



# **Inter-American Development Bank**

**Integration and Regional Programs Department**

## **TRADE AND POVERTY TRUST FUND**

### **Globalization, Inequality, and Poverty**

*By Pranab Bardhan*

Paper to be presented at the *Trade and Poverty in Latin America and the Caribbean* workshop (IDB headquarters, 19 June 2006), organized by the Integration and Regional Programs Department, in coordination with the Sustainable Development Department and the UK Department for International Development (DFID). The workshop is funded through the IDB's *Trade and Poverty Trust Fund*.

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# Globalization, Inequality, and Poverty

By Pranab Bardhan  
University of California at Berkeley

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## I

Most people I know have a strong opinion on globalization and all of them are concerned with the well-being of the world's poor. The strength of conviction is often in inverse proportion to the amount of robust factual evidence they have. I have also noted that the confidence with which officials of international financial institutions and opinion-makers in influential newspapers and magazines assert their belief in the value of global free markets in expanding the horizons for the poor is only matched by the passionate intensity with which activist-protesters hold their opposite belief, one effect of which had been in the recent past to turn the venues of many important international meetings into combat zones of excessive security arrangements surrounded by absurdist street theater.

Of course, as is common in contentious public debates, different people mean different things by globalization. Some interpret it to mean the global reach of new technology (particularly in information and communications) and capital movements, some refer to outsourcing by domestic companies in rich countries, others protest against the tentacles of corporate capitalism or US hegemony. As I see it, a large part of the opposition to globalization relates to its three different aspects:

- (a) the fragility of valued local and indigenous cultures of masses of people in the world facing the onslaught of global mass production and cultural homogenization (through global brand-name products, movies, music, fast food, soft drink, internet, the English language, etc.);
- (b) the devastation caused to fragile economies by billions of dollars of volatile short-term capital stampeding around the globe in herd-like movements;
- (c) the damage caused to jobs, wages and incomes of poor people by the dislocations and competition of international trade and foreign investment and the weakening of the ability of the state to compensate for this damage and in general to alleviate poverty and inequality.

These three issues are inter-related: for example, ethnic handicrafts of the indigenous people wiped out by imports of mass-produced manufactures may be seen as both economic and cultural loss; when short-term speculative capital rushes out of a developing country it inevitably has adverse effects on its medium to long-term

investment climate as well. But they are conceptually separable issues. In this paper I shall confine myself to a discussion of issue (c); in other words, I shall mainly interpret globalization to mean openness to foreign trade and *long-term* capital flows and try to understand the possible difficulties poverty alleviation and redistributive policies in developing countries may face from such international economic integration. For this understanding we need first to look at the processes by which globalization may affect the conditions of the poor, and then analyze the ways in which the policies meant to relieve those conditions are hemmed in by global constraints. In general I believe that globalization can cause many hardships for the poor but it also opens up opportunities which some countries can utilize and others do not, largely depending on their domestic political and economic institutions, and the net outcome is often quite complex and almost always context-dependent, belying the glib pronouncements for or against globalization made in the opposing camps. I shall also emphasize the scope for institutions of international coordination among the involved parties and for public-private partnerships in resolving many of the controversial policy issues.

For the record let me say that on the important issues (a) and (b) ignored in the rest of the paper, I am generally in favor of some modest restrictions on the full fury of globalization. On (a), I think there are valid arguments for cultural protection<sup>1</sup> that even an economist can make: (i) preservation of cultural diversity on the same lines as that for bio-diversity and ‘option value’ in environmental economics; (ii) inter-temporal irreversibility and externality in production in the form of ‘forgetting by not doing’ in production of local varieties, on lines similar to the more familiar case of ‘learning by doing’; (iii) endogenous preferences, when what we choose depends on the range of varieties available and also when these preferences may be molded by giant international firms selling some standardized products but with large advertisement budgets, etc. On (b), let me point out that much of the financial crisis in developing countries in recent years was initially caused by overexposure to foreign currency-denominated short-term debts. These, everybody now recognizes, are particularly crisis-prone financial instruments. In most cases there was too little discipline in borrowing before the crises and too much discipline afterward. Many international economists (even those who otherwise support free trade) now believe in the need for some form of control over short-term capital flows, particularly if domestic financial institutions and banking standards are weak, though there are differences on the specific form such control should take and on the assessment of the effects of the rise in the cost of capital this may entail. I also think that it is imperative for the international community to work toward the creation and supervision of some international hedging and insurance institution against the impact of capital flow volatility.

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<sup>1</sup> For an attempt to formalize these arguments in terms of theoretical models see Aubert, Bardhan and Dayton-Johnson (2003).

I am also leaving out globalization in the form of international labor flows or more emigration of workers from poor to rich countries. If significant numbers of unskilled workers were allowed entry into rich countries even in limited and regulated doses, a large dent could have been made to world poverty, many times what can possibly be brought about by other forms of international integration<sup>2</sup>, but very few even among people who are concerned about the world's poor seem prepared to entertain this 'radical' idea, and the general rise in anti-immigration political temperature in many rich countries makes the current climate not very hospitable to the idea.

In the next section we start with the empirical evidence that exists on the relationship between globalization (in our sense of the term here) and inequality and poverty. In section III we discuss the various analytical ways one can try to think about the causal relation between globalization and wage inequality and poverty. In section IV we discuss the case of the self-employed poor and also the poor as consumers. In section V we take the case of the poor as users of public and environmental resources. In section VI we describe the set of feasible policies that can alleviate poverty without giving up on the gains of globalization and conclude with some suggestions for future research.

## II

One common cliché in the literature as well as in the streets is that globalization is making the rich richer and the poor poorer. This suggests a rise in economic inequality and poverty as a result of globalization, but the matter is actually much more complicated, yielding no easy or general answers. Let us first briefly review the evidence on inequality and poverty in the last two decades, and later we'll examine the question of how much of the change is due to globalization. First let us consider the evidence on changes in inequality<sup>3</sup>. Figure 1 gives the Gini indices for GDP per capita averaged across countries over the second half of the twentieth century under two alternative weighting schemes, one where countries are weighted equally (the United Nations principle of 'one country, one vote'), and the other is to give people, no matter where they live, equal weight. The weighting schemes give strikingly different results, particularly over the last two decades. The former weighting scheme suggests a rise in inequality, while the latter suggests a fall. The primary reason for the difference over the last two decades is the substantial income growth in by far the two largest poor countries

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<sup>2</sup> Walmsley and Winters (2002) have estimated that the global gains from allowing even temporary entry of both skilled and unskilled labor services equivalent to 3% of workforce in OECD countries will amount to about one and a half times the total gains from merchandise trade liberalization.

<sup>3</sup> Like most economists I'll refer here only to relative inequality. Ravallion (2004) points to the simple fact that non-economists often have absolute inequality in mind when they talk about a rise in inequality. It is easy to see that even when relative inequality remains the same with one person twice as rich as the other in both time 1 and time 2, the absolute gap between them may go up.

in the world, China and India. When people get equal weight, hundreds of millions of people in these two countries move to the middle of the world income distribution, rendering the latter as a whole less unequal. While the arguments for choosing the population weight may be stronger if one is interested in finding out what has happened to inequality among the people of the world, rather than simply the matter of inter-country disparity, in this paper we are also interested in intra-country inequality. So in the Appendix we provide, for illustrative purposes, some charts for movements in the Gini index for some selected countries (Argentina, Bangladesh, Brazil, Chile, China, India, Indonesia, Mexico, Nigeria and Pakistan---together covering about two-thirds of the total population of the developing countries), derived from a somewhat patchy World Bank database, to the extent we could find comparable (for the same country, not necessarily across countries) data for some years in the 80's and 90's. (Table 2 provides the figures of Gini coefficient for those countries). For these ten countries it looks like inequality was going up in most of them in this period. (One caution to keep in mind is that the household surveys on the basis of which inequality estimates are made often display an increase in the non-response rates of richer households, which may understate the rise in inequality or at least vitiate over-time comparisons of inequality). If one combines population-weighted inter-country inequality and intra-country inequality, the data for a larger set of developing countries are available only for a few recent years. The *World Development Report 2006* reports a small decline in this combined inequality between 1988 and 2000.

What about absolute poverty (in the sense of the percentage of people below an internationally comparable poverty line<sup>4</sup>)? Figure 2 gives the summary picture for developing countries as a whole (with and without China) over the last two decades for the percentage of people below \$1 a day at 1993 purchasing power parity. There is a declining trend in the percentage of poor people, though the decline is flatter if one excludes China. Table 1 gives a regionwise breakdown in these percentages between 1981 and 2001, for two poverty lines, \$1 a day and \$2 dollars a day. The declining trend in poverty is clear in most regions, except sub-Saharan Africa, Eastern Europe and Central Asia, and Latin America and the Caribbean.

Pro-globalizers point to the large decline in poverty in China, India and Indonesia, to take the three largest poor countries in the world (countries long characterized by massive rural poverty) in the recent decades of international economic integration. Chen and Ravallion have estimated that between 1981 and 2001 the percentage of rural people living below an international poverty line of \$1.08 per day (at 1993 purchasing power parity) declined from about 79 per cent<sup>5</sup> to about 27 per cent in China, from about 63 per cent to about 42 per cent in India, and 55 per cent to 11 per cent in Indonesia. But,

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<sup>4</sup> There are many caveats one should keep in mind for measurement of poverty by a common dollar (PPP) standard of poverty for countries in different parts of the world.

