Confronting rising inequality in Asia

2

Confronting rising inequality in Asia

Over the past 2 decades, developing Asia has reduced poverty faster than any other region of the world, at any time in history. But the bulk of developing Asia's population lives in countries with rising inequality. This is in contrast both to the "growth with equity" story that marked the transformation of the newly industrialized economies in the 1960s and 1970s, and to recent trends in other parts of the developing world, in particular Latin America, where income inequality has been narrowing since the 1990s.

This theme chapter presents an analysis of inequality in Asia, and develops a range of policy options to confront the rising inequality. A key message emerging from the analysis is that technological change, globalization, and market-oriented reform—the main drivers of Asia's rapid growth—are the basic forces behind rising inequality in the region. These forces tend to favor owners of capital over labor, high-skilled over low-skilled workers, and urban and coastal areas over rural and inland regions.

The impacts of these forces have been compounded by various forms of unequal access to opportunity—to earn income from labor and to build human capital—caused by institutional weaknesses, market distortions, and social exclusion. Working together, these have led to a falling share of labor income in total national income, rising premiums on human capital, and growing spatial inequality.

Yet these three forces should not be obstructed, because they are the engines of productivity and income growth. Policy makers should confront rising inequality through interventions that equalize opportunity and reduce inequality, in three areas: efficient fiscal measures that reduce inequality in human capital, policies that work toward more and high-quality jobs, and interventions that narrow spatial inequality.

The analysis and policy options in this theme chapter provide a broad road map for policy makers to chart their own, country-specific, path to addressing inequality—which, if unchecked, could undermine the momentum for economic growth and for a better quality of life for *all* Asians.

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Rising inequality concerns in Asia

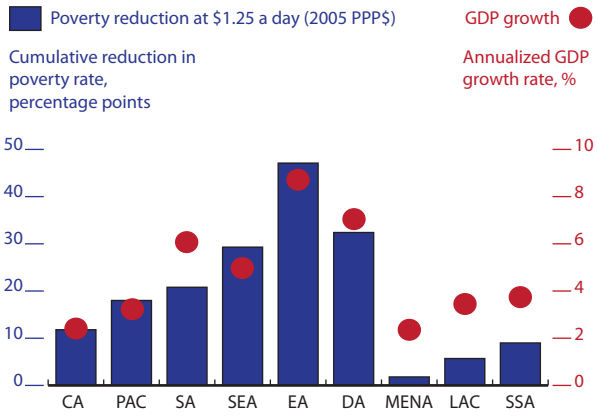
Remarkable growth—but widening inequality

Remarkable growth …

Many countries in Asia and the Pacific have seen remarkable achievements in growth and poverty reduction in the last 2 decades. From 1990 to 2010, the average annual growth rate of gross domestic product (GDP) for developing Asia reached 7.0% in 2005 purchasing power parity (PPP) terms, more than double the 3.4% for Latin America and the Caribbean (Figure 2.1.1). Much of the growth was driven by the People's Republic of China (PRC) and India—the world's two most populous countries—with annual GDP growth of 9.9% and 6.4%, respectively.

The rapid growth has dramatically improved living standards and greatly reduced poverty. During 1990–2010, the region's average per capita GDP in 2005 PPP terms increased from $1,633 to $5,133. The proportion of the population living on or below the $1.25-a-day poverty line fell from 53.9% in 1990 to 21.5% around 2008, as 716 million people were lifted out of poverty. Seventeen countries reduced poverty by more than 15 percentage points in the period.

2.1.1 GDP growth 1990–2010 and poverty reduction 1990s–2000s



CA =Central Asia; DA = Developing Asia; EA =East Asia; LAC = Latin America and the Carribean; MENA = Middle East and North Africa; PAC = The Pacific; SA = South Asia; SEA = Southeast Asia; SSA = Sub-Saharan Africa.

Note: Cumulative reduction in poverty rate is estimated as the difference in the percentage of poor people between the latest year in the 2000s and the earliest year in the 1990s for which data are available, weighted by 2010 and 1990 population, respectively. For Asia and the Pacific these include Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyz Republic, Tajikistan, and Turkmenistan (Central Asia); People's Republic of China (East Asia); Fiji and Timor-Leste (Pacific); Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka (South Asia); and Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Philippines, Thailand, and Viet Nam (Southeast Asia).

Source: ADB estimates using data from PovcalNet (accessed 9 March 2012) and World Development Indicators online database (accessed 7 February 2012).

… but widening inequality

This performance in growth and poverty reduction has, however, been accompanied by rising inequality in many countries. Of the 28 countries that have comparative data between the 1990s and 2000s, 11—accounting for about 82% of developing Asia's population in 2010—experienced rising inequality of per capita expenditure or income, as measured by the Gini coefficient (Figure 2.1.2).[1]

Developing Asia has historically been a region with relatively low levels of inequality, especially compared with other regions such as Latin America. Unlike developing Asia, though, most Latin American countries have seen narrowing inequality in the last 2 decades—even if average inequality there is still much wider than in developing Asia.

Concepts of inequality

Inequality of outcome and of opportunity

In discussing inequality, it is useful to distinguish two concepts: inequality of outcome and inequality of opportunity. A principal building block of economics is the idea of human welfare—a broad sense of an individual's "well-being." Individuals will use the resources that they have

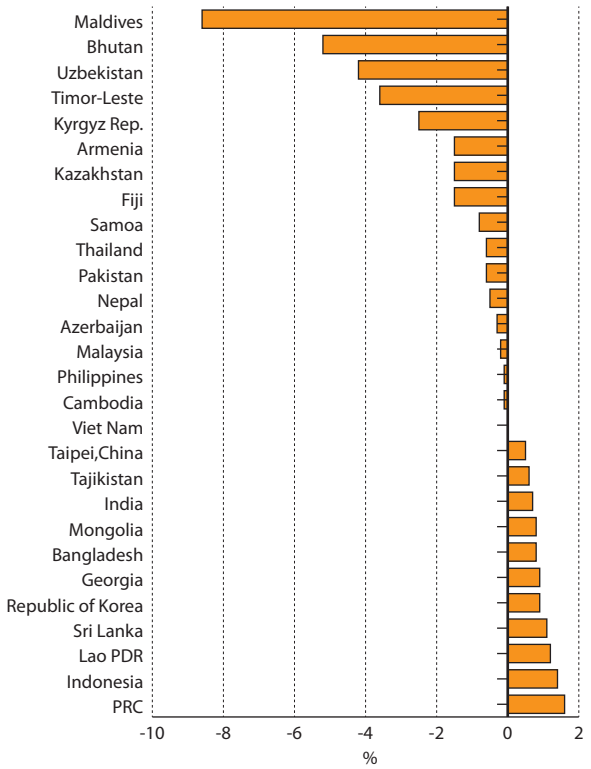
available, to maximize their well-being, subject to factors that may constrain their options. In the study of inequality, income or expenditure are commonly used to proxy the outcome of this process.

Focusing solely on income or expenditure can, though, be limiting. Non-income dimensions like education and health have come to the fore in recent years offering a multidimensional perspective on inequality and poverty. Good health, for example, confers on individuals benefits that are not fully captured by the increment it provides to incomes. Inequality in education and health may manifest themselves as differences in access and coverage among population groups defined by their income, gender, ethnic origin, or birth location.

While the concept of inequality of outcome suggests the endpoint of a process, one can usefully think of how to distinguish between the resources that one has available and the level of effort applied. Inequality of opportunity is the portion of the inequality of outcome that can be attributed to differences in "individual circumstances" (Roemer 1998). By circumstances we mean those features that are outside the control of an individual, such as gender, race, ethnicity, or place of birth. The same is true of a child's parental characteristics, for example, father's education or income.

On the other hand, given an individual's circumstances, what individuals choose for effort in the labor market or in education—"individual effort"—will also influence their outcomes.

2.1.2 Annualized change in inequality of expenditure or income, developing Asia, 1990s and 2000s



Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

Note: The annualized growth of the Gini coefficient refers to growth between the earliest available figure in the 1990s (except for Bhutan, Fiji, and Samoa, which are in the early 2000s) and the latest available figure in the 2000s. The Gini coefficient is based on per capita income for Malaysia and Taipei,China, and per capita consumption expenditures for all other economies.

Source: PovcalNet (accessed 9 March 2012), supplemented by household survey data (most Pacific countries and India), and publications of official statistics offices (Republic of Korea and Taipei,China).

Applying the concepts

The distinction between inequality of opportunity and inequality of outcome can be particularly useful in guiding public policy. Equality of opportunity is not only intrinsically important, but also a critical condition for a prosperous society. Public policy must be put in place to reduce or eliminate inequality of opportunity. As we will argue later, equality of opportunity is at the heart of the inclusive growth concept. In this chapter our focus will be on equality of opportunity, on assuring that everybody has equal opportunity to participate in the growth process and benefit from its fruits, equitably. To the extent that inequality of parents' income leads to inequality of opportunity for children, this inequality needs to be overcome by interventions to assure equal access to public services and to markets for all in society.

In the real world, a clear distinction between inequality of outcome and of opportunity is not straightforward. There could also be differences in opinion on what constitute circumstances and what constitute efforts in a society (Roemer 1998; Paes de Barros et al. 2009). Even with these difficulties, in many low-income countries, it is relatively easy to observe extreme circumstances that severely limit opportunities for a large segment of the population.

These circumstances include the lack of, or unequal access to, the high-quality jobs and public services to which every citizen is meant to

have equal access irrespective of circumstance—variations in this access reflect inequality of opportunity. For children, variations in access to education and health are indicators of inequality of opportunity, as these are outside children's control.

This distinction is something of which Asian policy makers are aware (Box 2.1.1). Beyond the intrinsic value of equality—the idea of fairness, for which most humans are hard wired—does inequality make any difference for a country's development?

2.1.1 Opportunity vs. outcome—Perceptions from Asia

How do Asians view the distinction between inequality of opportunity and inequality of income? Box figure 1 presents results for Asia and OECD countries from the World Values Survey of 2005.

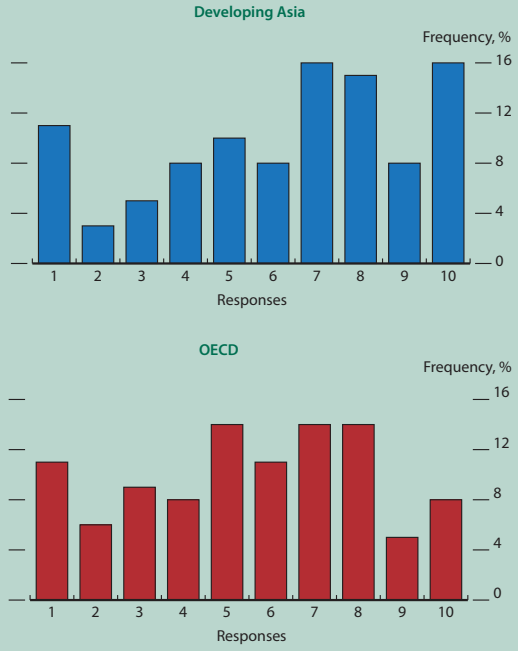
This survey asked representative samples of people in 69 countries to locate their views on a scale of 1 to 10, with 1 meaning "incomes should be made more equal," and 10 meaning "we need larger income differences as incentives."

The Asian responses are more skewed toward 10—about 63% of the responses are in the 6–10 range—but there is still significant weight in the lower value responses. The OECD responses are spread more evenly over the 10 categories.

This interpretation seems to be consistent with the results coming from ADB's web-based survey of Asian policy makers (Box figure 2; see Box 2.1.3 below for survey details).

About 60% of the respondents agree or strongly agree with the statement that it is more important to reduce inequality of opportunity (such as access to education, health, and employment services) than to reduce inequality of income; and 84% of the respondents agree or strongly agree with the statement that income inequality is acceptable if it is due to differences in individual efforts and an outcome of fair competition.

1 World Values Survey 2005—More or less income inequality?

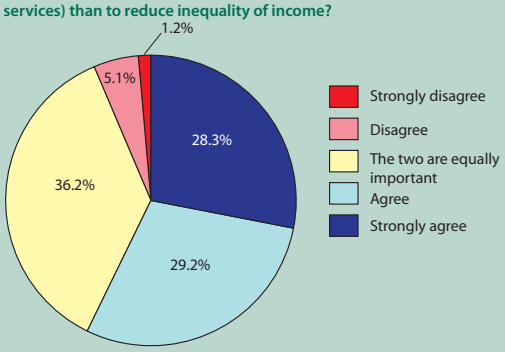


Note: "1" means "incomes should be made more equal; "10" means " we need larger income differences as incentives." The survey received 13,160 responses from 10 Asian economies, including the People's Republic of China; Georgia; Hong Kong, China; India; Indonesia; the Republic of Korea; Malaysia; Taipei,China; Thailand; and Viet Nam; and 23,032 responses from 19 OECD member countries.

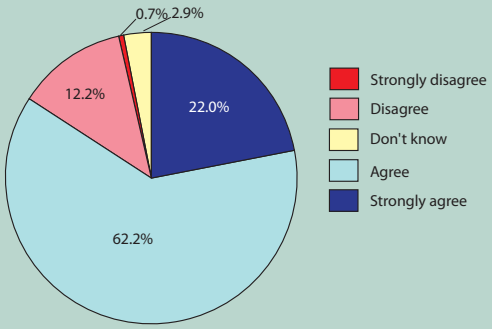
Source: World Values Survey, 2005. http://www.wvsevsdb.com/wvs/WVSData.jsp

2 Inequality of outcomes and inequality of opportunity—informal policy maker survey

A. Would you agree that it is more important to reduce inequality of opportunity (such as access to education, health, and employment services) than to reduce inequality of income?



B. Would you agree with the statement that income inequality is acceptable if it is due to differences in individual efforts and an outcome of fair competition?



Source: Web-based survey by ADB, January–February 2012.

Why inequality matters

Inequality is an important dimension of development in its own right, but it also has consequences for governments' fight against poverty and efforts to sustain growth. Both poverty reduction and the foundations for future growth can be strengthened by ensuring that the benefits of development are shared broadly.

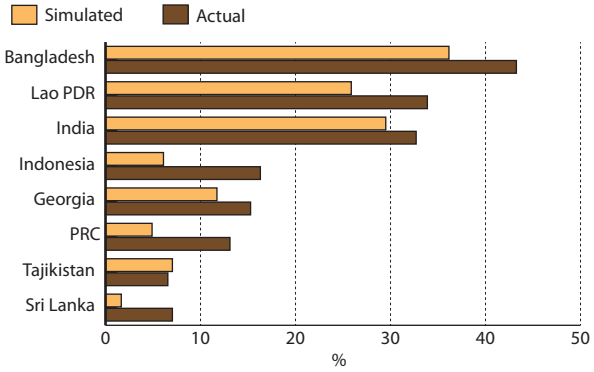
Inequality and poverty reduction

Rising inequality hampers poverty reduction. For countries with comparable data, Figure 2.1.3 compares actual poverty headcount rates (using the $1.25-a-day poverty line in 2008) with the poverty headcount rates simulated keeping inequality unchanged from the 1990s to the 2000s. The simulations highlight the degree to which rising inequality holds back poverty reduction. Had inequality not increased, notably:

- In India, the poverty headcount rate would have been reduced to 29.5% in 2008, instead of the actual 32.7%;
- In the PRC, extreme poverty would have declined to 4.9%, instead of the actual 13.1%;
- In Indonesia, the poverty rate would have fallen to 6.1%, instead of the actual 16.3%.

For the 11 economies with rising inequality, the cost of that widening comes to 240 million more people trapped under the $1.25-a-day poverty line—6.5% of the region's population today. In contrast, those countries with decreasing inequality had smaller poverty rates than they would have had with stable inequality.

2.1.3 Actual and simulated poverty rates at $1.25



Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

Note: Simulated poverty rate is the poverty rate that would have been observed in the final year (with the same mean per capita expenditure) had inequality remained at its level of the initial year.

Source: Simulations using PovcalNet (accessed 9 March 2012) and synthetic expenditure data derived from household surveys.

Inequality, institutions, and growth

So, not only does inequality dampen the poverty reduction impact of growth, it can also affect growth itself, through a number of economic, social, and political mechanisms.

Inequality of wealth and income can lead to a misallocation of human capital. Those with little wealth or low income are unable to invest in human capital, or wealth- and income-enhancing activities, and will remain poor. In principle they may be able to borrow to finance investment. But imperfect financial markets, coupled with other market failures, often heavily constrain their ability to borrow and invest. Similarly, much evidence shows that small enterprises have high potential rates of return to investment but are constrained from accessing capital (for example, de Mel, McKenzie, and Woodruff 2008).

Widening inequality—leaving more people at the top and bottom of the ladder—can also mean a hollowing out of the middle class. The importance of the middle class for stability and growth has been emphasized and analyzed in recent years. Birdsall (2010, p.158), for example, has argued that "growth driven by and benefiting a middle class is more likely to be sustained—both economically, to the extent that the rent seeking and corruption associated with highly concentrated gains to growth are avoided, and politically, to the extent that conflict and horizontal inequalities between racial and ethnic groups are easier to manage…."

In fact, there is a broad consensus among analysts on the link between inequality and the quality of institutions. Along several dimensions, ranging from political stability, through institutional stability, to property rights, the negative impact of inequality on institutional quality seems to be well established, although the two-way causality is also widely recognized (Zhuang et al. 2010; Nye forthcoming). At the same time, there is also a literature on the effect of inequality on crime and violence and, through that, on the investment climate (for example, Fajnzylber, Lederman, and Loayza 2002; Özler and Demombynes 2002).

Finally, greater inequality may lead to a political backlash, in which pressure grows for governments to enact populist policy measures. In response to the rising demands, the political process may favor policies which, in the short term, would benefit the lower end of the income distribution, but which in the long run could hold back efficiency and growth (Alesina and Rodrik 1994). Under such conditions, the interests of the political system diverge from the interests of the economy as a whole. This is a widespread concern in developing and developed countries alike.

Empirically establishing the linkage between inequality and growth is not easy, because numerous factors are at work, and economic analysis is often subject to data and methodological limitations. Unsurprisingly, the empirical evidence is itself mixed (for example, Kanbur and Lustig 2000; Barro 2008).

Recent studies by Berg and Ostry (2011a, 2011b), however, provide convincing evidence on the inequality–growth relationship. The studies make a key distinction between growth over the short run and growth over the long run (Box 2.1.2). This corresponds to the different issues involved in "igniting" growth versus sustaining it over the long run. Many countries can ignite growth in the short run, but far fewer can sustain it (Hausmann, Pritchett, and Rodrik 2005). The econometric analysis of Berg and Ostry confirms that inequality is a key variable explaining long-run growth. Thus not only does rising inequality dent the poverty impact of a given growth rate, it can also affect the sustainability of a growth path.

Inequality on the policy agenda

Governments are not blind to the problem. Indeed, in recent years more of them have embraced the concept of inclusive growth to make income distribution more equitable:

- In the PRC, where the Gini coefficient of per capita expenditure worsened from about 32.4 in 1990 to 43.4 in 2008, the government set about building a harmonious society as the development goal in its Eleventh Five-Year Plan (2006–2010). This goal has been reaffirmed in the Twelfth Five-Year Plan (2011–2015), with greater emphasis on the quality—not just the rate—of growth, and making growth inclusive.
- In India, where the Gini coefficient deteriorated from 32.5 in 1993 to 37 in 2010, the government made an explicit commitment to inclusive growth in its Eleventh Five-Year Plan (2007–2012). The central vision of the plan is "…not just faster growth but also

2.1.2 Inequality and sustained growth

In analyzing the determinants of growth, one needs to make an important distinction between short-term and long-term growth. The course of economic growth does not run smooth. Growth over a long period is made up of "growth spells," where growth accelerates to a higher rate then falls again. Some of this is purely cyclical, but a recent literature focuses on finding policy and structural determinants of the frequency and length of these spells.

This literature suggests that accelerating growth in the short run may be easier than sustaining it over the longer term—and at the very least the determinants of these two types of growth can be very different. The former can be achieved by a set of conventional reforms that lead to a burst of investment and output—liberalization of trade or finance, for example. But sustaining this growth requires longer-term institutional underpinnings (Rodrik 2005).

Further, economies are subject to shocks, even more so in an era of globalization. How policy makers respond to these shocks will determine the speed and sustainability of the rebound and the subsequent growth path. But because any policy response will invariably have distributional consequences, the ability of policy makers to push through efficient responses to shocks depends on their ability to manage the distributional consequences of these responses (Rodrik 1999).

Inability to manage these shocks, and more generally the distributional consequences of efficient reforms, will mean that growth accelerations will peter out sooner than if these shocks are managed well, and growth spells will be shorter. Long-run growth will therefore be lower.

Berg and Ostry (2011b) argue that inequality can influence the duration of growth spells through several channels:

- With credit market imperfections, inequality inhibits private investment in human capital.
- If the distribution of political power follows the distribution of income, this may lead, on the one hand, to pressure for populist policies from the bottom end, and, on the other, to efforts by elites to resist this pressure through corruption—both of which are inefficient and detrimental to growth.
- Inequality may increase the risk of political instability.

Berg, Ostry, and Zettelmeyer (2008) test for the effect of inequality on growth, focusing on its impact on the duration of growth spells. The empirical results show that income distribution survives as one of the most robust and important factors associated with growth duration. A 10-percentile decrease in inequality increases the expected length of a growth spell by 50%. They conclude that inequality is a more robust predictor of growth duration than many variables widely understood to be central to growth.

Sources: Berg and Ostry (2011a, 2011b); Berg, Ostry, and Zettelmeyer (2008); Rodrik (1999, 2005).

inclusive growth, that is, a growth process which yields broad-based benefits and ensures equality of opportunity for all."

- The 2010–2014 development plan for Indonesia, which saw its Gini coefficient worsen from 29 in 1990 to 39 in 2011, offers a vision of a society supported by five national development agendas, among them inclusive and just development.
- Malaysia's 2011–2015 Development Plan is based on the "1Malaysia: People First, Performance Now" concept, and adopts an inclusive development approach to ensure equitable access to economic participation among all Malaysians, particularly aiming at improving livelihood of the poorer 40% of households.
- In the Philippines, the vision of the 2011–2016 medium-term development plan is to achieve inclusive growth, create employment opportunities, and reduce poverty.
- Thailand's 2012–2016 Development Strategy is based on the "sufficiency economy" philosophy and people-centered development, with a vision of equity, fairness, and resilience.

To gauge the extent of the rising concerns over inequality among Asian policy makers, in early 2012 ADB carried out a web-based survey

(Box 2.1.3). Over 65% of respondents agreed that income inequality in their countries was high or very high. Almost all felt that incomes in their countries were becoming more unequal. Importantly, for a region with considerable success in lifting its citizens out of poverty, a majority of the respondents felt that widening inequality was not acceptable even with these declines in the poverty rate.

2.1.3 How important is inequality to developing Asia's policy makers?

To better understand the views of regional policy makers, the Asian Development Bank (ADB) used an informal survey covering different aspects of the inequality problem. ADB targeted officials of ministries of finance, planning authorities, and other government agencies in the region.

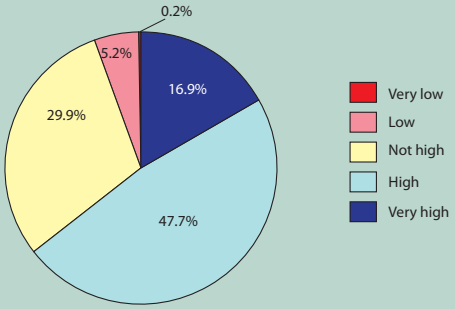
The survey was administered online from 11 January to 29 February 2012. In some cases, the questionnaire was translated into local languages. From key government agencies in 25 of ADB's developing member countries, 504 respondents registered their opinions. The results confirm that policy makers consider rising inequality an increasingly serious problem (Box figure). In particular:

- About two-thirds of the respondents indicated that the level of income inequality is high or very high and that it has increased from 10 years ago;
- 44% of the respondents indicated that the level of concern over inequality among policy makers is high or very high and 70% indicated that the concern has increased;
- 95% of the respondents think that it is important or very important to have policies in place to prevent rises in inequality in order to maintain stability and sustain growth; and
- More than 52% disagree or strongly disagree with the statement that higher income inequality is acceptable so long as poverty is declining.

