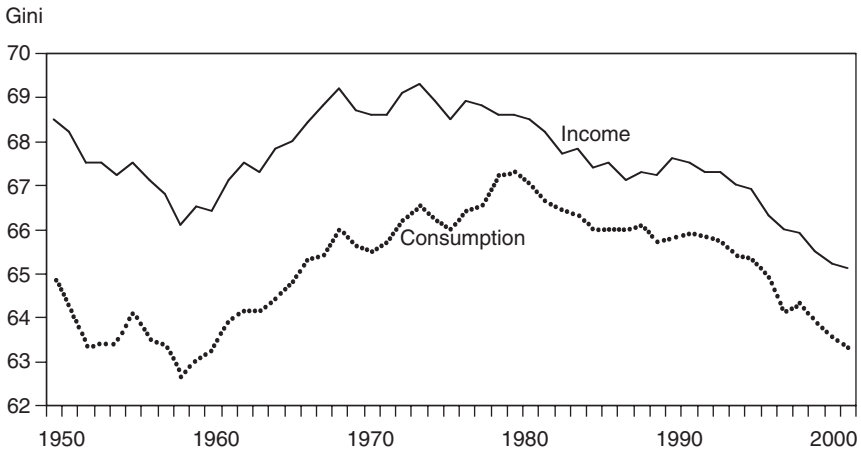

Inequality as It Is

There are at least four “legitimate” estimates of world individual inequality. Official and consumption purchasing power parity (PPP) exchange rates, and survey and national accounts estimates of mean income are the four components that can yield these estimates. As debate rages on as to whether inequality has improved or not, it is important to identify precisely what definition, and what measures of inequality, are being used.

The simple accounting procedure (SAP) system allows one to test the behavior of inequality according to virtually any method. It is this attribute that has allowed us to reproduce the received results, and therefore also to identify the problems with earlier methods. It was observed that the published PPP 1993 exchange rates, along with published national accounts figures, provided the best basis for estimating world inequality. There are at least three advantages to such a combination: It is transparent (everybody can reproduce the results), it provides a consistent series (the survey-national accounts ratio does not meander), and the estimates of growth and so on derived from such a series are estimates that everyone is familiar with (e.g., GDP growth in local currency).

The story told by such a consistent estimation of world and regional inequality is radically different from received wisdom. Far from world inequality worsening, it actually improved with globalization. The peak of world inequality occurred in 1973; today, it is at its lowest in the past 50 years. This is likely the result of catch-up and convergence; there are no signs of this inequality trend slowing, either. Though undoubtedly there will be fights for shares of the pie, the convergence trend should

Figure 11.1 World individual income and consumption inequality (Ginis), 1950-2000



Note: The simple accounting procedure method is used to derive world income distribution from individual country distributions.

Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

ensure that in 10 years, inequality will be where it started off a hundred years ago in 1910. A similar trend is observed for consumption inequality.

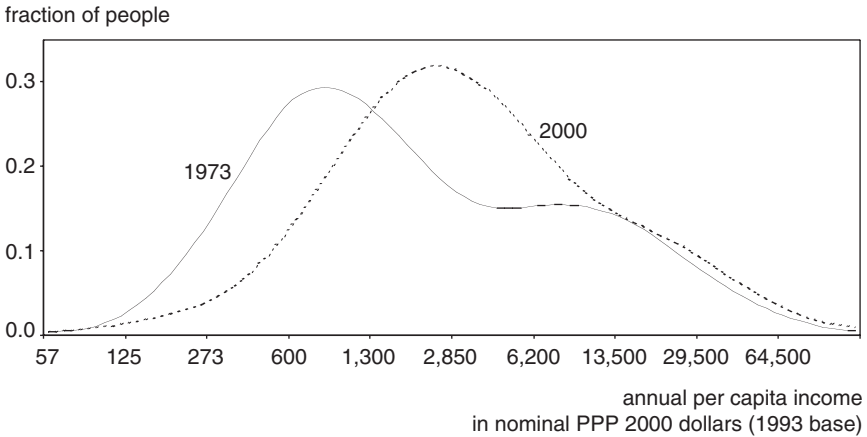
On a regional basis, both the developing and the industrialized worlds show a strong trend toward equality—this despite several large economies (e.g., China, the United States) showing an increase in inequality in the past 20 years.

SAP Results for World Inequality, 1950-2000

Figure 11.1 plots the movement of both the income and consumption Gini for the past 50 years. Both patterns are roughly the same. The time pattern is a normal U-shaped curve from 1950 to 1980, and since then there is a trend decline (i.e., the globalization period is the one where there is a decline, and a sharp one at that, and for both income and consumption). In 2000, global income distribution was at its lowest level in the postwar period, lower than the previous trough in 1958. These pictures illustrate the move toward equality much better than even a thousand words.

SAP estimates for world inequality indicate a Gini of 66.4 in 1960, a level that became more unequal until a peak of 69.3 was reached in 1973.