<sup>5</sup> This figure actually relates to China in 1980.

contrary to repeated assertions in the international financial press, no one has yet convincingly demonstrated that this decline is mainly due to globalization. In China it could instead be, to a large extent, due to internal factors like expansion of infrastructure or the massive 1978 land reforms or policy changes relating to grain procurement prices or the relaxation of restrictions on rural-to-urban migration. That the spurt in agricultural growth following the 1978 decollectivization and land reform may be largely responsible for the poverty reduction in China is suggested by the fact that the substantial part of the decline in poverty in the last two decades already happened by mid-1980's, before the big strides in foreign trade or investment<sup>6</sup>. Similarly, rural poverty reduction in India may be attributable to the spread of Green Revolution in agriculture, large anti-poverty programs or social movements in India, and not the trade liberalization of the 1990's (which in any case was largely confined to the non-agricultural sectors). In Indonesia<sup>7</sup> sensible macro-economic policies, an active rice price stabilization policy, massive investment in rural infrastructure, and the Green Revolution played a substantial role in the large reduction of rural poverty between 1981 and 2001 (note that by early 80's the oil boom of the earlier decade was largely over and by 2001 the economy has not fully recovered from the financial crisis).

Those who are more dubious of global processes point out that in the same decades poverty has remained stubbornly high in sub-Saharan Africa; as Table 1 shows, between 1981 and 2001 the percentage of people<sup>8</sup> living below the poverty line of \$1.08 per day (at 1993 purchasing power parity) increased in sub-Saharan Africa from about 42 per cent to about 46 per cent (the trend in the years in Table 1 is upward, but not statistically significant). But this may have little to do with globalization, and more to do with unstable or failed political regimes, wars and civil conflicts which afflicted several countries (29 out of 43 countries in sub-Saharan Africa in the 80's and 90's had civil conflicts). If anything, such instability only reduced their extent of globalization, as it scared off many foreign investors and traders. For Latin America and the Caribbean the trend in poverty for the years in Table 1 is downward, but not statistically significant.

Let us now briefly refer to inequalities in health-related indicators. From the *World Development Report 2006* we can see that in 1980 the average life expectancy at birth in four regions in the world--West Asia and North Africa, East Asia (excluding China and Japan), South Asia and sub-Saharan Africa-- was below the world average, but high rates of growth in life expectancy in the first three of these areas in the next 20 years was inequality-reducing globally, while the decline of life expectancy in sub-

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<sup>6</sup> Chen and Ravallion (2004a) note that mean tariff rates in China fell only slightly in the 1980's and non-tariff barriers actually increased, and show econometrically that growth in the primary sector (mainly agriculture) rather than in the secondary or tertiary sectors is largely responsible for the decline in poverty. One of their conclusions : "our data do not suggest that expanding trade can explain China's progress against poverty".

<sup>7</sup> See, for example Timmer (2004).

<sup>8</sup> This relates to the total population.

Saharan Africa in the 1990's increased this inequality by stretching the bottom tail of the distribution. By 2000 only South Asia and sub-Saharan Africa were still below the world average. While health indicators are in general much worse when incomes are low, differences in income growth explain less than a sixth of inter-country variation in improvements in life expectancy. Major determinants of mortality decline are clean water, systems of public health and sanitation, basic sanitary knowledge, women's education, etc. Deaton (2004) considers it a major failure of globalization (i.e. too little of it) in the transmission of health knowledge, drugs and technology that every year 10.5 million children die preventable deaths in poor countries (preventable in the sense that they would not have died had they been born in rich countries) and that tens of millions of people currently lack treatment for HIV/AIDS in some of these countries.

There have been attempts on the basis of cross-country regressions to relate trade with income inequality, results often varying depending on whether the level of trade is related to the level of inequality, or changes in the two variables are related. Milanovic and Squire (forthcoming), for example, find that openness hurts poorer deciles in low-income countries, when the analysis relates levels to levels, but finds no measurable effect when he switches to changes on changes<sup>9</sup>. There have also been attempts on the basis of cross-country regressions to positively relate trade liberalization (measured either as tariff reduction or less satisfactorily, as an increase in an outcome variable like trade shares) with economic growth, and relate growth with poverty reduction. The former relation has been found controversial<sup>10</sup>, while the latter is regarded by many as more sturdy. In any case there are deep methodological-econometric flaws in such cross-country regressions, apart from acute problems of reliability and comparability of the data for many countries. On the methodological point, for example, in the trade-growth regressions instrumentation via lags or economic indicators have been tried, but they hardly offer a valid alternative, if, respectively, openness is serially correlated or those other variables affect growth as much as trade. On the data-related problems Deaton (2003), for example, has argued that an observed correlation between aggregate growth and poverty reduction could be attributable to measurement error as well as biases in national income statistics, which yield very different results regarding the magnitudes and trends in aggregate poverty relative to the household surveys. The results of a more micro analysis of the impact of trade liberalization on total factor productivity growth at the enterprise level are mixed. Even for the relationship between openness and levels of firm productivity the evidence is quite ambiguous, as can be seen in the survey by Tybout (2000).

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<sup>9</sup> Earlier Edwards (1997) also did not find any significant effect as he took changes in inequality in the 70's and 80's.

<sup>10</sup> See, for example, Rodrik and Rodríguez (2000). Warner (2003) has in turn refuted some of the criticisms of the earlier literature made by the latter. Wacziarg and Welch (2003) shift the focus from cross-section to time-series and panel analysis and seem to support the view that trade liberalization has a positive impact on growth. Lee, Ricci, and Rigobon (2004) try an alternative methodology ("identification through heteroskedasticity") to estimate the effect of openness on growth, finding it significantly positive but small, while controlling for the effect of growth on openness.



While the long-run effect of growth on poverty reduction is often accepted, the usefulness of the average estimated value of the elasticity of this effect---taken to be 2 in an estimate reported in the *World Development Report 2001*, i.e. a one percent increase in real per capita income has been associated with a reduction in the headcount incidence of poverty by two percent---is somewhat limited, as the underlying causal model is underspecified. Also, the value of the elasticity varies from country to country depending on initial conditions (particularly initial levels of income and the extent of social and economic inequality), and, of course, varies a great deal, even within (large) countries. Across states in India Ravallion and Datt (2002) find that the elasticity of poverty reduction with respect to non-farm output growth varies depending on initial conditions, like literacy or land distribution.

There is now a large literature on the effect of globalization on wage inequality, particularly between skilled and unskilled labor. For example, in the middle to late 80's and the early 90's drastic reductions in tariff rates in Mexico and Colombia were accompanied by a rise in the skill premium. In Mexico, as Cragg and Epelbaum (1996) show, the skill premium increased by about 68 per cent between 1987 and 1993<sup>11</sup>. In Colombia, as Attanasio, Goldberg, and Pavcnik (2004) report, the skill premium increased by 20 per cent between 1990 and 1998. There is general agreement that this is more a result of an increase in the demand for skilled workers. (How this may be related to globalization will be discussed in the next section). But as Attanasio, Goldberg, and Pavcnik show the skill premium alone cannot fully explain the observed increase in wage inequality in Colombia. What happens to trade policy-induced industry wage premium and trade union premium may also be important. Using two large datasets on wage inequality across countries over the 80's and 90's, one from the Occupational Wages around the World database and the other from the University of Texas Inequality Project, Milanovic (2005) finds that tariff reduction is associated with a rise in inter-industry wage inequality (the industry premium) in developing countries (strictly, countries with below \$9000 PPP per capita income at 1995 prices), and somewhat more weakly with inter-occupational wage inequality (the skill premium) in those countries. Behrman, Birdsall and Szekely (2003) did not find a significant impact of liberal trade regimes on wage differentials in Latin America, but financial liberalization and high-technology exports in the context of a liberal trade regime did contribute to a rise in wage inequality. In general, since trade reforms are often carried out in association with a whole host of liberalization, deregulation, and macro-economic stabilization policies, apart from ongoing technological changes, it is difficult to disentangle the effects and isolate that of trade reform alone. Micro studies usually do a better job in this respect, but they do not capture general-equilibrium and growth effects.

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<sup>11</sup> Milanovic (2005), however, reports that this finding for Mexico is not consistent with the occupational wage data for Mexico in the dataset collected from ILO sources by Richard Freeman and Remco Oostendorp.

What about the impact on levels of absolute wage and employment? Wage income can go up and absolute poverty of workers can decline even when wage inequality is increasing. Hanson (forthcoming) compares the evolution of wage distribution in the 1990's in Mexico in regions that were most exposed to FDI and foreign trade with regions that were less exposed (after carefully excluding any effect of migration by high-ability migrants to regions with more opportunities). He finds that the number of wage-poor in states with high exposure declined by 10% relative to the number in non-exposed states. Arbache, Dickerson and Green (2003), however, find that following the extensive trade liberalization in Brazil in the 1990's, average wage in the traded sector fell compared to the non-traded sector, even after adjusting for education, experience, etc. As for employment, analyzing a set of 25 trade liberalization episodes in developing countries, using internationally comparable sectoral labor data, Seddon and Wacziarg (2004) come to the conclusion that trade liberalization has far smaller effects on intersectoral reallocation (even at the 3-digit level within manufacturing) than is conventionally presumed. What is more likely is that much of the structural change is intrasectoral and that some of the potential changes are neutralized by policies like exchange rate depreciation, labor regulations, and sector-specific subsidies. The micro-studies of effects of trade reform in Mexico and Morocco by Revenga (1997), Feliciano (2001), and Currie and Harrison (1997) attribute the small effect on employment to labor regulations or to the firms adjusting to trade reform by reducing their formerly protected profit margins and raising productivity rather than laying off workers. But even when the net effect on employment is relatively small, there may be a considerable amount of job reallocation and dislocation, as Levinsohn (1999) finds, using firm-level data in Chile. Daveri, Manasse and Serra (2003), on the basis of a sample of firms in 6 manufacturing sectors in India in 1997-99, confirm that employees of foreign-exposed, particularly exporting, firms face more wage and employment variability, but at the same time enjoy a higher probability of being trained and promoted than in firms not exposed to foreign competition. Comparing factories owned by multinational firms with domestic factories of the same size and efficiency in Indonesia, Bernard and Sjöholm (2003) find that the probability of closure was 20 percent higher for the former over a fifteen year period.

