able to undertake timely and effective action to prevent the spread of HIV/AIDS or to deal with its consequences.

Many Asian countries will need to bolster the social protection mechanisms afforded to those infected with or affected by HIV (Pitayanon et al., 1997). Possible policy responses include improving the access by the poor to free or subsidized health care and basic social services, and initiating government-sponsored campaigns against discrimination. As the burden of HIV infection grows, government resources alone may be insufficient, and community resources will have to be mobilized to provide social and financial support for those with HIV and their families. Throughout Asia, an effective response to the epidemic will depend greatly on building support and compassion in the community.

In countries with limited access to health services, community response can be a major determinant of care and economic survival. Recent observations in the Chiang Mai area of northern Thailand indicate that the area's long history of

enlightened government and Buddhist self-determination have facilitated the development of community support networks. For example, the Clear Sky project, established to provide mutual support and home visits for AIDS patients, has expanded its scope to include the creation of job opportunities and advocacy for community health issues and for community development in general. Collaborating with groups of farmers, environmentalists, and women, the project is bringing together groups that have never communicated or worked together before, in order to destigmatize HIV/AIDS and provide social and material support for each other.

Prevention and Treatment

Once policymakers decide to act, the first issue they face is how to prioritize among the various options available to them. Information is the most effective weapon against HIV, as people can avoid infection through changing behavior. While policy cannot change basic human instincts, campaigns that promote awareness of the disease, combined with improved access to preventive measures such as condoms, will reduce the spread of HIV significantly. Many of the most affected areas of Southeast Asia have relatively high education levels and access to mass media, both of which enhance the effectiveness of public health education efforts. In one particularly effective undertaking, Cambodia's military has developed a peer education program about HIV. Early results show that condom use is up 16 percent and that visits to brothels fell 40 percent in one year (United Nations, 1998).

It is essential to ensure that good-quality condoms are widely available. Medical personnel must also have the training and equipment that they need to support appropriate behavior, including condom use. Furthermore, medical staff must have the appropriate training and equipment so that they do not make the epidemic worse: clean needles, sterile techniques, and an accurate understanding of HIV/AIDS transmission and treatment are essential.

Policymakers often focus on the conventional distinction between preventing HIV infection and providing AIDS care. There is a substantial economic imbalance between the two, with the cost-benefit ratio being in favor of prevention. Thus the tendency to 'write-off' those already infected is increasing. Not only is this utterly unacceptable on humanitarian grounds, but probably also on pure economic grounds, because relieving pain and suffering and extending productive lives is of great private and social economic value. This neglect also fosters a sense of hopelessness that conspires to keep people living with HIV invisible, making it even more difficult to motivate and mobilize effective prevention efforts.

In many wealthy countries the use of anti-retrovirals is pushing back the earlier surge of AIDS deaths. These scientific advances are impressive, but their costs are well beyond the reach of the developing world. An alternative approach is to prevent or treat the opportunistic infections associated with AIDS by using Bactrim and antifungals and implementing preventive therapy for tuberculosis. Also promising are low-cost, short-course drug therapies for preventing perinatal transmission. However, these approaches require the development of logistic infrastructure that is still not affordable in many places. Other promising possibilities involve strengthening the clinical management of AIDS; developing home care and community care programs; and developing initiatives that address social ostracism, stigmatization, and discrimination (Bloom and River Path Associates, 2000).

The long gestation period of the HIV virus has enabled policymakers in many Asian countries to ignore the full costs of the disease. While more research to evaluate the extent and impact of the epidemic in Asian countries is critically needed, policymakers must act as quickly as possible to stem the spread of the disease. The experience of Thailand, where massive public health and information campaigns have had a dramatic effect in controlling the epidemic, proves that if policymakers do indeed make HIV/AIDS a priority, then ameliorating its long-term impact is possible. While AIDS has traditionally been viewed as an urban problem, its rapid spread in rural areas

places many more Asians at risk, and the difficulty of reaching less educated, more isolated rural inhabitants presents a serious challenge for governments.

Many successful campaigns have involved partnership between the State and NGOs. Business, however, is a third partner, with a vital role to play. Because of the impact of AIDS on adults, business has a natural interest in protecting its customers and staff. It also has vital skills in marketing, needed to make prevention messages effective in changing behavior, and distribution, both to spread information to remote areas and to increase condom availability. Some Asian businesses are already involved in the fight against AIDS, but the potential is huge for their wider and more effective deployment (Bloom, 2000; Bloom, Bloom, and River Path Associates, 2000; Bloom, Rosenfield, and River Path Associates, 2000).