**Figure 11.2 An inexorable trend toward less inequality?
World income distribution, 1973 and 2000**



Note: Per capita income is calculated at 2000 prices. An 18 percent increase in prices between 1993 and 2000 (equal to US inflation for the period) is used to convert 1993 prices to 2000 prices. The simple accounting procedure method is used to derive world income distribution from individual country distributions.

Sources: Deininger and Squire (1996); World Income Inequality Database, available at <http://www.wider.unu.edu/wiid>; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

It stayed at these highly unequal levels for more than a decade, and then inequality started to improve. World individual income inequality has been trending lower since then, and is estimated to have reached its lowest level of 65.1 in 2000.

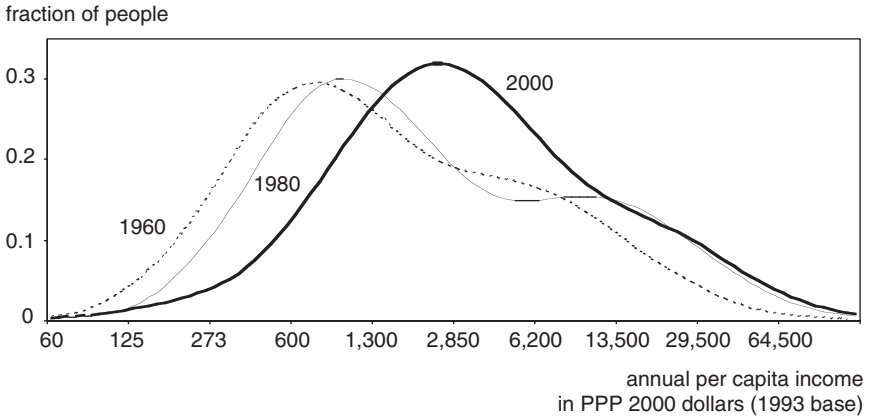
How unequal is a Gini of 65.1? It is slightly more unequal than the Gini of Brazil in 1990 (Gini of 63.7) and slightly less unequal than a Gini of 69.0 observed for the Central African Republic in 1993. Ginis are hard to relate to; in terms of quintile shares, Brazil in 1993 showed the following: income shares of 2.2, 4.8, and 67.1 percent for the first, second, and fifth quintiles. The world shares in 2000 were as follows: 1.8, 4.3, and 70.3 percent.

Figures 11.2 and 11.3 show the world individual income inequality (W3i) density distribution for selected years. Figure 11.2, comparing 1973 and 2000, compares the most unequal with the most equal year. The trend toward lesser equality is apparent from the sharp movement toward a more log normal distribution. Figure 11.3 documents how the distribution has shifted during the past 40 years, and how it has become more equal.

Regions and Indices

Income inequality Ginis are reported for various regions of the world for three years, 1960, 1980, and 2000, in figures 11.4 and 11.5. Three results

Figure 11.3 World income distribution, 1960, 1980, and 2000



Note: Per capita income is calculated at 2000 prices. An 18 percent increase in prices between 1993 and 2000 (equal to US inflation for the period) is used to convert 1993 prices to 2000 prices. The simple accounting procedure method is used to derive world income distribution from individual country distributions.

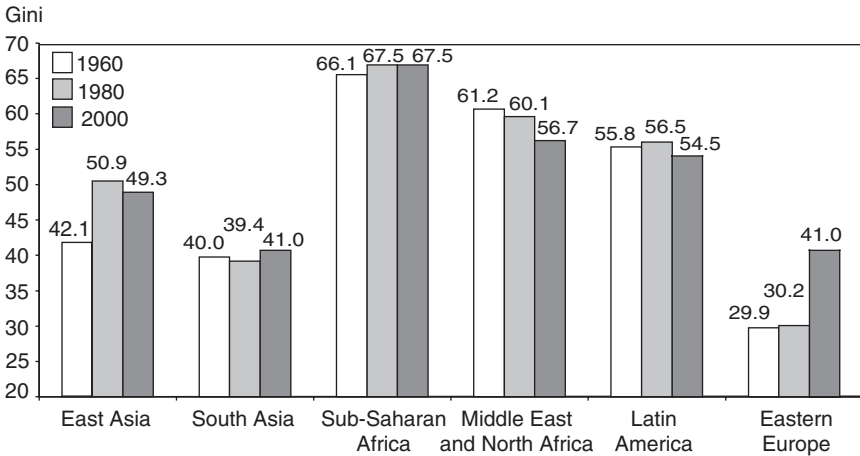
Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

emerge. First, the most equal part of the world in 1960 was Eastern Europe, and relatively more equal by a wide margin (a Gini of 29.9 versus a Gini of 40 for South Asia). In 2000, the two regions have the same inequality index—thus, Eastern Europe was witness to the largest increase in inequality recorded for any region, or any time, globalization or not. This increase, of 37 percent in the slow-moving Gini, is a huge, huge increase. The one area with the sharpest decrease in inequality is the developing world, a region making up about four-fifths of the world's population. And the decrease is large—almost 7 percentage points.