There are two micro studies on the link between trade liberalization and poverty. Between 1986 and 1994-95 decline in urban poverty in Colombia coincided with drastic tariff reductions, but Goldberg and Pavcnik (forthcoming) in their statistical analysis find that across industries trade liberalization either had no differential effect on poverty, or to the extent there was any effect, it went in the direction of increasing poverty. Topalova (forthcoming) uses the difference-in-difference approach to show that in rural districts in India where exposure to the liberalization in the 1990's (most relevant for the rural districts was the reduction in agricultural tariffs) was concentrated, poverty incidence and depth increased as a result of trade liberalization, amounting to a setback of about 15 per cent of India's progress in poverty reduction. Both of these studies suggest that limited labor mobility, across industries in the former and across districts in the latter, has something to do with the results.

### III

In this section we discuss theoretical models that can provide some clues about the causal processes (particularly in the wage labor market) that may be driving the observed relations between globalization and inequality and poverty. First, there are models on wage inequality (or skill premium) designed to explain the puzzle (from the point of view of Heckscher-Ohlin trade theory) why trade liberalization may have led to a rise in the skill premium *both* in the rich (presumably skill-abundant) and poor (presumably skill-scarce) countries. The explanation that is nearest to the Heckscher-Ohlin model is the idea--see for an exposition, Davis (1996)-- that the rich and the poor country are in different 'cones of diversification' in the standard Lerner-Pearce diagram, so that there is no factor price equalization. Suppose there are two factors of production, skilled and unskilled labor, and three countries and three goods. The rich country (say US) is in one cone, marked by relative abundance of skilled labor, thus specializing in the most skill-intensive good, whereas of the two poor countries in the other cone nearer the unskilled labor axis, one (say Mexico) is less skill-poor than the other (say China). In this case China may specialize in the least skill-intensive good, so that a reduction in tariffs in Mexico on the least skill-intensive good (say, textiles) may increase wage inequality in Mexico. This is essentially because Mexico may be unskilled labor abundant compared to US, but is skilled labor abundant compared to China, and so trade liberalization between China and Mexico turns the relative factor price in favor of skilled labor in Mexico. So the Heckscher-Ohlin distributional result applies to the two poor countries in the same cone of diversification.

It is, of course, interesting to note that in the above example trade liberalization brings down tariffs in the most unskilled labor-intensive sectors like textiles. This suggests that possibly for political-economy reasons (like political pressure from sectors employing large numbers of workers) pre-existing tariffs even in developing countries were high not so much on skill-intensive import-substitutes but more on the most unskilled labor-intensive goods. There is evidence for this kind of tariff structure for Mexico, Morocco, Brazil, and Colombia<sup>12</sup>: unskilled labor-intensive sectors were protected with the highest tariffs before trade reform and they experienced the largest tariff reductions during trade reform.

A widely cited explanation of the rise in wage inequality in both rich and poor countries is that of Feenstra and Hanson (1996). Even though their paper is couched in terms of US outsourcing to Mexico through foreign investment, the main idea is in the use of a continuum of goods ranked by skill-intensity to trace the effect of changes in

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<sup>12</sup> See Hanson and Harrison (1999), Currie and Harrison (1997), Blom, Goldberg, Pavcnik, and Schady (2004), and Attanasio, Goldberg, and Pavcnik (2004).

output composition along this continuum on factor prices. At the boundary of specialization in this continuum are the most skill-intensive goods for Mexico and the least skill-intensive goods for US. So with foreign investment as Mexico shifts the boundary to expand the range of goods in Mexico to produce its more skill-intensive goods, raising the relative demand for more skilled labor, the same happens in the US as the latter gives up its least skill-intensive goods, and so the relative wage for skilled labor goes up in both countries. (They give the example of TV production shifting from the US to the *maquiladoras*, first the chassis of the television sets, then electronic circuits, and later still picture tubes, going up the chain of skill-intensity of production in Mexico). Zu and Trefler (2005) have extended the model to a case without foreign investment but with Ricardian source of comparative advantage added to that based on factor endowment. In their model technological catch-up by the developing country causes a shift of production of the least skill-intensive goods in the rich country to the former where they become the most skill-intensive goods produced. They thus replicate the Feenstra-Hanson result and then empirically corroborate this particular causal mechanism. Xu (2003) has also a model with continuum of goods (but with neither foreign investment as in the Feenstra-Hanson model nor any technology catch-up as in the Zu-Trefler model), where the boundary between traded and non-traded goods is endogenously determined by trade policy. He shows that trade liberalization by expanding a developing country's export set can raise wage inequality.

In most of these models the rise in wage inequality is due to a shift in relative demand of skilled labor across industries. Verhoogen (2004) has questioned this at least with respect to the Mexican non-*maquiladora* sector. Contrary to the implications of the Feenstra-Hanson hypothesis, for example, he shows that *maquiladoras* were on average markedly *less* skill-intensive than the rest of the Mexican manufacturing sector. He focuses instead on trade-induced shifts within an industry, with firm heterogeneity and differential quality upgrading. When new trade opportunities arise (as in the case he examines, due to the 1994 peso crisis), these opportunities are seized by the most productive firms, producing a better-quality good for export, raising returns to all factors in those firms, but particularly to the most skilled<sup>13</sup>. He confirms this with a panel dataset on Mexican manufacturing plants.

Another set of explanations of the rise in wage inequality with globalization has to do with trade-induced skill-biased technical progress. Wood (1995) and Thoenig and Verdier (2003) suggest that some developing countries (and, of course, rich countries) facing competition from imports of cheap unskilled labor-intensive products from poorer

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<sup>13</sup> Verhoogen uses a O-ring production function in which the production of high-quality goods requires highly skilled workers across occupational categories and is more sensitive to the skill of white-collar workers than to that of blue-collar workers. Kremer and Maskin (2003) use their O-ring model to explain the coincidence of expanding trade and rising wage inequality in poor countries but through matching of workers from rich and poor countries in multinational firms, rather than through the quality upgrading mechanism emphasized by Verhoogen.

countries may adopt skill-biased ‘defensive innovations’. Attanasio, Goldberg, and Pavcnik (2004) find some support for this in their study on Colombia: in the 1984-98 period the increase in demand for skilled workers was largest in those sectors that experienced the largest tariff cuts (for example, textiles and apparel). Acemoglu (2003) suggests that cheaper imports of machines, office equipment, and other capital goods that are complementary with skilled labor in developing countries provide the vehicle of skill-biased technical change. Harrison and Hanson (1999) find that within each Mexican industry in the 1980’s firms that import machinery and materials are more likely to employ a higher share of white-collar workers than firms that do not import these inputs. But Pavcnik (2003) cannot confirm this for Chilean plants in the early 1980’s, controlling for time-invariant plant characteristics.

As we have noted before, a rise in wage inequality is compatible with a rise in absolute wage rate or wage income. The traditional international trade theory suggests that the workers in a poor country (presumably with abundant supplies of unskilled labor) having a comparative advantage in products intensive in unskilled labor should benefit from trade liberalization. The improvement in wages and employment of garment workers (mostly women) in Bangladesh or Mauritius or Vietnam with expanding exports is an obvious example. On the basis of household survey data Hertel et al (2003) estimate that global trade liberalization leads in the long run (i.e. when labor and capital are mobile across sectors) to a decline in poverty for all strata of the population; this is largely because of increased demand for unskilled labor which lifts income even of some of the formerly self-employed who now move into the wage labor market. Edmonds and Pavcnik (2003) also note how Vietnam’s liberalization of rice trade in the 1990’s led to a gainful reallocation of labor of the poor from household occupations to the wage labor market.

There is not much theoretical literature showing that the wage income can *decline* (thus leading to a worsening of poverty) in a developing country with globalization. Yet this can happen and let me point to some possible cases:

(a) We have already noted that in a three-country Heckscher-Ohlin type model trade liberalization in Mexico with US and China may bring down the wage rate in Mexico. Similarly, in a Heckscher-Ohlin model if a poor country has large supplies of non-labor factors of production (like land or mineral resources), trade liberalization may not benefit the labor-intensive sector.

(b) Going back to the case of trade-induced (or a foreign investor-introduced) skill-biased technical change above, it is, of course, possible for an extreme skill-biased change to lower the wage rate or employment of unskilled labor. For an example of how global tenders to construction companies like Bechtel or Mitsui using labor-saving technology has rendered many construction workers unemployed in India, see Jhabvala and Kanbur (2004).

(c) If some factors of production are intersectorally immobile, and some goods are non-traded, real wage of an unskilled worker in a poor country may not go up with trade liberalization even in an otherwise standard model of trade theory. Take a three-good model in a hypothetical African country: one is a non-tradable good (say, a subsistence food crop) largely grown by women who for various social and economic reasons cannot move to other sectors, another good (say, an exportable tree crop) is produced largely by men in a capital-intensive way (maybe simply because tree crops lock up capital for a long period), and the third good is an importable (say, processed food) which is somewhat substitutable in consumption for the subsistence food. In this three-sector model it is not difficult to show that the real wage of women may go down when the importable processed food is made cheaper by trade liberalization (under the sufficient condition that the elasticity of substitution in consumption of the two foods is sufficiently high).

