CHAPTER 6

Partially Awakened Giants

Uneven Growth in China and India

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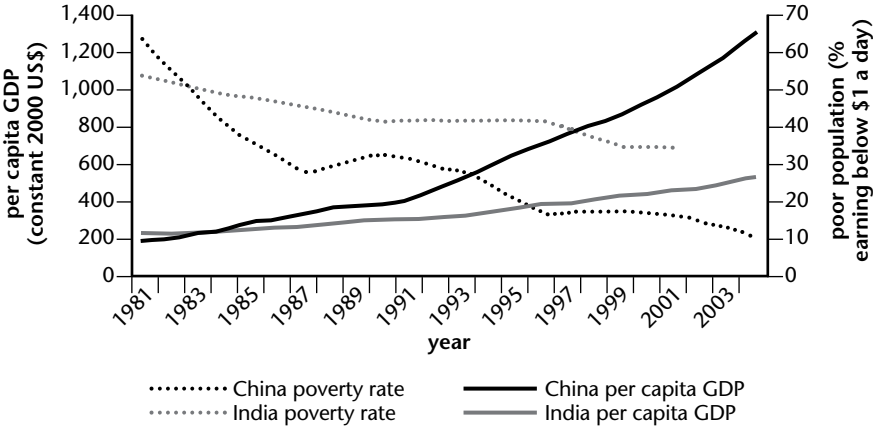
The emergence of China and India on the global economic stage has been the subject of much discussion in international media and business and policy circles. The nearly 9 percent annual rate of real per capita gross domestic product (GDP) growth that China has averaged over the last quarter-century is unprecedented; and with an average per capita GDP growth rate of nearly 4 percent a year since 1981, India's takeoff seems less than spectacular only in comparison with that of China.

In both countries, this growth has been accompanied by substantial—in the case of China, dramatic—reductions in the aggregate incidence of absolute poverty measured in terms of income or consumption. Figure 6.1 displays these two trends for the two countries over the period from 1981 to 2003.[1] The headcount rates of poverty are calculated on as comparable a basis as is currently feasible. The poverty line is the World Bank's dollar-a-day global standard of $32.74 a month at 1993 purchasing power parity. China started this period with the higher poverty rate, but soon overtook India.

Concerns are being expressed about the distributional impacts of the growth processes in both countries. The domestic debate about growth-promoting reforms has become increasingly contentious. It is widely felt that the

1. At the time of writing, only preliminary data were available for India for fiscal 2004/05, and this data point is not plotted in figure 6.1. The preliminary data suggest that the overall Indian poverty rate trend shown in figure 6.1 has been maintained, although it has not accelerated (in percentage points per year) since the early 1990s.

Figure 6.1 Growth and Poverty Reduction, 1981–2003



Source: Poverty measures from Chen and Ravallion (2004); GDP from national accounts.

gains from growth have been spread too unevenly, with some segments of the population left behind in relative and even absolute terms. Yes, the Giants are awakening from their economic slumber, but they still are only partially awake in that segments of their societies remain (relatively and absolutely) dormant. This unevenness has shown up as rising income inequality by conventional measures in both countries. These developments in turn have led some observers to question the sustainability of growth.

What is one to make of this? In what ways has growth been uneven? Can we believe the data suggesting rising inequality? If so, should we be concerned that segments of the population appear to have been left behind (at least in relative terms)? And does this pose a risk to the sustainability of growth and poverty reduction?

In this chapter, we try to shed some light on these questions. Certainly of undeniable interest in both countries, these questions also merit attention elsewhere because the impact that the rise of China and India is going to have on the rest of the world depends very much on whether the Giants are able to sustain the growth rates they have achieved over the last quarter-century. And that sustainability hinges on whether concerns about the unevenness of growth thus far are legitimate and whether that unevenness poses a risk to future growth.

After noting a number of data issues, the chapter examines the ways in which growth has been uneven in China and India, and what that unevenness has meant for inequality and poverty. Drawing on analyses based on existing household survey data and aggregate data from official sources, we show that growth has been uneven—geographically, sectorally, and at the household level—and that this has meant uneven progress against poverty, less poverty reduction than might have been achieved had growth been more balanced, and increased income inequality. We then turn to why growth has been uneven and why this should be of concern. Because of the complexity of the underlying issues and the difficulties of settling them in an empirically rigorous manner, the discussion is necessarily somewhat more speculative. We structure the discussion around the idea that there are both "good" and "bad" inequalities—drivers and dimensions of inequality and uneven growth that are good or bad in terms of what they imply for both equity and long-term growth and development.

We argue that the Giants' development paths have been influenced by, and have generated, both types of inequalities. Although good inequalities—most notably, those that reflect the role of economic incentives—have been critical to the growth experience thus far, there is a risk that bad inequalities—those that prevent individuals from connecting to markets and limit investment and accumulation of human and physical capital—may undermine the sustainability of growth in the coming years. We argue that policies are needed to preserve the good inequalities—continued incentives for innovation and investment—but reduce the scope for bad ones, notably through investments in human capital and rural infrastructure that help rural poor people connect to markets.

Clarifying Data Issues

There are always reasons to be skeptical about economic statistics, and measures of inequality and poverty are no exceptions. The issues are rather different between these two countries.

A number of data problems have clouded past assessments of what has been happening to poverty and inequality in China. Some of these problems are common to other countries; others seem unique to China. An unusual feature of China's data is that the National Bureau of Statistics (NBS) uses different annual survey instruments for urban and rural areas, namely the Rural House-

hold Survey and the annual Urban Household Survey; whereas NBS makes some efforts to ensure comparability, problems remain. For the rural survey, there are also comparability problems over time, as discussed in Ravallion and Chen (forthcoming). One of the more serious problems is that, in 1990, there was a change in valuation methods for consumption of own-farm production in the Rural Household Survey: public procurement prices (held below market prices) were replaced by local selling prices.[2] For 1990 (the only year for which the two methods can be compared), Ravallion and Chen (forthcoming) showed that the new valuation method generates slightly lower inequality; for 1990, the aggregate Gini index for rural China drops from 31.5 percent to 29.9 percent, and the rural headcount index of poverty drops substantially from 37.6 percent to 29.9 percent. These effects reflect the high share of consumption from own-farm product among China's poor population.

Another problem in past work has been the failure to adjust for spatial cost-of-living differences. This failure can affect distributional comparisons over space and time. The extent of urban-rural disparities drops appreciably when one corrects for the higher urban cost of living (Ravallion and Chen forthcoming). Also, the positive trend in urban–rural inequality since around 1980 (noted by many authors in the literature) vanishes when one allows for higher inflation rates in urban areas than in rural areas, although a marked positive trend in urban–rural inequality since the mid-1990s is still evident (Ravallion and Chen forthcoming).

Lack of public access to the micro data for China as a whole has restricted researchers' ability to address the data concerns. However, micro data for some selected provinces and time periods have been available. Ravallion and Chen (1999) used the micro data for four provinces of southern China to correct poverty and inequality measures for problems in both the valuation methods for consumption of own product and the deflators. The corrections to the original survey data tend to reduce measured inequality and to attenuate its rate of increase over time.

Not all the likely data problems mean a lower true level of inequality or a lower rate of increase over time. For example, if we could correct for selective

2. Until the mid-1990s, public procurement prices for grain were held below market prices. Using these prices to value own consumption overestimates the true extent of both poverty and inequality. This practice largely was abandoned from the 1990s onward in favor of using local selling prices for valuation.

compliance (whereby people who are relatively well off are less well represented in surveys), then we might find higher inequality.[3] We currently have no basis for correcting for this possible problem in China, however; we suspect the compliance problem is of greater concern in urban China than in rural areas.

Poverty monitoring in India since the 1960s has been based mainly on the household expenditure surveys done as part of the National Sample Surveys. The salient features are that household consumption expenditure per person is used as the individual welfare indicator, and the poverty line that is intended to have a fixed real value across time and space (urban and rural areas of states) is determined by combined geographic and intertemporal deflators. The main data issue is that assessing what has been happening to poverty and inequality in India during the 1990s has been clouded by a comparability problem between the two main surveys available for the 1990s (Deaton 2001; Sen and Hiamnshu 2004a, 2004b).[4]

There are concerns about how well surveys measure incomes or consumptions. Survey-based income and consumption aggregates for nationally representative samples typically do not match the aggregates obtained from national accounts. This is to be expected for GDP, which includes nonhousehold sources of domestic absorption. Possibly more surprising are the discrepancies found with both the levels and growth rates of private consumption in the national accounts aggregates; Ravallion (2003) provides evidence. The discrepancies between levels and growth rates of consumption as measured by India's National Sample Survey and national accounts have been of particular concern, but here, too, it should be noted that (as measured in practice) private consumption in the national accounts includes sizable and rapidly growing

3. This is not necessarily the case, but there is supportive evidence for the United States (Korinek, Mistiaen, and Ravallion 2006).