Second, the most equal part of the world today consists of the industrial countries, which, despite major inequality increases *within*, show only a small increase since 1980 (from 36.4 to 38) but a 4-Gini-point decline since 1960. Third, inequality in most subregions of the world is as it was in 1960, or somewhat worse; but between 1980 and 2000, there is improvement. So when generalizations are tricky, one can say that broadly, both legs of the inverted Kuznets U-curve were witnessed—the left leg 1960 to 1980, the right leg 1980 to 2000. This is mirrored in both the developing-world inequality and the world inequality—these two “regions” display the Kuznets curve in its most classic form.

The construction of percentile-level data allows one to be more sophisticated, and more accurate, in the analysis of “convergence.” Recall that the popular (but wrong) method of determining convergence was by

Figure 11.4 Simple accounting procedure (SAP) regional measures of income inequality (Ginis), 1960-2000



Note: To obtain regional distributions of income, country data are pooled using the SAP method.

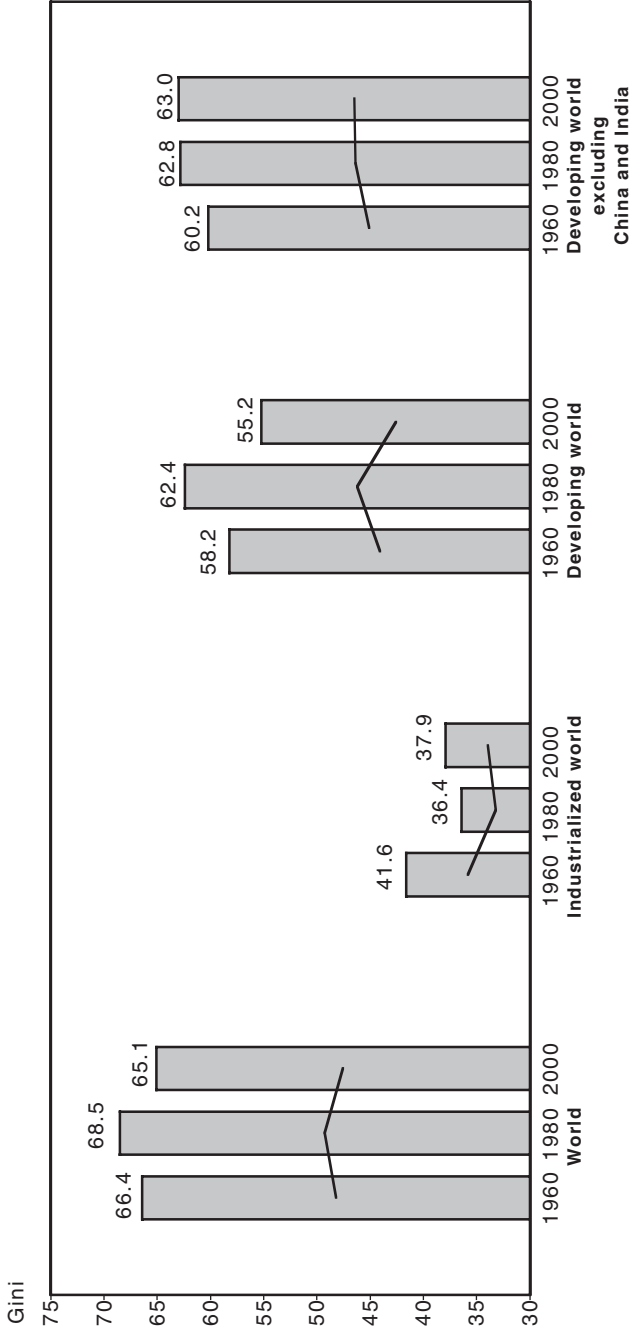
Sources: Deininger and Squire (1996); World Income Inequality Database, available at <http://www.wider.unu.edu/wiid>; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

looking at the ratio of incomes of the richest country in comparison with those of the poorest country. What is more appropriate is to compare the incomes of the rich (e.g., the 20th percentile in the United States) with the poor (the 20th percentile in the developing world)—or to compare the median income in the two sets of countries. According to both indices, figure 11.6 documents that there has been a huge increase in equality, a definite trend toward convergence. In 1960, the US 20th-percentile person was about 18 times richer than the 20th-percentile person in the developing world; in 2000, this ratio had almost been halved to 11. The 50th percentile shows a greater decline—from a relative level of 19.1 in 1960 to a relative level of only 11.7 in 2000.

Individual Inequality Studies Compared

The results for W3i, however, are at sharp variance with received wisdom. On inequality, a strong negative trend is observed, it has been downhill since the peak reached in 1973; the 2000 estimate is an improvement of about 6 percent since then. Thus, for more than 20 years, and coincident with the globalization period, world individual inequality has been declining—a result different from what one has been led to believe.