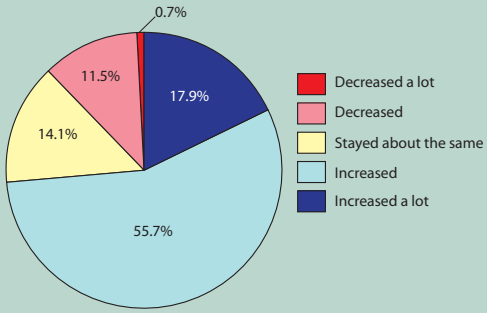
A simple analysis of the survey results shows that respondents from countries with rising inequality have a higher level of concern over inequality and a sense of urgency for addressing it than those from countries with declining inequality.

Concerns about inclusiveness of growth and rising inequaity—Policy maker survey

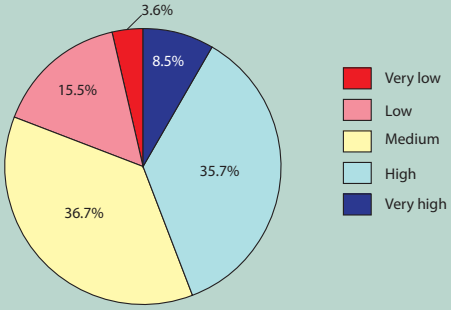
A. Would you say that the level of income inequality in your country is ...



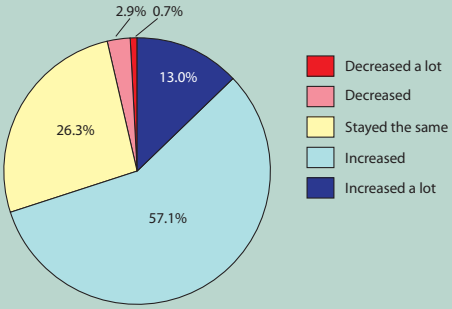
B. Would you say that compared to 10 years ago, income inequality in your country has ...



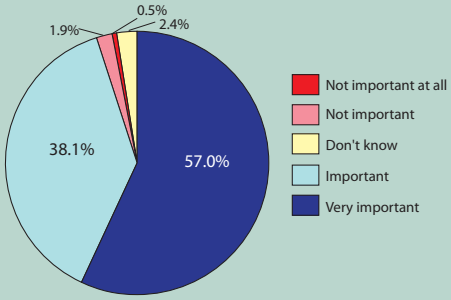
C. What is the level of concern among policy makers in your country about income inequality?



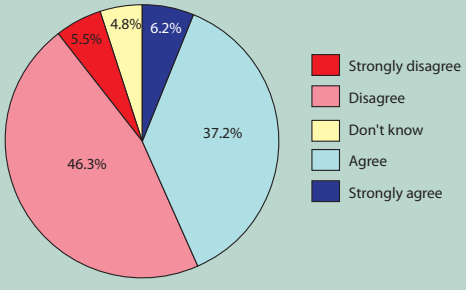
D. Has the concern over income inequality increased in the last 10 years?



E. How important do you think it is to have policies in place to prevent rises in inequality in order to maintain stability and sustain growth in your country?



F. Would you agree with the statement that higher income inequality is acceptable so long as poverty is declining?



Source: Web-based survey by ADB from January to February 2012.

Income inequality in Asia

This chapter draws on data from several sources. The first is the World Bank's PovcalNet, which provides Gini coefficients for most of the countries covered. The PovcalNet also provides grouped per capita income or expenditure data (by decile), from which the quintile ratios and growth incidence by quintile can be computed. The grouped expenditure data (together with rural and urban populations) were also used to estimate the national Gini coefficients for the PRC and Indonesia for more recent years as they are not available in PovcalNet.

The second is unit-level household survey data, which are used for estimating growth incidence curves, the top 5% and 1% income (or expenditure) shares, and GE(0) indexes (in decomposition analysis) for a selection of countries. Unit-level survey data are also used to estimate Gini coefficients and quintile ratios when PovcalNet does not provide sufficient data, mostly for Pacific countries. Inequality measures for India are all calculated from unit-level household survey data.

The third source is official statistical publications or databases for all OECD countries, the Republic of Korea, and Taipei,China.

Inequality can be estimated for per capita income or per capita expenditure. The two measures usually give different results, with income inequality normally higher than expenditure inequality. For example, the income measure of the Gini was 47 in the Philippines in 2009 while the expenditure measure was 43. Viet Nam provides a more stark example: the income measure was 46 in 2008 and the expenditure measure 37. For most developing Asian countries, this theme chapter estimates inequality measures from expenditure data, with the exception of those for Malaysia and Taipei,China that are based on income data. Estimates for Sub-Saharan African countries are also based on expenditure data, while those for Latin American and OECD countries are based on income data. These are largely determined by data availability.

Standard measures of inequality are discussed in Box 2.2.1.

Recent trends of income inequality estimates in developing Asia

Higher growth and rising inequality

Of the 36 economies with available data in 2000s (Table 2.2.1),[2] 13 had a Gini coefficient at or greater than 40, widely considered the threshold for "high inequality."[3] The average Gini for the 36 economies is 37.[4] Eleven of the 28 economies with comparable data show an increase (worsening) in the coefficient in the last 2 decades. These 11 cover 82% of the region's population. On an annual basis, the increase in inequality was most pronounced in the PRC: the Gini there worsened from 32.4 to 43.4 in 1990–2008 (1.6% a year). Indonesia's increased from 29.2 in 1990 to 38.9 in 2011 (1.4% a year).

2.2.1 Methods for measuring inequality

The *Gini coefficient* is one measure of dispersion of a frequency distribution, for example, of how income or consumption expenditures are distributed across households. For an income distribution, the Gini is computed as follows:

$$Gini = \frac{-(n+1)}{n} + \frac{2}{n^2 \mu_x} \sum_{i=1}^{n} i\, x_i$$

where x_i is the income (or expenditure) of individual i, μ_x is the average income of the population, and n is the total number of individuals in the population. The Gini will range from 0 if all individuals have the same income (perfect equality) to 1 if income is held by only one person in the population (perfect inequality). For convenience, this theme chapter cites the Gini multiplied by 100.

The *quintile income (or expenditure) ratio* is the ratio of the total income (or expenditure) of the top (richest) 20% of the population to that of the bottom (poorest) 20%.

Generalized entropy GE(0) is one member of a family of measures derived from the notion of entropy in information theory. It is also known as Theil's second measure and can be computed as follows:

$$GE(0) = \frac{1}{n} \sum_{i=1}^{n} ln\left(\frac{\mu_x}{x_i}\right)$$

A major attraction of this index is that it is decomposable: the total inequality can be decomposed into a component measuring inequality between groups and components measuring inequality within groups.

Income (or expenditure) shares of the top 1% and 5% of the households in the distribution focus on income (or expenditure) shares of the richest households.

The *growth incidence curve* plots per capita income (or expenditure) growth at each point of an income distribution between two periods, which can provide more detailed insight into what is driving changes in the distribution over time than any summary measure of inequality.

There appears to be a positive and statistically significant relationship between the increase in the Gini (rising inequality) and GDP growth (Figure 2.2.1).

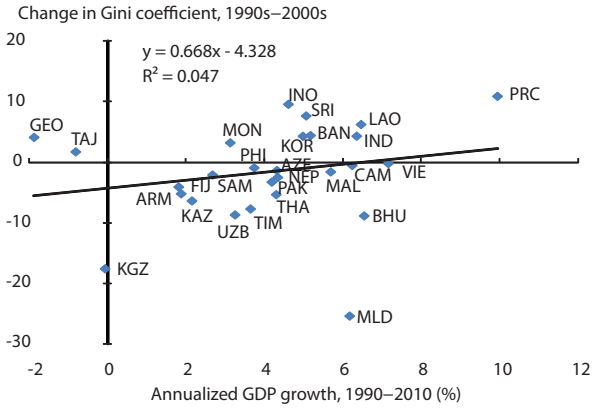
The trend of rising inequality is widespread in the region. Yet 14 economies with data in the 2 decades recorded an improvement in the Gini, five from Central Asia. Part of the former Soviet Union, these five underwent dramatic economic and social transformation from the late 1980s, when the Gini surged, but the coefficient declined in more recent years as their economies became more stable. In the Kyrgyz Republic, for example, the Gini worsened from 26 in 1988 to 53.7 in 1993, then declined to 36.2 in 2009.

Most of the other countries that saw an improving Gini coefficient (sometimes sharply) have a small economy: Bhutan, Fiji, Maldives, Nepal, Timor-Leste, Tuvalu, and Samoa. Some of them are vulnerable to shocks. Maldives, for instance, experienced a devastating tsunami in 2004 and Timor-Leste went through civil conflicts. These are likely to have impacted on incomes of different classes and on income distribution.

To gain more insight into the pattern of inequality and its change over time, we look at the Gini coefficient of urban and rural subpopulations within a country, focusing on the PRC, India and Indonesia, the region's three most populous countries.

In the PRC, rural and urban inequalities increased in 1990–2008—urban from 25.6 to 35.2 and rural from 30.6 to 39.4

2.2.1 GDP growth and change in the Gini coefficient



ARM = Armenia (1998–2008); AZE = Azerbaijan (1995–2008); BAN = Bangladesh (1991–2010); BHU = Bhutan (2003–2007); CAM = Cambodia (1994–2008); FIJ = Fiji (2002–2008); GEO = Georgia (1996–2008); IND = India (1993–2010); INO = Indonesia (1990–2011); KAZ =Kazakhstan (1993–2009); KOR = Rep. of Korea (1992–2010); KGZ = Kyrgyz Republic (1993–2009); LAO = Lao People's Dem. Rep. (1992–2008); MAL = Malaysia (1992–2009); MLD = Maldives (1998–2004); MON = Mongolia (1995–2007); NEP = Nepal (1995–2010); PAK = Pakistan (1990–2007); PHI = Philippines (1991–2009); PRC = People's Republic of China (1990–2008); SAM = Samoa (2002–2008); SRI = Sri Lanka (1990–2006); TAJ = Tajikistan (1999–2009); THA = Thailand (1990–2009); TIM = Timor-Leste (2001–2007); UZB = Uzbekistan (1998–2003); VIE = Viet Nam (1992–2008).

Sources: PovcalNet (accessed 9 March 2012); World Development Indicators online database (accessed 9 February 2012).

2.2.1 Trends in inequality in developing Asia

Economy	Initial year	Final year	Gini coefficients			Quintile ratios		
			1990s	2000s	Annualized growth rate (%)	1990s	2000s	Annualized growth rate (%)
Central Asia								
Armenia	1998	2008	36.0	30.9	-1.5	5.8	4.5	-2.5
Azerbaijan	1995	2008	35.0	33.7	-0.3	6.1	5.3	-1.1
Georgia	1996	2008	37.1	41.3	0.9	7.1	8.9	1.9
Kazakhstan	1996	2009	35.3	29.0	-1.5	6.2	4.2	-3.0
Kyrgyz Republic	1993	2009	53.7	36.2	-2.5	22.7	6.4	-8.0
Tajikistan	1999	2009	29.0	30.8	0.6	4.5	4.8	0.6
Uzbekistan	1998	2003	45.3	36.7	-4.2	-	-	-
East Asia								
China, People's Rep. of	1990	2008	32.4	43.4	1.6	5.1	9.6	3.6
Korea, Rep. of	1992	2010	24.5	28.9	0.9	-	-	-
Mongolia	1995	2007	33.2	36.5	0.8	-	-	-
Taipei,China	1990	2010	31.2	34.2	0.5	5.2	6.2	0.9
South Asia								
Afghanistan	-	2007	-	27.8	-	-	-	-
Bangladesh	1991	2010	27.6	32.1	0.8	3.9	4.7	0.9
Bhutan	2003	2007	46.8	38.1	-5.2	9.9	6.8	-9.4
India	1993	2010	32.5	37.0	0.7	4.8	5.7	1.1
Maldives	1998	2004	62.7	37.4	-8.6	46.6	6.8	-32.1
Nepal	1995	2010	35.2	32.8	-0.5	5.5	5.0	-0.7
Pakistan	1990	2007	33.2	30.0	-0.6	5.2	4.2	-1.3
Sri Lanka	1990	2006	32.5	40.3	1.3	4.8	6.9	2.3
Southeast Asia								
Cambodia	1994	2008	38.3	37.9	-0.1	5.8	6.1	0.3
Indonesia	1990	2011	29.2	38.9	1.4	4.1	6.6	2.2
Lao People's Dem. Rep.	1992	2008	30.4	36.7	1.2	4.3	5.9	1.9
Malaysia	1992	2009	47.7	46.2	-0.2	11.4	11.3	0.0
Philippines	1991	2009	43.8	43.0	-0.1	8.6	8.3	-0.2
Thailand	1990	2009	45.3	40.0	-0.6	8.8	7.1	-1.2
Viet Nam	1992	2008	35.7	35.6	0.0	5.6	5.9	0.2
The Pacific								
Fiji	2002	2008	46.8	42.8	-1.5	12.6	8.0	-7.5
Kiribati	-	2006	-	40.0	-	-	7.8	-
Micronesia, Fed. States of	1998	-	45.0	-	-	10.3	-	-
Nauru	-	2006	-	48.0	-	-	16.2	-
Palau	-	2006	-	42.0	-	-	7.6	-
Papua New Guinea	1996	-	50.9	-	-	12.5	-	-
Samoa	2002	2008	45.0	43.0	-0.8	9.2	7.9	-2.5
Solomon Islands	-	2006	-	46.0	-	-	10.3	-
Timor-Leste	2001	2007	39.5	31.9	-3.6	7.0	4.6	-6.9
Tonga	-	2001	-	34.0	-	-	6.0	-
Tuvalu	1994	2004	45.0	37.0	-2.0	8.9	6.2	-3.6
Vanuatu	-	2006	-	46.0	-	-	10.4	-

- = not available.

Note: Gini coefficients and quintile ratios are mainly from earliest available data in the 1990s (except for Bhutan, Fiji, Samoa, and Timor-Leste, which are in the early 2000s) and latest available data, based on per capita expenditures, except for those of Malaysia and Taipei,China which are income-based. Estimates for the People's Republic of China and Indonesia combine the separate urban and rural distributions, weighted by share of urban/rural to total population.

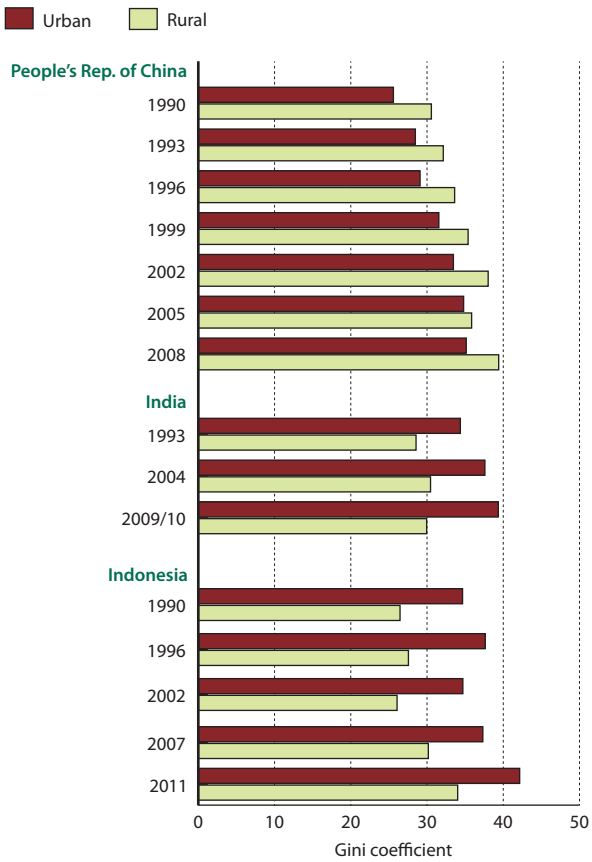
Source: PovcalNet data (accessed 9 March 2012), supplemented by household survey data mostly from Pacific countries and from India, and publications of official statistics offices (Republic of Korea and Taipei,China).

(Figure 2.2.2). The pace in both was similar, leaving rural areas more unequal than urban areas, a position unlike that in most developing countries. However, the rate of increase appears to have been slowing since the early 2000s, for both areas.[5]

In India, the urban Gini grew from 34.4 in 1993 to 39.3 in 2010, much faster than the contemporaneous growth of the rural Gini, from 28.6 to 30.0. India's rural inequality is lower and urban inequality is higher than in the PRC and, unlike the PRC but like most developing countries, India's urban inequality is higher than its rural inequality.

Similarly in Indonesia, urban inequality has been consistently higher than rural inequality, respectively, in 2011, 42.2 and 34. During 1990–2011, both urban and rural inequalities increased (but urban inequality faster).

2.2.2 Urban and rural inequality in the PRC, India, and Indonesia



Source: PovcalNet (accessed 9 March 2012) and ADB estimates using household survey data (India).

Quintile ratios

The Gini coefficient presents an aggregate measure of inequality in a distribution, and it may hide detailed patterns of differences across different levels of income. Table 2.2.1 above presents the quintile ratios—the ratio of the per capita expenditure of the top 20% to that of the bottom 20%. In the late 2000s, 12[6] out of the 32 economies with available data had a quintile ratio at or above 7, that is, the average per capita expenditure of the richest 20% households was at least seven times as high as that of the poorest 20%. The mean quintile ratio for the 32 economies was 7.1.[7]

Table 2.2.1 also shows that on an annual basis, the change in the quintile ratio is more pronounced than the change in the Gini for almost all the countries. For example, the PRC's annualized rate of increase of the Gini was 1.6%, but 3.6% for the quintile ratio (the ratio grew from 5.1 in 1990 to 9.6 in 2008). The larger increase in inequality when measured by the quintile ratio than by the Gini suggests that rising inequality may have been driven by households at the top.

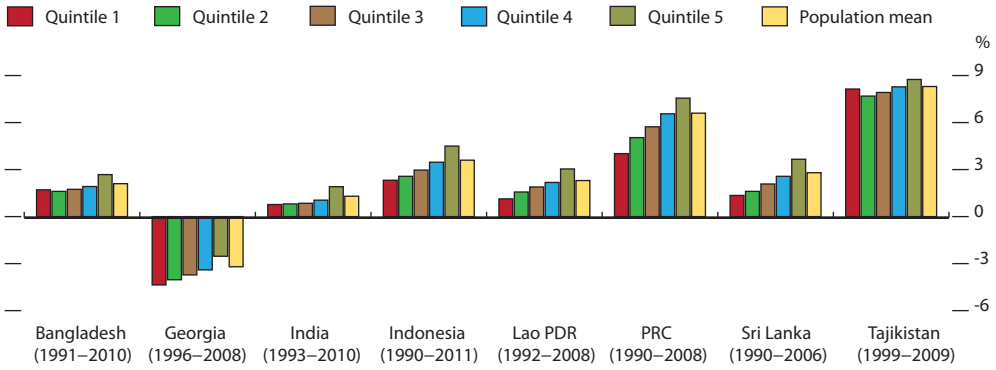
Growth incidence curves

Growth incidence curves provide more detail on distributional changes by allowing one to look at income growth between two periods at various points of an income distribution. Figure 2.2.3 shows the annual growth of mean per capita expenditure by quintile as well as for the entire population for the countries experiencing rising inequality in the last 2 decades with available data.[8]

All income groups of households (apart from Georgia's) experienced per capita expenditure growth during the periods reviewed. This suggests that economic growth has raised living standards for all people in these countries. However, per capita expenditure grew much faster for the top quintile households than for the lower quintiles, especially than for the bottom quintile.

In the PRC, for example, the mean expenditure growth for the bottom quintile in 1990–2008 was only 4%, but 7.6% for the top quintile. In India, the mean growth was only 0.8% for the bottom quintile but 1.9% for the

2.2.3 Growth incidence by quintile, countries with rising inequality



Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

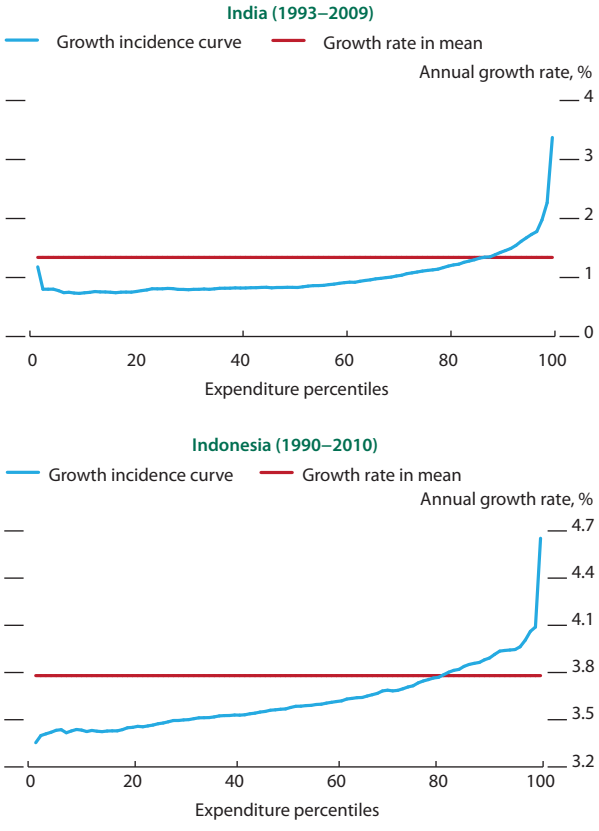
Source: ADB estimates using PovcalNet (accessed 9 March 2012) and household survey data (India).

top quintile. (In Georgia, income fell for all quintile groups in 1996–2008, though as the decline was more significant for the bottom quintile than for the top quintile, inequality widened).

Figure 2.2.3 also compares mean growth of each quintile with that of the population. It shows that in all the countries (but the PRC and Tajikistan), rising inequality involves a shift of income from the bottom 80% of the population to the top 20%, as indicated by lower mean expenditure growth for quintiles 1 to 4 than that for the whole population. In the PRC and Tajikistan, with mean expenditure growth for quintiles 1 to 3 lower than and for quintile 4 close to that of the top quintile, rising inequality involves a shift of income from the bottom 60% to the top 20% of population.

Figure 2.2.4 shows growth incidence curves for India and Indonesia using unit-level survey data. The results largely confirm the findings from mean expenditure growth by quintile. The growth incidence curve cuts across the line of growth of population mean per capita expenditure at close to the 80th percentile, suggesting that rising inequality in the two countries has been driven by income redistribution to the top 20%, at a cost to the bottom 80%. The growth incidence curve increases monotonically for Indonesia. But for India, expenditure growth at the lowest few percentiles was higher than growth of population mean per capita expenditure.

2.2.4 Growth incidence curves, Indonesia and India



Source: ADB estimates using household survey data.

Expenditure shares of the top 5% and 1%

Figure 2.2.5 goes further up the income distribution, focusing on the very top. In terms of levels, there are large variations in the expenditure shares of the top 5% and 1%. Except for the Pacific countries, in the late 2000s the shares of the richest households are relatively close across countries, in the range of 17–22% for the top 5% and 6–9% for the top 1%. For the Pacific countries, the shares of the top 5% and 1% are higher with a wider variation: 15–28% for the top 5% and 5–16% for the top 1%.

Consistent with the changes in the Gini and quintile ratios, most of the countries in Figure 2.2.5 show that the expenditure shares of the top 1% and 5% increased during the review

periods. In the PRC, for example, in 1995–2008 the share of the top 5% rose from 17% to 20.5%, and that of the top 1% from 4.6% to 6.4%. In India, the shares of the top 5% and 1% increased from 17.7% and 6.5% in 1993 to 21.3% and 9%, respectively, in 2010. These results back up the earlier point that rising inequality in developing Asia is closely associated with very rapid increases in the very top income groups—that is, the rich are getting richer much faster.