4. Since the National Sample Survey began in the 1950s, it has used 30-day recall for consumption. This changed in 1999/2000 with the 55th round for which food consumption (on average, approximately 60 percent of total consumption) was obtained by both 7- and 30-day recall for the same set of households, with the question about the last 7 days' consumption of each commodity coming before the question about the last 30 days' consumption. (The columns for 7- and 30-day recall appear side by side on the same page in the questionnaire.) By contrast, spending on low-frequency nonfood consumption items (about 20 percent of the average total consumption) was obtained using a one-year recall period, unlike earlier rounds. The 30-day recall period was used only for high-frequency nonfood items.

components typically missing from surveys (Deaton 2005).[5] Aside from differences in what is being measured, however, surveys do encounter problems of underreporting (particularly for incomes; the problem appears to be less serious for consumption) and selective nonresponse.[6]

There are also a number of data problems in making comparisons between China and India. China has traditionally used household income (per capita) as the ranking variable whereas India has used consumption expenditure (per capita). Also, the available data on spatial differences in the cost of living are still rather weak in both countries. Furthermore, purchasing power comparisons between the countries are confounded by a number of concerns about the underlying price data and standard index-number problems.[7]

One data-related issue that should be flagged, however, is how well conventional inequality measures capture the significance that is often attached to *between-group* inequalities. Naturally, any conventional inequality measure puts weight on such differences, but it is far from obvious that those weights accord well with the significance attached to between-group inequalities, as argued by Kanbur (2001). Although this issue raises a number of deeper questions about individualism and the role of group identities that are beyond our present scope, we will note the extra significance attached to certain between-group disparities in both China and India.

Ways in Which Growth Has Been Uneven

Growth in China and India over the last quarter-century has indeed been uneven. This unevenness has been apparent in several (related) dimensions, with implications for inequality, poverty reduction, and human development in the two countries. This section makes four claims:

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5. Deaton and Kozel (2005) provided a useful compilation of papers on this and related issues of poverty measurement in India.

6. In measuring poverty, some researchers have replaced the survey mean by the mean from the national accounts (GDP or consumption per capita); for example, see Bhalla (2002) and Sala-i-Martin (2002). This replacement assumes that the discrepancy is distribution neutral, which is unlikely to be the case; for example, selective nonresponse to surveys can generate highly nonneutral errors (Korinek, Mistiaen, and Ravallion 2006). For further discussion in the context of poverty measurement in India, see Ravallion (2000).

7. We will largely ignore these data problems in this chapter, not because we think them unimportant but because this is not the place to dwell on them.

1. Uneven growth across states in India and provinces in China has meant uneven progress against poverty.
2. Growth has been sectorally uneven, with primary sector growth rates lagging behind growth rates in the secondary and tertiary sectors in both of the Giants, and with rural incomes growing more slowly than urban incomes.
3. Growth has been uneven at the household level. In particular, incomes at the top of the distribution increased much faster than those at the bottom in both countries. That fact has meant rising inequality—dramatically so in the case of China.
4. Because the more rapid growth of both countries has been so uneven in these dimensions, it sometimes has brought disappointing outcomes in terms of progress against poverty and other ("nonincome") dimensions of well-being.

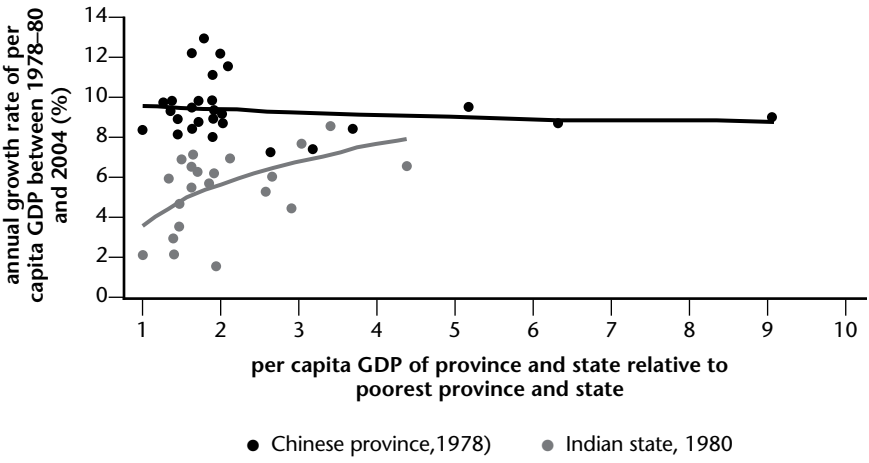
Geographically Uneven Growth Has Produced Uneven Progress against Poverty

The aggregate growth performances of China and India mask considerable unevenness of growth at the subnational level. Chinese provincial GDP growth rates (between 1978 and 2004) ranged from a low of 5.9 percent in Qinghai to a high of 13.3 percent in Zhejiang. In India, growth rates of state domestic product between 1980 and 2004 ranged from a low of 1.7 percent in Jammu and Kashmir to a high of 8.7 percent in Goa. Among India's 16 major states, Bihar (including the newly created state of Jharkand) had the lowest growth rate—namely, 2.2 percent—and Karnataka had the highest—7.2 percent.

Province- and state-level growth rates have been higher and less volatile since around 1980 in China and 1990 in India.[8] Nonetheless, the sustained geographic differences in growth rates have generated some marked regional disparities in both countries. In India, the states that initially were poorer have grown more slowly, resulting in unconditional divergence in both absolute and relative terms.[9] This is apparent in figure 6.2, which plots the average annual growth rate of real per capita state GDP against a state's initial per

8. In India, as an example, except for the Green Revolution states of Punjab and Haryana and the state of Maharashtra, annual growth rates before the 1980s were, at most, 2 percent.
9. See Ghosh (2006) for econometric tests indicating more marked growth divergence for India in the postreform period

Figure 6.2 Growth Rates at the Subnational Level



Source: National Bureau of Statistics of China, *China Statistical Yearbook,* various years; Government of India Central Survey Organization.
Note: The lines of best fit are semi-log least-squares regression lines.

capita GDP relative to the poorest state. India's poorer states are experiencing positive growth, but the high growth rates, postreform, have been elsewhere.

In China, provinces that initially were poorer have managed to keep pace with the initially wealthier provinces in terms of aggregate growth rates (figure 6.2). Keeping pace has meant no divergence in relative terms, but absolute differences across provinces have increased. Also, there have been signs of divergence regionally between the coastal and inland areas of China (see Chen and Fleisher 1996; Jian, Sachs, and Warner 1996; Sun and Dutta 1997; Raiser 1998; and Kanbur and Zhang 1999).

The spatial unevenness of growth has contributed in two ways to uneven progress against poverty. First, because household income growth has been associated closely with poverty reduction at the subnational level in both China and India, geographically uneven growth has meant that progress against poverty was uneven as well, with some provinces and states seeing far more rapid reduction in poverty than others.[10] In China, the coastal areas fared better than inland areas; the trend rate of decline in the poverty rate between

10. This is clearly documented for India by Datt and Ravallion (2002) and Deaton and Drèze (2002), and for China by Ravallion and Chen (forthcoming).

1981 and 2001 was 8 percent a year for inland provinces, versus 17 percent for the coastal provinces. In India, most of the western and southern states—peninsular India (with the exception of Andhra Pradesh)—did comparatively well, while the more backward states of Bihar, Madhya Pradesh, Rajasthan, and Uttar Pradesh, along with states in the eastern region, achieved relatively little poverty reduction between 1993/94 and 1999/2000.

Second, the most rapid growth did not occur where it would have had the most impact on poverty. This is evident if one compares growth rates across provinces with the growth elasticities of poverty reduction weighted by the initial shares of total poverty. (The weights ensure that this gives the impact on national poverty of growth in a given province.) Had the pattern of growth favored provinces where growth would have had the greatest impact on poverty, we would find a negative correlation between the growth rate and the share-weighted elasticity. However, for neither country does one find any relationship, one way or the other (see Ravallion and Chen [forthcoming] for China and Datt and Ravallion [2002] for India).