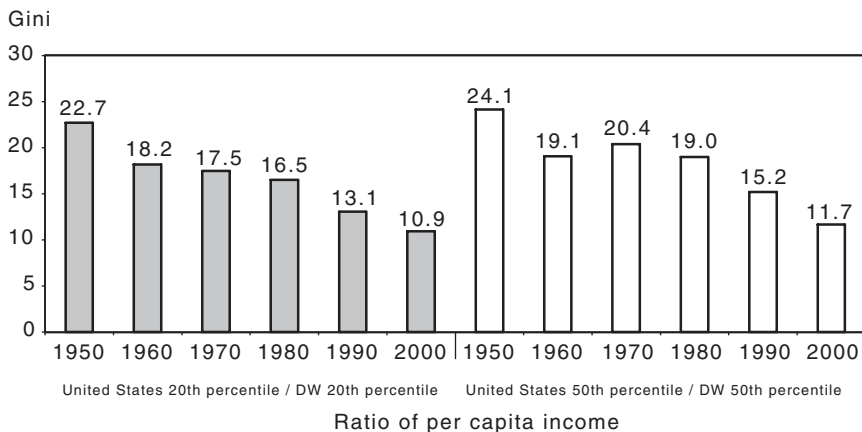
Figure 11.5 Simple accounting procedure (SAP) regional measures of income inequality (Ginis), 1960-2000



Note: To obtain regional distributions of income, country data are pooled using the SAP method.

Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

Figure 11.6 Proper tests of intercountry convergence, 1950-2000



DW = developing world

Note: The figures above the bars represent the ratio of incomes at the 20th (shaded bars) and 50th (unshaded bars) percentiles, respectively, comparing US incomes with incomes in the developing world. To obtain the distributions of income across the developing world, country data were pooled using the simple accounting procedure method.

Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

The set of estimates discussed here is the third set of estimates on world inequality (besides Bourguignon and Morrisson 2001 and Milanovic 1999), and it updates those reported in June 2000 (see Bhalla 2000d). What does a joint reading of the three results tell us? First, the time periods considered are vastly different: The Bourguignon and Morrisson study's (an extension of the Berry et al. 1983 study done for a single year) scope is exhaustive, from 1820 to 1992, and results for about 10 selected years are reported; SAP constructs inequality indices for all the 50 years from 1950 to 2000, and for both consumption and income; and Milanovic constructs income inequality estimates for only 2 years, 1988 and 1993. The welfare indicator used by the three studies is the same (PPP incomes). All three studies use essentially the same income distribution data.¹

Are the results of the studies the same, at least for the overlapping periods? No, and not necessarily so. For three reasons: the level of aggrega-

1. As discussed in appendix B, for some countries more than one estimate of income distribution is available; this is truer for earlier years than the post-1970s period. I have selected a procedure to "filter" out the "bad" estimates of income distribution, and it is not clear what methods of filtering the other authors undertake. Nevertheless, it is highly unlikely that the selection of data would make much difference to the results, or trends, in world income inequality.

tion, the cleaning of the raw data, and the use of national accounts means versus survey means. SAP is the most disaggregated, and likely to be the cleanest; SAP and Bourguignon and Morrisson use national accounts means; and Milanovic alone uses survey means as the estimate of mean income.

The SAP estimates overlap with Bourguignon and Morrisson's estimates for the period 1950-92, and though there are differences (they observe a marginal increase in inequality, 1970-92, while I observe a decline), the common element is very large—both in the method and in the results.

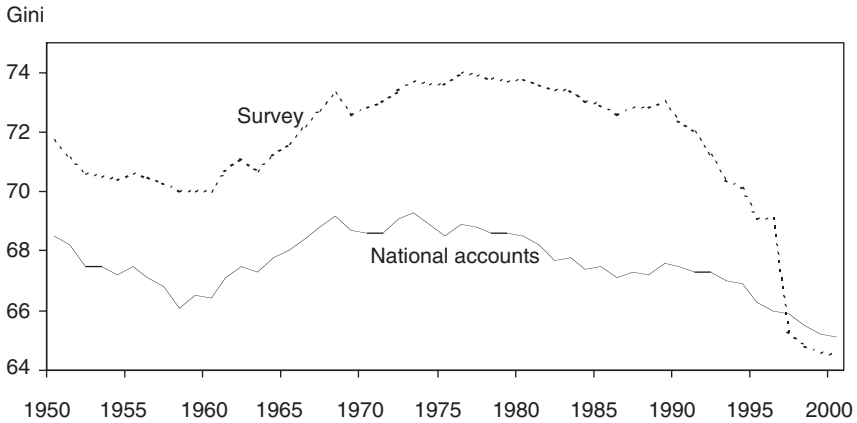
The level of inequality estimated by Berry and his colleagues and SAP are similar for 1970 (the base year for Berry et al.), yet quite different. Berry and his colleagues estimate the Gini to be 64.9, while the SAP estimate is almost 6 percent higher at 68.6. While a 6 percent difference may appear small, it is actually quite large. Several reasons point to its largeness; first, as Bourguignon and Morrisson's analysis shows for a period of 170 years, the Gini moves like an elephant—slow to change, and slow to accelerate, but once it gains momentum, the speed (change) can be large as we saw above for Eastern Europe for 1980-2000.