Within- and between-country inequality

Although the focus of this chapter is on inequality within each country, it is useful both to look at Asia-wide inequality that considers developing Asian countries as one entity and to ask how important within-country inequality is, compared with between-country inequality.

The Asia-wide Gini coefficient increased from 39 in the mid-1990s to 46 in the late 2000s, or 1.4% a year. Both within-country and between-country inequality as measured by the GE(0) index (Box 2.2.1 above) widened (Figure 2.2.6). However, between-country inequality grew faster, as its contribution to Asia-wide inequality rose from about 22.6% in the mid-1990s to 29.6% in the late 2000s, while the contribution of within-country inequality to Asia-wide inequality declined from 77.4% to 70.4% in the same period. The between-country income differences can be largely explained by much faster growth in the PRC than in the rest of the region.

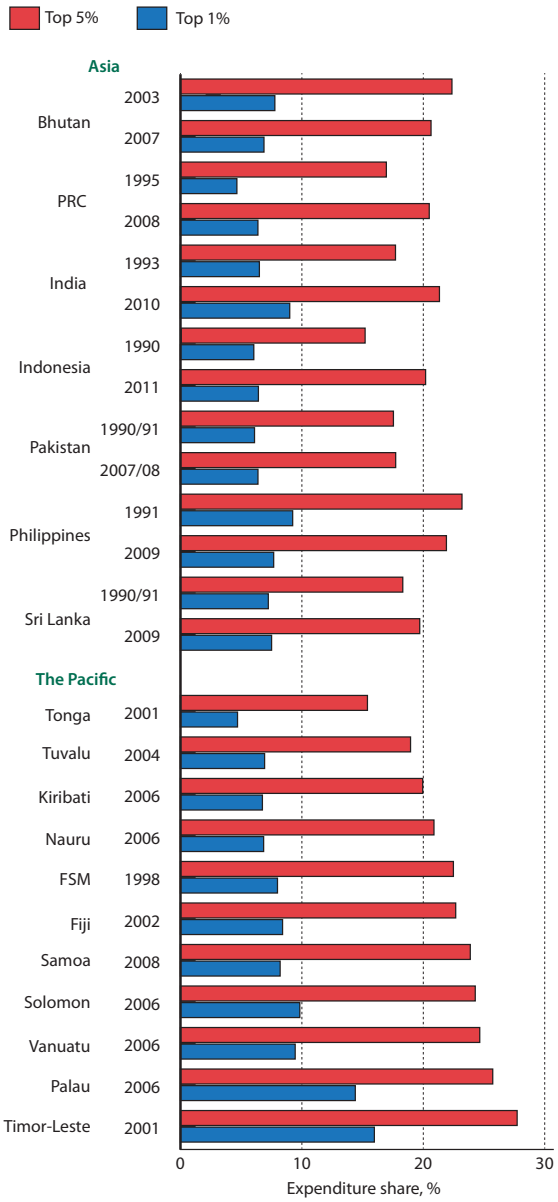
Asia's inequality in a global context

Before going into a detailed comparison of Asia's inequality vis-à-vis other groupings, a word of caution. Inequality measures are by and large based on per capita incomes for OECD and Latin American countries, while they are based on per capita expenditure in most developing Asian countries (as well as Sub-Saharan Africa). As noted earlier, income-based inequality measures tend to run higher than expenditure-based ones.[9]

Despite recent increases, Gini coefficients in developing Asia are still on average lower than in other regions of the developing world (Figure 2.2.7). Developing Asia's range of Gini coefficients of 28–51 is tighter than that of Sub-Saharan Africa's 30–66, and lower than that of Latin America and the Caribbean's 45–60. This conclusion is likely to hold even if we consider the differences between income-based and expenditure-based inequalities.

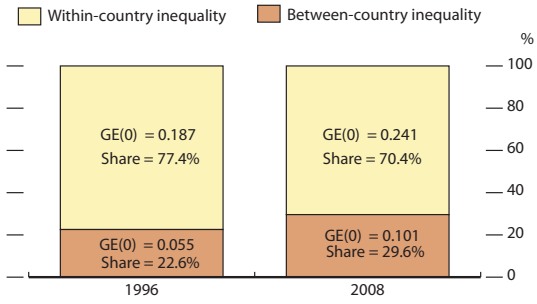
Yet developing Asia compares less favorably when one looks at *changes* in inequality. During the last decade, most Sub-Saharan African countries and more than half of Latin American and Caribbean countries experienced declines in Gini. In developing Asia, 11 out of the 28 economies with comparable data, covering 82% of the region's population, experienced increases in inequality (Figure 2.2.8 below).

2.2.5 Expenditure shares of the top 5% and 1%



FSM = Federated States of Micronesia; PRC = People's Republic of China.
Source: ADB estimates using household survey data.

2.2.6 Decomposition of Asia-wide inequality



GE(0) = See Box 2.2.1.
Note: Asia-wide inequality pertains to 23 countries where comparative data are available for 1996 and 2008 or closest available.
Source: ADB estimates using grouped expenditure data from PovcalNet (accessed 9 March 2012).

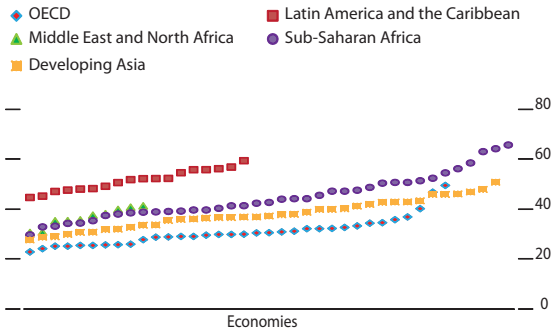
For Latin America, recent studies have identified several contributing factors to the declining inequality, including policies that enhanced employment prospects (including encouraging trade), targeted inequality of human capital through strengthened provision of education and health services, and promoted conditional cash transfers that help build human capital. Large, conditional cash transfer programs, such as *Bolsa Familia* in Brazil and *Progresa/Oportunidades* in Mexico, have played a central role in the turnaround (Esquivel, Lustig, and Scott 2010).

Compared with OECD countries, however, developing Asia's inequality is much higher overall. Of the 34 OECD countries with comparative data, most countries had a Gini in the range of 25–35. High taxes and transfers are key reasons for their low income inequality. Twenty OECD countries had a Gini coefficient before taxes and transfers greater than 40 in the mid-2000s (Figure 2.2.9).

Yet even in OECD countries, as in developing Asia, inequality is on the rise: 17 OECD countries saw increases in the Gini coefficient from the mid-1990s to late 2000s (Figure 2.2.8).[10] A study by OECD (2011a) reports that in many OECD countries household incomes increased much faster at the top income ranges from the mid-1990s to the late 2000s, similar to the experiences of many developing Asian countries. On average, income growth for households in the top decile was 1.5 times as high as that for the bottom decile from the mid-1980s to late-2000s for 27 OECD countries. The difference in income growth between the top and bottom deciles was particularly significant in Germany, Sweden, the US, and the Netherlands, in the range of 3 to 15 times as high.

The OECD study identified various factors contributing to rising inequality, such as increased financial integration and technological change; increased imports from low-income countries, reducing employment prospects for less skilled workers; changes in labor market policies that tended to reduce income and benefits for less skilled workers; increasing prevalence of part-time work; greater numbers of single-headed households; increasing income shares for capital, benefiting rich households; increased incomes from self-employment, which reward the more highly skilled workers; and declining effectiveness of redistribution through taxes and transfers.

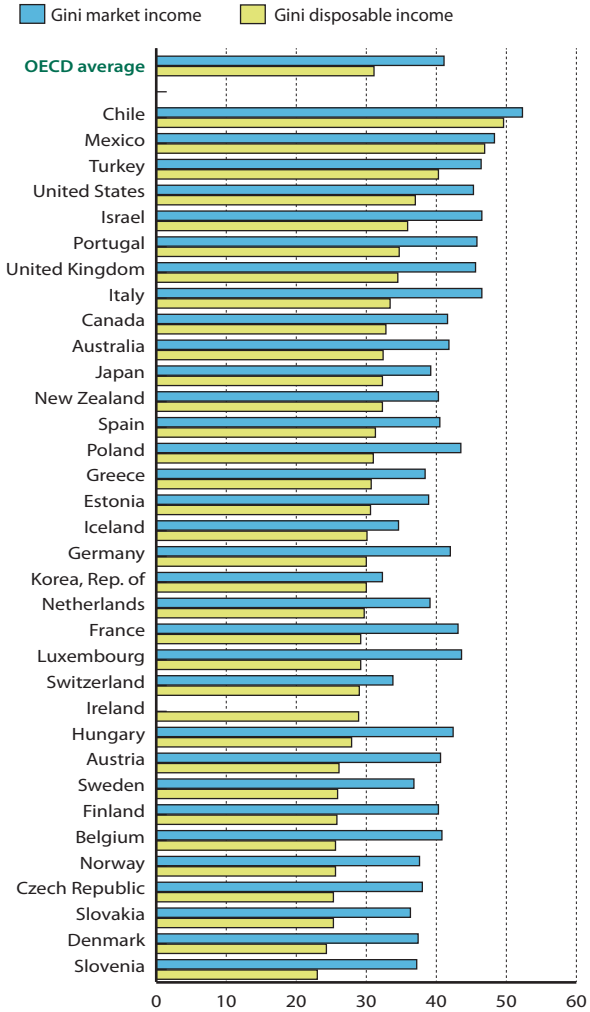
2.2.7 Gini coefficients, 2000s



Note: Markers indicate individual country observations for each region ranked by the value of the Gini coefficient. Gini coefficients for Latin America and the Caribbean and for OECD are estimated from per capita income. For developing Asia (except Malaysia and Taipei,China); Sub-Saharan Africa; Middle East and North Africa, coefficients are estimated from per capita consumption expenditure.

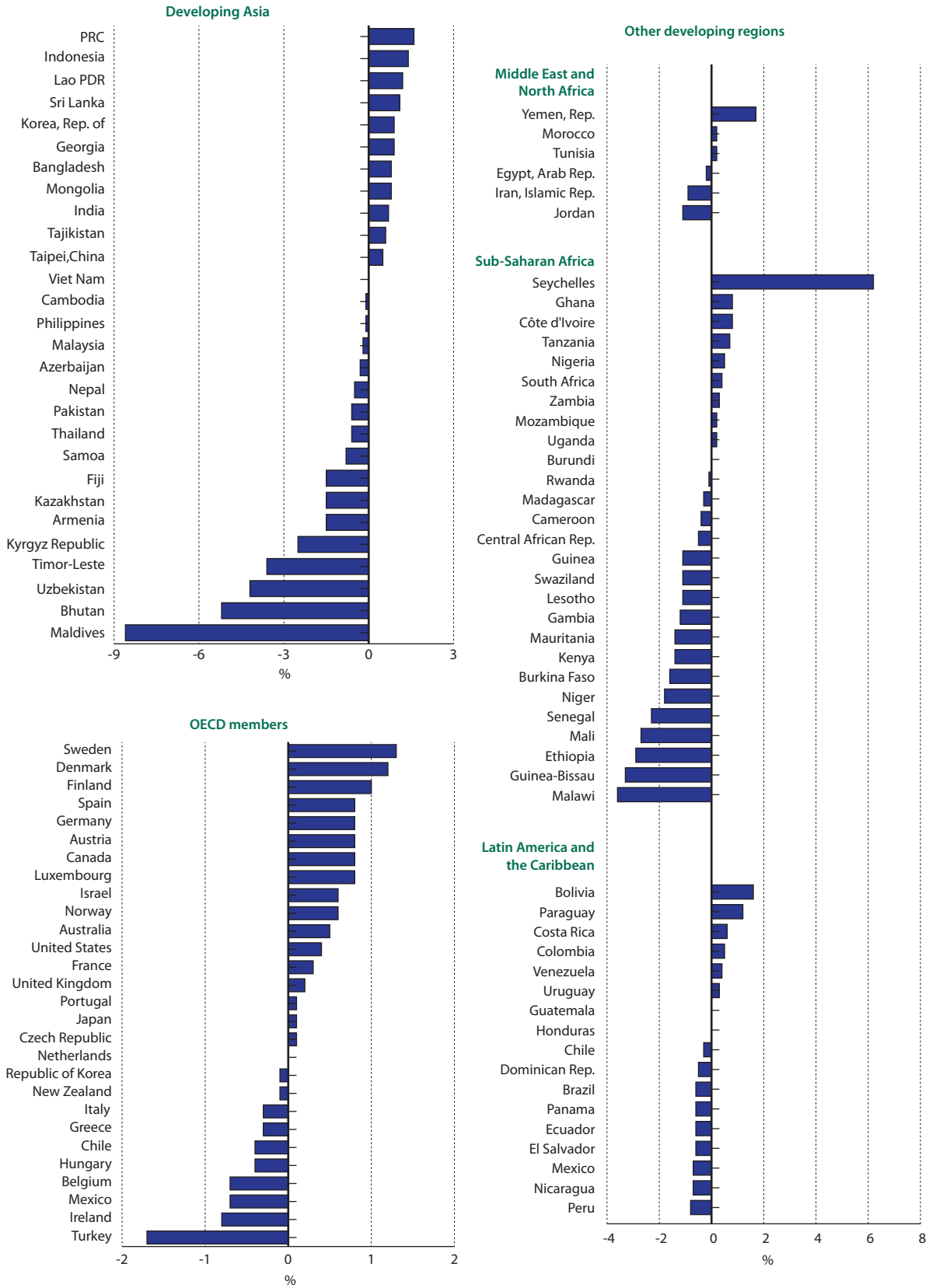
Sources: PovcalNet (accessed 9 March 2012), supplemented by household survey data (most Pacific countries and India) and publications of official statistics offices (Republic of Korea and Taipei,China), OECD Stat database (accessed 9 February 2012).

2.2.9 Gini coefficients of OECD countries, 2000s



Source: OECD Stat database (accessed 24 February 2012).

2.2.8 Annualized change in Gini coefficient: Developing Asia and other regions, 1990s and 2000s



Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

Source: ADB estimates based on PovcalNet (accessed 9 March 2012), supplemented by household survey data for mostly Pacific countries, and publications of official statistics offices (Republic of Korea and Taipei,China).

Inequality of opportunity

What is opportunity?

An important development in the recent discourse on inequality is the focus on opportunity. Whether the opportunity is used well must be conceptually separated from whether it exists in the first place. The policy implications vary greatly depending upon whether the outcome was the result of differences in education and health available to an individual—opportunity—or differences in effort. A few examples will illustrate this point.

First, consider two low-income individuals. One, despite having been provided with a good education and health care, wastes this opportunity by not exerting enough effort and enterprise, and ends up with a low income. The other had poor education so that, despite being willing to work hard, ends up with low income. The first individual suffers due to lack of effort, while the second one is limited by his or her circumstances (Roemer 1998). The distinction here is that the first person could have applied more effort, while the second was constrained by a lack of opportunity.

But how do differences in opportunities arise in the first place? Consider two individuals with different levels of education and health because one did not have access to schools or health services. This could be because of discrimination in access for social reasons, or because of services not provided in certain geographic areas. Preventing individuals from enhancing their human capital to augment their earning potential—through discrimination or incomplete service coverage—creates inequality of opportunity.

Unfortunately, that is not the only way that unequal opportunities arise. Consider now two individuals with the same level of education and health, and the same level of effort and enterprise, but one of whom is simply not allowed to exercise that effort and enterprise to earn income. This exclusion could stem from discrimination in the labor or credit market, or from gender or racial bias. Such social exclusion creates inequality of opportunity as well.

Differences in opportunity can therefore arise because of differences in access to public services that lead to differences in human capital formation (education and health), or because of differences in access to income earning opportunities. However, the final outcome, in this case income actually earned, depends also on the effort and enterprise applied by the individual. Inequality of opportunity is thus a determinant of inequality of outcome, but not the sole factor.

Inequalities due to circumstances are ethically unacceptable because it is attributable to factors over which the individual has no control. In contrast, inequalities due to effort may be ethically acceptable, and may even be desirable to reward enterprise and thereby spur productivity and growth. Thus inequality of opportunity is the more important for policy action.

Of course, in practice it is not easy to separate effort from opportunity, especially in an intergenerational context (Kanbur 2010). Thus parental income, which may be the result of their effort, nevertheless determines the opportunity of their children. Inequality of income, even if it is not of direct concern in this framework, will still be important as a determinant of inequality of opportunity.

This connection between inequality of income and of opportunity makes it important to study both, and for policy makers to address both dimensions of inequality. If drivers of inequality are such that any given inequality of opportunity is transformed into ever greater divergences in income, and this income inequality translates into inequality of opportunity in the next generation, policy makers will need to redouble their efforts to break the link between parental income and educational opportunity for their children.

Inequalities of education and health in Asia

Asia has made significant strides in improving average achievements in education and health. However, considerable inequalities remain, as now discussed.

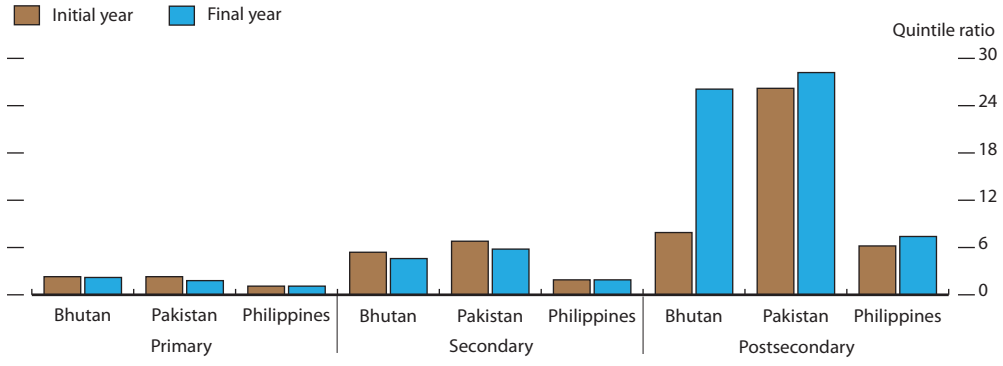
Education

Significant inequality in education persists in developing Asia, discussed here along three dimensions: wealth, location, and gender.[11]

Inequality by wealth quintile. Inequality in the proportion of out-of-school children between rich and poor households was, in the late 1990s to mid-2000s, very wide in developing Asia (UNESCO 2005). For example, in Bangladesh, India, Mongolia, Myanmar, and the Philippines, where the average proportion of out-of-school primary school-age children was about 20% in 1999–2003, children from the poorest quintile were three times as likely as those from the richest quintile to be out of school. In Cambodia and the Lao PDR, with an average proportion of about 35%, the children from the poorest quintile were four or five times as likely as those from the richest quintile to be out of school.

Results from more recent household survey data for Bhutan, Pakistan, and the Philippines show that inequality in education indicators persists (Figure 2.3.1). In Bhutan in 2007, the net attendance rate for primary schooling for the top-quintile households (based on per capita household expenditure) was more than two times as high as that for the bottom quintile. The ratio was even greater for secondary schooling at close to five

2.3.1 Gaps in net attendance rates between top and bottom quintiles, 2000s



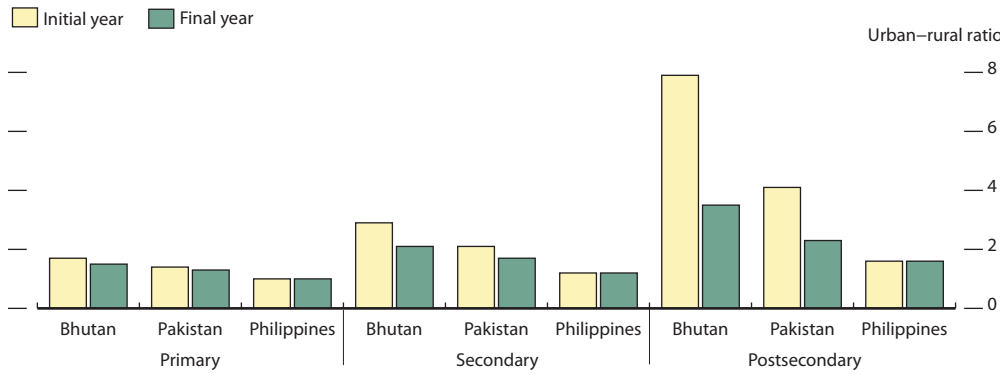
Note: Net attendance rate refers to the percentage of children of primary (or secondary or postsecondary) school age attending primary (or secondary or postsecondary) school. Initial year refers to 2003 for Bhutan and 2002 for Pakistan and the Philippines; final year refers to 2007 for Bhutan, 2008 for Pakistan, and 2010 for the Philippines.

Source: ADB estimates using household survey data.

times, and postsecondary at 25 times. Relative to 2003, the gap widened significantly for postsecondary education.

In Pakistan in 2008, the net attendance rate for primary education for the top quintile was about two times as high as for the bottom quintile. In the case of secondary education, the ratio was over five, and for postsecondary, it was 27, increasing slightly from 2002.

2.3.2 Urban–rural gaps in net attendance rates, 2000s



Note: Initial year refers to 2003 for Bhutan and 2002 for Pakistan and the Philippines; final year refers to 2007 for Bhutan, 2008 for Pakistan, and 2010 for the Philippines.

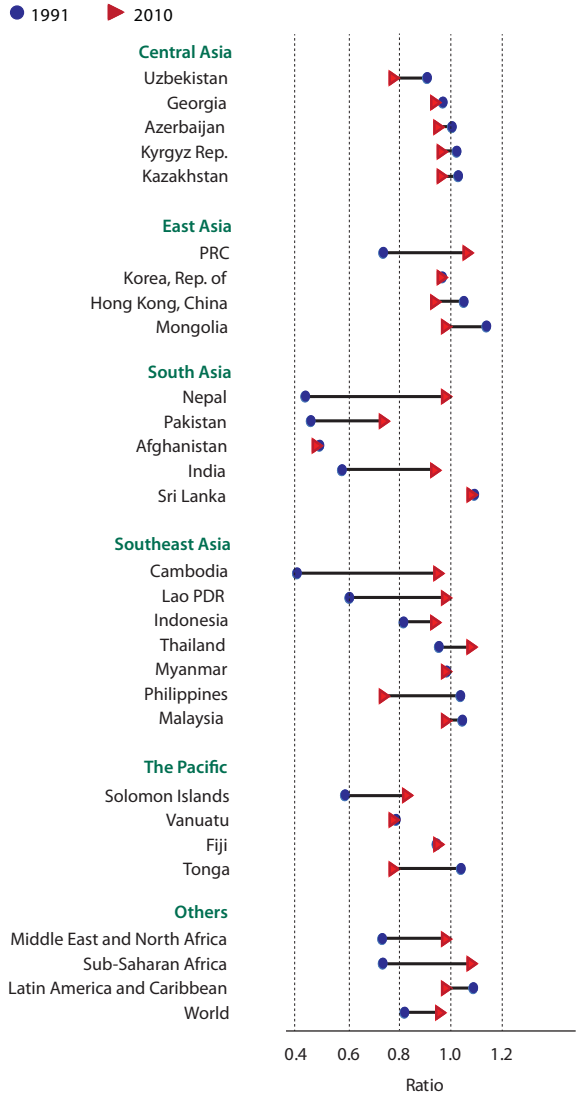
Source: ADB estimates using household survey data.

In the Philippines in 2010, the difference in net attendance between the top and bottom quintiles was not large for primary education, but much larger for secondary education, even more so for postsecondary education. The net attendance rate for postsecondary education for the top quintile was about seven times as high as for the bottom quintile.

Inequality by location. Significant inequality in education also exists between urban and rural areas (Figure 2.3.2). For example, in Bhutan in 2007 and Pakistan in 2008, the net attendance rate in the rural area was only two-thirds in primary education, about one-half in secondary education, and one-third in postsecondary education of that of the urban area. In the Philippines in 2010, the inequality in education between rural and urban areas was much smaller in primary and secondary education, but significant in postsecondary education: the urban rate was 1.5 times as high as the rural rate.