Sectorally Uneven Growth Has Increased the Urban–Rural Income Gap and Suppressed Poverty Reduction

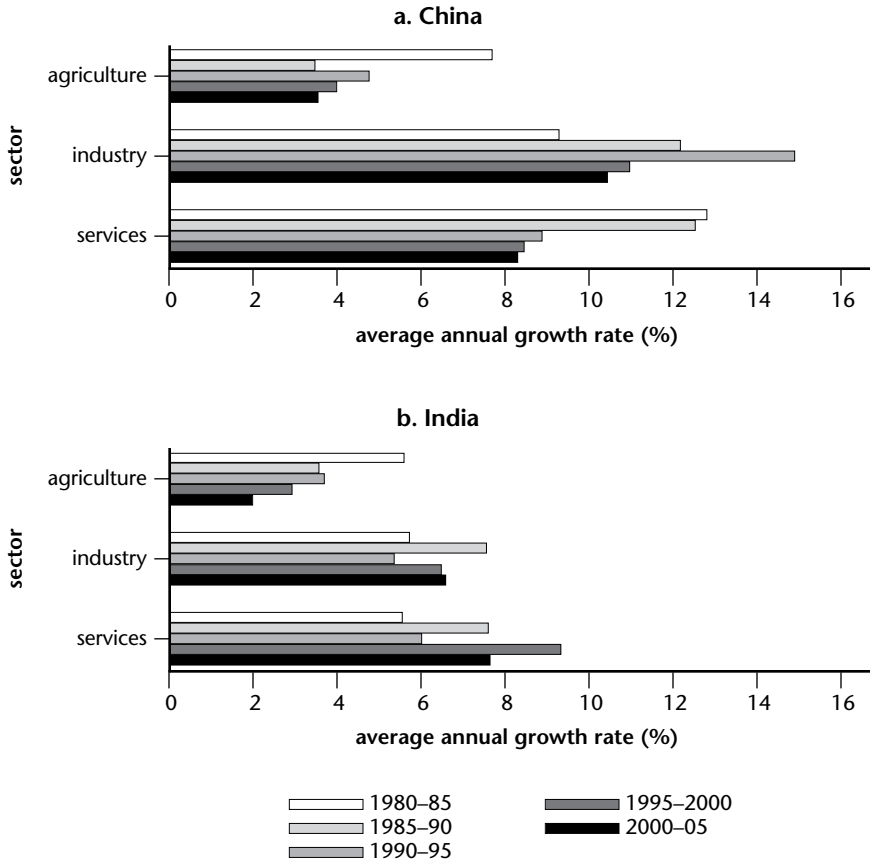
A second dimension of uneven growth in both countries is found across sectors. Growth rates in the primary sector (agriculture) not only have lagged behind those in the secondary (industry) and tertiary (services) sectors, but also actually have declined since 1980 (figure 6.3).

In nominal terms, urban incomes and expenditures clearly have increased faster than rural incomes over the past quarter-century in both countries. For India, this has been reflected in a steady increase in the ratio of urban-to-rural mean real consumption levels, from just below 1.4 in 1983 to approximately 1.7 in 2000. Even in 1981, the urban-to-rural ratio of nominal mean incomes in China was approximately 2.5—much higher than it ever has been in India. And since then, although there have been periods when the ratio of urban-to-rural mean incomes fell, the overall trend has been upward.

Adjusting for cost-of-living differences clouds these trends somewhat. For China, the urban rate of inflation has been higher than the rural rate; and when one allows for this fact, there is no trend increase over time in the ratio of the urban mean to the rural mean (Ravallion and Chen forthcoming).[11]

11. There are other data problems with ambiguous implications for urban–rural disparities. The undercounting of rural migrants in China's urban areas is likely to lead to an overesti-

Figure 6.3 Sectoral GDP Growth Rates, 1980–2005



Sources: National Bureau of Statistics of China, *China Statistical Yearbook,* various years; Government of India Central Survey Organization.

There have been subperiods, however, including the period from 1997 to the present, during which the relative urban–rural disparity has risen. Moreover, even allowing for cost-of-living differences, the absolute gap be-

mation of the level and growth rate in the ratio of the urban mean to the rural mean. Against this effect, urban survey response rates tend to be lower than in rural areas, and it may be assumed safely that the rich tend to have lower response rates. Our discussions with the staff of the National Bureau of Statistics of China suggest that this problem is growing over time in China.

Table 6.1 Poverty Reduction and the Sectoral Composition of Growth

	China			India	
Growth rate or components	(1)	(2)	(3)	(4)	(5)
Growth rate of GDP per capita	–2.60 (–2.16)			–0.99 (–3.38)	
Primary sector (share weighted)		–8.07 (–3.97)	–7.85 (–4.09)		–1.16 (–2.96)
Secondary sector (share weighted)		–1.75 (–1.21)			3.41 (1.84)
Tertiary sector (share weighted)		–3.08 (–1.24)			–3.42 (–2.74)
Secondary + tertiary sectors			–2.25 (–2.20)		
R^2	0.21	0.43	0.42		0.75

Sources: Ravallion and Chen forthcoming (China, 1981–2001); Ravallion and Datt 1996 (India 1951–91).
Note: t-ratios appear in parentheses.

tween rural and urban incomes has increased appreciably. This is also true for India.

The sectoral composition of growth has mattered for poverty reduction in both countries over recent decades. This can be seen in table 6.1, which provides regressions of the rate of change in poverty over time (that is, the difference in the log of the headcount rate of poverty) on both the overall rate of per capita GDP growth (that is, the change in the log of GDP per capita) and the share-weighted rates of GDP growth in each of the three sectors. The sector-specific growth rates are share weighted to allow for the fact that sectors growing at the same rate are unlikely to have the same aggregate impacts if one accounts for a much smaller share of aggregate income than the other. When rates are share weighted, one obtains a straightforward, testable hypothesis for whether the composition of growth matters—namely, that the regression coefficients across growth components would be roughly equal (Ravallion and Datt 1996). Note that these regressions are best viewed as decomposition tools rather than causal models of poverty reduction. Deeper explanations must endogenize growth rates and their composition; and Ravallion and Chen (forthcoming) have provided models of poverty reduction in China that try to make some progress in that direction.

For China, the overall elasticity of the headcount index to GDP growth was an impressive –2.6, meaning that a 10 percent growth rate brought (on

average) a 26 percent reduction in the proportion of people living in poverty. When growth is decomposed by sector, it is clear that its composition mattered greatly to the rate of poverty reduction. The impact of growth in the primary sector was far higher than for growth in either the secondary or tertiary sector. The effects of the latter two sectors are similar.

The overall growth elasticity of poverty reduction is appreciably lower in India than in China (column 4). For India, too, the sectoral composition of growth was important, although growth in the tertiary sector was relatively more important than in China.[12] This probably reflects the difference between the two countries in the distribution of agricultural land. In rural China, starting conditions at the outset of the reform process entailed relatively low levels of inequality in access to land. The de-collectivization process that started in the late 1970s achieved a relatively equal allocation of access to agricultural land, at least within communes. (Between communes, the only way to equalize land allocation would have been to allow mobility of people, which was not considered a desirable option.) This meant that agricultural growth was a powerful instrument against poverty and inequality in China (Ravallion and Chen forthcoming). The distribution of agricultural land was and is clearly more unequal in India, and that naturally attenuates the impact of agricultural growth on poverty relative to that found in China.

Increases in rural incomes, whether from agricultural growth or (particularly in the case of China) from increased rural nonfarm employment, also turn out to have been critical for overall poverty reduction. Table 6.2 gives regressions of the rate of change in poverty over time (difference in the log headcount index) on the share-weighted growth rates of rural and urban mean incomes and a term capturing the effect of any shifts in population from rural to urban areas. It can be seen that, in both countries, growth in rural incomes is the only statistically significant correlate of poverty reduction. Ravallion and Chen (forthcoming) also reported an alternative decomposition for China, which confirms the quantitative importance of rural economic growth. Approximately 72 percent of the reduction in the headcount index that occurred in China between 1981 and 2001 is attributable to rural poverty reduction, versus 5 percent attributable to urban poverty reduction and 23 percent resulting from the population shift from rural to urban areas.

12. Note that the coefficients on growth in the secondary and tertiary sectors for India are of approximately equal size but opposite sign (table 6.1). This suggests that the (share-weighted) difference in growth rates is picking up a distributional effect on poverty reduction.

Table 6.2 Poverty Reduction and the Urban–Rural Composition of Growth

Growth rate or population shift effect	China	India
Growth rate of mean rural income (share weighted)	–2.56 (–8.43)	–1.46 (12.64)
Growth rate of mean urban income (share weighted)	0.09 (0.20)	–0.55 (–1.37)
Population shift effect	0.74 (0.16)	–4.46 (–1.31)
R^2	0.82	0.90

Sources: Ravallion and Datt 1996 (India); Ravallion and Chen forthcoming (China).
Note: *t*-ratios appear in parentheses.

The results shown in tables 6.1 and 6.2 imply that the particular form of sectorally uneven growth experienced by China and India—primary sector growth rates lagging behind growth rates in the secondary and tertiary sectors, and rural incomes growing more slowly than urban incomes—has meant less poverty reduction than might have been the case otherwise. We can gain a sense of how much extra poverty reduction might have been achieved from a more balanced growth path through counterfactual simulations in which it is assumed that all three sectors grow equally—meaning that the sector shares of GDP in 1981 would have remained constant over time. The estimates from table 6.1 are used to calculate the implied rate of poverty reduction under different assumptions about the overall (common) rate of GDP growth. So, for instance, had it been possible to achieve a balanced growth path while maintaining the GDP growth rates China actually achieved between 1981 and 2001, the mean rate of poverty reduction would have been 16.3 percent a year, rather than 9.5 percent. Instead of 20 years to bring the headcount index down from 53 percent to 8 percent, it would have taken approximately 10 years.