In general, the lack of mobility issue is one of the most important in the link between trade and poverty, as has been suggested by the empirical work cited above of Goldberg and Pavcnik for urban Colombia and Topalova for rural India. It is not clear, however, how much of the lack of mobility is due to rigid labor laws as they suggest. Labor laws usually make it difficult to sack workers in import-competing industries, but do not prevent absorption of labor in the expanding export industries (except indirectly, when the new employer keeps in mind the future difficulty in sacking their new hires). For rural India there are few labor laws. The main reason displaced rural or urban workers cannot easily get jobs elsewhere has to do more with severe credit market imperfections that hamper mobility, retraining, retooling, etc.

(d) Take a two-period model where labor on a long-term contract is trained in the first period and this training bears fruit in the second period, when these long-contract workers are more productive than untrained short-contract casual laborers. If opening the economy increases the competition and the probability of going out of business, employers may go more for short-contract and less productive and lower-wage laborers, bringing down the average wage. On the other hand, increased foreign competition may lead to exit of old inefficient firms and entry of new more efficient firms, or a better allocation of resources within existing firms (for which there is plenty of evidence); this may lead to a rise in average wages in industries that attain such productivity gain.

(e) If firms facing more foreign competition and pressure to reduce costs outsource activities to smaller firms or household enterprises in the informal sector, the average wage (of those formerly employed in the formal sector) may go down, but this need not impoverish workers in general if the poorer informal workers get more employment this way.

(f) If the involvement of a large transnational company in the local labor market of a poor country raises the employer monopsony power, wages (and employment) may fall. But there is little evidence that poor unskilled workers get lower wages (or fewer jobs) in the presence of those companies, compared to what they will get in their absence, other things remaining the same<sup>14</sup>. Contrary to the impression created by the campaign in affluent countries against ‘sweatshops’ run by transnational companies in poor countries, it can be pointed out that the poor are often banging at the gates of these sweatshops for a chance of entry, since their current alternative is much worse, in inferior occupations or work conditions or in unemployment. This is not an argument against efforts to improve their work conditions (and certainly not in favour of the totally indefensible cases of forced labor or hazardous or unsafe work conditions<sup>15</sup>), but it is an appeal for looking at the reality of the severely limited opportunities faced by the poor and the unintended consequences of trying to restrict rich-country imports of ‘sweatshop’ products in terms of the harm it causes to the displaced poor workers.

(g) As foreign competition (or even the threat of it) lowers profit margins, the old rent-sharing arrangements between employers and unionized workers come under pressure. Rents decline both for capital and labor, but labor may have to take a larger cut if, as has been argued, the increase in the (perceived) elasticity of demand in the product market (due to opening of the economy to trade and foreign investment) leads to an increase in the elasticity of demand for labor, lowering its bargaining power and generally weakening unions<sup>16</sup>. This may lead to lower wages, and, sometimes more important, increased risk of unemployment. Scheve and Slaughter (2002) show how globalization of production through multinational enterprises in particular and related trade can make labor demand more elastic (through increased product market competition and substitution of foreign factors of production including intermediate inputs for domestic factors) and thereby raise economic insecurity for workers. Even in cases where the net

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<sup>14</sup> See, for example, Aitken, Harrison, and Lipsey (1996), Harrison and Scorse (2003), and Brown, Deardorff and Stern (2004).

<sup>15</sup> Conceptually, one should distinguish between unsafe or hazardous work conditions and forced labor on the one hand and low-wage jobs on the other. Under capitalism just as workers willing to sell themselves as serfs are not permitted, unsafe work conditions that can cause bodily injury should be strictly regulated. But the case for stopping workers from accepting low-wage jobs is much weaker.

<sup>16</sup> See Currie and Harrison (1997), Rodrik (1997) and Leamer (1998). The theoretical relation between product market demand elasticity and the elasticity of derived demand for labor is somewhat more complex than usual in the case of imperfect competition and is not always clear-cut. The empirical evidence in developing countries on the trade-induced changes in the elasticity of demand for labor is rather scanty. Krishna, Mitra, and Chinoy (2001) do not find much support for a positive effect of trade on labor demand elasticity on the basis of plant-level data in Turkey. Fajnzylber, Maloney and Ribeiro (2001), on the basis of plant-level data and taking both incumbent and exiting or entering firms into account, find in Chile and Colombia very ambiguous effects of trade liberalization on wage elasticities.

effect on employment is relatively small, there may be considerable amount of job reallocation and dislocation, as we have already noted in the preceding section.

Even when poor unskilled workers lose from trade liberalization, it may be possible to combine a policy of trade liberalization with a domestic policy of compensating the losers at low cost. Harrison, Rutherford, and Tarr (2003) have used a computable general equilibrium model for Turkey to show with a numerical exercise that a direct income subsidy to the losers of trade reform, financed by a VAT, is quite cost-effective. The main problem, of course, is that of credible commitment on the part of the ruling politicians that losers will be compensated. Recent history in many countries is full of renege promises on the part of governments to displaced workers. Obviously, this is a particularly important matter in poor countries where there is very little effective social protection available from the state. Rich countries have better social safety nets and some programs in place helping displaced workers to adjust. For example, the federal adjustment assistance program in the US, strengthened by an Act in the Congress in 2002, while still quite inadequate, is some program that is meant to help displaced workers, but no such program exists in most poor countries. International organizations that preach the benefits of free trade should take the responsibility of funding and facilitating such adjustment assistance programs in poor countries that can help workers in coping with job losses and getting retrained and redeployed. There should be more of income support programs like the Trabajar program in Argentina or programs to train and help the unemployed in finding new jobs like the Probecat in Mexico. For a discussion of the effectiveness of different programs to help workers cope with job loss in Latin America, see World Bank (2000).

Until issues of general economic security for poor workers in developing countries are satisfactorily resolved, globalization is bound to raise anxiety and hostility among workers worried about their job security. If mass politics in a country is organized, as it usually is, in such a way that the nation-state is the primary political forum for demanding and getting the necessary redistributive and insurance functions of a society (rendered more important by the economics of international specialization), to the extent that nation state is weakened by forces of international economic integration, it is a matter of serious concern. Much depends, of course, on a society's institutions of conflict management and coordination. It is not a coincidence that countries that have a better record in building these institutions have coped better with the dislocations brought about by international trade: the major example is the case of Scandinavian countries where in spite of a strong tradition of organized labor movement and worker solidarity over many decades of the last century, the unions there in general have been in favor of an open economy.

The general issue of the weakening of the nation state is rather complex. There is a possible loss of national policy options brought about by a poor country's participation in international trade and investment and in the framework of global institutions and rules that govern them. I agree with the anti-global protesters that many of the international



organizations that define the rules of this order are accountable more to the corporate and financial community of rich countries than to the poor and that the decision-making processes in these organizations need to be much more transparent and responsive to the lives of the people their decisions crucially affect<sup>17</sup>. But the protesters' demand for the abolition of international organizations like the WTO is, however, misplaced. If the alternative to a multilateral organization like the WTO is for a developing country to face the US in bilateral trade negotiations, the US is likely to be much more dominant and arbitrary in such negotiations than in the dispensations of the WTO (which in its arbitration decisions has sometimes ruled against the US position). Of course, serious efforts are needed to strengthen the technical negotiation capacity of poor countries in international trade forums where they face the well-equipped and well-funded teams of lawyers and negotiators representing rich countries.

Coming to the issue of the constraints on a national government's fiscal options in a global economy, many people are of the opinion that the scope for taxing capital to raise revenue is severely limited by the threat of capital flight in the long run, even if we ignore the problem of short-term speculative capital flows. (In fact capital itself does not have to flee the country; quite often accounting practices, through strategic bookkeeping adjustments, allow the base for capital taxes to migrate even when capital itself does not). While this limitation can be serious, one should not exaggerate its effects. Most countries collect only a small part of their revenues from capital taxation, even in relatively closed economies. In any case there are strong arguments for funding redistributive policies through progressive consumption taxes (say, VAT) rather than taxes on capital or labor. Of course there is a need for tax coordination across countries, and there is some evidence that capital taxation is declining and also converging across countries. But again, one should not overstate this. Even in the highly integrated European Union corporate tax rates have substantially converged not to zero, as some people anticipated, but to about 35 per cent. In general between two equilibria, one with high taxes and high public goods provision and the other with low taxes and low public goods, capital need not choose the latter over the former. For most medium to large sized countries the adverse effects of globalization on the political viability of national-level redistributive practices and institutions are somewhat exaggerated.<sup>18</sup>

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<sup>17</sup> It is also to be noted that in the WTO each member country has one vote (the convention is to reach decisions by 'consensus'), whereas in the Bretton Woods institutions (IMF and the World Bank) voting is dollar-weighted. But there is no denying the fact that the rich countries (and their large corporate lobbies) exercise a dominant effect on the agenda-setting and decision-making of the WTO, as with the Bretton Woods institutions.

<sup>18</sup> For a detailed discussion of the relevant political economy issues on this question see Bardhan, Bowles, and Wallerstein (forthcoming).

## IV

Apart from wage laborers discussed in the previous two sections vast numbers of the poor are self-employed. The self-employed work on their own tiny farms or as artisans and petty entrepreneurs in small shops and household enterprises. The major constraints they usually face are in credit, marketing and insurance, and infrastructure (like roads, power, extension service and irrigation), and government regulations (involving venal inspectors, insecure land rights, etc.). These often require substantive domestic policy and governance changes; foreign traders and investors are not directly to blame. If these changes are not made and the self-employed poor remain constrained, then, of course, it is difficult for them to withstand competition from large agri-business or firms (foreign or domestic). Let us just cite two examples. Using panel data for farm households in Zambia Deininger and Olinto (2000) show that many households could not reap productivity benefits from external liberalization because they lacked key assets like draft animals and farm implements. Similarly Lopez, Nash, and Stanton (1995) show from panel data of farm households in Mexico that the supply response to price incentives is much lower for households with more limited access to capital. Opening the product markets internationally without doing anything about the weak or distorted factor markets like credit or infrastructural services may thus be a sub-optimal (and even disastrous) policy for many poor farmers and artisans, both from the point of view of their exploiting new opportunities and of social protection for those who may need extra help to cope .