Inequality by gender. Education indicators by gender are more available (partly because they are part of the MDG indicators). Recent data suggest that most developing Asian countries have achieved or almost achieved gender parity in primary education, apart from Afghanistan and Papua New Guinea, where gender differences remain wide—the latest available data (in the 2000s) indicate that the ratio of girls' to boys' gross enrollment in primary education stood at 0.69 for Afghanistan and 0.82 for Papua New Guinea, according to the World Development Indicators. While the level of gender equality is less uniform for secondary than primary education, many countries made progress (Figure 2.3.3). Gender parity has been achieved in East Asia, Central Asia, and most countries in Southeast Asia, but gender gaps remain wide in South Asia (except Sri Lanka), and some countries in Southeast Asia and the Pacific. It is worrying to observe a reduction in the ratio of girls' to boys' secondary school enrollment rates in Afghanistan, however.

2.3.3 Ratio of girls' to boys' gross enrollment in secondary education, 1991 and 2010



Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

Note: The figure is based on 1991 data and the latest available data between 2007 and 2010.

Source: World Bank. World Development Indicators online database (accessed 15 February 2012).

In tertiary education, in some countries that have already achieved gender parity, girls' enrollment rates exceed boys', notably Maldives and Palau, where girls' rates are more than twice as high (Figure 2.3.4). In contrast, the rest of South Asia, except Maldives, are behind most other countries in the region.

Health

Health inequality within countries remains considerable in Asia, despite overall improvements in the average health of countries' populations throughout the region.

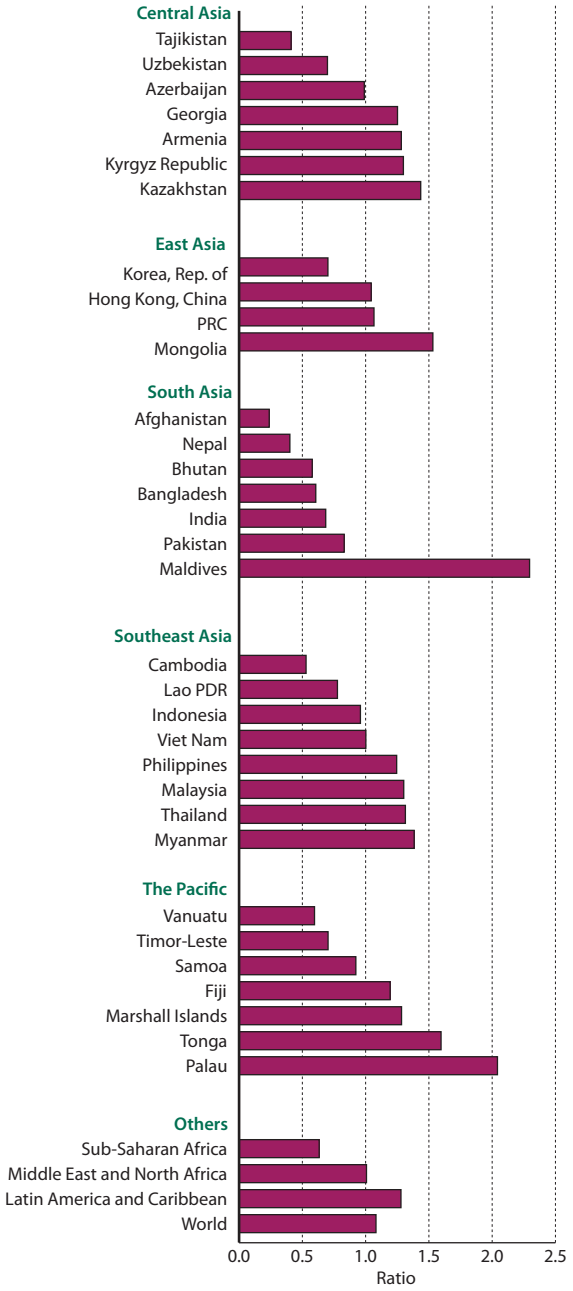
Inequality by wealth quintile. The mortality rates for the bottom quintile are much greater than for the top quintile in urban areas of all the countries in Figure 2.3.5. In the worst case, the chance of a poor infant dying at birth is more than 10 times that of an infant born to a rich family. This stark pattern of inequality in infant mortality is partly related to differences in birth attendance by skilled health personnel between rich and poor households. In all countries for which data are available, the poorest do much worse than the richest. In the worst case, the percentage of attended births in the lowest quintile is less than a fifth of the number for the top quintile. In some cases the situation has worsened in recent years.

Inequality by location. Spatial disparity in health achievements in Asia is large, especially between urban and rural areas. WHO data[12] show that in all the Asian countries with available data, the infant mortality rate in rural areas is much higher than that in urban areas. In Cambodia, Kazakhstan, the Philippines, and Viet Nam, the difference increased during the 2000s.

Inequality by gender. Gender is an important dimension of health disparity, which is clearly seen in under-five mortality rates (Figure 2.3.6). High mortality rates for both boys and girls in Afghanistan are alarming. A number of countries in Asia and the Pacific also record relatively high rates relative to the world average.

Boys' under-five mortality rates are higher than girls' in most countries in the region (and in other parts of the world), but girls' rates exceed those of boys' in the PRC, most of South Asia, and some Pacific islands. The preference for sons in these countries may be a causal factor, making the opportunity of life itself dependent on a predetermined characteristic—gender. The observed greater number of male than female infants in these countries is not only due to the differential care after birth, but also partly due to sex-selective abortion, though this cannot be captured by mortality rates.

2.3.4 Ratio of girls' to boys' gross enrollment in tertiary education, 2010

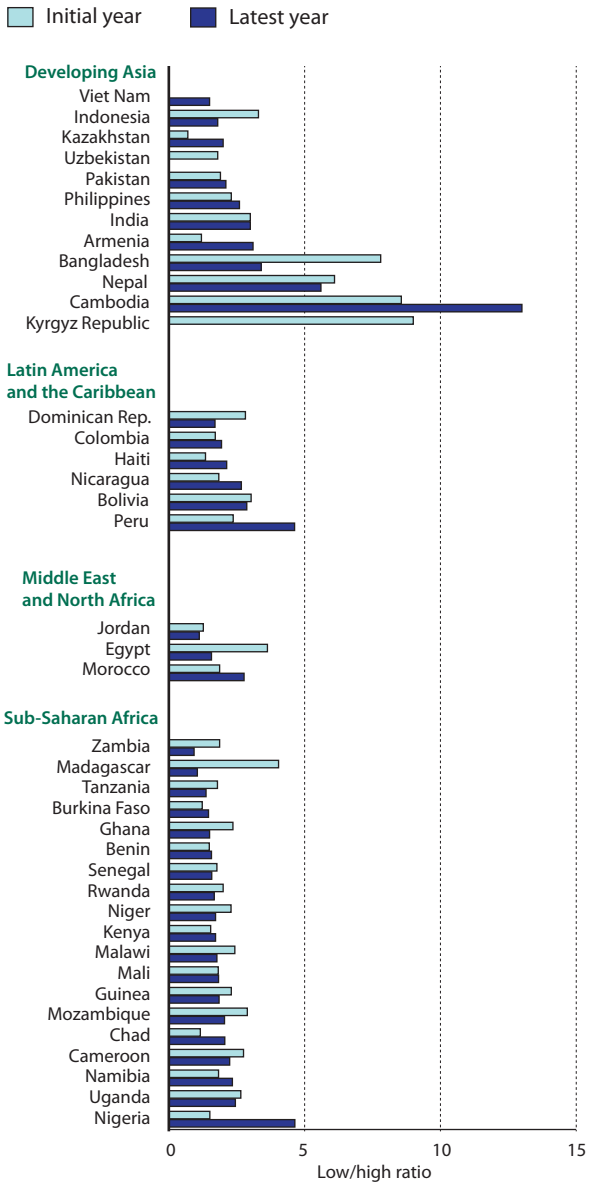


Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

Note: The figure is based on the latest available data between 2001 and 2010.

Source: World Bank. World Development Indicators online database (accessed 15 February 2012).

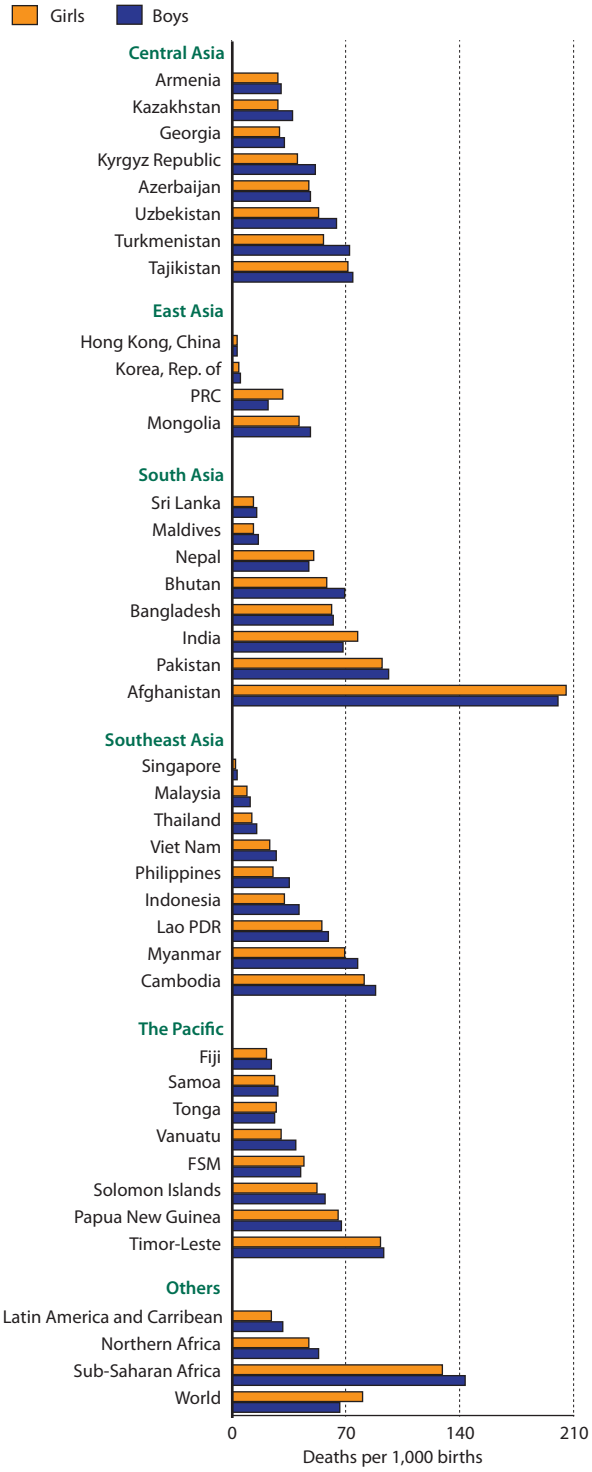
2.3.5 Inequality in infant mortality rate, urban



Note: The low/high ratio shows the ratio of infant mortality rates for those in the bottom quintile of wealth versus those in the top quintile. Initial year refers to earliest year in the 1990s (except for Armenia and Cambodia, which refer to 2000) and latest year in the 2000s for which data are available.

Source: WHO, Global Health Observatory Data Repository (accessed 17 February 2012).

2.3.6 Under-five mortality rate for girls and boys, 2005–2010



FSM = Federated States of Micronesia; Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

Source: World Bank. World Development Indicators online database (accessed 15 February 2012).

Measuring human opportunity in Asia

Strong disparities in education and health thus exist in Asia across income levels, location, and gender. But is there a systematic way of measuring *overall* inequality of human opportunity? Paes de Barros, et al. (2009) developed an approach that starts with the overall national rate of access to a public service—for example, enrollment in secondary school—then calculates how different the access rate is across gender, location, parental education, household income, and other indicators capturing circumstance.[13] The dissimilarity in access rates across these circumstance differences is the degree of inequality of opportunity (the D-index). The D-index can be interpreted as the proportion of a particular opportunity that needs to be redistributed to achieve equal distribution. The inequality of opportunity is then used to scale down the national access rate to estimate the human opportunity index (HOI).

The technical methodology outlined in Box 2.3.1 is applied to six developing countries in Asia (Bhutan, Indonesia, Pakistan, the Philippines, Sri Lanka, and Viet Nam) with a particular focus on inequality of opportunity that is related to basic education and infrastructure. The analysis includes five outcome variables: primary school attendance among children aged 6–11 years; secondary school attendance among children aged 12–17 years; access to safe water; access to electricity; and access to sanitation.

The analysis used a set of circumstance variables required to estimate the D-index and the HOI. These circumstance variables are gender, location of household (urban or rural), education of household head, per capita household expenditure, age of household head, gender of household head, and household size.

2.3.1 Inequality of opportunity (D-index) and the human opportunity index

Estimating the D-index[1] from household survey data involves the following steps:

- Estimating a separable logistic model on whether child j has access to a given opportunity (such as education) as a function of his or her circumstances such as parents' education, family per capita income, gender, and location of residence, which are outside the control of the child (Roemer 1998).
- Given the coefficient estimates, obtaining for each child in the sample the predicted probability of access to the opportunity in consideration, $\hat{\pi}_i$.
- Computing

$$D = \frac{1}{2\pi}\Sigma_{i=1}^{n} w_i \mid \hat{\pi}_i - \bar{\pi} \mid$$

where n is the number of sample households, w_i is the population weight attached to the ith sample household, and $\bar{\pi}$ is the proportion of the population with access to a given opportunity.[2] Note also that $\bar{\pi}$ may be called the coverage rate. D measures the degree of inequality of opportunity that is explained by the individual's circumstances. As such, (1-D) may be interpreted as equity of opportunity.

The human opportunity index (HOI) is then defined as

$$HOI = \bar{\pi}(1 - D)$$

which is a composite index of the coverage rate, and equity of opportunity. The policy makers' objective will be to maximize HOI, which can be achieved either by enhancing total opportunity (coverage) or by increasing equity of opportunity (more equitably distributing opportunity) or by increasing both coverage and equity.

[1] D is also referred to in the literature as the dissimilarity index, which is widely used in sociology.
[2] Note that $\bar{\pi}$ is the mean of $\hat{\pi}_i$ across all individuals.

Source: Paes de Barros et al. (2009).

Inequality of opportunity in basic education

The average coverage rate—or average opportunity—for primary education in various years in the 2000s was the highest for Sri Lanka (Table 2.3.1). It also had the lowest D-index—inequality of opportunity at close to zero, leading to an HOI of 99.3%. The three countries of Southeast Asia were moving toward universal access of basic primary education. For these countries, the estimated HOIs, higher than 90%, suggest that more than 90% of primary education services required for universal coverage are available and distributed equitably. Pakistan not only had the lowest average opportunity, its D-index was also the highest, leading to the lowest HOI among the six countries. For Bhutan and Pakistan, the relatively low HOI was due to both lower average opportunity and higher inequality of opportunity.

2.3.1 Inequality of opportunity in education (%)

Country	Survey year	Primary education, 6–11 years old			Secondary education, 12–17 years old		
		Average opportunity	D-index	Human opportunity index	Average opportunity	D-index	Human opportunity index
Bhutan	2007	83.1	5.0	78.9	72.0	5.8	67.9
Indonesia	2009	94.3	0.9	93.4	80.6	3.7	77.6
Pakistan	2007–08	74.6	8.7	68.1	56.2	15.2	47.6
Philippines	2002	93.9	1.8	92.2	83.1	4.0	79.7
Sri Lanka	2009–10	99.4	0.1	99.3	86.4	2.2	84.5
Viet Nam	2008	96.3	1.3	95.1	82.0	4.4	78.3

Source: ADB estimates using household survey data.

The HOIs for secondary schools (12–17 years old) are much lower among the six countries, suggesting that these countries face greater challenges in ensuring equal access to schools for children aged 12–17. The low HOIs are due to both lower average opportunity and higher inequality of opportunity than for primary education. This is expected because the opportunity costs of sending children to schools are higher at the secondary than the primary level. This also implies that financial incentives such as conditional cash transfer programs could be more effective in targeting older children if the main objective is to improve school enrollment.

Inequality of opportunity in basic infrastructure services for health

Basic services, such as safe water and sanitation (e.g., flushing toilets) have a direct impact on health status and overall well-being. Access to services such as electricity helps households increase their productivity for income generation. Studies show that a household's access to basic infrastructure services is highly and significantly correlated with a lower probability of being poor (for example, Balisacan 2003; Fan, Zhang, and Zhang 2002).

Developing Asia faces a more serious challenge in providing basic infrastructure services than basic education services. The HOIs for access to basic infrastructure services such as safe water, electricity, and sanitation show lower values for all countries and higher dispersion across countries than those for access to basic education services,

highlighting the uneven rates of progress in expanding opportunities for basic infrastructure services in the region (Tables 2.3.2–2.3.4).

The lower HOIs in access to basic infrastructure services compared with those in access to education are due to lower levels of average opportunity and higher levels of inequality of opportunity in some countries, especially for access to safe water and to sanitation. In Viet Nam, for instance, a low HOI in access to safe water, at 15.1%, is due

2.3.2 Inequality of opportunity in access to basic infrastructure services (%)

		Access to safe water			Access to electricity			Access to sanitation		
Country	Survey year	Average opportunity	D-index	Human opportunity index	Average opportunity	D-index	Human opportunity index	Average opportunity	D-index	Human opportunity index
Bhutan	2007	89.9	3.4	86.9	70.1	13.3	60.8	26.5	43.5	15.0
Indonesia	2009	26.8	21.3	21.1	89.5	3.2	86.6	55.2	10.6	49.3
Pakistan	2007–08	34.2	24.1	25.9	90.2	4.7	86.0	66.0	17.7	54.3
Philippines	2002	61.5	12.1	54.1	78.5	12.5	68.6	85.6	6.4	80.2
Sri Lanka	2009–10	40.5	16.3	33.9	93.8	2.1	91.9	94.2	2.2	92.1
Viet Nam	2008	26.4	42.7	15.1	97.2	1.5	95.8	40.2	31.0	27.8

Source: ADB estimates using household survey data.

2.3.3 Contribution of circumstance variables to inequality of opportunity for secondary education, 12–17 years old (%)

Country	Survey year	Gender of children	Area of residence (urban/rural)	Per capita household expenditure	Age of household head	Gender of household head	Education level of household head	Household size
Bhutan	2007	3.4*	42.4*	54.7*	4.1*	1.4*	-4.5*	-1.6
Indonesia	2009	0.2*	11.6*	69.1*	0.4*	1.5*	17.2*	0.1
Pakistan	2007–08	9.5*	5.2*	61.0*	0.2	1.2*	24.0*	-1.1*
Philippines	2002	6.4*	2.4*	90.7*	0.3*	-0.5*	0.0	0.6
Sri Lanka	2009–10	1.3*	0.8*	96.0*	0.6	0.7	0.0	0.6
Viet Nam	2008	4.0*	6.6*	65.7*	1.2	-0.4	11.0*	12.0*

Note: * indicates that the estimated coefficient was found to be statistically significant at the 5% level in the logit regression model of the probability of school attendance among secondary-school-age children, 12–17 years.

Source: ADB estimates using household survey data.

2.3.4 Contribution of circumstance variables to inequality of opportunity for access to sanitation (%)

Country	Survey year	Area of residence (urban/rural)	Per capita household expenditure	Age of household head	Gender of household head	Education level of household head	Household size
Bhutan	2007	43.7*	33.7*	1.7*	1.4*	21.0*	-1.6*
Indonesia	2009	79.6*	17.0*	0.6*	0.1*	2.7*	0.1*
Pakistan	2007–08	38.7*	50.6*	0.6*	0.8*	10.1*	-0.8*
Philippines	2002	2.5*	97.2*	1.1*	0.1*	0.7*	-1.5*
Sri Lanka	2009–10	-0.3*	98.9*	2.4*	0.0	0.0*	-0.9*
Viet Nam	2008	29.0*	67.0*	0.8*	1.5*	2.3*	-0.6*

Note: * indicates that the estimated coefficient was found to be statistically significant at the 5% level in the logit regression model of the probability of having access to sanitation.

Source: ADB estimates using household survey data.

to a low average opportunity at 26.4% and high inequality of opportunity at 42.7%. In Bhutan, a low HOI in access to sanitation, at 15%, is due to both a low average opportunity at 26.5% and high inequality of opportunity at 43.5%.

Determinants of inequality of opportunity

The estimation of the D-index is based on seven circumstance variables, including gender of children, area of residence, per capita household expenditure, gender, age and educational attainment of household head, and household size. The Paes de Barros et al. (2009) decomposition is used to show the importance of each of these variables in contributing to the inequality of opportunity. The following discussion focuses only on secondary education and access to sanitation.

Per capita household expenditure is the most important contributing factor to inequality of opportunity in access to secondary education (Table 2.3.3). For example, it explains 54.5% of the variation in Bhutan and 96% in Sri Lanka. Location of residence (urban and rural) of children is also important (for Bhutan and Indonesia). Educational attainment of the household head also has a significant influence for Indonesia, Pakistan, and Viet Nam. Another important factor is gender of children. Variables including household size, and age and gender of household head, are not important contributing factors.

In the case of access to sanitation, per capita household expenditure is a major driver of inequality of opportunity, and so is residence location (Table 2.3.4), especially in Pakistan, the Philippines, Sri Lanka, and Viet Nam. In Indonesia and Bhutan, the largest contributing factor is location of residence. Educational attainment of household head is also an important contributing factor in Bhutan and Pakistan. Other circumstance variables play insignificant roles.

It is well known that access to safe water and sanitation is generally lower in rural than urban areas. This is due to the relatively higher cost of building water and sanitation infrastructure as well as lower income levels in rural than urban areas. Rural areas often lack an enabling environment that encourages public or private investment in water services, leading to low provision of those services. This is a particular problem in South Asia where there is low overall public or private investment in infrastructure particularly in Bangladesh, India, and Pakistan (WaterAid 2011). Moreover, even if investments are made, poor maintenance is an additional constraint.

Summary

Much needs to be done to improve the distribution of opportunities—as measured by disparities in access to basic services—in developing countries in Asia. Sri Lanka's achievements in equitably providing basic education opportunities demonstrate the importance and possible effectiveness of public policy in achieving equity of opportunity, particularly in education. The need for action is urgent because, without it, inequality of opportunity will be magnified into greater and greater inequality of outcome, which will then continue the cycle of inequality of opportunity and outcome for the next generation.

What drives inequality in developing Asia?

Drivers and channels of inequality

Technological progress, globalization, and market-oriented reform have been the key drivers of developing Asia's rapid growth in the last 2 decades—but they also had huge distributional consequences. Together, they have favored skilled rather than unskilled labor, capital rather than labor, and urban and coastal areas rather than rural and inland regions. These changes can explain many of the movements in inequality in many regional countries.

Technological change can impact on the distribution of income among different factors of production. If it favors skilled labor (more educated or more experienced) over unskilled labor by increasing its relative productivity, we could expect the skill premium—the ratio of skilled to unskilled wages—to go up, which would most likely increase income inequality. Technological change could also affect the distribution of income between labor and capital. If it is biased in favor of capital, it could increase inequality since capital incomes, in general, are less equally distributed and accrue to the rich more than to the poor.

In a similar fashion, *globalization* can affect income distribution. Trade integration, for example, could change relative demand for and hence relative wages of skilled and unskilled workers. It could also affect income distribution between capital and labor because capital and skills often work together due to their complementarity. Financial integration could broaden access to finance by the poor—but could also increase the risk of financial crises and hurt the poor more than the rich. Globalization can magnify the distributional impact of technological progress.

A large literature has emerged in recent years attempting to understand the impacts of trade integration, financial integration, and technological change on income distribution (Box 2.4.1), though it has yet to provide a clear-cut answer. One complication is that there are several, closely linked, confounding factors.[14]

Market-oriented reform is an important driver of growth, but can also have significant distributional consequences. Trade policy reform is often part of the driving forces of globalization. Labor market reforms can change the bargaining position of labor vis-à-vis capital owners, impacting on wage rates and income distribution between labor and capital. Economic transition from a command to a market economy can improve efficiency and make returns to assets more closely reflective of resource scarcity, which can affect income distribution among different productive assets in a significant way.