THE CONTEXT OF DEVELOPMENT IN RURAL ASIA

The world is currently undergoing a period of rapid technological, economic, and social change. Rural Asia will become increasingly tightly interconnected with the urban and global economies. The following major dynamics are likely to have a huge impact on the way rural Asians live:

- Globalization
- Democratization
- Decentralization
- The knowledge and information-technology revolution

These are not unrelated processes. For example, information technology has driven economic globalization, while many believe that globalization and democratization are connected. Decentralization, meanwhile, deepens and strengthens democracy, allowing people more control over their lives, encouraging initiative, independence, and enterprise.

Globalization

The integration of national economies is occurring rapidly, as international trade and capital mobility increase, and cross-border labor movements continue. The cost of transportation and communication is falling, while barriers to trade, such as tariffs, foreign exchange restrictions, and quotas, are being reduced.

For rural areas, globalization has a number of implications. First, urban and international centers draw labor out of rural areas into industrial or service jobs. Workers also cross borders. East Asia, for example, has seen significant inflows of labor, often rural, from poorer neighboring countries (Bloom and Brender, 1993; Bloom and Noor, 1997; Findlay et al., 1998). While migration will continue to be vital to improving Asian QOL, policymakers should not underestimate the need for action to ensure that migrants form a mutually beneficial relationship with the receiving society. Migrating workers need to learn new skills and to be able to update them in a rapidly changing economy. Migration also increases social pressures and can have health consequences through the increased transmission of communicable diseases (see the discussion of HIV/AIDS above).

Globalization also seems to be transforming the landscape and character of rural life, making the rural-urban divide much less fixed and definable. Dick and Rimmer (1998) note that some production is moving to the peri-urban areas of Asia, when it becomes cheaper to bring production to rural workers than rural workers to urban work sites. Agriculture is also increasingly integrated into the global economy, as farmers grow traditional food crops for the world market or shift into cash crops like vegetables and cut flowers. Viet Nam—with new liberalization policies—has become the world's third largest exporter of rice. This diversification offers higher incomes, but also increases risk, through exposure to fluctuations in global prices or dramatic global economic shocks.

Few countries seem likely to attempt to reverse global integration, so policymakers must consider ways of protecting

their economies from the negative aspects of globalization by, for example, spreading risk both across individuals and over time. Saving helps individuals and communities weather economic shocks and loss of income, as does increased access to credit. As mentioned elsewhere, in rural areas, NGOs that provide credit could be transformed into savings institutions. However, local initiatives can soon be overwhelmed by the scale of a serious crisis. Crop failures, natural disasters, or economic crises can quickly overwhelm local savings institutions, as all members are affected at the same time. Ideally, risk needs to be shared internationally, through more complex insurance mechanisms. Transnational policymaking organizations, such as the Association of Southeast Asian Nations, should consider creating insurance-based safety nets that operate across large regions or are continent-wide. Doing so would mitigate the risks of globalization and lessen the burden on areas hardest hit by shocks.

Labor standards also need to be set at a transnational level, avoiding a 'race to the bottom' where countries lower standards in order to compete in the trade arena. How the establishment of labor standards affects QOL in developing countries depends upon the nature of the standard and whether the standard is inherently distortion-reducing or distortion-creating. For example, a prohibition on child labor will improve well-being if child labor is forced and exploitative, as is often (some would say always) the case; it could conceivably diminish well-being in situations where families find that they need to rely on the labor of their children in a difficult and insecure economic environment (Bloom and Noor, 1994; Basu, 1999).

Health and workplace safety standards are also linked to QOL. Workers may be uninformed about the long-term risks that their work entails and unable to make informed choices about where to work. Even if they understand the health and safety risks, they may have no alternative in the absence of other jobs. International labor standards can help address this problem, although it is important to ensure that the social benefits exceed the social costs of the regulations. International donors and other agencies are in the best position to carry out

research on the impact of labor standards on labor markets and economic performance and competitiveness. It is essential that this kind of information be gathered to promote the kind of standards that ensure a better QOL in the context of flexible and competitive markets, which are also essential for improving QOL. It is also important to recognize the long history of contributions that organized labor has made to QOL among many of today's wealthy industrial countries. This contribution has occurred via the constraints worker organizations impose on capricious (and counterproductive) behavior by employers, through collective bargaining to improve workers' wages, hours, and working conditions, and through the threat effect of potential labor organization on terms and conditions of employment.