Measurement of the direct impact of trade reform on poverty of the self-employed is actually quite tricky. As we have noted before, apart from the scarcity of detailed household data before and after trade reform, it is often difficult to disentangle the effects of trade reform from those of other reforms and other events and shocks that affect the household poverty dynamics. Most existing attempts to measure are really with simulation models. Litchfield, McCulloch and Winters (2003) is among the first empirical attempts, using household survey data for more than one period in time. For Vietnam in the 1990's, for example, they find in a multinomial logit model that the trade variables have a positive significant effect on a household's chance of escaping poverty.

It is not hard to see that openness to foreign trade and investment may sometimes help in relieving some of the bottlenecks in infrastructure and services and in essential parts, components and other intermediate products like fertilizers and pesticides. Gisselquist and Grether (2000), for example, show how farmers in Bangladesh benefited as liberalization increased the availability of farm inputs. In a more general sense international diffusion of technology in agriculture, of which the Green Revolution has been a dramatic example, has led to large reductions in poverty, particularly in Asia, even though the larger dependence of farm households on purchased inputs that became necessary increased the importance of the constraints of credit and irrigation.

Small farms or firms that are not severely handicapped by the credit and other constraints are sometimes more productive than their larger counterparts, and are also sometimes more successful in export markets. Small producers are often heavily involved in exports (for example, coffee producers of Uganda or Nicaragua, rice growers in Vietnam, shrimp farmers in coastal Bangladesh or India, garment producers in Bangladesh or Cambodia). But in exports the major hurdle they face is often due to not more globalization but *less*. Developed country protectionism and subsidization of farm and food products and simple manufactures (like textiles and clothing) severely restrict their export prospects for poor countries<sup>19</sup>. By estimates of the World Bank, based on the widely used GATP (Global Trade Analysis Project) model, the total income losses incurred by developing countries on account of rich-country trade barriers on textiles and apparel amount to about \$24 billion. Taking tariffs and tariff-equivalent of subsidies in agriculture, Cline (2004) estimates that the overall protection in agriculture is about 20 per cent for US, 46 per cent<sup>20</sup> for EU, 52 per cent for Canada, and 82 per cent for Japan. The annual loss to developing countries from agricultural tariffs and subsidies in rich countries is estimated from a static CGE model and the GATP trade and protection database by Cline (2004) to be about \$45 billion (and much higher if dynamic effects are taken into account).

I wish the anti-global protesters of rich countries turned their energies toward the vested interests in their own countries which prolong this protectionism and cripple the efforts of the poor of the world to climb out of their poverty. Pro-poor opponents of NAFTA, for example, point out how competition from northern agri-business is destroying the livelihoods of small farmers in Mexico, without being equally vocal about the farm subsidies and tariffs in the U.S. and Canada which are, to a large extent, responsible for this. U.S. wheat export prices are estimated to be 46 per cent below cost of production, U.S. corn export prices are at 20 per cent below cost, and so on<sup>21</sup>. It is not surprising that US subsidies in cotton provided a major flashpoint in the breakdown of the WTO's ministerial negotiations in Cancun in September 2003, as this crop is grown by farmers in some of the poorest countries of the world<sup>22</sup>. Of course, this is not to

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<sup>19</sup> This is, of course, not to minimize the trade barriers imposed by developing countries on imports of other developing countries, which are often higher than those imposed by rich countries. There are some conflicting estimates of the welfare gains of the reduction in trade barriers imposed by developing countries themselves in relation to that for reduction in trade barriers imposed by industrial countries. A convincing estimate by Cline (2004) suggests that industrial-country liberalization provides from about half to two-thirds of the total potential welfare gains to developing countries from trade liberalization all around.

<sup>20</sup> Adjusting for preferential entry of farm products from some countries, the agricultural protection for EU goes down to 34.5 per cent.

<sup>21</sup> See, for example, the recent Oxfam Report, *Rigged Rules and Double Standards: Trade, Globalization, and the Fight against Poverty*, 2002.

<sup>22</sup> Minot and Daniels (2002) in a study of Benin show that a 40 per cent reduction in farmgate cotton prices, equivalent to the price decline between December 2000 and May 2002, implies an 8 per cent reduction in per capita income in the short run (6-7 per cent in the long run), with the incidence of poverty among cotton growers rising in the short run from 37 per cent to 59 per cent.

minimize the responsibility of domestic governments. In Mexico, for example, following the peso crisis of 1994 the government abandoned its plans to phase in the trade liberalization; although the Procampo program provided some compensation to the very poor farmers against the price decline, there was a lack of public support infrastructure to enable the small farmers to adjust to new patterns of production necessary to be competitive in the post-NAFTA world.

Another increasingly important barrier to trade many small farmers of developing countries face in world markets is that rich countries now shut out many of these imports under a whole host of safety and sanitary regulations (sometimes imposed under pressure from lobbyists of import-competing farms in those countries). This may actually increase the importance of the need for involving rich-country transnational companies in marketing poor-country products. These companies can deal with the regulatory and lobbying machinery in rich countries far better than the small producers of poor countries can and at the same time can provide to consumers credible guarantees of quality and safety. Of course, these companies will charge hefty fees for this marketing service (usually much larger than the total production cost), and sometimes impose costs which small farmers find difficult to bear. European supermarkets, for example, now insist on criteria for farmers to satisfy that include health and safety rules, product testing, farm audits and staff training. It has been pointed out that farm audits alone cost around \$500 per farmer, more than what many farmers earn in the supplying countries in Africa. In some cases tighter control by the retail chains over suppliers to ensure standards and practices has led to a drastic decline in the proportion of exports coming from smallholders—for an example from the case of Kenyan horticulture exports, see Dolan and Sutherland (2002).

Similarly, it may be very difficult, costly, and time-consuming for small producers of manufactures or services in developing countries to establish brand name and reputation in quality and timely delivery, which are absolutely crucial in marketing, particularly in international markets (much more than comparative costs of production which traditional trade theory emphasizes). This is where multinational marketing chains with global brand names, mediating between domestic suppliers and foreign buyers, will play a dominant role for a long time, and small producers can do worse than paying the high marketing margin they charge. At the same time coordinated attempts on the part of developing countries, with technical and financial assistance from international organizations, to build international quality certification institutions and domestic cooperative marketing organizations for their products should be a high priority.

There is very little hard empirical evidence on the precise figures of marketing margins. There are occasional newspaper reports, for example, that for a 44lb. box of bananas which sell for about \$25 in US supermarkets, the producers in Ecuador get only

\$2 or \$3.<sup>23</sup> Similarly there are reports that for a shirt that sells for at least \$20 in Gap stores in the US, the producer in Hong Kong gets less than \$1. Of course, much of the difference is made up of transportation, distribution and inventory costs, but the marketing margins are likely to be substantial. Morisset (1998) points out that the spread between world and domestic prices almost doubled over 1975-94 in all major commodity markets leading to several billions of dollars of lost revenue for commodity-exporting countries. He suggests that the market power of international trading companies could be the major reason, after showing why changes in trade and tax policies, or factors such as transport, processing, and market costs cannot provide a systematic explanation. Let us also give the examples of two major beverage markets. The coffee market is dominated by four transnational retail companies. In the early 90's the coffee earnings of exporting countries were 10 to 12 billion dollars, while retail sales were around \$30 billion; by 2002 retail sales more than doubled, but coffee-producing countries received about half their earnings of a decade earlier. Three companies control more than 80 per cent of the world tea market. Many in the tea industry in India believe that the cartels of the big buying companies push down prices on the tea auction floors; a 2003 report in Delhi states that while the tea price in the retail market was around Rs. 160 per kg, in the auctions it was less than Rs.50 per kg (and while auction prices have fallen, retail prices of tea continue to rise). In recent years through mergers, acquisitions and business alliances the agri-food corporations have concentrated enormous market power: companies like Monsanto, Cargill, Nestlé and Wal-Mart have come to dominate supply chains for food and agricultural goods, from seed to supermarket shelf. Five companies control 90 per cent of the world grain trade; six corporations control three-quarters of the global pesticides market; Wal-Mart controls 40 per cent of Mexico's retail sector; Nestlé has established a virtual monopoly of the UHT milk market in Pakistan and controls around 80 per cent of Peru's milk production; DuPont and Monsanto dominate the world seed markets for corn (65 per cent) and soya (44 per cent); and so on.<sup>24</sup>

Those who are thus justifiably outraged by the extremely high marketing margins the monopoly multinational companies currently charge the poor producers, their price-fixing cartels, or by their efforts to push out small producers from the supply chains should agitate more for anti-trust action, not anti-trade action. There should also be more energetic international attempts to certify codes against international restrictive business practices and to establish an international anti-trust investigation agency, possibly under WTO auspices. Even if such an agency may not have much enforcement powers, internationally publicized reports of anti-trust investigations by a recognized international

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<sup>23</sup> Similarly, there are reports that in the UK for every £1 that shoppers spend on loose Ecuadorian bananas, around 40 pence goes to supermarkets, while plantation workers receive just 1.5 pence. See [www.bananalink.org.uk/tuforum/split.htm](http://www.bananalink.org.uk/tuforum/split.htm) Five companies control over 80 per cent of the global market.