Moreover, the impacts of the three drivers of growth—technological progress, globalization, and market-oriented reform—can be

2.4.1 Globalization and inequality

There is general consensus among researchers and policy makers that Asia's stellar growth performance could not have been achieved without its embrace of globalization. All countries in Asia are committed to greater integration with the global economy in coming decades. How does greater openness of an economy influence income inequality? Economic analysis does not provide a clear answer.

The simplest trade theory predicts that for countries with abundant unskilled labor, opening the economy should raise the wages of unskilled labor and depress the wages for skilled workers and returns to capital, as the country specializes in low-skill production, increasing equality (Stolper and Samuelson 1941). The historical evidence on "growth with equity" from the Republic of Korea; Singapore; and Taipei,China seems to support this thesis (Wood 1999).

The recent evidence on trade, openness, and inequality, however, is mixed, especially for economies that are not readily characterized as being abundant in unskilled labor, are resource rich, or have production structures not easily captured by the simple model. The channels between market opening and inequality are complex, and the quest for clarity in results remains elusive (Box table).

Empirically, a number of variables that affect inequality can confound the effect of trade openness on inequality, most notably financial integration, and skill-biased technological change and rising skill premiums.

Empirical studies on globalization and inequality

Mechanism and net effect on inequality	Sample or data	Literature
Decrease		
Financial integration can spur growth and benefit the poor	Meta-survey	Demirguc-Kunt and Levine (2007)
No effect		
Trade liberalization	Survey of results for Mexico, Colombia, Brazil, Chile (1990s)	Goldberg and Pavcnik (2007)
Inconclusive or varying		
Trade liberalization may decrease or increase wage differentials	Survey for Latin America and East Asia (1960–1970s, 1980s–1990s)	Wood (1999)
Financial integration may increase the poor's access to finance, but gains may be captured by elite: Inequality increases at low income levels; decreases as income rises	Meta-survey	Claessens and Perotti (2007)
Trade openness benefits the rich more than the poor in very poor countries; it benefits the poor and middle class more as income rises.	Household surveys, World Income Distribution (WYD) database (1988, 1993, 1998)	Milanovic (2005)
Financial globalization increases Gini coefficient by about 0.04; trade globalization decreases Gini coefficient by about 0.05	Global dataset (1980s–2000s)	IMF (2007)
Increase		
FDI increases demand for high-skilled workers	119 countries (1993–2004) from World Development Indicators 2004	Choi (2006)
FDI increases demand for skilled workers, explains 11% of wage inequality	101 manufacturing industries in UK (1983–1992)	Taylor and Driffield (2005)
FDI increases demand for high-skilled workers, and thus explains 50% of the increase in share of skilled labor	Data on foreign assembly plants in Mexico (1975–1988)	Feenstra and Hanson (1997)
Trade induces skill-intensification in the traded manufacturing sector, resulting in a 0.1% change in wage premium	Micro-level data from approximately 1 million workers in Mexico (1987–1993)	Cragg and Epelbaum (1996)
Trade index explains 10–12% of wage gap between workers with different schooling; financial index explains 12–33% of the gap; capital account index explains 25–30%	Household surveys from 18 Latin American countries (1977–1998)	Behrman, Birdsall, and Székely (2003)
Financial integration may lead to crises which hurt the poor: poverty incidence increased from 1997 to 1998 in Indonesia by 11–19.9%; Republic of Korea, 2.6–7.3%; Malaysia, 8.2–10.4%; Thailand, 9.8–12.9%	Country data for Indonesia, Republic of Korea, Malaysia, Thailand, and some Latin American countries (Asian financial crisis period)	Fallon and Lucas (2002)
Financial integration may lead to crises that hurt the poor; macroeconomic volatility increases poverty index by about 0.35 to 0.40	Macroeconomic data on various countries (World Bank Live Database) (1980s–1990s)	Agenor (2002)

Source: ADB staff compilation.

geographically uneven, leading to a further channel of changing income distribution: spatial inequality. This is because new economic opportunities, released by these drivers, are often most easily seized by locations closer to the existing trade routes—coastal areas, for example, not inland ones—and areas with better public infrastructure—such as urban locations, not rural areas. This leads to shifts in income distribution among different geographic locations.

Complicating the analysis is that the impacts of the three drivers are intertwined. Although they can be disentangled conceptually, it is difficult to do so empirically. In the next three sections, therefore, instead of trying to isolate their impacts, we will look at three channels through which the three drivers affect income inequality: shifts in income distribution between skilled and unskilled labor, by examining returns to human capital and the skill premium; between labor and capital, by analyzing labor and capital income shares; and between different locations, by estimating spatial inequality. This approach also facilitates discussions of policy responses.

Yet those individuals and groups excluded from the market because of individual circumstances beyond their control or discrimination would certainly not benefit from these opportunities—inequality of opportunity magnifies the distributional consequences of the three drivers. One such group is women—discussed in the final section.

Increasing skill premiums

Inequality of education is a major contributor to inequality of income. There is significant global evidence that the rates of return to progressively higher levels of education have been trending upward in recent years. In OECD countries, for instance, those who do not complete an upper secondary education could earn an average of 23% less than their counterparts who do. A person with a tertiary education can expect to earn over 50% more than a person with an upper secondary or postsecondary non-tertiary education (OECD 2011b).

In Asia, empirical studies find that the returns to education increase with educational attainment and that the relationship has been getting steeper over time. An ADB study (2007b) finds that from the mid-1990s to mid-2000s, real wages grew much faster for wage earners with tertiary or higher education than for those with lower educational attainment in India and the Philippines, leading to wider wage differentials.

The same study also finds that education is the single most important factor among those variables that were included in analyzing wage inequality. In the case of India, the Gini coefficient of wages increased from 40.5 in 1993 to 47.2 in 2004. Half the increase can be explained by individual characteristics. Of this explained increase, about 50% is accounted for by education.

Many other studies have provided direct or indirect evidence of rising skill/education premiums in developing Asia. Son (2010) finds that in the Philippines education increases individuals' employability. In 2003, the probability of being employed was 57% for individuals with tertiary education, and 34% for those with primary education only. This difference in employability increased from 1997 to 2003. Further, the difference in

employability due to differences in educational attainment was more pronounced among poorer households.

A study on India, the Philippines, and Thailand finds that the rate of return to college education rose relative to that of secondary education between the mid-1990s and mid-2000s (Mehta et al. 2011). This rise was related to the expansion of high-skill services jobs: employing only 7–11% of the labor force, they contributed 40–70% of the rate of return to college education.

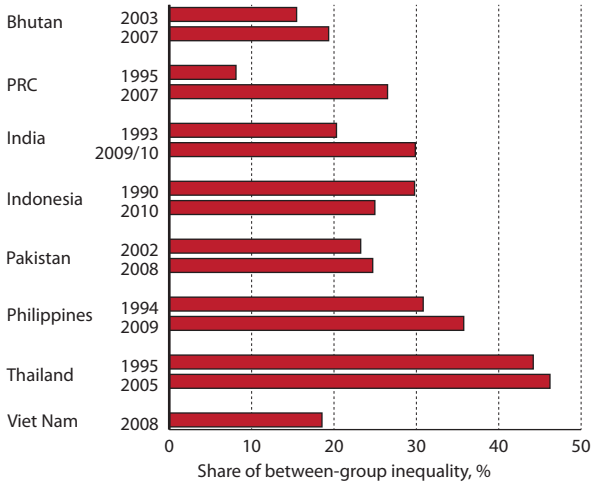
A more recent study (World Bank 2012a) reports that the tertiary education premium[15] stood at 90% for Cambodia (2007), 60% for the PRC (2005), 84% for Indonesia (2007), 70% for Mongolia (2007), 70% for the Philippines (2006), 120% for Thailand (2004), and 55% for Viet Nam (2006). In Cambodia, the PRC, Mongolia, and Viet Nam the premium increased in recent years across sectors. In Indonesia, the tertiary education premium increased in the manufacturing sector, and in the Philippines, it increased in the services sector.

Household survey data help reveal patterns of income inequality due to educational attainment (in this case, of the household head) (Figure 2.4.1). First, education inequality almost always accounts for more than 20% of total income inequality. Second, the share of total income inequality explained by educational inequality has by and large been on the increase. The share of inequality accounted for by differences in educational attainment increased in all the countries during the periods looked at, with the increase most significant in the PRC, from 8.1% in 1995 to 26.5% in 2007.

As in the rest of the world, developing Asia is facing strong upward pressure on the wage gap between skilled and unskilled labor. Is this because of skill-biased technological progress?

There are empirical difficulties in isolating this factor because the wage premium depends on both demand- and supply-side factors. Unsurprisingly, analysts have come down on both sides of the explanation.[16] To the extent that skill-biased technological change happens, its impact can be transmitted through globalization. It is unlikely that policy makers can reverse this trend, nor should they want to, since technological progress is delivering higher levels of productivity and growth in the economy. The answer, rather, is to address inequality in human capital itself.

2.4.1 Income inequality decomposition by educational attainment of household head

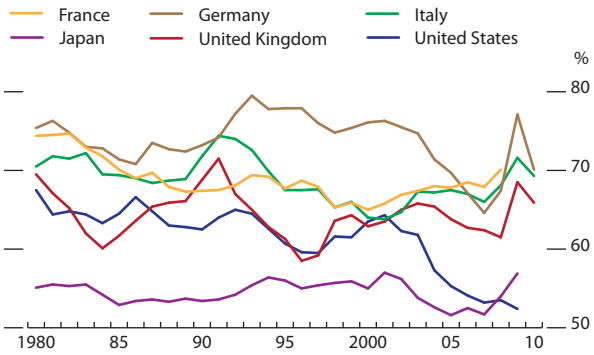


PRC = People's Republic of China.

Note: Estimates are based on per capita expenditure in nominal terms, except for the PRC which is based on income. The decomposition is based on GE(0).

Source: ADB estimates using household survey data and data from the Chinese Household Income Project.

2.4.2 Labor income share of industry, major OECD countries, 1980–2011



Note: Annual labor income share is calculated as total labor costs in nominal terms divided by nominal output.

Source: OECD Stat database (accessed 1 March 2012)

Declining share of labor income

In the last 2 decades, the income share of labor has been on the decline and that of capital on the rise in many OECD countries. In the US, for example, the labor income share in industry declined from 65% in 1992 to 52.4% in 2009 (Figure 2.4.2). For the entire US economy, the labor income share fell from 68.7% to 64.2% in the same period. Similarly in Germany, the labor income share of industry peaked at 79.5% in 1993 from the rise that started in the mid-1980s, declining since then.

A declining labor income share means that the growth of wage rates lags behind growth of labor productivity. A number of contributing factors have been identified.

The first is that technological change, especially connected with improvements in information and communications technologies, has raised the productivity of and return to capital relative to labor. The second is the decrease in the bargaining power of labor, due to changing labor market policies and declining union membership in these countries. The third is increased globalization and trade openness, that led to migration of relatively more labor-intensive sectors from advanced economies to emerging economies—with the sectors remaining in the advanced economies relatively less labor intensive and having a lower average share of labor income (Jacobson and Occhino 2012; Arpaia, Perez, and Pichelmann 2009). It has also been noted that globalization and trade openness increase the elasticity of labor demand, which also weakens labor's bargaining position (Rodrik 1997; Harrison 2002).

Empirical evidence suggests that Asia is following this trend—all the economies in Figure 2.4.3 saw declines in labor income shares during the mid-1990s to mid-2000s.

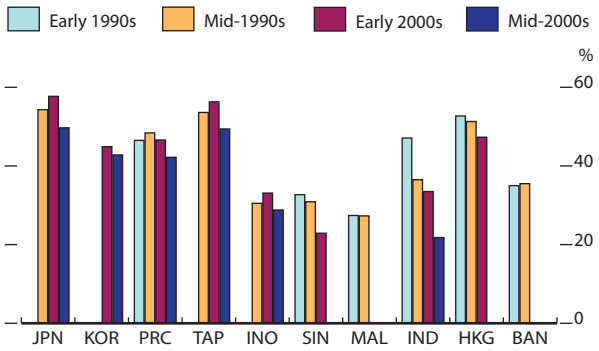
What are the causes of these declines? Technological progress in the region appears to have been labor-saving and capital-using. Partly, this can be explained by a high level of capital accumulation in many Asian countries (Felipe 2009; ADB forthcoming). As a result, the wage employment elasticity of growth[17] has been on the decline in many countries in recent years (Figure 2.4.4)—in the PRC from 0.44 in 1991–2001 to 0.28 in 2001–2011 and in India from 0.53 to 0.41, for example. This decline means that each percentage of employment growth now requires a higher percentage of output growth than in the past—a phenomenon sometimes referred to as "jobless growth."

A declining employment elasticity of growth implies increases in labor productivity. Annual growth of manufacturing labor productivity in 2000–2008 reached 6.7% in the PRC, 5.5% in Malaysia, and was in the range of 3–4% in Indonesia, Pakistan, the Philippines, Thailand, and Viet Nam (APO 2011).

That labor productivity is increasing but the labor income share is declining implies that real wage growth has lagged behind labor productivity growth, partly because of the presence of a large pool of rural surplus labor in many countries associated with their dual-economy structure.[18] The pool of surplus labor weakens the bargaining power of labor and depresses wages in the nonagricultural sectors, contributing to declines in the labor income share when globalization and market-oriented reform led to rapid growth.

In India, for instance, the average annual growth of labor productivity was 7.4% in 1990–2007, while average annual real wage growth was only 2% (Box 2.4.2). In the case of the PRC, Zhuang (1996) showed that if the labor market had been fully liberalized and controls over labor transfer

2.4.3 Share of labor income in industrial/manufacturing value added, selected Asian economies

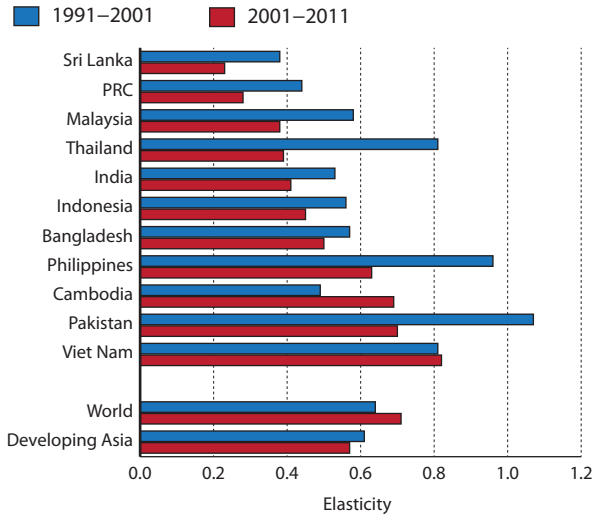


BAN = Bangladesh; PRC = People's Republic of China; HKG = Hong Kong, China; IND = India; INO = Indonesia; JPN = Japan; KOR = Rep. of Korea; MAL = Malaysia; SIN = Singapore; TAP = Taipei,China.

Note: Early 1990s (1990–1992), mid-1990s (1994–1996), early 2000s (2000–2002), mid-2000s (2004–2006) for the PRC; India; Singapore; Malaysia; India; Hong Kong, China; and Bangladesh.

Source: OECD Stat database for Japan; Republic of Korea; Taipei,China; and Indonesia (accessed 1 March 2012); Felipe and Sipin (2004) for Singapore; Malaysia; Hong Kong, China; Bangladesh; Bai and Qian (2009) for the PRC; and Felipe and Kumar (2010) for India's organized manufacturing sector.

2.4.4 Wage employment elasticity of growth, selected Asian economies, 1991–2001 and 2001–2011



PRC = People's Republic of China.

Note: Simple average for world and developing Asia.

Source: International Labour Organization. 2011. *Trends Econometric Models*. October.

2.4.2 India's formal sector: Real wage rate and labor productivity growth

The figure shows that over the period 1990–2007, labor productivity in India's organized manufacturing sector grew much faster than the real wage rate. While the latter did not even double during the period, labor productivity increased threefold, from about R80,000 to about R250,000. This implies that gains in productivity were not passed on to wages and, consequently, the labor share of India's organized manufacturing sector declined significantly.

Growth of real wage rate and labor productivity in India's formal sector, 1990–2007

Note: Growth rates are based on wage rate and labor productivity in constant 1993–94 rupees.

Source: Kumar and Felipe (2011).

from rural to urban areas fully relaxed in the early 1980s, urban wage rates would have fallen and the labor income share of the urban sector decreased by half.

A lower share of income going to labor and a higher share of income going to capital tend to increase inequality, because capital income is more unequally distributed (due to asset inequality) than income from basic wage labor.

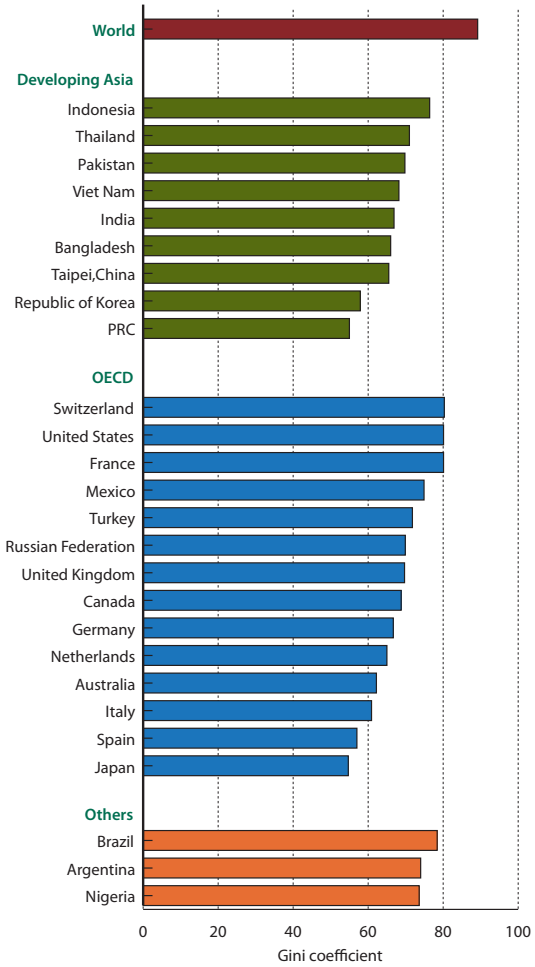
Figure 2.4.5 shows the Gini coefficients for wealth of selected Asian economies and some comparator countries—they are much higher than those for income inequality.

The declining employment elasticity in Asia is of concern because the poor and middle class rely heavily on labor for their income. Figure 2.4.6 shows that a higher wage employment elasticity is associated with a smaller increase in inequality. The policy implications of the close relationship between employment and inequality are significant. They suggest a search for policies that promote employment.

Spatial inequality—up to half the total

As the distribution of economic activity is structured geographically—high concentrations and incomes in some locations, and low on both counts in others—so are the distribution of income and its evolution. Some locations have natural advantages—like fertile soil for agriculture or proximity to a coastline for trade.[19] Economic analysis has also highlighted the role of agglomeration benefits, where once concentration

2.4.5 Inequality in wealth distribution, selected economies



PRC = People's Republic of China; OECD = Organisation for Economic Co-operation and Development.

Note: Gini coefficient pertains to inequality in wealth distribution, where wealth refers to net worth or the value of physical and financial assets less liabilities. The data are for around the year 2000.

Source: Davies et al. (2008).

starts because of natural advantages or because of advantages conferred by infrastructure, there is a self-perpetuating process of increasing concentration (Krugman 2008).

Rural–urban inequality

The increasing rural–urban income gap is a significant contributor to inequality in several Asian countries (Figure 2.4.7), especially the PRC (around 45%). Its importance has even increased in some.

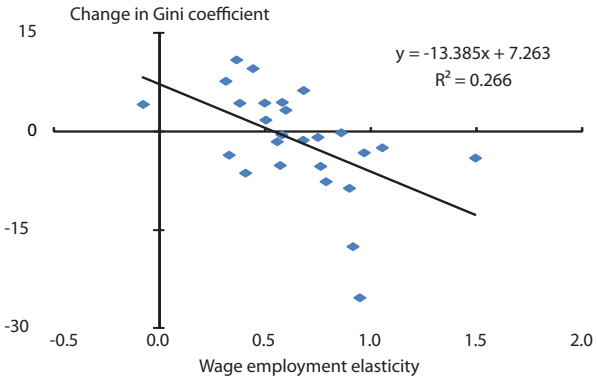
The possibility of rising inequality due to urbanization as part of the development process was first pointed out by Kuznets (1955). The particular mechanisms that he highlighted in his contribution (Box 2.4.3) starts with a two-sector model with the population divided between a low mean income, low inequality sector (rural/agriculture) and a high mean income, high inequality sector (urban/industrial). In this model, the drivers of inequality are changes in inequality within the two sectors, a widening of the gap between average incomes in the two sectors, and a shift of population from agriculture in the rural sector to industry in the urban sector.

Inequality changes within the two sectors will most likely be affected by the same factors discussed in the previous sections, in particular the widening wage premium for skills, and the regional disparity (to be discussed below). To the extent that the urban labor force has a higher level of human capital than the rural labor force, this factor would also tend to widen the rural–urban gap in average incomes. But perhaps the strongest driver of that gap is the cumulative force of agglomeration economies and its impact on productivity (de Groot, Poot, and Smit 2008). For whatever combination of reasons, the rural–urban income gap in Asia has been widening in the last 2 decades, especially in the PRC (Figure 2.4.8).

Thus the first two—change in inequality within the two sectors and a widening of the gap in the average income between the two sectors—are likely to put upward pressure on inequality in Asian countries.

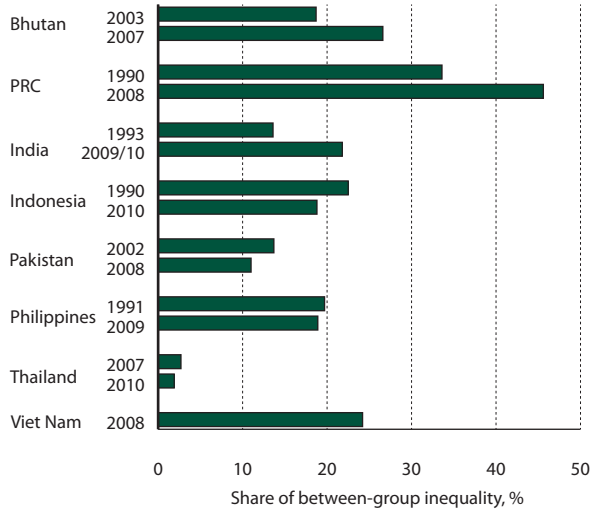
What about the third factor? As is well known, urbanization in Asia is rapid. Kuznets explored this with the aid of a numerical example (Box 2.4.3), which showed increasing inequality to start with as urbanization begins, followed by a decrease at the later stages. Anand and Kanbur (1993) show that if there is no inequality within the two sectors, so that the only difference between them is because of the higher income in the urban area, then inequality will indeed follow an inverse U shape, so that this driver will tend to raise inequality in the early stages of urbanization. If, further, urban inequality is higher than rural inequality, this effect will be reenforced. These suggest that the rural–urban structural divide, present in all developing Asia, and the process of urbanization, which all Asia is going through, are powerful drivers of overall inequality.

2.4.6 Wage employment elasticity and change in Gini coefficient, Asia and the Pacific, 1991–2011



Source: ADB estimates using International Labour Organisation, Trends Econometric Models, October 2011 and PovcalNet (accessed 9 March 2012), supplemented by household survey data (most Pacific countries and India), and publications of national statistics offices (Republic of Korea).