Of course, one can question whether a more sectorally balanced growth path could have been achieved without lowering the overall growth rate, and so this exercise should be viewed as an upper bound on what might have been possible. And there appear to be signs of a sectoral trade-off in that the correlation between China's primary sector growth rates and the combined growth rate of the secondary and tertiary sectors was –0.414 over this period, thus implying that a more balanced growth path in which the growth rate of the primary sector was higher might have meant less growth overall. It is worth noting, however, that the negative correlation is statistically quite weak—a significance level of 6 percent—and that there were subperiods (1983–84, 1987–88, and 1994–96) in which *both* primary sector growth and combined growth in the secondary and tertiary sectors were above average.

A similar exercise for India suggests that, were it not for the sectoral and geographic imbalance of growth, the national rate of growth since reforms began in full force in the early 1990s would have generated a rate of poverty reduction that was double India's historical trend rate (Datt and Ravallion 2002). The evidence also suggests that states with relatively low levels of initial rural development and human capital development experienced lower elasticities of poverty reduction to economic growth (Ravallion and Datt 2002).

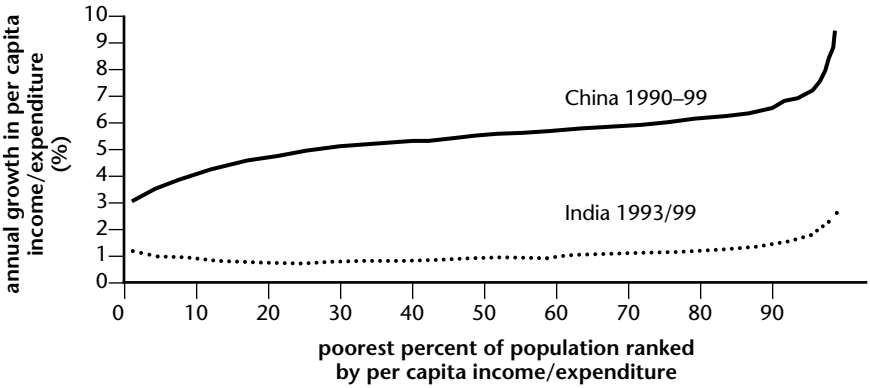
Uneven Growth across Households Has Led to Rising Inequality

The unevenness of economic growth across households at different levels of living can be seen clearly in the growth incidence curve (GIC), which gives the annualized rate of growth over the relevant time period at each percentile of the distribution (ranked by income or consumption per person).[13] Figure 6.4 displays the Chinese and Indian GICs for the periods 1990–99 and 1993–99, respectively. In both cases, growth rates at the bottom of the distribution were lower than those at the top. The gradient is less steep for India.[14] Growth rates in China in the 1990s rise sharply as we move up the income ladder, with the annual rate of growth in the 1990s increasing from approximately 3 percent for the poorest percentile to more than 10 percent for the richest. Although the growth rate in the overall mean was 6.2 percent, the mean growth rate for the poorest 20 percent (roughly according with China's "$1 a day" poverty rate in 1995) was 4.0 percent. The GIC for India for the 1990s shows a slight U shape, with the lowest growth rates—approximately

13. See Ravallion and Chen (2003) on the precise definition and properties of the GIC.

14. The shape of India's expenditure GIC for the 1990s depends critically on what adjustment is made for the comparability problems between the 1999/2000 survey and earlier surveys. The GIC shown in figure 6.4 is based on estimates produced by Sundaram and Tendulkar (2003), who resolved the comparability problem by estimating consumption expenditures based on a common "mixed reference period" for categories of consumption. The rural and urban distributions were then aggregated, assuming urban–rural cost-of-living differentials of 33 percent and 38 percent for 1993/94 and 1999/2000, respectively, based on updated poverty lines as used in Ravallion and Datt (2002). This roughly matches the GIC implied by estimates Deaton (2001) obtained using an alternative method, based on a "common reference period," to make the surveys comparable. If no attempt is made to correct for the comparability problem, however, and one simply uses the "unadjusted" primary estimates from each of the surveys, the GIC suggests a much more pro-poor pattern of growth, with growth rates declining from more than 2 percent for the poorest percentile to approximately 1 percent at the top of the distribution (Ravallion 2004b).

Figure 6.4 Growth Incidence Curves for China (1990–99) and India (1993–99)



Sources: Ravallion and Chen 2003 (China, using household income); Ravallion 2004a (India, using household expenditure on consumption).

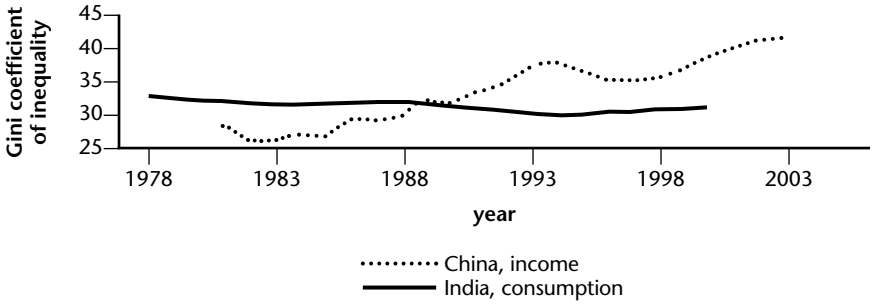
1 percent—for people around the 10th percentile, and a smaller difference between growth rates at the top (close to 2 percent) and those at the bottom (just over 1 percent) than was the case for China.

As we have noted, even large-sample, nationally representative surveys (such as used to construct figure 6.4) typically do not pick up what is happening at the extreme upper tails of the distribution. In the case of India, evidence from other sources indicates that incomes at the top end have risen dramatically. For instance, based on a study of tax returns, Banerjee and Piketty (2003) reported that the super-rich population in India—that is, those at the 99.99th percentile—experienced income growth greater than 285 percent between 1987/88 and 1999/2000.

Figure 6.5 displays the trends in income inequality for the two countries. From a cross-country perspective, India remains a relatively low-income inequality country (World Bank 2005c, 2006), but this is no longer true of China. The Gini index of income inequality for China rose from 28 percent in 1981 to 41 percent in 2003 (although not continuously) and more in some periods and provinces.[15]

15. Note that the latter figure is somewhat lower than past estimates for China because corrections have been made for changes in survey-valuation methods (as discussed above) and

Figure 6.5 Trends in Income Inequality, 1978–2003



Sources: Authors' calculations (India); Ravallion and Chen forthcoming (China).

The fact that the inequality measures for China use income whereas those for India use consumption (per capita) does not account for the difference in measured inequality, as in figure 6.5. For a few years it is possible to measure inequality using consumption for China. When one does this, the consumption-based inequality measure is only slightly lower than that based on incomes, and it is still appreciably higher than for India (Chen and Ravallion 2006).

In the case of India, one finds that the Gini index rose in the 1990s, although the increase was less pronounced than in China (figure 6.5).[16] It is too early, however, to say if India is undergoing a trend increase in inequality similar to what China has experienced. As can be seen in figure 6.5, looking back over time, rising inequality in India is a recent phenomenon.[17] Indeed, there is no statistically significant trend increase in consumption inequality in India up to the early 1990s (Bruno, Ravallion, and Squire 1998).[18]

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urban–rural cost-of-living differences, which have tended to rise over time because of higher inflation in urban areas (as price controls and subsidies were progressively removed on certain goods, including housing). Without these corrections, the estimate of the Gini index for 2003 rises to more than 45 percent, instead of 41 percent.

16. Figure 6.5 uses the National Sample Survey "thick samples" only. The thin samples for the 1990s also confirm the increase in inequality (Ravallion 2000).

17. Note that comparisons over the longer term are possible only using the uniform recall period data, using the Deaton method of correcting for the comparability problem in the 1999/2000 data.

18. At the time of writing, the 61st round of the National Sample Survey, for 2004/05, has not been released. Only preliminary tabulated results were available to us at the time of

Perceptions "on the ground" that inequality is rising markedly in India do not appear to sit easily with the impression given by figure 6.5. Popular opinion can be mistaken, but data are not perfect either. As we have noted, the survey-based numbers may well understate the relative gains to the rich, and that is consistent with the evidence from tax returns. The visible changes in consumption patterns and lifestyles that the rich have achieved may not be reflected properly in the survey-based inequality measures. Also, and possibly more important, the perception of sharply rising inequality in India also may reflect rising *absolute inequality,* as reflected in the absolute gaps between the rich and the poor, as distinct from the proportionate gaps (Ravallion 2004a). There is evidence that many people view inequality in absolute rather than relative terms (Amiel and Cowell 1999).

Sectoral and Geographic Unevenness of Growth Has Contributed to Rising Inequality

Because both Giants started their reform periods with sizable urban–rural gaps in mean living standards, the unevenness of the subsequent growth process in which urban incomes increased faster than rural incomes, is likely to have put upward pressure on aggregate inequality. The time-series data and regressions presented in Ravallion and Chen (forthcoming) provide direct evidence of this for China. Controlling for growth in rural and urban incomes, the rising urban population share has had no significant effect on aggregate inequality, and the periods when the urban–rural disparity in mean income rose (fell) were the periods when overall inequality rose (fell). But it also would seem that the rising urban–rural gap now has a salience in popular and government circles that far exceeds its likely contribution to a conventional inequality or poverty metric. This salience appears to stem in part from the (plausible) belief that the urban–rural divergence reflects (in part at least) urban biases in the reform processes and complementary public spending choices. This is reinforced by actual or perceived abuses of local political powers at the expense of poor farmers or the landless rural poor (the recurrent land disputes of land contracts and land-use conversions in rural China are examples).