<sup>24</sup> Much of the information in this paragraph is from a summary report by Action Aid International (2005). The original sources are cited there.

body will have some impact on rapacious monopolies, and strengthen the hands of domestic Competition Commissions in developing countries.

Trade liberalization, even when increasing the mean incomes of the poor, may heighten their vulnerability, particularly by increasing the variance of prices or income sources. Theoretically, there can be conflicting factors working here, and whether in a particular case variability increases or not can only be resolved empirically for different cases. For a brief summary of the empirical literature on this question, see Winters, McCulloch, and McKay (2004). For example, they cite a study of how trade liberalization may have helped to mitigate the post-flood food crisis in Bangladesh in 1998 with private imports stabilizing prices; on the other hand, they cite evidence from Côte d'Ivoire that the ending of domestic marketing arrangements with liberalization may have increased the variance of prices. There is, of course, general agreement on the low capacity of the poor to cope with negative price and income shocks.

There is also the issue of commodity concentration of exports. More than 50 developing countries depend on 3 or fewer primary commodities for more than half of their export. Exports of such products are often a curse as well as a blessing for these countries, as their prices fluctuate wildly and as the economy is too dependent on them. As a result of recent cases of elimination of the erstwhile inefficiently-run marketing boards and the dismantling of wasteful stabilization schemes, farmers in many African countries now receive a higher fraction<sup>25</sup> of a more volatile (and in some cases, lower) world market price<sup>26</sup>. International commodity agreements among these countries to control their supply in the world market have not worked very well in the past. For reducing their economic vulnerability there is probably not much alternative to attempts at diversification in production and skill-formation, and gradual movement up the supply chain toward activities with more value addition for the same commodity and arranging at an international level institutions of insurance for farmers in poor countries. Of course, as we have suggested above, the transnational corporate concentration in some of the higher-value stages in the supply chain impose formidable barriers to entry.

With the opening of the economy just as export crops face new opportunities potentially lifting their producers from poverty, crops where the country may lack comparative advantage will lose out and push their small producers into poverty, if, in a situation of pervasive failure of credit and insurance markets, there is no vigorous program of public adjustment assistance and extension services to help producers to reallocate their resources. The poor growers of traditional crops are often ill-equipped to shift by themselves to the new commercial products like fruits, vegetables, flowers, dairy products, processed foods, etc. These products require new storage and transport

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<sup>25</sup> Unless the public monopsony is replaced by private marketing cartels.

<sup>26</sup> See, for example, Gilbert and Varangis (2003) for the case of cocoa. For a whole range of crops in Africa see the analysis in Townsend (1999).

infrastructure, large set-up costs, marketing connections, and new legal rules and institutional structures that can facilitate contract farming and agro-processing in a way that does not expose small producers to exploitation by large marketing chains. This is clearly not an argument against globalization but for pro-active public programs to help poor farmers adjust and coordinate. International agencies which advocate the benefits of free trade have an obligation to contribute to such programs with financial, organizational and technical assistance.

What has been said in the preceding paragraphs about self-employed farmers is also largely valid for those who are self-employed in non-agricultural activities. Some firms adjust well to new trade opportunities, while others find it difficult to cope with the competition, depending on their initial asset, credit and other infrastructural conditions. Parker, Riopelle and Steel (1995) in their study of small enterprises in five African countries show that firms that adapted quickly benefited from import liberalization, while those ill-prepared to face competition lost out. What is called for is therefore liberalization to be accompanied by a comprehensive policy package for enhancing the capability of latter firms and a safety net for people who lose in the process.

Before we end our discussion of the working poor in the family farms and firms, let us briefly turn to the issue of child labor that has attracted a great deal of international attention in connection with the globalization debates. We discuss it in this section because, contrary to popular impression in the West, most working children in poor countries work for their family enterprises. According to UNICEF-coordinated detailed household surveys in 36 low-income countries for 124 million children in the 5-14 age group, and tabulated by Edmonds and Pavcnik (2005a), 25 per cent of these children work in gainful employment but only less than 3 per cent work outside their family enterprises for pay. About 70 per cent of the children attend school, and of those who do not only about a quarter work on what can at least partly be described as gainful work (including in family enterprises), the rest of the non-attendees either do not work or only do domestic chores. Theoretically, trade-induced expansion of an industry that employs children may increase the demand for child (and adult) labor, but the resultant income effect will reduce the supply of child labor from poor (or credit-constrained) households. Edmonds and Pavcnik (2005) study the effect of national and international rice market liberalization in rural Vietnam in the 1990's on the basis of household survey data, and find that the income effect dominates: an increase of 30 per cent in the real price of rice in this period is associated with a 9.2 per cent decline in the probability that a child works. The result could have been, of course, different in a country where the majority of the poor are net rice consumers (an issue to which we turn in the next paragraph). But the point remains that a policy that increases earning opportunities for poor households (rather than good-intentioned but simplistic punitive policies like boycotting products of child labor) are much more effective in reducing child labor. Policy interventions like contingent transfer programs (contingent on school attendance) like PROGRESA in Mexico (now expanded into the *Oportunidades* program) or the Food for Education Program in Bangladesh have been particularly effective.

Let us now discuss the case of the poor as consumers. Whether they gain as consumers from trade depends on whether they are net buyers of tradable goods--for example, the landless laborers in east or south India who are net buyers of rice may gain from imports of cheaper rice from Thailand, but may lose from higher prices of medicine as the Indian drug market becomes internationalized (with the laws changing in 2005 from recognizing only process patents to the international product patent system under TRIPS), or how monopolistic is the retail market structure which often blocks the pass-through from border prices to domestic prices -- for example, in Mexico after NAFTA the cartelized tortilla sector largely maintained prices even with the availability of cheaper North American corn. In one of the most disaggregated exercises in the empirical literature, with the use of Morocco's household survey of living standards and a general-equilibrium simulation of trade policy change, Ravallion and Lokshin (2004) show that a simulated trade reform in the form of liberalization of cereal imports in that country (which does not have a comparative advantage in water-intensive cereals production) leads to a rise in rural poverty, with the losses to the net producers of cereals outweighing the gains to the net consumers among the poor. In an application of a general-equilibrium formulation of the effect of trade policy Porto (2003) examines the impact of Argentina's entrance into Mercosur on urban households there. He finds that the poverty decline through the labor income channel (the usual Stolper-Samuelson effect) outweighs any negative consumption effect. Before one generalizes these findings, one should recognize that much depends on where trade liberalization lowers prices (for example, agricultural or manufactured goods), the nature of price response to trade policy, various price elasticities and factor intensities in production, and the demographics and location of the poor (rural or urban).

Whether developing countries are net importers or exporters of agricultural products varies a great deal from country to country. From FAO data sources Valdes and McCalla (2004) compute that of the 115 low-income and low-middle-income countries, 62 are net agricultural good importing countries and 53 are net agricultural good exporting countries. In general with the expected price rise from agricultural trade liberalization in the form of reduction of agricultural tariffs and subsidies in developed countries, the former set of countries is likely to lose and the latter to gain. So contrary to the impression one gets from advocates of agricultural trade liberalization, many poor countries will not gain from this liberalization<sup>27</sup>. In particular, of the 46 least-developed countries (by UN classification) 30 are net agricultural good importing countries<sup>28</sup>, and it is unlikely that with liberalization some of the latter will transform themselves into large agriculture-exporting countries. Even in the case of the fewer agriculture-exporting least-developed countries many of them are likely to lose the special preferential status they enjoy under the current regime in some developed markets; for example, many least-

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<sup>27</sup> See Panagariya (2004).

<sup>28</sup> In terms of population, roughly one-fifth of the total population of these least-developed countries is in one country, Bangladesh, which is a net importer of agricultural goods.



developed countries in Africa have duty- and quota-free access to the EU market so that they currently sell in this market at the high EU internal prices. This, of course, does not apply to the recently publicized case of poor countries exporting cotton, as the highest domestic subsidies (depressing world price) are in the US.

## V

Let us now briefly turn to the case of the poor as recipients of public services. In the low-income developing countries the poor, particularly those who are in the preponderant informal sector, do not receive much of effective social protection from the state, but the public sector is usually involved in basic services like education and health and public works programs. Cuts in public budgets on these basic services are often attributed to globalization, as the budget cuts to reduce fiscal deficits often come as part of a package of macroeconomic stabilization prescribed by international agencies like the IMF. Trade reforms can bring about a decline in customs revenue (which is usually a substantial source of total government revenue in low-income countries) due to tariff cuts, to the extent these are not compensated by the replacement of the pre-existing quotas by tariffs. But Pritchett and Sethi (1994) analyze the experience of Jamaica, Kenya, and Pakistan on their tariff reductions and found that revenues often fell substantially less than tariff rates did. Much depends on the nature of customs administration, the degree of complexity of the tariff structure, and the scope for expansion of the revenue base following trade reform .

While there is a lot of scope for improvement in the internationally prescribed (occasionally ideologically blinkered) stabilization programs to minimize their adverse impact on the poor, one should keep in mind that the fiscal deficits in these poor countries are often brought about in the first place more by domestic profligacy in matters of subsidies to the rich, salaries for the bloated public sector or military extravaganza. Faced with mounting fiscal deficits the governments often find it politically easier to cut the public expenditures for the voiceless poor (along with public investment programs), and that is primarily due to the domestic political clout of the rich who are disinclined to share in the necessary fiscal austerity, and it is always convenient to blame an external agency for a problem that is essentially domestic in origin.