2.4.7 Income inequality decomposition by location, urban/rural

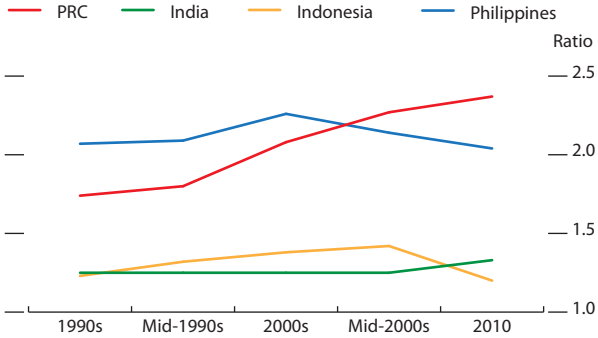


PRC = People's Republic of China.

Note: Estimates are based on per capita expenditure in nominal terms. Decomposition is based on the GE(0) inequality measure.

Source: ADB estimates using household survey data.

2.4.8 Urban–rural income gaps in selected Asian economies, 1990–2010



PRC = People's Republic of China.

Note: Figures are for the closest available year. Missing data in India for the mid-1990s and 2000s assumed the same as the closest 5-year period.

Source: ADB estimates using PovcalNet (accessed 9 March 2012).

2.4.3 The Kuznets theory and evidence

The basic Kuznets model is a well-defined process of distributional shift as population moves from agricultural (rural, traditional) to nonagricultural (urban, modern) sectors during the course of development. The process was set out by Kuznets (1955, pp. 12–15) in his classic paper as follows:

> The basic assumptions used throughout are that the per capita income of sector B (nonagricultural) is always higher than that of sector A; that the proportion of sector A in the total population declines; and that the inequality of the income distribution within sector A may be as wide as that within sector B but not wider. With the assumptions concerning three sets of factors—intersector differences in per capita income, intrasector distributions, and sector weights—varying within the limitations just indicated, the following conclusions are suggested: .... [E]ven if the differential in per capita income between the two sectors remains constant and the intrasector distributions are identical for the two sectors, the mere shift in the proportions of populations produces slight but significant changes in the distribution for the country as a whole. In general, as the proportion of A drifts from 0.8 downwards, the range tends first to widen and then to diminish.

This is the famous Kuznets inverted-U in the original: "the range tends to first widen and then to diminish."

Evidence on the Kuznets inverted-U is mixed. Kuznets himself presented evidence for his hypothesis from the United Kingdom, the US, and some other developed economies in the late 19th and the first half of the 20th century. During this period, in fact, these economies were already on the downward part of the inverse-U. The possibility of a Kuznets inverse-U for developing economies was tested 2 decades later, by Ahluwalia (1976), who found support for it using cross-sectional data. However, subsequent rigorous econometric testing, with better techniques and better data, did not support the inverse-U in cross-country data (Anand and Kanbur 1993).

Focusing on the middle- and low middle-income countries, Cornia, Addison and Kiiski (2004) find that, out of 34 developing countries for which they have several observations between the 1950s and the mid-1990s, inequality is higher in the terminal period for 15 of them, equal for 14 and lower for 5. When data are available, a U-shape is observed in a number of cases where inequality is found to be increasing when comparing the terminal and the initial years.

Barro (2008), on the other hand, seems to find support for the Kuznets inverted-U in the cross-sectional data, although he recognizes that many factors are important in providing a full explanation.

Thus the scant empirical evidence validating Kuznets hypothesis calls for a multifactor analysis, recognizing that the contributions of the various factors explaining growth and inequality may change over time. There is no single overarching driver of inequality. Rather, we need to explore a number of mechanisms in detail.

Sources: Kanbur (2011); Aizenmann et al. (forthcoming); Anand and Kanbur (1993).

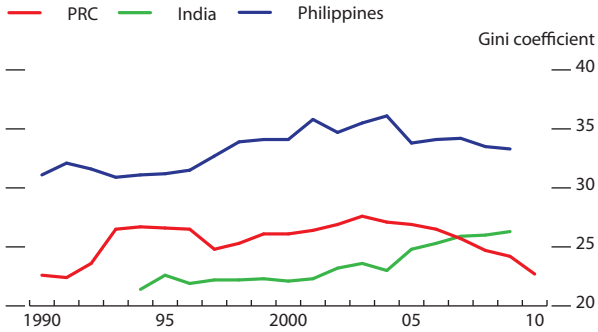
Regional inequality

Regional inequality has also been a key contributor to total inequality in many Asian countries, particularly in the PRC and India (Figure 2.4.9). Notably for the PRC, in 1990–2003 regional inequality increased more or less concurrently with overall inequality.

In the PRC, there appears to be a general consensus that increased openness contributed to sharpening income disparities between coastal and interior regions. As Lin (2005) notes, an important feature of that country's global integration is the depth of concentration of international trade along the east coast—which has far lower transport costs to the country's major markets such as Hong Kong, China; Europe; Japan; and the United States.[20] The recent decline has been partly attributed to the government's Great Western Development Strategy (Fan, Kanbur, and Zhang 2011).

In India, coastal states have also fared better than inland states, although here a set of compounding factors such as initial level of

2.4.9 Inequalities in provincial per capita incomes, 1990–2010, selected Asian economies



PRC = People's Republic of China.

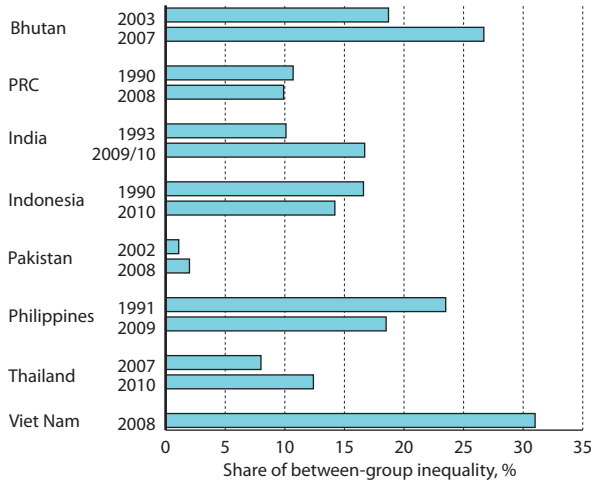
Note: Gini coefficients are weighted by group population.

Source: ADB estimates using province-level data for the People's Republic of China and the Philippines from CEIC database (accessed 5 March 2012) and India's Ministry of Statistics and Programme Implementation (accessed 5 March 2012).

human capital and public infrastructure is also important (Kanbur, Gajwani, and Zhang 2007). New private-sector industrial investments typically take place in existing industrial and coastal districts to reduce costs, and overall investments have become more concentrated.

More generally, the interplay between market-oriented reforms and economies of agglomeration appear to have given certain regions within countries an edge when it comes to economic growth. Indeed, this interplay has been linked to increasing inequality in Southeast Asia and East Asia's middle-income economies (Gill and Kharas 2007). Figure 2.4.10 provides decomposition results for regional inequality in selected Asian countries. In the late 2000s, between-region inequality can explain 20–30% of the national inequality in Bhutan, the Philippines, and Viet Nam, and 10–15% in the PRC, Indonesia, India, and Sri Lanka.

2.4.10 Income inequality decomposition, province/region



PRC = People's Republic of China.

Note: Estimates are based on per capita expenditure in nominal terms. Decomposition is based on the GE(0) inequality measure.

Source: ADB estimates using household survey data.

Spatial inequality: The combined contribution

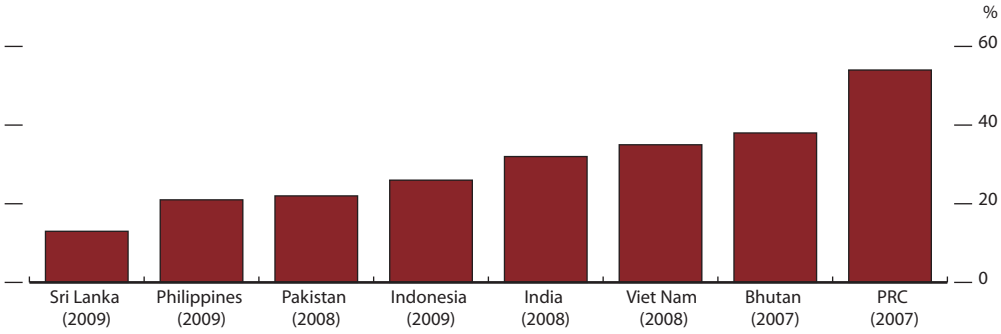
Combining the two components of the spatial inequality and calculating the fraction of total inequality explained by rural–urban and interregional (provinces or states) divides, we see a share of more than half for the PRC (Figure 2.4.11).

In sum, the widening gaps between provinces and states, on the one hand, and between urban and rural areas on the other, provide and will provide the geographic driver of inequality in Asia. These divides are important in themselves, and because they account for a significant proportion of observed inequality in Asian countries. The driver of inequality in the spatial dimension is the interaction between new opportunities through trade, technology, and market-oriented reform, interacting with the structure of geography and infrastructure.

The rise in spatial inequality is not a reason to reverse openness and technological progress, or stop the reform process, but rather to reorient infrastructure investment to lagging regions, and to remove barriers to migration to the fast-growing regions.

Similarly, the process of urbanization cannot be reversed—nor should it be—because it brings with it higher national productivity and growth. But it raises the question of policy responses to the rise in inequality that it can also engender.

2.4.11 Combined contribution of spatial inequality to overall inequality, selected Asian countries



PRC = People's Republic of China.

Note: Spatial inequality covers both between-region and urban-rural inequality. The estimation involves dividing all sample households into groups classified by both region and urban/rural. For example, if a country has 20 provinces, the total groups will be 40 (20 urban and 20 rural). The between-group inequality is the combined spatial inequality.

Source: ADB estimates using household survey data.

Gender inequality

If some individuals are partially or wholly excluded from access to education and health, or from participating in markets, this blocks a

source of income and becomes a driver of inequality in society. Social exclusion therefore magnifies the distributional impact of globalization, technological progress, and market-oriented reform. In this section, we consider the issue of gender inequality.

Economic growth and gender inequality

The effect of economic growth on gender inequality in labor markets is ambiguous. Growth can narrow gender inequality through a number of channels, including the demise of traditional structures that reinforce human capital differences between men and women, the rising opportunity cost of women's time outside of the labor force, the strengthening of women's economic and property rights, technological progress, and the introduction of labor-saving consumer durables.

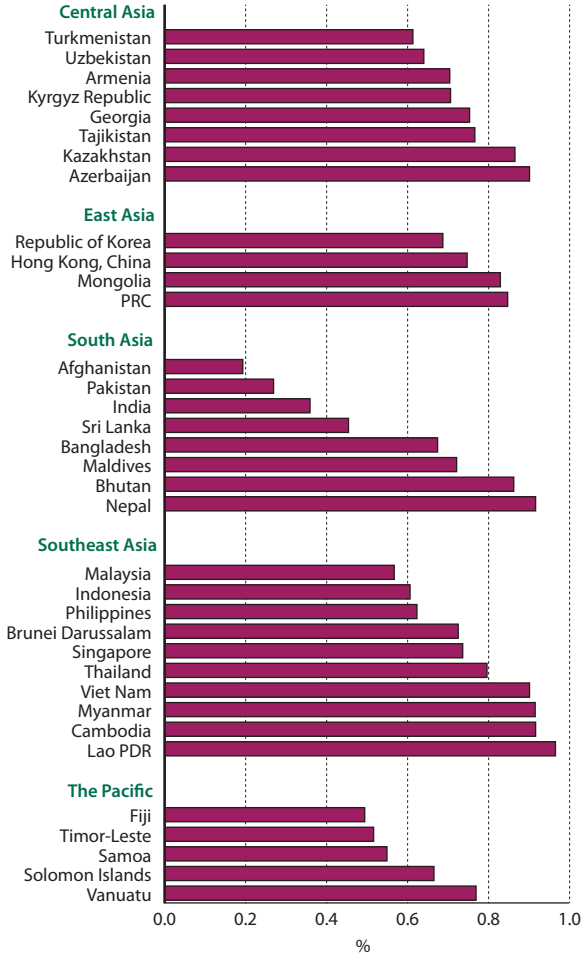
Yet economic growth does not necessarily mean inequality will decline, especially if unpaid work burdens, biased laws, differential access to resources, and social norms continue to constrain women in their ability to take advantage of new, well-paid jobs. A growing number of empirical studies have indicated that economic growth may improve or worsen gender inequality depending on the gendered indicator under consideration.

Increased openness to trade and FDI often brings increased access to employment for women in export-oriented labor-intensive manufacturing. At issue is the extent to which women have actually benefited from international trade and foreign investment through new paid employment opportunities. Some argue that gains in women's employment have been accompanied by precarious working conditions and an expansion of informal-sector jobs that lack basic legal and social protections and are not subject to formal economic regulations. As firms face pressure in international markets to keep production costs low, the jobs they offer become increasingly insecure; employment is often temporary, casual, and flexible, characterized by poor working conditions (Benería 2007).

Another concern is low wages for women. Economic growth generated through export promotion may put downward pressure on the wages of workers in the export sector and, to the extent that women workers account for a high proportion of employment, contribute to wider gender wage gaps. Supporting this argument, Berik, Rodgers, and Zveglich (2004) used data for Taipei,China and the Republic of Korea and found that increasing competition from international trade is associated with larger wage gaps between men and women. Because the analysis controlled for gender differences in productivity characteristics, the widening wage gap was interpreted as a sign of increased wage discrimination.

Yet others have argued that jobs in the export sector offer better pay than the alternatives for women workers, and the evaluation of wages in the export sector ought to consider wages in alternative jobs, wages expressed in hourly terms, and nonwage working conditions (Kabeer 2004).

2.4.12 Women's labor force participation rate, 2010



Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China.

Note: Labor force participation rate refers to age groups 15 and over.

Source: International Labour Organization. *Key Indicators of the Labour Market* (accessed 22 March 2012).

Technological change can also affect gender inequality. Several studies have shown that in middle- and higher-income economies, technological improvements have led to displacement of women from low-paying jobs in import-competing sectors. In particular, Anker (1998) provided evidence that women in middle- and higher-income economies tend to cluster in manufacturing industries that have begun to upgrade their technologies, reduce the size of their workforce, and move production to lower-wage countries.

In the case of Taipei,China, technological upgrading and rising capital intensity of export-oriented manufacturing after 1980 was linked to a relative decline in employment opportunities for women (Berik 2000). Women in lower-income countries can also experience job displacement when technological change makes traditional female jobs redundant and when women face barriers to training for new jobs (Jhabvala and Sinha 2002).

Women's labor force participation

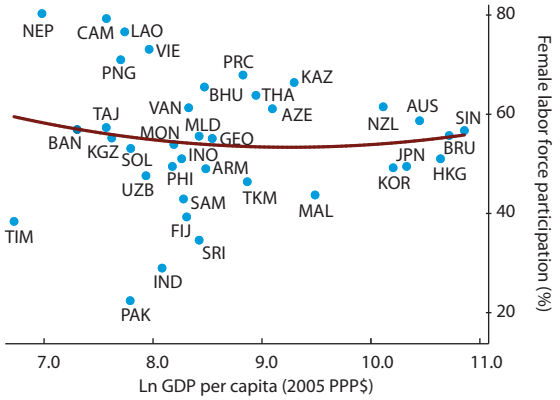
A specific dimension of opportunity is participation in the labor market. This generates income through the use of what is often poor women's only asset, their labor. Labor force participation is much lower for women than for men in most Asia–Pacific countries, averaging around 0.7 (Figure 2.4.12 above), with wide variations (Afghanistan the lowest, the Lao PDR the highest).

What are the determinants of women's labor force participation? At a macro level, a stylized fact is that economic development and women's participation in the formal labor market exhibit a fairly predictable and well-documented relationship. When countries begin to industrialize, female labor force participation falls as the household farm model becomes less common and more women engage exclusively in nonmarket activities such as child care and housework. In more advanced economies, female participation rates begin to rise again as growing numbers of women engage in market-based economic activity, often in combination with raising children. This trend generates a U-shaped function that fits time-series and cross-sectional data for a number of countries at different stages of development (Goldin 1994; Mammen and Paxson 2000; Tam 2011). The pattern across Asia–Pacific countries is consistent with this U-shaped relationship (Figure 2.4.13).

The micro evidence can uncover various forces behind women's engagement in the labor market. An empirical study, based on Demographic and Health Survey data from nine Asian countries spanning 2005–2009 estimated the likelihood of a woman engaging in employment, conditional on the full set of personal and household characteristics (Rodgers and Zveglich forthcoming).

The results show that household wealth, in particular, can have different effects in different countries, and the results also point to important interactions between women's role as caregivers to young children and their employment decisions. In every country, married women are less likely

2.4.13 Women's labor force participation rates and per capita GDP in Asia, 2010



ARM = Armenia; AUS = Australia; AZE = Azerbaijan; BAN = Bangladesh; BHU = Bhutan; BRU = Brunei Darussalam; CAM = Cambodia; PRC = People's Republic of China; FIJ = Fiji; GEO = Georgia; HKG = Hong Kong, China; IND = India; INO = Indonesia; JPN = Japan; KAZ = Kazakhstan; KOR = Rep. of Korea; KGZ = Kyrgyz Republic; LAO = Lao People's Democratic Republic; MAL = Malaysia; MLD = Maldives; MON = Mongolia; NEP = Nepal; NZL = New Zealand; PAK = Pakistan; PHI = Philippines; PNG = Papua New Guinea; SAM = Samoa; SIN = Singapore; SOL = Solomon Islands; SRI = Sri Lanka; TAJ = Tajikistan; THA = Thailand; TIM = Timor-Leste; TKM = Turkmenistan; UZB = Uzbekistan; VAN = Vanuatu; VIE = Viet Nam.

Note: All data are for 2010 or the closest year available.

Sources: International Labour Organization. *Key Indicators of the Labour Market*. http://kilm.ilo.org/kilmnet; World Bank. World Development Indicators online database (both accessed 19 March 2012).

to be employed than their single counterparts, and this relationship is statistically significant and fairly large in seven of the nine economies. These results point to the importance of policy actions that support women's roles as caregivers of young children at the same time that they are employed in market-based activities.

Summary

This section argues that technological progress, globalization, and market-oriented reform—the key drivers of Asia's rapid growth—are the basic forces behind the rising inequality in many Asian countries in the last 2 decades, and these forces have changed income distribution through three channels: capital, skill, and spatial bias.

The bias toward physical capital reduces labor's share of national income while increasing the income share of the owners of capital. Similarly, the heightened demand for better skilled workers raises the premium on their earnings. And spatial disparities are becoming more acute: locations with superior infrastructure, market access, and scale economies—such as urban centers and coastal areas—are better able to benefit from changing circumstances. Empirical evidence is consistent with these arguments. Inequality of opportunity magnifies the distributional consequences of these driving factors.

Confronting rising inequality: Policy options

Summary of key findings

Developing Asia's rapid growth in recent decades has led to a significant reduction in extreme poverty, but it has also been accompanied by rising inequality in many countries. Income inequality has increased in 11 out of the 28 countries with comparable data, the 11 accounting for 82% of the total population. In many countries, income inequality coexists with non-income inequality in the form of unequal access to education, health, and basic services among different population groups classified by gender, location, and income. Asia's rising inequality contrasts with the "growth with equity" story that characterized the transformation of the newly industrialized economies in the 1960s and 1970s, and with recent trends in other parts of the developing world, in particular Latin America, where income inequality has been on the decline since the 1990s.

Technological change, globalization, and market-oriented reform—the main drivers of Asia's rapid economic growth—are the basic driving forces behind the rising inequality in Asia. Working together, these have significantly impacted on inequality through a number of channels, in particular:

- *Increasing skill premiums and returns to human capital.* The emergence of vast new economic opportunities, unleashed by trade and financial integration, technological progress, and market-oriented reform, has increased returns to human capital and the skill premium, with individuals having higher educational attainment and skill endowment able to benefit more from the new opportunities. Our analysis shows that, in many countries, as high as 25–35% of the total income inequality can be explained by interperson differences in human capital and skill endowments.
- *Falling labor income shares.* As in many countries in other parts of the world, technological progress appears to have favored capital over labor. The abundance of labor relative to capital, which depresses wage rates, is also a contributing factor to the declining labor income share in developing Asia. Since capital is less equally distributed, this has contributed to rising inequality.
- *Increasing spatial inequality.* Some regions, especially urban and coastal areas, are better able to respond to the new opportunities because of their advantages in infrastructure and market access, as well as agglomeration economies from a self-perpetuating process of increasing concentration. The process of urbanization reinforces the inequality effects of agglomeration. Our analysis shows that in many Asian countries about 30–50% of income inequality is accounted for by spatial inequality due to uneven growth.

The impact of the basic driving forces of inequality has been compounded by various forms of unequal access to opportunity—to earn income from labor and to build human capital—caused by institutional weaknesses, market distortions and failures, and social exclusion.

The basic driving forces of inequality cannot—and should not—be reversed. They generate productivity growth, which underpins Asia's poverty reduction, betterment of quality of life, and prosperity. However, high inequality could undermine social cohesion, political stability, and sustainability of growth, and a divided and highly unequal nation cannot be prosperous, as shown by international experience. Rising inequality could also lead to demands for populist measures that would be detrimental to efficiency and growth.

How should Asian governments respond to the rising inequality? Via three sets of policy measures. These measures cannot eliminate inequality, but will go a long way toward reducing it and, at the same time, not endanger development or hurt growth.

- *Efficient fiscal policy*. Measures include increasing spending on education and health, especially for the poorer; developing better targeted social protection schemes, including conditional cash transfers that target income to the poorest but also incentivize the building of human capital; and greater revenue mobilization through broadening the tax base and improving tax administration, and switching spending from inefficient general subsidies to targeted transfers.
- *Interventions to address lagging regions*. Measures include improving regional connectivity; developing new growth poles in lagging regions; strengthening fiscal transfers for greater investment in human capital and better access to public services in lagging regions; and removing barriers to migration from poor to more prosperous areas.
- *More employment-friendly growth*. Policies include facilitating structural transformation and maintaining a balanced sectoral composition of growth between manufacturing, services, and agriculture; supporting the development of small and medium-sized enterprises; removing factor market distortions that favor capital over labor; strengthening labor market institutions; and introducing public employment schemes as a temporary bridge to address pockets of unemployment and underemployment.

Efficient fiscal policy

Fiscal policy is a key part of the policy responses to rising inequality in Asia. Both government spending and taxation can affect inequality. Asian governments have ample room to maneuver in using fiscal policy to address the challenge of rising inequality, depending on individual country circumstances. This could involve increasing human capital investment and social protection provision—financing the increased spending on these through greater and more equitable revenue mobilization—and switching spending on inefficient general price subsidies (as for fuel) to targeted transfers.

Fiscal spending

A large part of inequality in developing Asia is explained by differences in individual attainments in education and human capital. Returns to human capital are largely driven by the market, and it may not be efficient and or even desirable for governments to try to alter them. However, it *is* efficient and desirable for governments to reduce inequality in the distribution of human capital in the population, by making public investments in education and health and by ensuring that all members of society have equal access to these basic services, regardless of their individual circumstances. A recent study shows that government spending on education and health helps reduce income inequality (Box 2.5.1). It has also been well documented that a key contributing factor to the recent decline in income inequality in many Latin American countries is improved access to education by the poor (Esquivel, Lustig, and Scott 2010, for example).

Increasing spending on education and health. Figures 2.5.1 and 2.5.2 show wide variations in spending on education and health as a share of GDP among developing Asian countries. In 2010, in 15 out of the 33 Asian countries where comparative data are available, government spending on education as a share of GDP was less than 4%, including the PRC, India, Indonesia, Pakistan, and the Philippines, compared with an OECD average of 5.2%. In 2009, in 20 out of the 41 Asian countries with comparable data, government spending on health as a share of GDP was less than 5%, including most economies in East Asia, South Asia, and

2.5.1 Estimating the impact of fiscal policies on income inequality

Both taxation (particularly personal income taxes) and public spending reduce inequality, but public spending has a larger impact on the distribution of income, according to a study of 150 countries with data for 1970–2009.

The results in the box table suggest that government expenditures on health and education reduce income inequality in Asia and the rest of the world. But expenditure on social protection and housing appears to increase income inequality in Asia, whereas it lowers it in the rest of the world.