The three studies reach very different conclusions on the *trend* in inequality. The Bourguignon and Morrisson study suggests that inequality worsened till 1980 and since then has remained relatively flat at 65.7. Milanovic shows a huge increase in inequality in the space of just 5 years, 1988 to 1993—an increase from 62.5 to 65.9 and to a level almost identical to that of Bourguignon and Morrisson in 1992. The SAP method results in the highest level of inequality for any year common to the three studies; in 1950, SAP reports a Gini level of 68.5, considerably higher than the 64.0 level reported by Bourguignon and Morrisson; in 1980, the levels are 65.7 and 68.5, respectively.

The differences in estimates between SAP and Bourguignon and Morrisson are most likely due to the disaggregated nature of this study, disaggregated to the percentile level in *each* country. The SAP method is also the only study to suggest that globalization has led to a sharp decline in inequality, a decline that leads to the result that inequality in 2000 was the lowest in the past 50 years (but still higher than the levels reached by either Bourguignon and Morrisson or Milanovic for 1992 or 1993).

Let us look at pictorial differences among different methods and estimates of $W3i$. Figure 11.7 shows the time pattern of inequality according to the two different methods of obtaining estimates of mean income—national accounts (Berry et al.; Bourguignon and Morrisson; and SAP) or surveys. The two methods reveal a similar pattern for most of the past 50 years, with the survey estimates being higher (until recently) and more exaggerated. The exaggeration is to be expected because changes in the survey capture *create* inequality changes even when none exist. Note the

Figure 11.7 World individual income inequality estimates, according to surveys and national accounts, 1950-2000



Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

sharp decline in the survey-based estimate of the world Gini from a level of 72.6 in 1988 to less than the national-accounts-based estimate of 65.1 in 2000! Besides the survey capture ratio, differences can also arise with use of internal or “consumption” PPP exchange rates and thus cause havoc with the estimates of inequality (and poverty). But figure 11.7 uses only the published PPP exchange rates; hence, the entire effect documented in the figure is due to the use of survey means rather than national accounts means.

How Accurate Are the SAP Estimates?

Different regional distributions have been computed to partly identify why SAP indicates that inequality has improved when most are saying the opposite.² Is there a particular bias in the SAP method? There cannot

2. Two recent international conferences—sponsored by the World Institute for Development Economics Research and the Organization for Economic Cooperation and Development—have been held on the determinants and consequences of worsening world inequality. Not one of these studies (at least to my knowledge) questions the conclusion that world inequality has worsened. Note that *it is quite possible for a large number of countries to show worsening inequality and yet for the world itself to show improving equality*. Indeed, it is theoretically possible for all countries to show worsening inequality and yet the world to show improvement.

be, because, as the name suggests, the procedure is one of simple counting, and simple accounting. SAP is far from rocket science, though there is some methodological improvement³ in constructing percentile distributions from exclusive use of just quintile data (appendix B). So why are SAP results different from others? One possibility is that the conclusion of the *other* studies that income inequality has worsened since the 1980s is incorrect.

Poor People Have a High Elasticity of Connection

Some support for the proposition that world inequality has improved in the globalization period is provided by the results on the “elasticities of connection” for the first and fifth quintiles for different regions of the world. These elasticities have been computed on the basis of aggregations of the data for the individual countries (unlike the computations undertaken by Roemer and Gugerty (1997), Timmer (1997), Gallup, Radelet, and Warner (1998), and Dollar and Kraay (2000), the results portrayed in figure 11.8 do not need any assumptions or inference); the reported figures are the elasticities of the bottom 20 percent (and top 20 percent) of individuals in each region.

Let us consider some results for the bottom 20 percent: The world as a whole shows an elasticity of 1.58 in the globalization period, more than *twice* as high as that observed for the period 1961-80. The elasticity for the preglobalization period was 0.74, signifying that this period was associated with worsening world inequality, whereas the next 20-year period was associated with a significant increase in equality, at least as measured by the share in incomes of the first quintile.

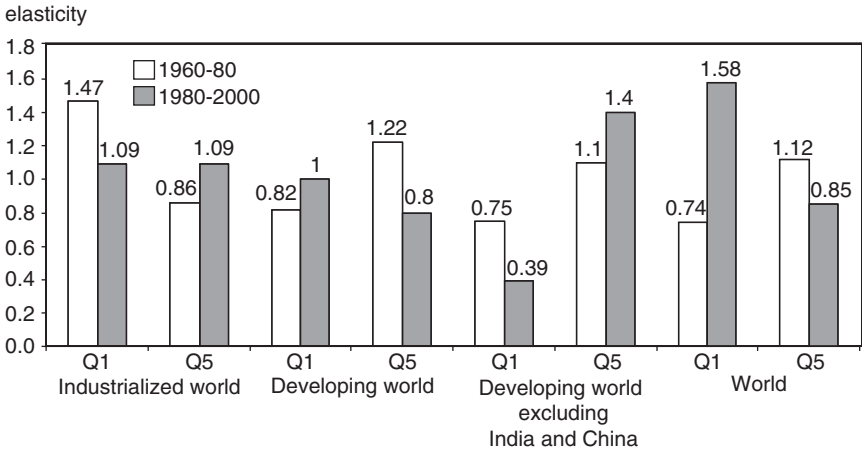
This elasticity for the globalization period is higher than that observed by any of the studies attempting to estimate the impact of growth on the poor. Unlike studies that use country data, in our formulation, the bottom 20 percent *are* the poor of the world. This striking result can only be revealed by a Lorenz curve that aggregates individual percentile incomes, and not by country quintile averages.