The low quality and quantity of public services like education and health in poor countries is not just due to their relatively low share in the public budget. To a large extent even the limited money allocated in the budget does not reach the poor because of all kinds of top-heavy administrative obstacles and bureaucratic and political corruption. The development literature is full of accounts of targeting failures in social

expenditures.<sup>29</sup> Again this is a domestic institutional failure, not largely an external problem. The major effort required here is to strengthen the domestic institutions of accountability.

Apart from basic public services, the poor are also users of common property resources, the decline in which is not usually taken into account in the standard estimates of poverty, based as they are on either household surveys of private consumer expenditure or national income accounts. Environmentalists argue that trade liberalization damages the poor by encouraging overexploitation of the fragile environmental resources (forestry, fishery, surface and groundwater irrigation, grazing lands, etc.) on which the daily livelihoods of particularly the rural poor crucially depend. Here also the answers are actually complex and mere trade restriction is not the solution. The environmental effects of trade liberalization on the rural economy depend on the crop pattern and the methods of production. Take, for example, an African rural economy where the exportable product is a capital-intensive tree crop (like coffee or cocoa), the import-substitute is a land-intensive crop (like maize), and there is a labor-intensive subsistence (non-traded) crop (like roots and tubers). The economy may have a comparative advantage in tree crops. In this case under a trade protection regime an increase in import substitution leads to an expansion of cultivated land under the land-intensive crop as well as a shortening of the fallow period, leading to depletion of natural vegetation and biomass. Trade liberalization in this context, through encouraging the production of the less land-intensive tree crop, can significantly improve the natural biomass, as has been shown by Lopez (2000) for Côte d'Ivoire in the latter part of the 1980's, using the data from the Living Standards Survey and some remote sensing data from satellite images. There are, of course, some cases where international trade may push a country into a narrow range of cropping specialization, and the resulting loss of diversity may make the local eco-system less resilient and more vulnerable to shocks.

One reason why land-intensive crops may lead to overuse of land and depletion of natural vegetation (or that expansion of the agricultural frontier in general leads to deforestation) is the lack of well-defined property rights or lack of their enforcement in public or communal land. In such cases private cost of expanding production is less than the social cost and there is overuse and degradation of environmental resources. If the country exports such resource-intensive products, foreign trade may make this misallocation worse. International trade theorists point out that trade restriction is not the first-best policy in this situation, correcting the property rights regime is (including community based regulations and coordination<sup>30</sup>). But the latter involves large changes in the legal-regulatory or community institutional framework which take a long time to implement, and given the threshold effects and irreversibilities in environmental

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<sup>29</sup> See, for example, Lanjouw and Ravallion (1999).

<sup>30</sup> One should, of course, keep in mind that traditional local community regulations sometimes become less viable with more market integration as social norms erode and exit options of community members improve.

degradation (forest regeneration requires a minimum stock, for example), one may not afford to wait. In that case some program of (time-bound) trade restriction coupled with serious attempts at the overhaul of the domestic institutional framework may be necessary. In some cases of international disputes (like sea turtles getting caught in the nets of fishermen in developing countries), international assistance in providing turtle-excluder devices is much cheaper for all concerned than trade restrictions. In other cases domestic policy changes can be implemented quite quickly, and restricting trade is unnecessary and undesirable. For example, when coastal shrimp ponds in a shrimp-exporting country like India or Bangladesh pollute the water supply and destroy surrounding mangroves domestic taxes on the basis of 'polluter pays' principle are imperative. In some cases domestic government policies are primarily responsible for environmental degradation. For example, administered underpricing of precious environmental resources (irrigation water in India, energy in Russia, timber concessions in Indonesia and the Philippines, etc.), prolonged by the pressure from powerful political lobbies, is a major cause of resource depletion. Domestic vested interests, not globalization, are responsible for the continuation of such socially damaging policies.

In the case of some resource-intensive exports it is difficult for a country by itself to adopt environmental regulations if its international competitors do not adopt them at the same time and have the ability to undercut the former in international markets. Here there is an obvious need for coordination, in the environmental regulation policies of the countries concerned. Given the low elasticity of demand for many resource-intensive primary export commodities from developing countries in the world market<sup>31</sup>, such coordinated policies, while raising prices and the terms of trade need not lead to a decline in export revenue.

A common charge against multinational companies is that they flock to developing country 'pollution havens' to take advantage of lax environmental standards. In one of the very few careful empirical studies on the question Eskeland and Harrison (2003) examine the pattern of foreign investment in Mexico, Venezuela, Morocco and Côte d'Ivoire. They find no evidence that foreign investment in these countries is related to pollution abatement costs in rich countries. They also find that within a given industry foreign plants are significantly more energy-efficient and use cleaner types of energy compared to their local peers.

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<sup>31</sup> Repetto (1994) puts together the estimates of world elasticity of demand for some of the natural resource intensive export commodities of developing countries. For the eight commercial agricultural commodities considered by him the absolute value of the elasticity does not exceed 0.5. For tropical timber it is 0.16 for nonconifer logs, 0.74 for nonconifer sawnwood, and 1.14 for nonconifer plywood.

## VI

In general while globalization in the sense of opening the economy to trade and long-term capital flows can constrain some policy options and wipe out some existing jobs and entrepreneurial opportunities for the poor and for small enterprises, in the medium to long run it need not make the poor as a whole much worse off, *if* appropriate domestic policies and institutions (particularly for support infrastructure to help production reorganization, labor market adjustment and social protection) are in place and appropriate coordination among the involved parties can be organized. Societies with institutions that can better coordinate social protection and economic restructuring and make the winners share some of their gains with the losers are in a better position to cope with the churning that globalization necessarily involves. If the institutional prerequisites can be managed, globalization opens the door for some new opportunities even for the poor. Of course, domestic institutional reform is not easy and it requires political leadership, popular participation and administrative capacity which are often lacking in poor countries. One can only say that if we keep the focus on agitating against transnational companies and international organizations like the WTO, attention in those countries often gets deflected from the domestic institutional vested interests, and the day of politically challenging them gets postponed. In fact in some cases opening the economy may unleash forces for such a challenge. Some suggest that in countries with long-entrenched oligarchic structures, international exposure may undermine those structures<sup>32</sup>. Global competition among nation states and transmission of ideas and information improve the ability of citizens in any country to compare institutional performance across countries, and this may be a force bringing about improvements in accountability of hitherto elite-dominated governance institutions.

As in the debates several decades back around ‘dependency’ theories in development sociology, there is often a tendency to attribute much of the problems of underdevelopment to the inexorable forces of the international economic and political order, ignoring the sway of the domestic vested interests. In many countries poverty alleviation in the form of expansion of credit and marketing facilities or land reform or public works programs for the unemployed or provision of basic education, training, and health need not be blocked by the forces of globalization (particularly in medium to large sized countries where most of the world’s poor live). Substantial, though necessarily time-bound, income support programs coupled with retraining and extension facilities for displaced workers or distressed farmers and small producers are essential to relieve the

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<sup>32</sup> Diaz-Cayers, Magaloni, and Weingast suggest that in Mexico the post-NAFTA exposure to international trade and investment may have helped in bringing about the erosion of support for the long-dominant PRI. López-Córdova and Meissner (2005) find a positive effect of international trade on democracy in a statistical analysis across countries since 1895.

obvious anxieties about economic insecurity generated by globalization. This, of course, requires a restructuring of existing budget priorities and a better and more accountable political and administrative framework, but the obstacles to these are often largely domestic. Closing the economy does not reduce the power of the relevant vested interests: landlords, corrupt and/or inept politicians and bureaucrats, and the currently subsidized rich. The poverty alleviation measures mentioned above are not merely redistributive, they also enhance the productivity of workers and farmers, and hence need not be at the expense of global competitiveness of a country's products. All this means that for developing countries globalization is often not the main cause of their problems, contrary to the claim of critics of globalization; just as globalization is often not the main solution of these problems, contrary to the claim of some over-enthusiastic free traders.

All this, of course, does not absolve the responsibility of international organizations and entities in helping the poor of the world, by (a) working toward a reduction of rich-country protection on goods produced by the poor, by (b) energetic anti-trust action to challenge the monopoly power of international (producing and trading) companies based in rich countries, by (c) facilitating international partnerships in research and development of products (for example, drugs, vaccines, crops) suitable for the poor, and by (d) organizing more substantial (and more effectively governed) financial and technology transfers and international adjustment assistance for displaced workers and farmers, and (e) help in (legal and technical) capacity building for poor countries in international negotiations and (f) quality certification organizations for their products in international markets. On many of these policies there is a great deal of scope for public-private partnerships. Already the international partnership among private Foundations (like the Gates Foundation), NGO's (like Médecins sans Frontières), international organizations (like WHO and the World Bank), and donor country governments in starting a Global Fund to fight some of the killer diseases of the poor (malaria, TB, AIDS) has been quite active. Another example is the Partners' Agreement to Eliminate Child Labor in the soccer ball industry in Pakistan (which produces a large fraction of soccer balls in the world) in the mid-90's where transnational sporting goods companies, the Pakistan Chamber of Commerce, International Labor Organization, and some NGO's reached an agreement to eliminate child labor in that industry, provide scholarships to the displaced children, arrange the school facilities needed, and monitor the agreement<sup>33</sup>. OXFAM, a major NGO, has already proposed an international anti-trust body under the auspices of the WTO; as we have mentioned before, even without enforcement powers well-publicized accounts of investigations carried out by such a body can be effective in curbing some of the monopoly practices of transnational companies (which eat up a large part of the conventional gains from trade for a developing country). A recent case brought by an NGO, Treatment Action Campaign, against excessive pricing of patented antiretrovirals by some transnational pharmaceutical

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<sup>33</sup> See IPEC (1999).

companies with the South African Competition Commission led the companies to settle for licensing generic production. As we have mentioned before, an international quality certification organization established with public and private partnership can help poor countries in their uphill task of establishing brand name reputation for the quality of their products, and thus adding to their market value. A Fair Trade Coffee movement is slowly showing some effect in helping the prices received by small coffee farmers (though as yet Fair Trade Coffee accounts for at most 3 per cent of total sales). The Department of International Development of the UK Government has started small-scale programs of assistance to displaced workers from bankrupt firms, in collaboration with local NGO's, in some poor countries. These are all small steps on a road well worth taking (without forgetting the need for constant and careful evaluation of the effectiveness of these steps in different cases).