Similarly, regional inequality concerns loom large in both countries, although the quantitative importance of increasing disparities across regions

writing, but they suggest that the inequality increase in India since the early 1990s that is evident in figure 6.5 has continued through to 2005, and well may have accelerated, although this should be investigated more thoroughly when the micro data become available.

(provinces and states) appears to be greater in India. Although these between-group inequalities have carried weight in policy discussions, it is important to note that growing inequality *within* both urban and rural areas have been a major component of the increase in overall inequality; for China, rising inequality within rural areas has been an important dynamic in overall inequality, whereas inequality in India has risen more within urban areas than rural areas.

The sectoral composition of GDP growth—cutting across the urban and rural divide—is also a significant predictor of changes in inequality. For instance, regressions of the sort reported in table 6.1, with share-weighted sectoral GDP growth rates as covariates, but with the change in inequality (change in the log of the Gini index) as the dependent variable, indicate that primary sector growth in China has been associated with lower inequality overall, whereas there is no correlation with growth in either the secondary or tertiary sector (Ravallion and Chen forthcoming). The regression coefficient of the change in log Gini index on the growth rate in primary sector GDP (without share weighting) is –0.478, with a *t*-ratio of –2.76. There is also a strong positive trend in inequality (of approximately 5 percent a year), independent of the rate of private sector growth.

How much higher would the rate of primary sector growth need to have been to stem the rise in aggregate inequality? A moving-average annual growth rate of 7.0 percent would be needed to avoid rising inequality, whereas the mean primary sector annual growth rate was under 5.0 percent between 1981 and 2001. Only in two periods (the early 1980s and the mid-1990s) were agricultural growth rates high enough to prevent rising inequality. The divergence between the actual growth rates in the primary sector GDP and the minimum needed to prevent rising inequality is particularly striking in the most recent period. The recent composition of economic growth in China clearly has been increasing inequality.

It is too early to say with confidence that India's (more recent) rise in inequality stems from similar factors. Nonetheless, we can be reasonably sure that the "urban bias" in India's growth process since reforms began has put upward pressure on overall inequality.

Why Growth Was Uneven and Why This Matters

Why was growth uneven—in the aggregate as well as sectorally and geographically—over recent decades and what are we to make of this unevenness?

Should we be concerned that segments of the population in both China and India appear to have been left behind (at least thus far)? And should we worry that inequality has risen?

These questions are more easily posed than answered because of the multiple complex processes through which uneven growth and inequality are generated and reproduced. Policies play a role, but so do initial conditions in the form of history (for example, inherited institutions) and geography (as a determinant of access to markets and public services). Economic forces undoubtedly are important, but so too are political and social factors. Answering these questions in a rigorous fashion is beyond the scope of this chapter. What we can do, however, is provide an assessment based on our interpretation of the evidence from various sources.

We will structure the discussion around a distinction between *good* and *bad* inequalities—drivers and dimensions of uneven growth that are good or bad in terms of what they imply for how the living standards of poor people evolve over time. We will argue that the Giants' postreform development paths have been influenced by and have generated both types of inequalities.

Good Inequalities

Good inequalities reflect and reinforce market-based incentives that are needed to foster innovation, entrepreneurship, and growth. Scattered evidence suggests that the rise in inequality with the introduction of market reforms in China and India at least partially reflects newly unleashed market-based incentives at work, in contrast with the earlier period of artificially low levels of inequality brought about by regulatory distortions and interventions that suppressed incentives for individual effort and innovation.

Perhaps the leading example of the role that good inequalities (and the economic incentives that underlie them) have played in China's growth is the stimulus to agricultural production in the early 1980s provided by the Household Responsibility System. Under this system, rural households were assigned plots of land and became the residual claimants on the output from that land, significantly enhancing the incentives for production. Prior to that system, land had been farmed collectively, with all members sharing the output more or less equally. Incentives for individual effort in this setting were naturally very weak, and the reforms to this system were critical in stimulating rural economic growth at the early stages of China's transition (Fan 1991; Lin 1992). Initially, these reforms were likely to have been inequality reduc-

ing because they raised rural incomes relative to incomes in urban areas. Soon, however, some farm households did better than others, depending on their farming acumen, agroclimatic conditions, and access to markets—and that put upward pressure on inequality within rural areas.

Another piece of evidence is provided by Park et al. (2004) in their analysis of the substantial increase in urban wage dispersion in China since the reform period that started around 1980. At the outset of that period, urban China had a system of fixed wage scales, allocation of labor by government, and resulting low returns to schooling (Fleisher and Wang 2004). There were few incentives for work performance or skill acquisition. From this legacy of wage compression and low labor mobility, China moved gradually in the 1990s to a market-based system featuring a dynamic nonstate sector and an increasingly open labor market. With reforms that expanded the scope for employment in a growing private sector and the emergence of a competitive labor market, wage dispersion within skill categories and experience cohorts has increased considerably, and returns to schooling have risen (Heckman and Li 2004; Park et al. 2004). Looking forward, a further implication of the emergence of a more convex structure of returns to education in postreform China (whereby the increase in returns to education has tended to be at higher levels of schooling) is that generalized increases in the level of schooling will put upward pressure on aggregate inequality, though they probably will be poverty reducing.

In India, too, there was growing wage inequality in the 1990s that was partly attributable to increasing wage disparities within educational attainment categories, and those disparities, in turn, reflected increasingly competitive product and labor markets (Dutta 2005). Another example of increasing disparities reflecting the growth-enhancing role of incentives comes from considering the increasing disparities in growth performance across Indian states during the 1990s, when some states significantly accelerated their growth and others lagged behind. Both Ahluwalia (2000) and Kohli (2006) have suggested that at least part of the increase can be attributed to the greater responsiveness of private investment flows to differences in the investment climate in various states. As Kohli (2006) noted, that responsiveness appears to have encouraged state leaders to adopt measures that would improve the business environment and woo private investment—of course, subject to the constraints imposed by state-level political considerations and capacity. This stands in contrast to earlier periods when the share of public investment in total investment was much larger.

There is evidence in India that the impact of incentives was magnified by the presence of agglomeration economies in industrial activity. Lall and Chakravorty (2005) showed that industrial diversity (which is higher in metropolitan and mixed industrial regions) produces cost-reducing effects through agglomeration economies. Therefore, private industrial units favored locating in existing high-density industrial areas, thus increasing the degree of industrial clustering. Conversely, the location decisions of state-owned industry appeared to have been much less driven by these cost considerations and may have been motivated by a desire for greater regional balance. The conclusion that Lall and Chakravorty drew is that the reforms and the scaling back of public investments, and the emergence of the private sector as the primary source of new industrial investments, contributed to higher levels of spatial inequality in industrial activity.

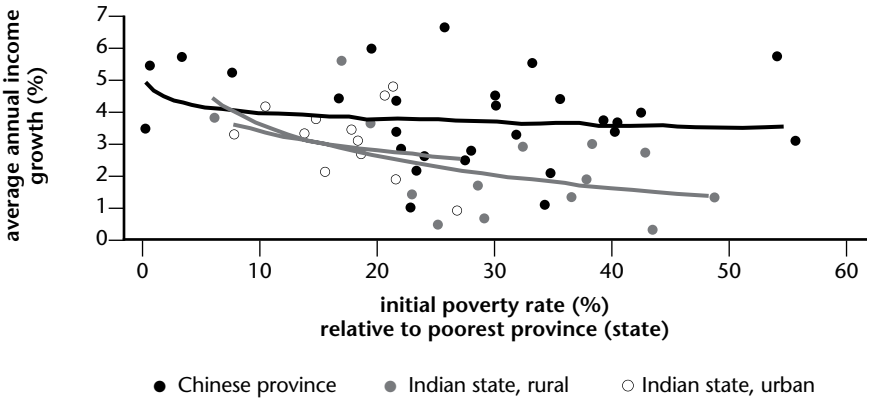
Bad Inequalities

The processes underway in China and India are almost certainly less benign and less automatic than the account above suggests. Geographic poverty traps, patterns of social exclusion, inadequate levels of human capital, lack of access to credit and insurance, corruption, and uneven influence simultaneously can fuel rising inequality and prevent certain segments of the population from moving out of traditional low-productivity activities. Credit market failures often lie at the root of the problem; it is poor people who tend to be most constrained in financing lumpy investments in human and physical capital. These bad inequalities—rooted in market failures, coordination failures, and governance failures—prevent individuals from connecting to markets and limit investment in human and physical capital.[19]

Here we focus on two dimensions of bad inequalities. The first relates to location in the presence of externalities, impediments to mobility, and heavy dependence of local states on local resources. These features can generate geographic poverty traps—that is, a poor household situated in a well-endowed area eventually can escape poverty, whereas an otherwise identical household living in a poor area faces stagnation or decline. This is one possible reason

19. World Bank (2005c, ch. 5) provided a useful overview of the arguments and evidence on how certain inequalities can be inefficient, notably when they entail unequal opportunities for advancement. Also see the excellent overview of the theoretical arguments in Aghion, Caroli, and Garcia-Peñalosa (1999).