Another policy prescription that would enhance rural Asia's development possibilities is promoting freer markets, which, while not specifically a rural issue, would bring benefits to the rural sector. In this respect, the continued barriers to capital mobility and lack of openness are problems that many Asian nations need to address. According to the 1998 Competitiveness Index (World Economic Forum, 1998), while countries such as Republic of Korea, Malaysia, and Thailand all fare above average on competitiveness among the more than 50 countries surveyed, they rank much lower than average on a number of the individual components of the index linked to economic openness, such as tariffs and quotas, hidden import barriers, and capital controls. The PRC, India, Indonesia, and Viet Nam also fare extremely poorly on these measures.

Increased openness does, of course, carry risks such as those associated with the transmission of financial malaise, but these can be dealt with through strong global and national economic institutions. Sustainable development requires that the positive potential of globalization be realized and that its downside risks be minimized (Yasuf, 1999). Creating stable governance structures that are committed to promoting openness as well as insuring that those most vulnerable to the effects of the global economy are protected is an essential task for policymakers.

Democratization

The move toward democracy is one of the most important international developments of the late 20th century, with more than half the world's population living in democratic regimes for the first time in history (Freedom House, 1997). This is a positive trend in terms of QOL insofar as democracy offers people increased freedom and control over their own lives.

The movement toward democracy is not irreversible, of course. While economic growth is not a necessary or sufficient condition for consolidating democracy, it is enormously helpful (Haggard and Kaufman, 1995). Disenchantment with economic performance may overwhelm new democratic systems, convincing some sectors to turn toward authoritarian solutions, although this has not as yet happened as a result of the recent Asian crisis.

Democratization in Asia has generally been driven by urban areas. In part, this is because urban workers and the middle classes withdrew their support from the old regimes, but it also reflects the continued lack of rural organization in many countries and an adherence to traditional forms of politics. This represents a serious long-run problem for rural Asia, especially as the percentage share of rural Asians continues to decline (see Table VI.2). Political systems may become even more biased toward urban areas, unless rural organizations develop a more sophisticated relationship with the new democratic structures.

Rural industrialization policies will increase the congruence of rural and urban interests, but rural political parties will need to work to reinvent themselves and develop a broader base for representing rural interests. There may be common ground between rural movements and urban groups interested in environmental quality, for example. The strong links many urban Asians feel with their rural roots (as shown by the flow of remittances) may offer another opportunity for building rural-urban coalitions.

The heavy responsibility for protecting and nurturing democracy lies with the donor community, as well as domestic

actors. Technical assistance should be provided to strengthen democratic institutions and build capacity for policymaking within them. Doner and Laothamatas (1994), for example, argued that the low level of party institutionalization in Thailand hampers the political system's ability to address infrastructure and human capital development needs. In the absence of progress in institution building, the ability of the systems to respond to public needs is weakened.

Decentralization

Decentralization—which is closely linked to democratization—attempts to ensure that those who are affected by policies are closely involved in making them, or at least have more influence over elected decision makers. Proponents of decentralization argue that it increases the efficiency of the public sector, as local actors exert pressure on the use of resources. They also believe that local actors are often pushed into a more active role by the realization that there is insufficient capacity to meet their demands centrally. According to Smoke and Lewis (1996), for example, Indonesia's efforts to achieve fiscal decentralization were the result of local and regional demands for infrastructure that the central Government simply could not fulfill.

Some of the criticisms of decentralization are pertinent when thinking about the future of rural Asia. First, decentralization can exacerbate regional inequalities: empirical evidence for a number of countries including Thailand shows that large cities tend to subsidize other parts of the country, and Prud'homme (1995) suggested that a likely result of fiscal decentralization would be to concentrate growth in a small number of urban centers.

Second, decentralization relies on there being sufficient capacity for local management and decision making. Rural areas often experience shortages of officials with technical skills, and improving capacity quickly can be difficult. However, technical assistance, performance evaluations, and incentives all help

overcome these deficiencies (Smoke and Lewis, 1996) and, ultimately, leave a rural area stronger and more self-reliant than before the decentralization process started. Decentralization does not allow central authorities to immediately withdraw. Especially during a transitional phase, they have vital roles as a facilitator, supervisor, and guarantor of minimum standards.

Rural localities also face the problem that economies of scale make it difficult for them to maintain high-quality decentralized structures. Central and eastern Europe's experience has shown that decentralization can leave health and education services underfunded and underprovided in small communities (Bird et al., 1994). Asian nations should therefore consider ways of combining the advantages of national and local systems, perhaps by putting national provision under local management.