Asia has made substantial progress toward achieving the Millennium Development Goals and targets on education and health. These achievements are consistent with the finding that education and health expenditures reduce inequality. However, social protection policies generally remain limited in Asia, and in countries where they exist, they tend to have a narrow coverage, extended mainly to urban population and the formal sector. This could explain the paradoxical finding of social protection spending increasing inequality in Asia. The finding suggests that universal social protection that covers the entire population would help reduce inequality.

For taxation, the results provide evidence that personal income taxes reduce inequality, with a greater effect in Asia than in the rest of the world, possibly because of a larger number of people not paying income tax. Although taxes by themselves are less effective in redistributing income, taxation is crucial to raise financing for government expenditure to achieve distributional objectives.

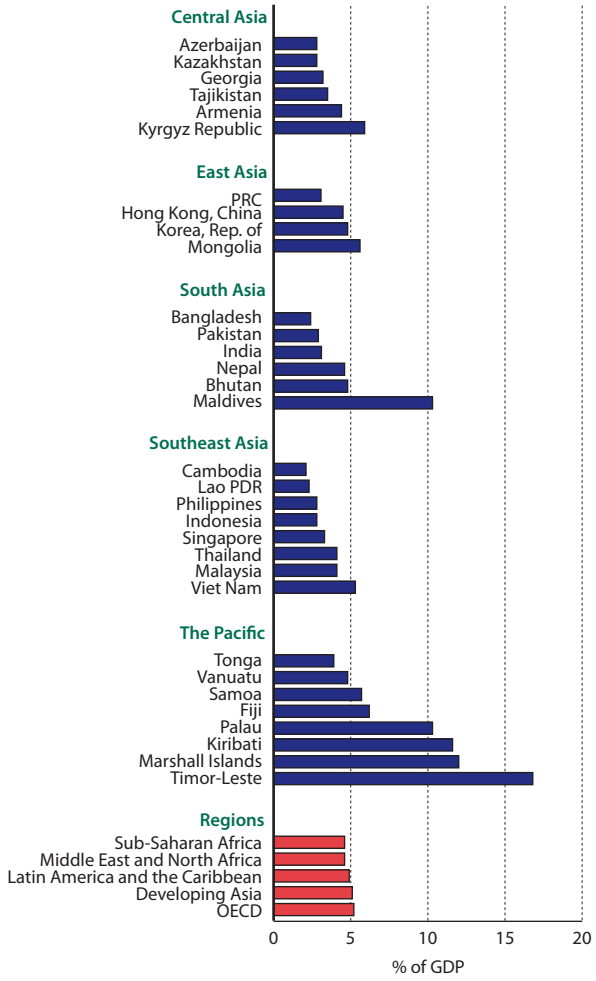
Estimated marginal impact of government spending on the Gini coefficient (percentage points)

	Asia	Rest of the world
Social protection	0.490	-0.276
Education	-0.486	-0.034
Health	-0.241	-0.330
Housing	2.162	-0.614

Note: A negative sign means that an increase in government spending reduces the Gini coefficient. The numbers show the percentage point change in income inequality (measured by the Gini coefficient) associated with a 1 percentage point increase in the government expenditure variable.

Source: Claus, Martinez-Vazquez, and Vulovic (forthcoming).

2.5.1 Government expenditure on education (% of GDP), 2000s

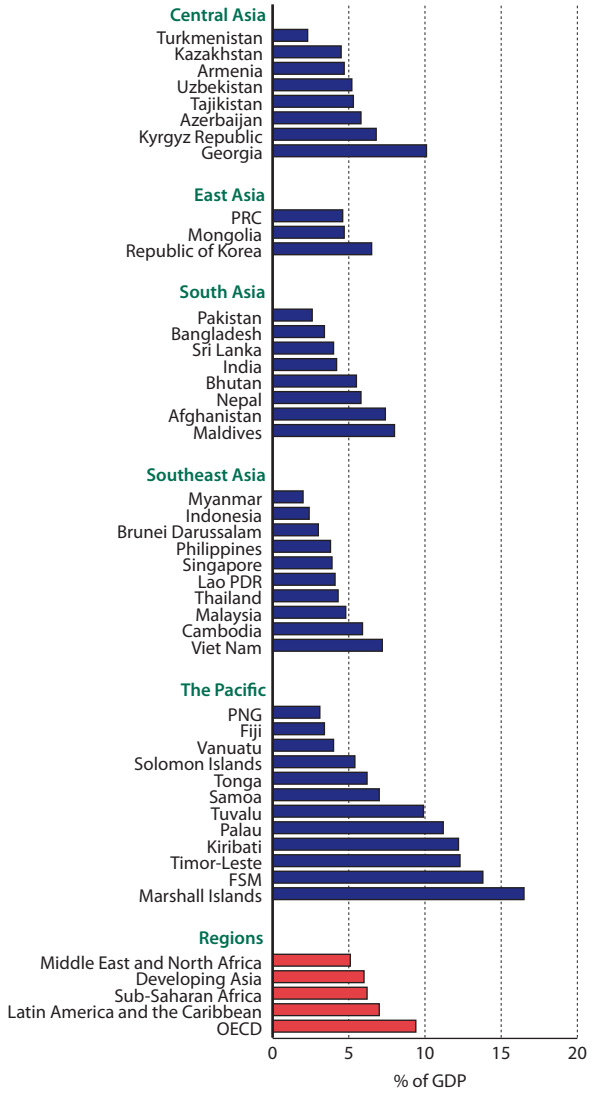


Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China; OECD = Organisation for Economic Co-operation and Development.

Note: The data are the latest available between 2002 and 2010. Regional averages are simple averages.

Source: World Bank. World Development Indicators online database (accessed 24 March 2012).

2.5.2 Government expenditure on health (% of GDP), 2009



FSM = Federated States of Micronesia; Lao PDR = Lao People's Democratic Republic; PNG = Papua New Guinea; PRC = People's Republic of China; OECD = Organisation for Economic Co-operation and Development.

Note: Regional averages are simple averages.

Source: World Bank. World Development Indicators online database (accessed 24 March 2012).

Southeast Asia, compared with the OECD average of 9.4%. These figures suggest that there is scope for developing Asian economies to increase spending on education and health.

In practice, even if education and health services are available, poor households may not able to use them because of economic pressures (such as losing income, by sending children to school). To address the demand-side constraints, the policy community has developed the instrument of conditional cash transfers (CCTs). They have been designed to have long-term benefits by providing poor households with an incentive to invest in human capital (education and health). For example, poor families receive cash transfers conditional on their children attending school.

CCTs have expanded rapidly in Latin America since the 1990s, and have been found to be effective in improving education and health

indicators for poor households in many countries (Schultz 2004; Schady and Araujo 2006). In Asia, CCTs have been implemented in Bangladesh, Cambodia, Pakistan and, more recently, Indonesia and the Philippines (Box 2.5.2). CCT programs, which are financially sustainable and combined with complementary programs to improve the delivery of health care and education services, could play an important role to reduce poverty and inequality in Asia.

Increasing social protection spending. Social protection also has an important role in reducing inequality. Social safety nets mitigate the risks of external and transitory livelihood shocks, as well as meeting the minimum needs of the chronically poor. Exposure to such shocks can have a profound and long-lasting impact not only on economic well-being, but also on accumulation of human capital, such as education and health. Social safety nets act as a coping mechanism for poor and vulnerable people and help improve well-being by investing in human capital in the long run, which, in turn, can enhance accessibility of those with limited assets and capabilities to opportunities (Ali and Zhuang 2007).

Despite the increasing recognition of the importance of social safety nets in the region, their provision remains limited. ADB (2008) shows that very few developing Asian countries have adequate social safety nets, compared with Japan or the Republic of Korea. One reason is the limited resources allocated to social protection (Figure 2.5.3).

Countries often face many challenges in increasing social protection

2.5.2 Conditional cash transfers in the Philippines: *The Pantawid Pamilyang Pilipino Program*

The *Pantawid Pamilyang Pilipino Program* (4Ps) has run since January 2008. It aims to provide cash grants to extremely poor households and allow them to meet certain human development goals—health, nutrition, and education of children below 15 years—set by the government. Around 3 million households nationwide are targeted under 4Ps in 2012, out of 18.5 million households in 2009.

The targeting involves a number of steps, including selecting the poorest municipalities and cities within each selected province based on poverty incidence, and identifying poor households in the selected municipalities and cities using a proxy means testing that assesses household socioeconomic characteristics such as ownership of assets, type of housing units, educational attainment of household head, family livelihood, and access to water and sanitation facilities.

To be eligible for 4Ps, a household must have an income equal to or below the provincial poverty threshold; have children 0–14 years old and/or a pregnant woman at the time of assessment; and agree to meet the program conditions.

The conditions have both health and education components. In particular, pregnant women must avail of pre- and postnatal care and childbirth must be attended by a health professional. Parents are required to attend "family development sessions" conducted by local governments. Children aged 0–5 must get regular preventive health checkups and vaccines, and those aged 6–14 must receive deworming pills twice a year. Children 3–14 years old must attend classes at least 85% of the time. Schools are required to report the attendance rate of program beneficiaries to their municipal governments.

The program benefits include P500 (around $12) a month per household for health and nutrition expenses, and P300 a month per child attending school for 10 months, up to a maximum of three children per household. Transfers are generally handed to the most responsible adult in the household, and are credited to the "cash card facility" of the government-owned Land Bank of the Philippines.

Source: DSWD (2012).

provision, including affordability, targeting, and institutional and administrative capacity.

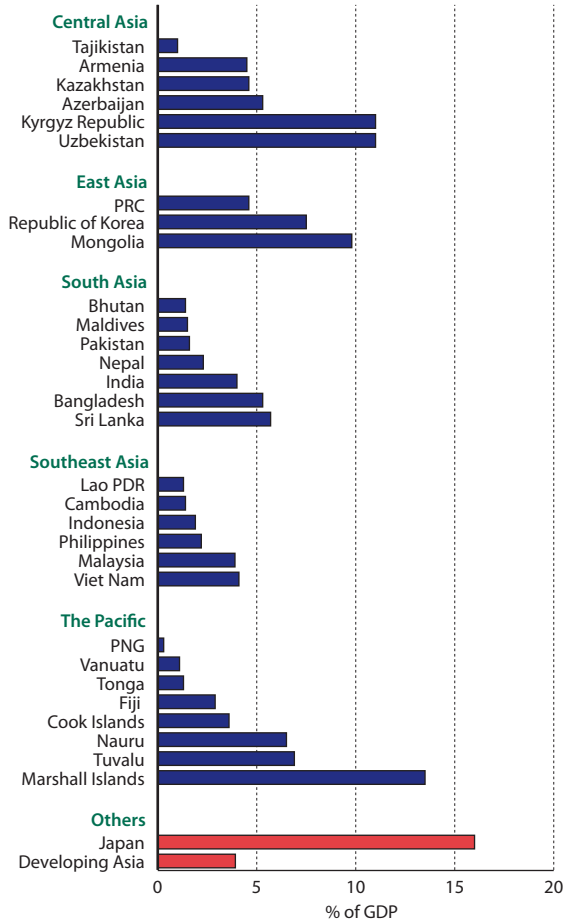
As for affordability, while this is often raised as an issue, studies have shown that the costs of basic universal social protection are not beyond the reach of most developing countries (for example, Ortiz and Yablonski 2010). ILO (2008) shows that virtually all countries can afford basic social security.[21]

On targeting, poor beneficiaries of social protection programs account for, on average, only about 54.8% of the poor population in developing Asia, pointing to a clear case for improving targeting (Figure 2.5.4).

In terms of institutional and administrative capacity, examples include better accounting, rigorous financial controls, human resource development, computerization, and greater disclosure to stakeholders.

Switching general price subsidies to targeted transfers. Increased spending on education, health, and social protection can be partly financed by reducing some other spending items. In most Asian

2.5.3 Social protection expenditure (% of GDP), 2008

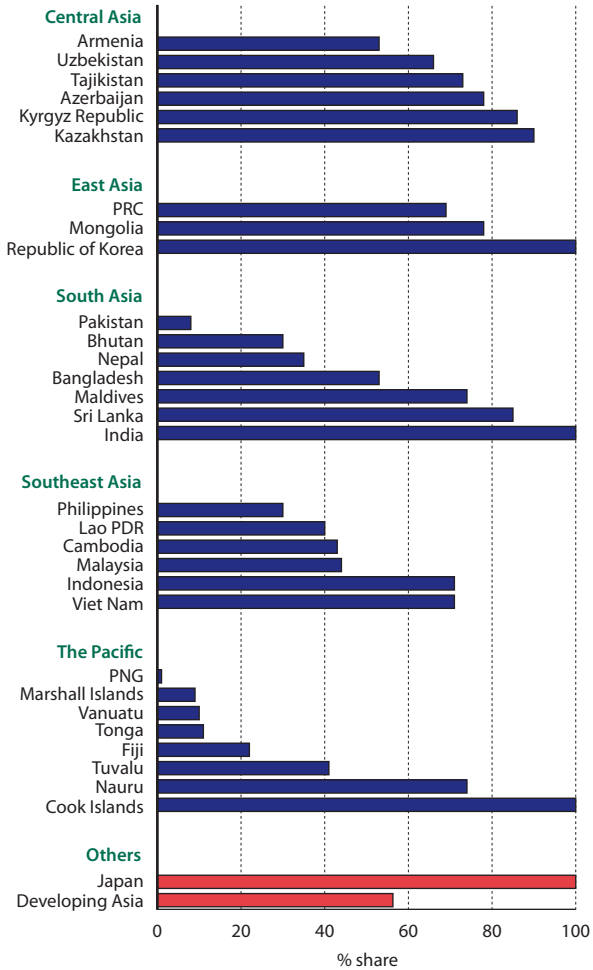


Lao PDR = Lao People's Democratic Republic; PNG = Papua New Guinea; PRC = People's Republic of China.

Note: Social protection expenditure covers labor market programs, social insurance, social assistance, micro- and area-wide programs (including microcredit), and child protection. The figure for developing Asia is a simple average.

Source: ADB (2008).

2.5.4 Share of the poor receiving social protection (%), 2008



Lao PDR = Lao People's Democratic Republic; PNG = Papua New Guinea; PRC = People's Republic of China.

Note: The figure for developing Asia is a simple average.

Source: ADB (2008).

countries, infrastructure investment is inadequate and should not be the target for spending reduction through switching. But switching government spending from general subsidies to human capital investment and social protection provision could be an effective means to reduce inequality in human capital and in income.

Many countries allocate large sums to general price subsidies, which entail significant fiscal costs, but benefit the non-poor more than the poor. A typical example is fuel subsidies (Figure 2.5.5). In Indonesia, for example, in 2011 fuel and electricity subsidies amounted to 3.4% of GDP, which was larger than government spending on infrastructure that year. It is estimated that the richest 10% of households consumed 40% of the total subsidized gasoline, and the top half of households used almost 84% of it (Ginting and Aji 2012).

Encouragingly, the Indonesian government is taking some action to tackle this issue. In March 2012, the government proposed a revised 2012 budget bill to reduce untargeted fuel subsidies and to use the saved budget resources for infrastructure investment, promotion of green growth, and transfers to poor regions and households.[22] Although what was passed by the Parliament was far short of what the government originally proposed, it is still welcome.

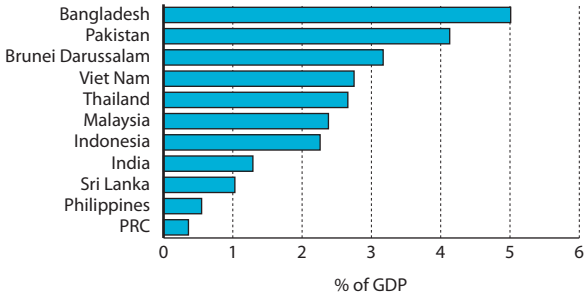
Greater and more equitable revenue mobilization

Given the large need for more human capital investment and social protection provision in many developing Asian countries, governments will inevitably have to mobilize more revenue. The share of government revenue in GDP is low in many Asian countries. For example, in 2011, the share of central government revenue in GDP was about 12–14% in Bangladesh, Cambodia, Myanmar, Pakistan, and the Philippines compared with the world average of close to 25% (Figure 2.5.6). The majority of government revenues are from taxation. In many Asian countries, more tax revenues can be mobilized by broadening tax bases and improving tax administration.

Broadening the tax base. The tax base can be broadened by reducing various exemptions, deductions, and incentives. Despite tax rates comparable to the world average (though lower than the OECD average), personal income tax collection is low in Asia (Figure 2.5.7). This is partly because of relatively high tax free (minimum exempt) thresholds and a relatively high threshold of income above which the top marginal personal income tax rate applies (Figure 2.5.8).

Also contributing to the lower tax collection are tax concessions. In the PRC, for example, only 11 types of personal income are liable to tax, and others not. Some of these categories are taxed at progressive rates (wages and salaries), while others are taxed at a flat rate (such as incomes of personal services, royalties, and rental and lease incomes). Tax reform is

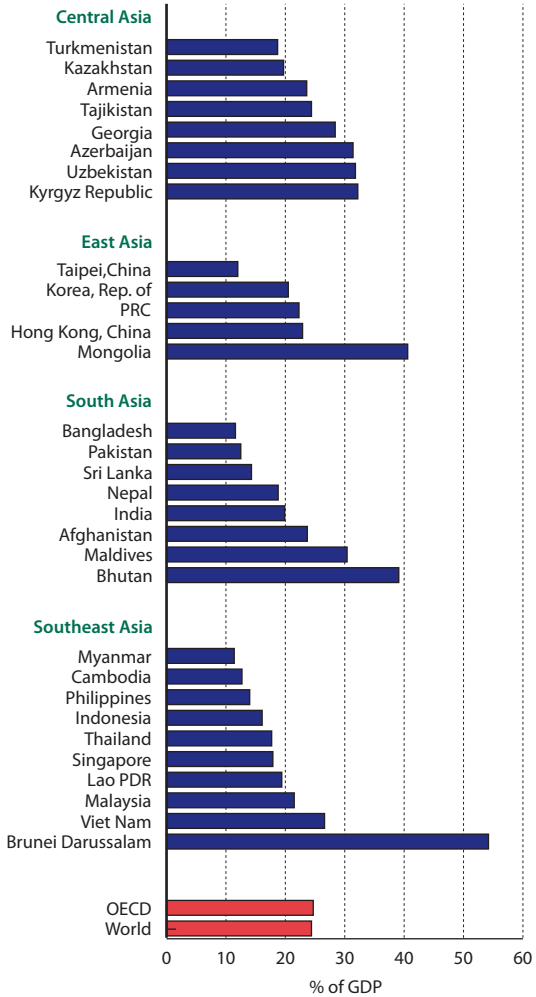
2.5.5 Fossil-fuel consumption subsidy (% of GDP), 2010



PRC = People's Republic of China.

Source: ADB estimates using the International Energy Agency database on fossil fuel subsidies (http://www.oecd.org/document/32/0,3746,en_21571361_48776931_48783776_1_1_1_1,00.html#data) and World Development Indicators online database (accessed 30 March 2012).

2.5.6 Central government revenue in selected Asian economies (% of GDP), 2011

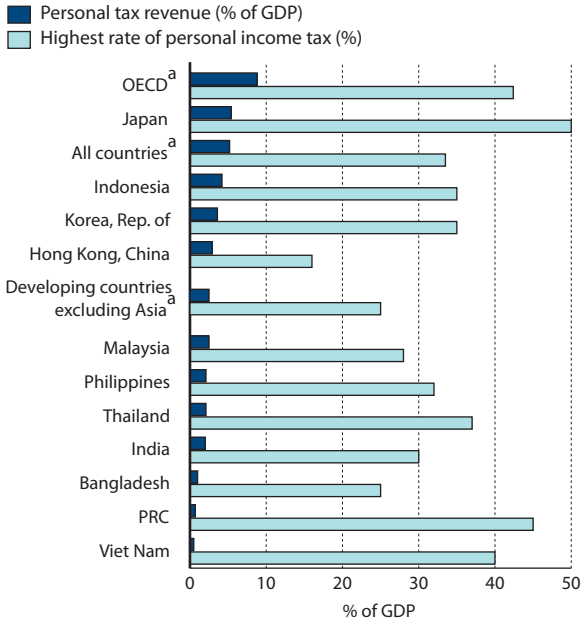


Lao PDR = Lao People's Democratic Republic; OECD = Organisation for Economic Co-operation and Development.

Note: Data are for 2011, except for Brunei Darussalam (2010); and OECD and World (2009). For Cambodia, the PRC, India, Kazakhstan, Kyrgyz Republic, Mongolia, and Tajikistan, transactions are those reported by the general government. For detailed explanation, please see the Statistical notes of this report. OECD (2009) and world averages refer to revenues, excluding grants.

Sources: Asian Development Outlook database; World Bank. World Development Indicators online (accessed 25 March 2012).

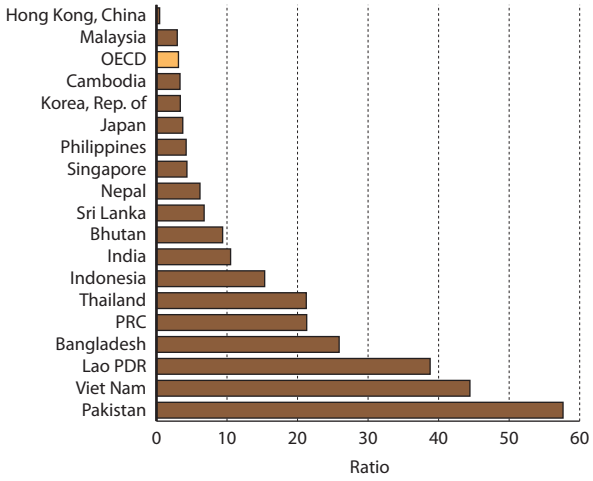
2.5.7 Personal income tax (% of GDP) and top personal marginal income tax rate, 2009 or latest available year



PRC = People's Republic of China; OECD = Organisation for Economic Co-operation and Development. [a] Simple averages.

Sources: IMF Global Financial Statistics Database; OECD Revenue Statistics; CEPAL; KPMG (2011).

2.5.8 Ratio of top personal income tax threshold to gross national income per capita, late 2000s



Lao PDR = Lao People's Democratic Republic; PRC = People's Republic of China; OECD = Organisation for Economic Co-operation and Development.

Note: For OECD countries, data refer to 2008 or 2009 and the figure is simple average (excluding Turkey). For Asian countries, data are for 2012. It is assumed that per capita gross national income of these countries in 2012 grow at the average rate of 2000–2010.

Sources: ADB estimates using International Bureau of Fiscal Documentation database (accessed 31 January 2012); ADB (2011a); OECD tax database.

a key policy measure to improve income distribution in the PRC's 12th Five Year Plan (State Council of China 2011).

Corporate income taxes are also low in some Asian countries partly because of tax incentives to attract investment and for activities seen as having social or economic merit. However, tax incentives can reduce the progressivity of income taxation if resources are captured by high-income interest groups lobbying for concessions. Moreover, they are often inefficient because they simply subsidize activities that firms would have undertaken anyway. Tax collection could thus also be increased by broadening the corporate tax base.

Value added tax (VAT) receipts are also low as a share of GDP in many Asian countries and is a potential source of additional government revenue. It is true that VAT is regressive and it is not an effective tool for reducing income inequality, but it is less distortionary than income and sales taxes, and is easier to collect.

VAT does not exist in, for example, Bhutan, Malaysia, Maldives, and Myanmar. For those countries where VAT exists, its collection can be increased by broadening its base. VAT exemptions or reduced tax rates for necessities are often used to address its potential regressivity. However, these two mechanisms are costly and not well targeted at the poor. A more effective policy would be direct transfer payments to those in need. In countries where the VAT tax rate is low, it could be raised.