And consider some results for the top 20 percent: The results tell a similar story; the 1961-80 elasticity is 1.12; absence of globalization was good for the rich. The 1981-2000 elasticity was 0.85; the presence of globalization was bad for the rich.

In a most striking way, this result indicates the improved inequality effects of globalization, and the importance of China and India to the calculations. For the classification of the developing world excluding

3. The basic method is outlined in the pioneering study of Kakwani (1980); the SAP improvement is simply to impose consistency checks on the Kakwani Lorenz distributions.

Figure 11.8 Elasticities of connection: Quintile 1 (Q1) and quintile 5 (Q5) to mean income, 1960-2000



Note: The elasticities above are derived by regressing the mean income of the first and fifth quintiles as a function of the mean income in each region. To obtain regional distributions of income, country data are pooled using the simple accounting procedure method.

Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

China and India, the elasticity of quintile 1 is significantly below unity for both periods, and *declines* during the period 1980-2000. For the rich, there is a continuous improvement, from an elasticity of 1.1 in the 1960-80 period to about 1.4 in the globalization period.

What are the major results emerging from the connection elasticities? It is not the case that globalization has been bad for poor people—just the opposite. It is not the case that the quality of growth has been not good, or that the growth has been antipoor—just the opposite. It is not the case that relatively poor people (defined as the bottom 20 percent) share equally in the downturns as in the upturns. It is the opposite, at least for the unit of analysis called the world, or the developing world.

What Happened with Global Inequality?

The beginning point of globalization is dated by most observers to be in the 1980s. But no matter what year is chosen, there is a definite positive association between globalization and improving global income distribution. In this regard, the critics of world inequality today have to be careful as to what they find wrong—high inequality per se (in which case, just

look at the 1970s for considerably worse inequality) or trends in inequality (in which case, the only legitimate complaint can be that inequality is not declining as fast as one would like).

Why should we have expected things to get worse? Along with the United States, China is the other major economy whose own income distribution has significantly worsened in the past two decades. It is very possible that this worsening is associated with an improvement in world distribution; however, a worsening US distribution is unambiguously associated with worsening inequality. Again, one needs to be careful about the inequality measure one is concerned with. Most Americans (upward of 60 percent) are in the top decile of world population; a worsening US distribution only makes a difference if one is concerned about the top 10 versus the top 12 percent. It is true that one percentile's ceiling is another percentile's floor.

The result that world individual inequality has improved significantly since the 1960s is a major conclusion of this book. It is different from all other studies, and naturally subject to scrutiny. However, let me offer some reasons why the result of greater world equality *has* to be accepted. This conclusion requires three very minor assumptions: first, that China has a large population, approximately 1.3 billion people; second, that China was a poor country in 1980 with more than half its population classified as absolutely poor; and third, that this large poor country has experienced economic growth rates in significant excess of the growth rates experienced by most countries that were richer than China in 1980. Though there are quibbles about whether China's average per capita growth rate since 1980 has been as high as 7.5 percent,⁴ all analysts agree that the figure is at least upward of 6 percent, or some 4.5 percent a year higher than the world non-China average; and higher per year for 20 years!

There is one additional troublesome aspect for those arguing that world income distribution has deteriorated during the so-called globalization period of the 1980s and 1990s. It is the acceleration in India's annual per capita income growth rate to 3.8 for 1980-2000, from less than half that pace in the previous two decades (1960-80).⁵ If this information is added to the China pot, then one has more than conclusive proof—one has incontrovertible proof—that *W3i* *has* to have improved since 1980.

4. In a footnote contained in Bhalla (1997a), and *not* considered “politically correct” (at that time), I observed that existing estimates for China's growth implied that “China had a per capita income of approximately \$92 in 1960, 1987 prices. This figure is put in perspective by noting that with this income, China ranks as the *poorest* developing country in 1960 followed by Lesotho (\$93), Burundi (\$99) and Ethiopia (\$103). The Summers-Heston data are not so ridiculous—out of 118 countries China ranks 66 from the bottom.”

5. See Virmani (2000) for an excellent discussion of the growth story about the Indian elephant during the past 20 years.