Figure 6.6 Growth Rates at the Subnational Level Plotted against Initial Poverty Rate



Sources: National Bureau of Statistics of China, *China Statistical Yearbook,* various years; Government of India Central Survey Organization.
Note: The lines of best fit are semi-log least-squares regression lines.

why initially poorer provinces often have seen lower subsequent growth (figure 6.6).

Although these observations from aggregate data suggest that such traps exist, they hardly are conclusive. More rigorous micro evidence of the geographic externalities that underlie such traps can be found in Jalan and Ravallion (2002) and Ravallion (2005), using farm household panel data for rural China. The geographic attributes conducive to an individual's prospects for escaping poverty include both publicly controlled endowments (such as the density of rural roads) and largely private ones (such as the extent of local agricultural development).

The second dimension of undoubted importance relates to inequalities in human resource development—often linked to credit market failures on the demand side but also reflecting governmental failures in service delivery. We argued above that the rising returns to schooling and increasing dispersion of wages represent "good" inequalities because they reflect freer labor markets with increased incentives for work and for skill acquisition. But, naturally, those with relatively little schooling and few assets or little access to credit are less able to respond to these incentives and are less well positioned to take advantage of the new opportunities unleashed by market-oriented reforms. Thus, inequalities in opportunities to accumulate human capital are "bad" in-

equalities in that they have retarded poverty reduction through growth in both countries.[20]

Basic schooling was far more widespread in China at the outset of the reform period than in India, and China has achieved close to universal primary education. But inequalities in educational attainment beyond primary school remain, and these have become an increasingly important source of disadvantage because a junior high school education (and, in some instances, a senior high school education) has become a de facto prerequisite for accessing nonfarm work, particularly in urban areas where wages far exceed the shadow wages in farming. Thus, lack of schooling is now a very important constraint on prospects of escaping poverty in China, as elsewhere.

India's schooling inequalities clearly have been and are larger than those of China (both at the beginning of the reform period and since) (World Bank 2005c). Unequal attainment of education has inhibited pro-poor growth. The differences we have seen in the effects of nonfarm economic growth on poverty reflect inequalities in a number of dimensions; low farm productivity, low rural living standards relative to urban areas, and poor basic education all keep poor people from participating in nonfarm sector growth (Ravallion and Datt 2002). Interstate differences in initial levels of schooling appear to have been the dominant explanation for the subsequent effects of nonfarm economic growth on poverty. As was true in China, little schooling, few assets, or little access to credit dampened people's prospects to benefit from market-based reforms.

Policy Impediments, Biases, and Neglect

Policy errors of both omission and commission have contributed to the unevenness of growth in the Giants and to the failure of growth to translate into larger positive effects on poverty and human development. These errors have been one of three forms: first, policies that impede the market function; second, policies biased in favor of particular regions or industries; and, third, policies that neglect certain spheres of activity where public intervention is necessary.

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20. Note that the claim that inequalities in human capital are "bad" is consistent with our earlier point that certain inequalities in outcomes (reflected, for instance, in increasing wage dispersion) are "good." The latter stem from variation in returns that reflect differences in effort. The former arise from differences in endowments that are the results of both supply side governmental failures and demand side market failures (especially credit-market failures).

It has been argued that India's restrictive labor regulations and widespread preferences for small-scale industries are impediments to more broad-based growth. Although ostensibly motivated by distributive considerations, these policies instead have restricted firm growth, dampened job creation, and hindered the movement of labor out of agriculture (World Bank 2006). In a country of 1 billion people, only 8 million Indian workers are protected by such legislation, According to the World Bank (2006), "Current labor regulations seem to be protecting workers in jobs by 'protecting' other workers from having jobs" (p. 17). These regulations probably have not promoted labor absorption, and may have helped keep a much larger share of the Indian labor force in agriculture than is the case in other countries with similar shares of agricultural value added (Virmani 2005). And despite the increase in GDP growth, in recent years the rate of job creation in India has failed to keep up with increases in the size of the labor force, which has led some authors to characterize India's growth experience as jobless growth (Mehta 2003). Although these observations are suggestive, the costs of these policies to the poor remain to be quantified rigorously.

In China, impediments to the movement of labor out of agriculture through internal migration have come in part from government restrictions under the *hukou* system, by which a person must have an official registration to reside in an urban area and use its facilities. Those people born with an agricultural registration historically have had a hard time obtaining urban registration.[21] Other costs of migration facing rural households include the risk of losing one's administratively allocated land and various forms of discrimination rural migrants face in urban areas. A rough estimate of the magnitude of these policy-induced costs of migration is provided by Shi, Sicular, and Zhao (2004) who reported that even after controlling for worker characteristics and cost-of-living differences, urban wages are about 50 percent higher than rural wages. The high costs of migration underlying these gaps probably have been both poverty and inequality increasing. There are also similar restrictions on within-rural and within-urban migration.

Sizable aggregate output losses from these inequality-increasing restrictions on migration are likely. Not only is labor misallocated across sectors, but the restrictions also make it harder for China to realize agglomeration economies

21. Despite these migration impediments, China has had a more rapid rate of urbanization than has India. China's urban population share rose from 19 percent in 1980 to 39 percent in 2002. In India, with no such restrictions, the urban share of the population rose from 23 percent to 28 percent over the same period.

(Au and Henderson 2006). Under the (plausible) assumption that these costs of migration lower earnings in the poorer (labor-surplus) sector, they will increase poverty and inequality. Other policy biases against the poor have included public spending and industrial policies that have favored China's coastal areas over the (poorer) inland regions.

Service delivery has been an important area of policy neglect in both countries. The deficiencies of India's education system are well known, and not only from the point of view of poor people (Drèze and Sen 1995; PROBE 1999). Issues of service quality loom large in these concerns (World Bank 2006). Whereas it started from a position of greater equity in service delivery (although with large gaps between urban and rural areas), China also has experienced growing inequalities in access to health and education (Zhang and Kanbur 2005). The weaknesses and interregional disparities in service delivery in both countries can be traced, at least in part, to the large and rising disparities in public spending per capita between rich and poor areas, with rather weak fiscal redistribution and (hence) heavy dependence of local governments on local resources. We return to this point when we discuss policies.

Dynamics: How Good Inequalities Can Turn into Bad Ones

Without the appropriate institutional checks and balances, rising inequality, even if it is initially of the "good" variety, can engender phenomena such as corruption, crony capitalism, rent seeking, or efforts by those who benefit initially from the new opportunities to restrict the access of others to those opportunities or to alter the rules of the game to preserve their initial advantages.[22] Thus, bad inequalities emerge over time.

The growth and subsequent performance of China's township and village enterprises (TVEs) exemplify this dynamic at work. The emergence and growth of TVEs in various parts of China, starting in the mid-1980s, often is cited as a successful example of the country's strategy of incremental institutional innovation—in this case, economic decentralization under which local governments were given the right to establish TVEs and retain the profits generated by them (Oi 1999). The implied autonomy and control, combined with a hard budget constraint imposed from above, provided, at the outset, exactly the right incentives to invest and operate efficiently. The resultant in-

22. Antecedents to this argument can be found in the writings of North (1990) and Hellman (1998).

crease in rural nonfarm output and employment was spatially uneven, but probably was inequality reducing overall (given the rural base for this innovation) and likely contributed to China's growth until the mid-1990s.

However, with the proliferation of TVEs and the increased competition in various product categories, pressures emerged for local and provincial governments to increase the protection provided for the (local) markets of the TVEs under their control. These resulted in increasing impediments to interjurisdictional trade and to entry by outside firms, leading to the fragmentation of China's domestic product and factor markets and a deterioration in the investment climate in many localities (World Bank 2005c).

Perceptions and Tolerance for Inequality: The "Bad" Can Drive Out the "Good"

Bad inequalities are doubly harmful. First, they directly reduce the potential for growth because segments of the population are left behind, lacking the opportunity to connect with and contribute to the growth process. Second, persistent bad inequalities in a setting of heightened aspirations can yield negative perceptions about the benefits of reform. Because it is difficult for citizens to disentangle the sources of aggregate inequality in observed outcomes—to determine whether the underlying drivers are good or bad—societal intolerance for inequality of *an*y kind emerges. That intolerance can trigger social unrest or harden resistance to further needed reforms, thereby indirectly threatening the sustainability of growth. In effect, the persistence of bad inequalities drives out the good ones.

Han and Whyte (2006) reported results of a survey of more than 3,000 Chinese adults interviewed in 2004. The survey found that 40 percent of respondents "strongly agreed" that inequality in the country as a whole is "too large," and another 32 percent "agreed somewhat" with this view. An astonishing 80 percent favored "governmental leveling" to ensure a "minimum standard of living" (split roughly equally between "strongly agree" and "agree somewhat"). Interestingly, the correlates of perceptions of unfair inequalities did not suggest that the concern was greatest among people who were most disadvantaged, such as farmers or migrants from rural areas. Also notable is that most respondents believed that education, ability, and effort were rewarded in China.