Improving tax administration. Government revenue can be increased by improving tax administration. In the Philippines, for example, poor tax administration has been identified as a critical constraint to increasing government revenue (ADB 2009b). Complicated tax systems

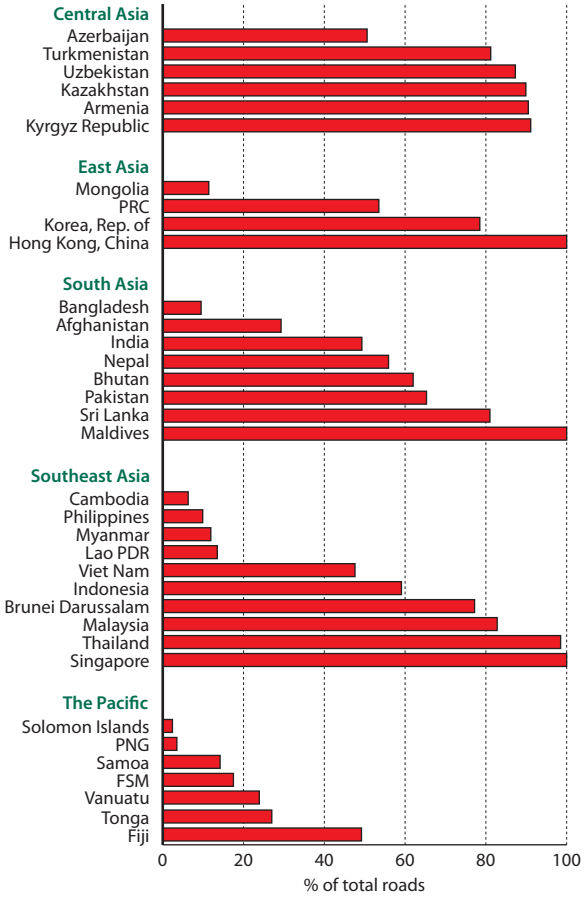
with many tax rates, exemptions, deductions, and concessions increase tax administration and compliance costs as well as the opportunity for tax planning and tax avoidance. They are also often seen as unfair because higher income taxpayers generally have greater scope and resources to shift income to avoid higher tax rates. Unfair tax systems can reduce people's and businesses' willingness to pay taxes. Strengthening governance and institutions is also a key to improving tax collection.

Reducing regional inequality

Spatial inequalities account for a large part of Asia's inequality. Reducing spatial inequality should therefore be a key element of the policy responses. A key component of such inequality is that between provinces or states. Four policy options for reducing regional inequality are discussed below.

Improving regional connectivity. Poor connectivity due to lack of adequate transport and communication infrastructure is often a major constraint for interior states or provinces in engaging in global trade and attracting investment. The proportion of paved roads in total roads was close to 100% in Thailand (as of 2000), while it was only 6.3% in Cambodia (as of 2004), 9.9% in the Philippines (as of 2003), 11.9% in Myanmar (as of 2005), 13.5% in Lao PDR (as of 2008), 47.6% in Viet Nam (as of 2007), and 49.3% in India (as of 2008) (Figure 2.5.9). Several ADB studies have found that the lack of adequate infrastructure including transport is a critical constraint to private investment in the Philippines, Indonesia, and Nepal (ADB 2009b, 2010, 2011b). Improving infrastructure therefore should be one of the key policy measures to reduce regional inequality.

2.5.9 Paved roads in Asian economies



FSM =Federated States of Micronesia; Lao PDR = Lao People's Democratic Republic; PNG = Papua New Guinea; PRC = People's Republic of China.

Note: The figure is based on the latest available data between 2000 and 2008.

Source: World Development Indicators online database (accessed 21 March 2012).

Developing growth poles in lagging region. To a large extent, interregional inequality is due to coastal areas' proximity to overseas markets. This is an exogenous factor and no one can change it. However, developments in economic theory have also emphasized the importance of agglomeration economies, increasing returns, and clustering in shaping regional development (Krugman 2008). This means that countries can identify areas of potential growth poles and use policy tools and public investment to trigger growth. Countries could develop strategies for generating growth in lagging regions for equity as well as efficiency considerations. The PRC's Great Western Development Strategy presents a good example (Box 2.5.3).

Fiscal transfers for greater investment in human capital and better access to public services in poor regions. Fiscal transfers from richer regions to poorer regions also have an important part to play in reducing regional inequality. However, such transfers are likely to encounter political resistance from the richer regions, all the more so as even better-off regions in developing countries face a raft of pressing fiscal demands. Further, high levels of fiscal transfers may be seen as penalizing successful regions and rewarding unsuccessful ones, hence undermining incentives. Fiscal transfers should, therefore, be carefully designed and

2.5.3 The PRC's Great Western Development Strategy

This strategy was adopted in 2000 to boost the PRC's less developed western region. It covers 11 provinces (Gansu, Guizhou, Qinghai, Shaanxi, Sichuan, Yunnan, Guangxi, Inner Mongolia, Ningxia, Tibet, and Xinjiang) and one municipality (Chongqing). This region covers nearly three-fourths of the area of the country, but only one-fourth of its population and one-fifth of its total economic output (as of 2010).

The main components of the strategy include the development of infrastructure (transport, hydropower plants, energy, telecommunications, and urban development), attraction of foreign investment, increased efforts on ecological protection (such as reforestation), promotion of education, and retention of talent flowing to richer provinces.

During 2000–2009, total state investment in major projects in the western region reached CNY2.2 trillion (about US$349 billion); fiscal transfers from the central government reached more than CNY3 trillion; the region's volume of imports and exports grew by nearly one-fourth each year on average, with its share in the national total increasing from 3.8% to 4.2%; and annual average regional GDP growth reached 11.9%, higher than the national average, with the region's share in national GDP increasing from 17.1% to 18.5%.

What has been the overall impact of the strategy on regional inequality? This is of course difficult to estimate because the counterfactual is difficult to specify. However, Fan, Kanbur, and Zhang (2011) argue that regional inequality in the PRC has begun to stabilize and perhaps even turn down since the mid-2000s, partly as the result of this strategy.

Based on primary survey data in two poor provinces—Guizhou and Gansu—Zhang, Yang, and Wang (2011) show that real wages have risen rapidly since 2003. Finally, Khan and Riskin (2005) have argued that overall inequality has begun to level off, and have identified the strategy as a key factor.

Sources: Fan, Kanbur, and Zhang (2011); Zhang, Yang, and Wang (2011); Khan and Riskin (2005); http://www.chinawest.gov.cn/web/NewsInfo.asp?NewsId=55943.

linked to targets and performance in improving development outcomes in recipient regions, and should aim to build poor regions' own capacity for self-sustaining regional development, such as staving off extreme poverty, investing in human capital, and improving public services.

Reducing barriers to within-country migration. Migration from poor to prosperous areas is one of the major means for reducing regional inequality. Migration and labour mobility often come up against significant barriers. One comes from the bureaucratic and administrative obstacles to moving from one part of the country to another. For example, in the PRC, the *hukou* (registration) system constrains rural–urban migration by limiting rural migrants' access to basic public services such as education, health care, and social protection in urban areas. Lack of necessary skills and suitable job opportunities in prosperous areas is another barrier. Absence of portability of pension benefits also discourages individuals from seeking better opportunities elsewhere. Improving connectivity, as mentioned, will facilitate not only the movement of goods but also of people.

Making growth more employment friendly

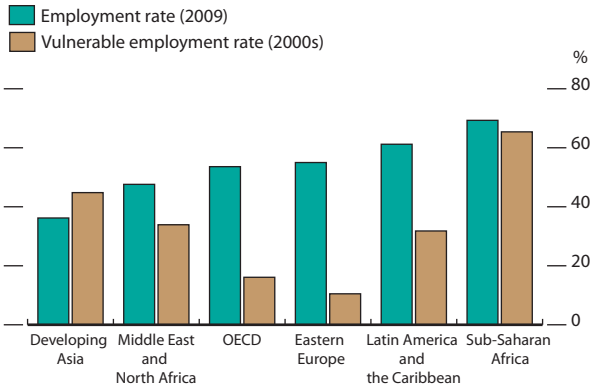
Since the declining share of labor income is associated with rising inequality, a key issue is how to maintain and even raise this share during the growth process. This requires shifting the labor demand curve in the productive sectors of the economy as output increases. If demand outstrips supply, wages will rise, increasing the labor income share

and containing inequality. Therefore, making growth more employment friendly so as to create productive and well-paid jobs for a much wider section of the population is one of the keys to confronting rising inequality in developing Asia. Various policies stand out.

Facilitating structural transformation

Agriculture is still the largest (or at least substantial) employer in most Asian developing countries, and its dominance in providing jobs is closely associated with the high proportion of vulnerable employment, which contributes to inequality (Figure 2.5.10). A key challenge for most developing Asian countries is therefore to facilitate the process of structural transformation to transfer large amounts of rural, agriculture surplus labor to urban, manufacturing and services sectors, where most of the future's productive jobs will be generated.[23] These include making the business environment more conducive to investment, improving infrastructure, reducing regulatory burdens on enterprises, promoting innovation, and upgrading industry.

2.5.10 Vulnerable employment in Asia, latest year



OECD = Organisation for Economic Co-operation and Development.

Note: Vulnerable employment refers to unpaid family workers and own-account workers as a percentage of total employment. Employment rate refers to the ratio of employment to population aged 15+. Weighted averages are based on 2009 population.

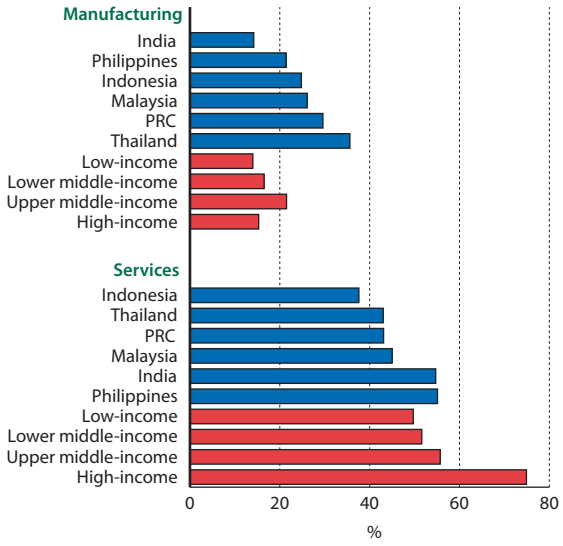
Source: World Development Indicators online database (accessed 21 March 2012) and ADB estimates using China Statistical Yearbook 2011.

Sectoral composition of growth has received some attention on development experiences in Asia (ADB 2007a). In 2010, India's share of manufacturing in GDP was close to the average of low-income countries, but much lower than the average of both lower and upper middle-income countries (Figure 2.5.11).[24] In the PRC, on the other hand, the share of services in GDP was much lower than the averages of low-, lower middle and upper middle-income countries.[25]

A country's sectoral composition is determined by its comparative advantages and other factors, but development policy often plays a role. For instance, India is making greater efforts to develop manufacturing, while the PRC is aiming to increase the share of services as a source of growth and job creation. International experiences suggest that both manufacturing and services are important for growth and job creation, and the two often support each other during economic development.

Structural transformation also involves maintaining a high pace of agricultural productivity growth. This requires governments to implement agricultural policies to produce more output per hectare. Improving the access of the rural poor to irrigation, electricity, transport services, new technology and improved seeds, agricultural extension services, and financial services are all vital for raising farm productivity. If ownership or access to land is highly skewed, implementing mechanisms that improve the access of the poor to land is also essential. In the PRC, rural nonagricultural village and township enterprises have played an important role in lifting income levels of the rural population and reducing rural poverty. Such enterprises could be promoted by other Asian countries.

2.5.11 Share of manufacturing and services in GDP, 2010



PRC = People's Republic of China.

Source: World Development Indicators online database (accessed 24 March 2012).

Supporting the development of small and medium-sized enterprises

SMEs provide most jobs, in developing and developed countries alike. But SMEs often face constraints, especially in accessing finance, human capital, and markets. Three ADB studies found that access to finance was ranked among the top constraints to business growth by SMEs in the Philippines, Indonesia and Nepal (ADB 2009b, 2010, 2011b). In the PRC, access to finance and human capital is also considered among major constraints by SMEs, many of which are in rural areas.

Governments should support SME development by facilitating their creation, removing unnecessary and cumbersome restrictions on their development, and addressing market failures in their access to finance. Governments can also help SMEs adopt new technologies and access new markets (ADB 2009a).

On access to finance, recent international experience suggests that one of the most important ways governments can increase access to finance is to improve the institutional underpinnings of financial transactions by strengthening creditor rights, defining property rights so property can be used as collateral for credit, and enhancing credit registries and systems to screen borrowers. They can also improve the informational infrastructure that underlies the workings of financial markets.

To help SMEs adopt technologies and enter new markets, governments can provide information on improved production methods, products, and markets, technical support services, and vocational training. They can also foster links between SMEs and large enterprises and encourage cluster-based development by exploiting the fact that many enterprises that make and sell related or complementary products are grouped close together, often with their suppliers and buyers.

Removing factor market distortions

One of the reasons why developing countries with relatively abundant labor prefer labor-saving and capital-intensive techniques could be distortions in factor markets: market prices of factors of production fail to reflect relative abundance, due to causes such as underdevelopment of the financial sector or financial repression. In the PRC, for instance, factor market reform has lagged behind product market reform, and interest rate control has kept borrowing costs low, especially for state-owned enterprises. During 1990–2010, the PRC's real lending rate was one of the lowest among 50 middle- and high-income countries (ADB forthcoming). The low cost of capital has been put forward as one of the causes of the imbalances of growth sources in the PRC (Huang 2010; World Bank 2012b).

In India, the financial repression, as evidenced by persistently negative real savings deposit rates, could also be a contributing factor to the low cost of capital relative to labor in the formal sector (RBI 2011). It has also been suggested that some of the earlier policies of industrialization, which was intended to promote labor-intensive industries and adoption of labor-intensive techniques, had some unintended consequences of encouraging the use of capital intensive technology (Kochhar et al. 2006; Felipe, Kumar, and Abdon forthcoming).

Reducing factor market distortions could, therefore, promote job creation. A key policy measure is to reduce or eliminate financial repression by further developing the financial sector. This include

reducing and eliminating distortions in the cost of capital by gradually adopting market-determined interest rates; allowing greater competition and private sector participation in the financial sector; further strengthening the regulatory framework and governance of financial institutions; carefully managing the liberalization of the capital account; and making the exchange rate more flexible. India liberalized deposit interest rate in November 2011 (RBI 2011).

Labor market institutions

Employment generation also needs to be supported by effective labor market institutions. On the one hand, labor market institutions should help improve the employability of labor through providing skill training and assistance with job search (such as employment services), and provide necessary protection of worker rights. On the other hand, they should not impose excessive costs on enterprises and hurt job creation.

There are significant disagreements on effects of labor market interventions on job creation. Some believe that interventions such as employment protection legislation, minimum wages, and collective bargaining are important to protect the rights of workers, while others think that these interventions will raise labor costs, only protect those who have already been employed (or "insiders"), but make employers reluctant to hire new workers, or find ways to bypass these (for example, by replacing regular, formal jobs with contract labor that offers less protection, lower wages and little social security), hence hurting job creation. Empirical evidence on these is mixed (Felipe and Hasan 2006).

In some countries, there has been an implicit or explicit move to a "flexicurity system," which involves giving employers greater flexibility in adjusting the workforce based on their needs as determined by market fluctuations, while the security of workers is "socialized" through policies and programs administered by or through the state, such as re-training or unemployment insurance (Auer 2007). This approach reduces the retrenchment burden on firms (making it more likely that they will hire and provide better security for workers. In Asia, some countries have moved in this direction, including the Republic of Korea and the PRC, while others have found it hard to restructure labor market institutions (Vandenberg 2010).

In sum, while there is large room for many Asian countries to build effective labor market institutions, the exact form and approach to follow will have to be decided by each country on the basis of their specific circumstances. For countries that have transited from a planned economy to a market economy and basic labor market institutions are yet to be established, there is a case for moving toward establishing or strengthening formal arrangements. For countries where labor market regulations have been seen as too restrictive and a major constraint to growth and job creation in the formal sector, there is a need to examine the specific elements that are likely to be constraints and ensure that they are appropriately addressed.

Public employment schemes

Governments can also introduce public employment schemes to act as a buffer stock or mechanism for employment: when the private sector

downsizes in recessions, workers who lose their job can find work in such a scheme. The government pledges to hire anyone satisfying certain criteria and willing to work on projects such as small infrastructure (e.g., clean water and sewage projects, roads) at a basic public sector living salary. Many developing countries, including Bangladesh, Cambodia, Indonesia, the Republic of Korea, and Sri Lanka in Asia, and Argentina, Brazil, Chile, Peru, and Mexico in Latin America, and developed countries including Australia and France, have public employment programs, many of which are temporary (Felipe 2009).

Some countries have implemented such programs to counter the major problems associated with persistent unemployment. In Asia, a well-known case is India's National Rural Employment Guarantee Scheme (Box 2.5.4).

2.5.4 India's National Rural Employment Guarantee Scheme

The Mahatma Gandhi National Rural Employment Guarantee Scheme was launched in 2006 in the 200 most backward districts of India (of 640 districts in all). It is a program that explicitly recognizes the "right to a job."

Under the program, every rural adult willing to be engaged in unskilled manual labor has the right to demand work from the state government for up to 100 days per household annually. The core funding for the program is provided by the central government, and state governments make additional contributions.

The program has been extended and now covers the entire country (apart from 100% urban districts). The number of households who were provided employment increased from 21 million in 2006/07 to 38 million in 2010/11, which amounted to more than 1,200 million person-days of work. A notable aspect of the scheme is the large number of women who have sought work—female participation increased from 41% to 49% in this period.

The program has several achievements, including lifting rural wages; reducing distress migration; creating community assets; promoting empowerment and making politicians more responsive to the demands of the poor; reducing unemployment and underemployment; encouraging growth of agricultural production; reducing discrimination; and reducing malnutrition.

It has also drawn criticism, however, including allegations of corruption, weakening work incentives, undermining fiscal sustainability, distorting the labor market, and causing wage inflation.

Sources: Bonner et al. (2012); Jagannathan (2011); Sjoblom and Farrington (2008).

Toward inclusive growth in Asia

Driven by globalization, technological progress, and market-oriented reform, developing Asia has had a remarkable period of growth and poverty reduction. However, the drivers of growth are also magnifying the effects of inequalities in physical and human capital, leading to rising income inequality. These forces require Asian policy makers to redouble their efforts to generate more productive jobs, equalize opportunities in employment, education and health, and address spatial inequality. Without such policies, which will enhance growth further, Asia may be pulled into inefficient populist policies, which will benefit neither growth nor equity.

The policy options outlined constitute key elements of a strategy for inclusive growth. Broadly, inclusive growth can be defined as "growth coupled with equality of opportunity," and it needs three policy pillars: sustained growth to create productive jobs for a wide section of the population; social inclusion to equalize access to opportunity; and social safety nets to mitigate vulnerability and risks and prevent

extreme poverty (Zhuang and Ali 2010). Such a strategy would ensure that all members of society can participate in the development process productively and benefit equitably from the opportunities generated by economic growth.

It is encouraging that more and more developing Asian countries are embracing the concept of inclusive growth, with an increasing number of countries—including the PRC, India, and many Southeast Asian countries—placing inclusive growth at the heart of their development policy, as reflected in their recent medium-term development plans. Indeed, the entire development community is embracing the concept of inclusive growth. These developments will go a long way toward reducing poverty and inequality and making the world a more equitable place.

Endnotes

1 A common measure of inequality, ranging from zero indicating perfect equality and 1 (or 100) indicating perfect inequality. See Box 2.2.1 for technical details.

2 Of these countries, 25 have data for the 1990s and 2000s.

3 The 13 comprise one in East Asia (PRC), three in Southeast Asia (Malaysia, the Philippines, and Thailand), one in South Asia (Sri Lanka), one in Central Asia (Georgia), and seven in the Pacific (Fiji, Kiribati, Nauru, Palau, Samoa, Solomon Islands, and Vanuatu). The Gini of the rest of the economies ranged from 27.8 for Afghanistan to 38.9 for Indonesia.

4 If two countries with data only in the 1990s are included, the average is 37.9.

5 We say "appears" because the rural Gini had a sharp fall in 2002–2005 but a steep rise in 2005–2008. It is unclear whether this switch reflects data problems or changes in income distribution.

6 The PRC, Fiji, Georgia, Kiribati, Malaysia, Nauru, Palau, the Philippines, Samoa, Solomon Islands, Thailand, and Vanuatu.

7 This is a simple arithmetic average.

8 Data are not available for the Republic of Korea; Mongolia; or Taipei,China.

9 The difference between the two measures was 4.4 percentage points for the Philippines in 2009 and 8.9 percentage points for Viet Nam in 2008.

10 The increases were more pronounced in Austria, Canada, Denmark, Finland, Germany, Luxembourg, Spain, and Sweden.

11 A caveat: inequality in education is difficult to measure, as the quality dimension of education in particular is hard to capture through survey and census instruments.

12 Global Health Observatory Repository Data (accessed 18 February 2012).

13 Circumstances, as used here, are personal or family socioeconomic and demographic characteristics over which an individual has no direct control.

14 A cross-country study by IMF (2007) finds that global trade integration helps to reduce inequality as measured by the Gini coefficient, global financial integration increases it, and technological progress is the most important contributor to rising inequality globally in the last 2 decades. The study also finds that these impacts are particularly pronounced in developing Asia.

15 Tertiary education premium refers to the wage premium for workers with at least tertiary education compared with workers with a lower level of education.

16 Acemoglu (2002) notes that for the late 20th century, there has been a rise in returns to education and a decrease in low-skill wages, despite an increase in the supply of college graduates, which suggests that supply has not kept up with demand for high-skilled labor. Studies have also argued for evidence of skill-biased technological change in developing countries (Goldberg and Pavcnik 2007; Robbins 1996; Sanchez-Paramo and Schady 2003; and Attanasio, Goldberg, and Pavcnik 2004 for Latin America; Hsieh and Woo 2005 for Hong Kong, China; and Kijima 2006 for India). However, Card and DiNardo (2002) point out that wage inequality stabilized in the US despite continuing developments in computer technology. They also argue that skill-biased technological change does not

fully explain wage gaps across genders, and racial and demographic structures. The debate between competing explanations for the US is ongoing (see Autor, Katz, and Kearney 2008; Marquis, Trehan, and Tantivong 2011).

17 Wage employment refers to wage-earning employment, mostly in the formal sector. Wage employment elasticity is the ratio of employment growth to GDP growth between two periods. It thus measures the amount of employment growth required to generate each percentage point of GDP growth.

18 A dual economy consists of two sectors, one a low-income, rural subsistence sector with surplus population, and the other an expanding urban modern (manufacturing and services) sector. The urban economy absorbs labor from rural areas, which holds down urban wages until rural surplus labor is exhausted. See Lewis (1954).

19 Several decades ago, Arthur Lewis—a Nobel Prize winner—pointed out the tendency of the development process to be inegalitarian: "Development must be inegalitarian because it does not start in every part of the economy at the same time…There may be one such enclave in an economy, or several; but at the start, development enclaves include only a small minority of the population" (Lewis 1976).

20 See also the long-run analysis of regional inequality in the PRC by Fan, Kanbur, and Zhang (2011).

21 According to the UN (2007), the cost of a universal social pension scheme designed to keep the elderly out of poverty (at the $1-a-day poverty line) was estimated at 0.25% of GDP for Malaysia and about 0.5% of GDP for the Philippines and Thailand in 2005.

22 The revised 2012 Budget Law gives a mandate to the government to increase fuel prices if the average Indonesian crude oil price in the last 6-month period increases to $120.80 per barrel (15% above the budget assumption of $105).

23 ADB (2007a) provides a comprehensive discussion of the issues involved.

24 Although India's share of services in GDP is high, it has been argued that jobs in the sector are mostly of low productivity and poorly paid. While the booming business process outsourcing sector has generated many productive and well-paid jobs, this has only benefited a small group of the educated (ADB 2007a).

25 Some argue that the PRC's low share of services is also related to the way the data for services are collected and included in national income accounting (Pant 2007).

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