The China-India logic has an important bearing on calculations of global inequality. If large numbers of those in the first five deciles (China and India) are growing at a faster pace than the rest of the world, then even if presence in deciles does not change (e.g., 20 percent of China's population remains in the second and third deciles), then the share of income accruing to these deciles will, or rather must, *increase*; that is, global inequality must decline.

But what about all the megarich people of the world; what about all the genuine stories of the rich getting richer? All of them are true, but perceptions sometimes are based on absolute increases, whereas the reality being discussed here (inequality) is about relative performance. A heuristic explanation for what has happened is as follows. Growth has brought about income increases. The average poor person in the world enjoyed a higher rate of income growth than the average rich person. The poor person is still miles away from the entry gates; but she is getting closer.

If world inequality must have improved, and has indeed improved, and if conventional and journalistic wisdom say the opposite, then what should one believe? And from where comes the conclusion that globalization has induced large inequality changes in the past 20 years? How is it that researchers have missed this simple point? The constancy of paradigms in economics is a subject explored in some detail in Bhalla (2002c).

The Relationship between Growth and Inequality

Is there any relationship between high growth and changes in inequality? East Asian experience suggests yes, but South Asian experience suggests no; all of Asia reveals that inequality increased sharply in the slow-growth period, 1960-80, but then increased only marginally during the period 1980-2000. Latin America had high growth in the 1960-80 period, and stagnant income levels thereafter, yet showed a constant Gini level throughout. Sub-Saharan Africa also showed an unmoved Gini, regardless of growth or declining per capita incomes for the period 1980-2000.

Is there any relationship between initial inequality levels and income growth? There has been a considerable literature on this issue; a fair summary is that the research has been inconclusive. Nevertheless, cursory evidence suggests that there is a strong negative relationship. Look at sub-Saharan Africa—high inequality and no growth. Look at Latin America—equally high inequality and (almost) equally low growth. Look at Asia—low inequality and high growth.

There is a perfect fit—too perfect. Almost as perfect as the fit observed by some about the association between dictatorship, or Confucianism, or

both, and high growth. The reason India did not grow well is because of the conflicts in decision making that arise due to democratic politics; the reason China grows is because it does not have those constraints. As discussed extensively in Bhalla (1997a), and even in *World Development Report 1991: The Challenge of Development*, for every successful dictatorship there are at least 10 unsuccessful brothers. What most likely explains India's lack of progress before (along with other economically failed democracies like Costa Rica, Jamaica, and Sri Lanka) is the restraints it put on the economic freedom of its citizens; what explains its recent economic success is the beginnings of its participation in globalization.

The Middle Class

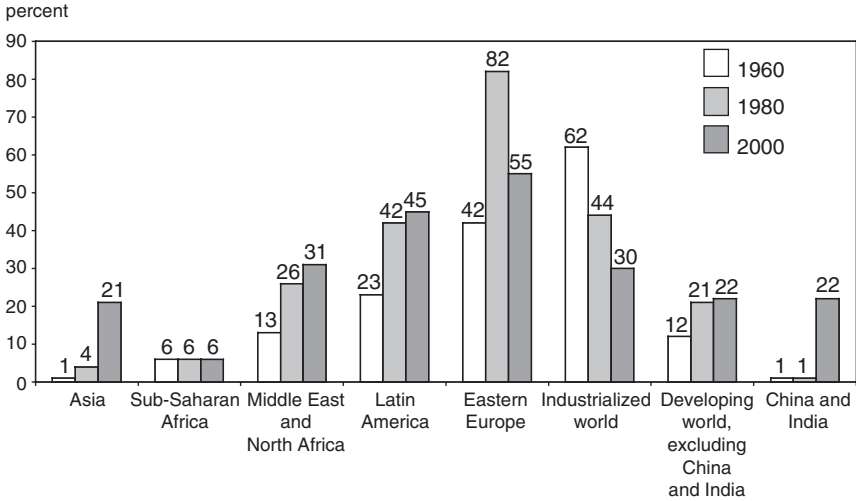
The definition of, and concern with, the middle class has been almost the same as that with the poor. Different definitions abound (see Bhalla and Kharas 1991; Birdsall, Graham, and Sabot 2000; and Milanovic and Yitzhaki 2001). Using a poverty line as the starting point, Bhalla and Kharas suggest the following simple construction of the different income classes. Let the poverty line be P , and then construct multiples of two with this poverty line as the base; for example, the first level is P , the next is $2P$, the next is $4P$, the next is $8P$, . . . $16P$, . . . $32P$, . . . $64P$, and $128P$. These relative income levels can then be grouped to "fit" the sociological and/or economic definition of the middle class.

For poor people in the developing world, a poverty line of \$2 was suggested. But this line ignores poor people in the industrialized world. In the United States, the poverty line is about \$10 a day. This is a convenient "market given" point for the beginning of the middle class in the world. The end-point is provided by PPP \$40 per capita per day, at 1993 prices. At current 2000 prices, and in US dollars, this is approximately \$70,000 for a family of four (i.e., if you earn more than that, you are no longer middle class—you are rich).