Such high levels of concern about inequality do not imply dissatisfaction with the distributive outcomes of economic reforms. But there are signs that

perceptions of (or direct experience with) bad inequalities are translating into growing dissatisfaction with reforms in both China and India. Social protests about various perceived injustices are becoming common in China. In a poll conducted by the Chinese Academy of Social Sciences in 2002, 60 percent of the 15,000 respondents thought that party and government officials had benefited most from reforms, whereas other polls (cited in Pei 2006) consistently rank corruption as one of the most serious problems facing China. In examining the economic underpinnings of social unrest in China, Keidel (2005) made the point that dissatisfaction with the economic dislocations caused by reforms, which are a necessary part of engendering good inequalities, have been amplified by corruption and malfeasance within state-owned enterprises and local governments. Police records reported in official bulletins cited by Gill (2006) indicate that the number of collective protests, violent confrontations, and demonstrations deemed to be incidents of social unrest has risen nearly tenfold, from 8,300 in 1993 to almost 80,000 in 2005. Pei (2006) argued that these indications of social discontent have made it that much more difficult for China to undertake the reforms needed to address remaining structural weaknesses, notably in the financial system—reforms that a study by the International Monetary Fund (Tseng and Rodlauer 2003) suggests might be critical to sustaining growth. Thus, Pei (2006) wrote of China's "trapped transition" (p. 2).

In India, the political failure of the Bharatiya Janata Party's "Shining India" electoral campaign in 2004 has been widely attributed to its neglect of the emerging inequalities in the wake of pro-growth reforms. Such attributions often are questionable, but there is evidence from attitudinal surveys suggesting that rising inequality is a popular concern in India. In a 2004 National Election Survey, three-quarters of the respondents indicated that the reforms of the past 15 years had benefited only the rich (Suri 2004). Within India's democratic polity, such sentiments have resulted in political pressures forcing the government to postpone needed reforms (Bardhan 2005). For instance, in 2005 the government had to withdraw plans to privatize 13 leading industrial public sector undertakings. The concerns about rising inequality and slow progress against poverty also have led to various new antipoverty programs.

Preserving the Good Inequalities and Reducing the Bad Ones

Putting in place the right mix of policies and institutions to ensure that growth is sustained *and* broad-based is now high on both Giants' policy agen-

das. Although inequality has been prominent in the rhetoric of Indian politics for decades, it is a relatively new concern in China, only having emerged as a major concern in recent years.[23]

Should policy makers be so worried about rising inequality? Possibly it is inevitable to some degree. More than five decades ago, W. Arthur Lewis (1954) observed that the defining feature of structural transformation in economies with large pools of surplus labor is the gradual transfer of surplus labor from "traditional" low-productivity activities to "modern" high-productivity activities. He argued that this process inevitably is accompanied at first by rising levels of inequality while some people make the transition and others, at least temporarily, are left behind.[24] As Lewis put it: "Development must be inegalitarian because it does not start in every part of the economy at the same time."

If indeed what we are witnessing in China and India is such a process of structural transformation, it may only be a matter of time before people left behind catch up. Then the rise in inequality would be a transitional phenomenon—although inequality might continue to rise for several more years because the transition is occurring on a decadal scale (even for a rapidly changing society and economy such as China's). And even when the transition is complete, almost certainly there will be an increase in the steady-state inequality relative to that in the prereform period because of the good drivers of inequality set in motion by the reforms.

However, as we have argued here, there are also a number of reasons to believe that policy makers concerned with ensuring rising absolute levels of living, especially for the poor, should be concerned about the bad inequalities. In this section, we try to provide a simple conceptual framework for thinking about what Chinese and Indian policy makers should do about rising inequality, and review some of the policy options, including those recently implemented in both countries.

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23. Han and Whyte (2006) quoted results of a 2004 survey of senior public officials, conducted by the Communist Party's Central Party School, that found income inequality to be the highest expressed concern, dominating all other issues.

24. The dimensions along which this productivity divide are manifested—rural versus urban, traditional versus modern agriculture, agriculture versus industry, and so forth—naturally will vary from context to context, even within a country. And which dimensions are most relevant clearly will matter for thinking about policy. The larger point, however, is that there is some axis along which the dualism is manifested.

Defining the Challenge and Avoiding Misdiagnoses

We take it to be self-evident that the objective is sustainable growth that benefits poor people so as to bring large and lasting reductions in the extent of absolute poverty.[25] Efforts to attenuate the bad inequalities should not undermine the drivers of good inequality to the point where the longer-term living standards of poor people are threatened. The challenge will be to identify the mix of policies that directly target the bad inequalities without undermining the good ones.

From that starting point, it is clear that we should not accept redistributive policies that come at the expense of lower longer-term living standards for poor people. Accepting that there is no aggregate trade-off between mean income and inequality does not suggest that there are no trade-offs at the level of specific policies. Reducing inequality by adding further distortions to an economy may have ambiguous effects on growth and poverty reduction. But we should not presume that there will be such a trade-off with all redistributive policies. The potential for win-win policies—promoting growth with equity—stems from the fact that some of the factors that impede growth also entail that the poor share less than is possible in the opportunities unleashed by growth. More rapid poverty reduction requires a combination of more growth, a more pro-poor pattern of growth, and success in reducing the antecedent inequalities that limit the prospects for poor people to share in the opportunities unleashed by a growth economy.

Learning from the Past: Avoiding False Trade-offs

The experience of China and India over the past quarter-century offers important lessons regarding the broad policy directions that are necessary and possible. One lesson is that an aggregate trade-off between growth and equity is often, although not always, a false one. As we have argued above, the trade-off exists for certain inequalities but not others. The right combination of policies can yield win-win-win combinations of growth, reduction in poverty, and declining (or at least nonincreasing) inequality.

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25. On this definition of "pro-poor growth" and alternatives in the literature, see Ravallion (2004b).

Testing for the existence of an aggregate growth-equity trade-off poses a number of analytic problems. In the case of China, it is at least suggestive that on comparing growth rates with changes in inequality over time we find no sign that higher inequality has been the price of China's high growth. The correlation between the growth rate of GDP and log difference in the Gini index is only –0.05; the regression coefficient has a *t*-ratio of only 0.22. This test does not suggest that higher growth per se meant a steeper rise in inequality. Although the level of inequality rose at the same time that average income rose, this reflects their common time trends rather than genuine comovement. The periods of more rapid growth did not bring more rapid increases in inequality; indeed, the periods of *falling* inequality (1981–85 and 1995–98) had the highest growth in average household income. Also, the subperiods of highest growth in the primary sector (1983–84, 1987–88, and 1994–96) did not come with lower growth in other sectors (Ravallion and Chen forthcoming). Nor do we find that the provinces with more rapid rural income growth experienced a steeper increase in inequality; if anything, the opposite was true.

The sources of higher primary sector growth rates in China were probably very different between the early 1980s and the mid-1990s. In the former period, agricultural growth was stimulated (in large part, we expect) by the much-enhanced incentives for production achieved by the introduction of the Household Responsibility System, whereby farmers became the residual claimants on farm output.[26] In the second period (the mid-1990s), the higher agricultural incomes appear to have come from a substantial reduction in implicit taxation of the sector. From the early 1980s to the mid-1990s, the government operated a domestic food grain procurement policy by which farmers were obliged to sell fixed quotas to the government at prices typically below the local market price (but they were free to sell the remainder at market prices). For some farmers this was an inframarginal tax, given that they produced more food grains than their assigned quota, but for others it affected production decisions at the margin. Ravallion and Chen (forthcoming) have provided evidence that the reduction in this implicit tax brought substantial income gains to the rural economy and especially to the poor.

26. The literature has pointed to the importance of the reform to this system in stimulating rural economic growth at the early stages of China's transition (Fan 1991; Lin 1992).

Helping the Rural Poor Connect to Markets

Attenuating the rise in inequality and ensuring more rapid poverty reduction will require raising incomes in the lagging rural areas of both countries, and this will require improved access to markets. The question of how this should be done often is framed as a choice between investing in poor-area development (jobs to people) or facilitating out-migration (people to jobs). Posing the choice this way almost certainly oversimplifies the problem. Migration to urban areas is likely to be pro-poor in both countries. However, out-migration often will not be feasible for poor rural households without the right sort of investments in poor areas, especially in human resource development. Conversely, although there may be scope for further increases in agricultural incomes (for example, through diversification into higher-value crops) or for promoting rural nonfarm employment, the share of agriculture in GDP is bound to decline in both countries, and geography and remoteness limit the possibilities of nonagricultural economic activity in poorer regions.

We instead frame the question in terms of identifying and correcting the underlying market and governmental failures and redressing the asset inequalities that lock the poor out of profitable opportunities for self-advancement. From this perspective, in both countries there are three priorities.