Information Technology

New information technologies (ITs) have the potential to transform rural life. In education, the Internet links remote institutions to the global knowledge commons. Computers offer the opportunity to standardize curricula; provide information resources quickly, efficiently, and cheaply; and mitigate teacher shortages through distance-learning programs. The Internet also offers teachers in remote areas the opportunity to develop relationships with colleagues in other schools, to maintain their links to professional bodies, and to access in-service training.

In rural Asia, primary education is now well established. But to diversify their economies and develop capacity to cope with the challenges brought by globalization, democracy, and decentralization, rural areas will need more people who have received a quality secondary or higher education (Task Force

on Higher Education and Society, 2000¹⁷). IT and the Internet can make a particularly significant contribution to these more advanced forms of education. Economies of scale make it difficult to deliver specialist curricula at the local level. Networked IT will allow small secondary schools to remain viable, while allowing more people to receive a higher education without the need to travel.

Technology also offers many new possibilities for producing and protecting good health. For example, IT can be used to conduct more thorough and effective health surveillance. Relevant and up-to-date information allows better control over the spread of communicable diseases and other health problems. It also improves efficiency by permitting better drug inventory control. Finally, health-care workers can gain access to offsite medical information and personnel, thereby improving diagnostic and referral systems.

While the possibilities the new technologies offer are great, the danger exists that developing countries or less developed areas within will suffer from a growing knowledge gap. The need for infrastructure in the form of electricity and telephony will require a high level of expenditure, which may be beyond the reach of some areas. However, demand is likely to be strong for a technology that offers rural areas new connections.

Recently, a South Asian Internet workshop considered the importance of new technology to rural areas. It noted that, while India is leading the way in Internet capacity (over 800,000 users), this is mostly urban based. All South Asian countries are held back by lack of bandwidth and need to encourage private Internet service providers (ISPs) to develop in a telecommunications market that has traditionally been dominated by government monopolies. It called for local infrastructure projects to go hand-in-hand with initiatives to generate local Internet content, through partnerships among

¹⁷ See www.tfhe.net for more details and for copies of the Task Force report (Task Force on Higher Education 2000)

government, private, educational, and NGO actors, driven by local entrepreneurs. As Imran Rasheed, director of the Bangladeshi Learn Foundation,¹⁸ commented: “with appropriate synergies in rural communities, we have shown how environmentally-aware education among primary school students can be coupled with the use of computers and the Internet in villages” (Rao, 1999).

Grameen Communications, meanwhile, is attempting to diversify rural economies through a Village Internet Program. Initially, the organization will provide Internet kiosks for villages, but it expects borrowers will start to buy their own kiosks after the pilot period. Technological capacity is being provided by underemployed university graduates, with the scheme explicitly aiming to bring greater information to rural markets, thus allowing farmers to better price their produce, and strengthen local systems of democracy. Grameen Communications will benefit from the Grameen Bank infrastructure, and also from links with Grameen Phone. It offers borrowers a cellular phone, which they can use to generate income, through the Village Payphone Scheme. The Internet kiosks will offer E-mail, Internet access, word processing using Bengali fonts, printing and publishing services, Internet phone usage, computer classes, and income opportunities through data entry for global customers.¹⁹

As Coeur de Roy (1997) points out, the main inhibition for IT development is lack of vision on the part of leaders, many of whom have low levels of computer literacy. They often fail to see the importance and usefulness of new technologies, and maintain monopolies within the telecommunications sector or impose inappropriate taxes on services and imported equipment. Work is needed to explore the experience of pilot projects, publicize best practices, and develop appropriate models and programs for conditions that are often vastly different from those of wealthy, highly industrialized nations.

¹⁸ www.bangladesh-web.com/learnfoundation/html/home00.html

¹⁹ See www.eb2000.org/ITPP1.htm for more details.

CONCLUSION

As policymakers chart a course for the new century, they are faced with many opportunities but also much uncertainty. Given the ongoing demographic, cultural, and political changes taking place in rural Asia, the past can provide only limited guidance for future action.

The wisdom and appropriateness of past policies and programs must therefore be examined in light of a new and uncertain future. Many traditional determinants of rural QOL, such as population growth, will operate with a different intensity. In addition, potent new influences, such as the emergence of many highly effective NGOs, a dramatic increase in the elderly share of the population, and the HIV/AIDS epidemic, are appearing on the scene. The broad context within which rural development must occur is also undergoing fundamental change because of, for example, globalization, democratization, technological change, and the knowledge revolution.

Policymakers face enormous challenges in adapting to rural Asia's new needs and possibilities. There is tremendous opportunity for the future of the region, but considerable peril, as well. Clearly, the new challenges associated with the development of rural Asia call for new strategies. Devising these in an open and rational way is the key to a bright future for rural Asia.