The advantage of an absolute middle-class category (unlike the relative definition of the 25th to 75th percentiles adopted by Birdsall, Graham, and Sabot) is that one can actually note the different magnitudes of the people in this class; relative definitions will always have the same percentage of people, for all times, and all income ranges. Further, by tying the definition to an absolute poverty line, the Bhalla and Kharas formulation has the advantage of allowing the notion of middle class to also rise with development.

A definition is only as good as its "feel"; it is only good if it passes "smell" tests (not unlike obscenity tests à la a US Supreme Court judge, who opined about the definition of obscenity: "I know it when I see it"). Figure 11.9 documents the trend in the share of the middle class within

Figure 11.9 Middle-class share in own population



Note: “Middle class” is defined as average per capita daily incomes in the range of \$10-\$40 (1993 purchasing power parity dollars). To obtain regional distributions of income, country data are pooled using the simple accounting procedure method.

Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.

each region of the world; the sum of the shares of the three classes (poor, middle class, and rich) within each region is equal to 100.

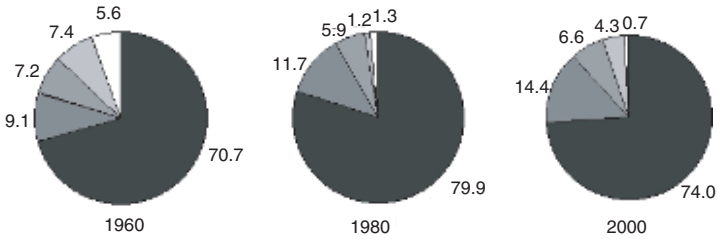
The miracle of Asia is one of the most prominent results. This region alone contains more than half (54.4 percent) of the world’s population, and more than two-thirds of the population of the developing world. During the period 1960-80, Asia had a negligible number of middle-class or rich people. But in 2000, middle-class people constituted 21 percent; and rich people, 2 percent! (Poor people are 77 percent, but this is according to a poverty line almost eight times the popular \$1-a-day line).

The changing world landscape is recorded by figure 11.10, which documents the composition of the three classes in the world population for 1960, 1980, and 2000. In 1960, 6 percent of the world’s middle-class population came from Asia; today, that share is 52 percent. If the world’s middle class was basically white in 1960 (industrialized-world residents constituted 63 percent), today it is basically Asian.⁶ This gives one explanation for the crisis of growth in Latin America (more explanations are given in the next chapter). This region had twice the market size of Asia in 1960; it had an equal market size in 1980; and today has less than one-third the market size of Asia.

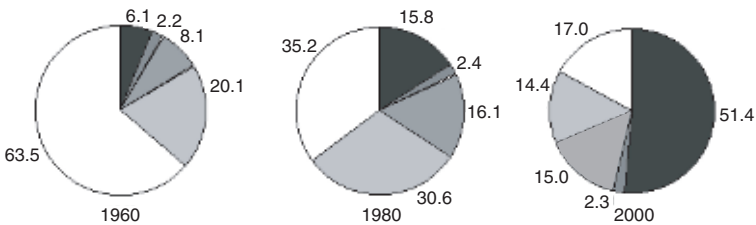
6. See Asian Development Bank (2002) for details about the miracle that *is* Asia.

Figure 11.10 Share of each region in various income levels

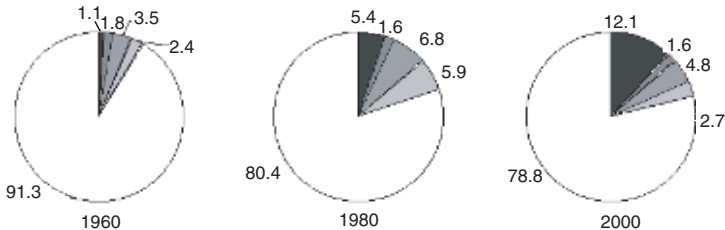
Share of each region in world's lower-class population (annual income is less than or equal to \$3,650, PPP at 1993 prices)^a



Share of each region in world's middle-class population (annual income is between \$3,650 and \$14,600, PPP at 1993 prices)^b



Share of each region in world's upper-class population (annual income is more than \$14,600, PPP at 1993 prices)^c



- Industrialized world
- Eastern Europe
- Latin America
- Sub-Saharan Africa
- Asia, Middle East and North Africa

PPP = purchasing power parity

a. "Lower class" is defined as average per capita daily incomes below \$10, or below \$3,650 a year (all in 1993 PPP dollars).

b. "Middle class" is defined as having an income in the range of \$10-\$40 a day or \$3,650-\$14,600 per year.

c. "Upper class" is defined as having an income greater than \$40 a day or \$14,600 a year.

Note: To obtain regional distributions of income, country data were pooled using the simple accounting procedure method.

Sources: Deininger and Squire (1996); World Income Inequality Database, available at www.wider.unu.edu/wiid; Asian Development Bank (2002); World Bank, *World Development Indicators*, CD-ROM.