First, rural infrastructure should have a high priority. China started its reform period with very poor rural infrastructure. Fiscal and borrowing constraints meant that it was some 10 years before it was feasible to embark on a massive expansion of infrastructure, such as the roads program that started around 1990. The differences in rural infrastructure across counties have strong explanatory power for subsequent consumption growth at the farm-household level in rural China (Jalan and Ravallion 2002). Quite reasonable rates of return are possible from well-designed programs for developing infrastructure in poor rural areas (Ravallion and Chen 2005).

In India, the poor quality of rural infrastructure is widely acknowledged as an impediment to growth and poverty reduction. It is believed that there are high returns in terms of achieving more equitable growth from better rural finance and infrastructure in India, although this is not simply a matter of building facilities; instead, it raises deeper issues about the need for reforming existing institutional arrangements and provider incentives (World Bank 2006).

Second, better policies are needed for delivering quality health and education services to poor people. And third, policies are needed that allow key

product and factor markets (for land, labor, and credit) to work better from the point of view of poor people. In India this includes further deregulation of formal-sector labor markets. In the case of China, reducing the policy impediments to migration and instituting legal reforms to allow a market in land-use rights in rural China (giving farmers title over land-use rights that they can sell, mortgage, or pass on to their children) are priorities. China has resisted embarking on agricultural land market reform. Neighboring Vietnam did take this step in the 1990s, and the available evidence suggests that, on balance, this reform has helped in reducing poverty (Ravallion and van de Walle 2006).

Public spending and fiscal policy will play important roles in realizing these priorities. But much depends on fiscal resource mobilization and exactly how that spending is done. Removing biases against the poor in taxation and spending policies will be essential. As we have noted, reducing the government's implicit taxation of farmers through food grain procurement quotas has been a powerful instrument against poverty in China. From this point of view, China's recent policy to give tax breaks to farmers in poor regions is surely welcome, although, without alternative revenue sources in poor areas, one can expect either a decline in the local public investments and services needed for poverty reduction or further poorly compensated expropriations of farmland by local authorities aiming to profit by selling the land to nonfarm activities.

Another continuing issue in both countries is how to enhance local-level fiscal resources in poor areas. The priority both countries now give to the decentralization of social spending will have limited impact on poverty and human development outcomes unless it comes with central efforts to ensure greater fiscal redistribution to poor regions from better-off—and increasingly better-off—regions.

Recent Initiatives

Policy makers and political leaders in both countries clearly are trying to find ways to help the rural poor connect to the process of growth. In China, the reduction and progressive elimination of agricultural taxes and fees and the limited introduction of subsidies for primary education in poor counties during the latter half of the 10th five-year plan were early indications of a significant shift in the government's priorities toward a greater emphasis on im-

proving welfare in the countryside.[27] A key component of the plan is a package of measures aimed at what the leadership has termed "building a new socialist countryside."[28] The package calls for a systemic elimination of all agricultural taxes, but eliminating these taxes and fees raises new concerns. As we have noted, for many rural local governments, particularly in interior provinces and poorer areas, these taxes and fees have been the main source of revenues from which to finance local public services, notably health and education. This policy potentially jeopardizes not only access to and quality of health and education services, given the huge disparities in the revenue bases of local governments, but also has implications for consumption poverty. China has been relatively unique in the high savings rates found among the poor. Although a complete and detailed analysis of this question is yet to be done, common sense and conventional wisdom suggest that (apart from any intrinsic cultural proclivities for thrift) precautionary saving for uninsured health (and other) shocks, saving to finance educational costs, and life-cycle saving to fund old-age living expenses all play an important role in explaining why China's poor save so much.

The government appears to be well aware of the concerns about poor services in rural areas, and a large part of the increased spending under the "building a new socialist countryside" strategy is to be directed toward education and health services in the countryside. Among the initiatives mentioned are plans to provide several billion yuan of transfers from the central government for tens of millions of poor primary and junior middle-school students and to offer free nine-year compulsory education to rural students. The central government also plans to double its subsidies for farmers if they join a state-backed medical cooperative fund designed to reduce their financial burdens. Other elements of the plan include increased subsidy payments for farmers and further government investment in rural public works.

The Minimum Livelihood Guarantee Scheme, popularly known as *dibao*, has been the government's main response to the new challenges of social pro-

27. First announced at the meeting of the Central Party Committee of the Chinese Communist Party in October 2005, the reorientation in policy has been written into the 11th five-year plan formally adopted by the National People's Congress in its 2006 annual session.

28. According to the budget tabled at the National People's Congress, the Chinese government planned to spend 340 billion yuan ($42 billion) on agriculture, rural areas, and farmers in 2006. That amount is 14 percent more than the previous year, and represents 22 percent of the increase in government spending from levels in 2005.

tection in the more market-based economy. This scheme is intended to guarantee a minimum income in urban areas by filling the gap between actual income and a locally established "*dibao* line." In theory, this would eliminate *dibao* poverty, but the practice appears to fall well short of that goal, largely because of imperfect coverage of the target group (Chen, Ravallion, and Wang 2006). Reforming the program and expanding coverage—including to (risk-prone) rural areas—pose a number of challenges. If these plans are implemented effectively and targeted to poorer areas and poorer households in rural China, however, the prospects are promising for poverty reduction, especially in the number of consumption-poor people, during the 11th five-year plan.

There also have been a number of new initiatives in India. The Rural Employment Guarantee Act of 2005 guarantees 100 days of work a year at the minimum agricultural wage rate to at least one member of every family. This is expected to have a large impact on rural poverty. It is far from obvious that the scheme is the most cost-effective option for this purpose, however, if we consider all of the costs involved, including the forgone incomes of program participants (Murgai and Ravallion 2005). The government's 2006/07 budget also calls for substantially increased spending on rural infrastructure, job creation, health services, and education. New programs include the *Bharat Nirman* (Building India) project to provide electricity, all-weather road connectivity, and safe drinking water to all of India's villages; and *Sarva Siksha Abhiyan*, which aims to ensure a minimum standard of elementary education. These programs are not targeted explicitly to poor areas, but that is likely to be the outcome because villages that lack these services tend to be poor.

Conclusions

Aggregate economic growth is rarely balanced across regions or sectors of a developing economy, and neither China nor India is an exception. We have seen that the postreform pattern of growth has not been particularly pro-poor in either country. In China, growth in the primary sector (mostly agriculture) did more to reduce poverty and inequality than growth in either the secondary or tertiary sectors. In India, with higher initial inequality in access to land than China, agricultural growth was less important to poverty reduction than tertiary-sector growth. In both countries, there has been a marked geographic unevenness in the growth process, with numerous lagging regions, including

some of those that started off among the poorest. In recent times, overall inequality has been rising in both countries.

India's poor did not start the current reform period with the same advantages as did China's poor, in terms of access to land and education. Persistent inequalities in human resource development and access to essential infrastructure within both countries, but probably more so in India, are impeding the prospects for poor people to share in the aggregate economic gains spurred by reforms. The geographic dimensions of their inequalities and the associated disparities in fiscal resources and government capabilities loom large as policy concerns for the future in both countries.

In the future, high and rising inequality will make it harder for either country to maintain its past rate of progress against poverty. However, it is not particularly useful to talk about "inequality" as a homogeneous entity when discussing appropriate policy responses. Policy needs to focus on the specific dimensions of inequality that create or preserve unequal opportunities for participating in the gains from economic growth. Arguably both countries are seeing a rise in these bad inequalities over time as the good inequalities (conducive to efficient growth) turn into bad ones, and the bad inequalities drive out the good ones.

Although both countries need to be concerned about the bad inequalities we have pointed to, we suspect that China bears the greater near-term risk that rising inequality will jeopardize growth. The Chinese authorities have been able to compensate for rising inequality by achieving high growth rates; arguably, it is the rising inequality that fuels growth in China, through the political economy of maintaining "social stability." The catch is that the emerging bad inequalities in China will make it harder to promote the growth needed to compensate for those inequalities. Maintaining sufficient growth will require even greater efficacy of the policy levers used to promote growth.

Whether the problem of rising inequality is or is not addressed successfully, there are likely to be implications for the rest of the world. If the problem is not addressed then there is a risk that the high growth rates will become much harder to maintain, with spillover effects for trade and growth elsewhere. If it is addressed, and depending on exactly how this is done, there may be some short-term costs to growth, although redressing the bad inequalities would be good for growth. There also may be consequences for the pattern of trade, such as through a change in the sectoral composition of growth; for example, in both countries there appears to be potential for cash crop expansion, which would attenuate one important source of concern about rising inequality, and

it can be expected that a non-negligible share of this expansion in domestic cash crop output would be exported.

The new initiatives under way in both countries are probably steps in the right direction, although continuous evaluative research will be needed on the efficacy of these approaches, relative to alternative strategies. There are important but poorly resolved issues concerning the appropriate balance between different types of interventions. But an even harder challenge remains: to improve governance—capacity, accountability, and responsiveness—notably (but not only) at the local level. If this challenge is left unmet, the ultimate efficacy of any of the initiatives described here will be questionable.