Let me end with a few suggestions for potentially fruitful research on the topic of globalization, inequality and poverty:

- (i) We do not have enough micro studies of the interaction between trade policy and labor market institutions. In particular one needs to integrate household surveys with surveys of worker characteristics, worker displacement and unemployment, and identities of firms from which one is displaced and where jobs are sought, all this at a sufficient level of sectoral disaggregation and institutional specifications like involvement of unions or degree of informality or access to any kinds of adjustment assistance.
- (ii) We need more work at the plant or firm level on the interaction between trade policy and technical change or quality upgrading, and its link with changes in income distribution.
- (iii) If lack of labor mobility is at the root of the link between trade liberalization and poverty, we need to understand better if this is primarily the effect of imperfections of the credit market or rigidities of formal-sector labor laws.
- (iv) Adjustment assistance policies have not been reportedly very successful in the US. We need to have detailed evaluation studies of the few programs of helping trade-displaced workers that now exist in some developing countries.
- (v) We need more case studies of how global competition (or its opposite through mergers and acquisitions) affects the monopoly practices of transnational companies and retail market chains, particularly with respect to the hefty margins charged for marketing the products of developing countries under international brand names. It is curious how little of the vast international trade literature is devoted to understanding the operations of international trading companies and the pattern and source of their market power.

(vi) There are also very few micro case studies (as opposed to anecdotes or much too aggregative cross-country exercises) in understanding how opening the economy affects the domestic political equilibrium and shapes the state policies toward poor farmers and workers.

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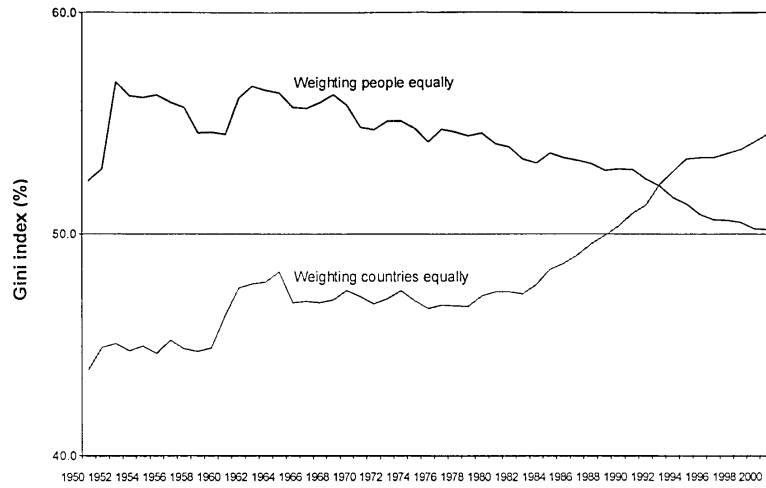
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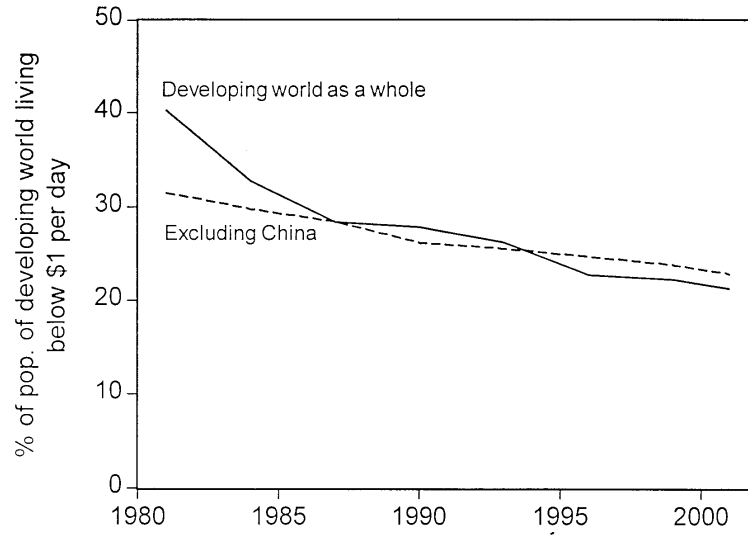
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**Figure 1: Gini Indices of GDP per capita across countries under alternative weighting schemes**



Source: Milanovic (2005)

Figure 2: Poverty incidence in the developing world 1981-2001



Source: Chen and Ravallion (2004)



**Table 1. Headcount Indices of Poverty by Region for  
Two International Poverty Lines, 1981-2001 (%)**

<i>Poverty line and region</i>	1981	1984	1987	1990	1993	1996	1999	2001
<b>\$1.08 a day (1993 PPP)</b>								
East Asia	57.7	38.9	28.0	29.6	24.9	16.6	15.7	14.9
China	63.8	41.0	28.5	33.0	28.4	17.4	17.8	16.6
East Asia excluding China	42.0	33.5	27.0	21.1	16.7	14.7	11.0	10.8
Eastern Europe and Central Asia	0.7	0.5	0.4	0.5	3.7	4.3	6.3	3.6
Latin America and Caribbean	9.7	11.8	10.9	11.3	11.3	10.7	10.5	9.5
Middle East and North Africa	5.1	3.8	3.2	2.3	1.6	2.0	2.6	2.4
South Asia	51.5	46.8	45.0	41.3	40.1	36.6	32.2	31.3
India	54.4	49.8	46.3	42.1	42.3	42.2	35.3	34.7
South Asia excluding India	42.2	37.0	41.0	38.7	33.1	19.7	22.9	21.0
Sub-Saharan Africa	41.6	46.3	46.8	44.6	44.1	45.6	45.7	46.4
Total	40.4	32.8	28.4	27.9	26.3	22.8	21.8	21.1
Total excluding China	31.7	29.8	28.4	26.1	25.6	24.6	23.1	22.5
<b>\$2.15 a day (1993 PPP)</b>								
East Asia	84.8	76.6	67.7	69.9	64.8	53.3	50.3	47.4
China	88.1	78.5	67.4	72.6	68.1	53.4	50.1	46.7
East Asia excluding China	76.2	72.0	68.4	63.2	56.7	53.2	50.8	49.2
Eastern Europe and Central Asia	4.7	4.1	3.2	4.9	17.3	20.7	23.8	19.7
Latin America and Caribbean	26.9	30.4	27.8	28.4	29.5	24.1	25.1	24.5
Middle East and North Africa	28.9	25.2	24.2	21.4	20.2	22.3	24.3	23.2
South Asia	89.1	87.2	86.7	85.5	84.5	81.7	78.1	77.2
India	89.6	88.2	87.3	86.1	85.7	85.2	80.6	79.9
South Asia excluding India	87.3	84.0	85.0	83.5	81.0	71.3	70.5	69.0
Sub-Saharan Africa	73.3	76.1	76.1	75.0	74.6	75.1	76.0	76.6
Total	66.7	63.7	60.1	60.8	60.2	55.5	54.4	52.9
Total excluding China	58.8	58.4	57.5	56.6	57.4	56.3	55.8	54.9

Source: Chen and Ravallion (2004)

**Table 2. Gini Coefficients from the World Bank's PovCal database**

Country	Year	Gini	Data Type
Argentina (Urban)	1986	44.51	Income*
Argentina (Urban)	1992	45.35	Income
Argentina (Urban)	1996	48.58	Income
Argentina (Urban)	1998	52.82	Income
Argentina (Urban)	2001	52.24	Income
Bangladesh	1983-84	25.88	Expenditure
Bangladesh	1985-86	26.92	Expenditure
Bangladesh	1988-89	28.85	Expenditure
Bangladesh	1991-92	28.27	Expenditure
Bangladesh	1995-96	33.00	Expenditure*
Bangladesh	1996	33.63	Expenditure
Bangladesh	2000	31.79	Expenditure
Brazil	1981	57.57	Income
Brazil	1984	57.88	Income
Brazil	1985	59.52	Income
Brazil	1987	59.31	Income
Brazil	1989	63.42	Income
Brazil	1990	60.68	Income
Brazil	1993	59.82	Income
Brazil	1995	61.51	Income
Brazil	1996	59.98	Income
Brazil	1997	59.05	Income
Brazil	1998	60.66	Income
Brazil	2001	59.25	Income
Chile	1987	56.43	Income
Chile	1989	57.88	Income*
Chile	1990	56.49	Income
Chile	1992	55.75	Income
Chile	1994	54.79	Income
Chile	1996	57.47	Income
Chile	1998	56.65	Income
Chile	2000	57.61	Income*
China (Rural)	1990	30.57	Expenditure <sup>†</sup>
China (Rural)	1992	32.03	Expenditure
China (Rural)	1993	32.13	Expenditure
China (Rural)	1994	34.00	Expenditure <sup>†</sup>
China (Rural)	1995	33.98	Expenditure <sup>†</sup>
China (Rural)	1996	33.62	Expenditure
China (Rural)	1997	33.12	Expenditure <sup>†</sup>
China (Rural)	1998	33.07	Expenditure <sup>†</sup>
China (Rural)	1999	35.39	Expenditure
China (Rural)	2001	36.33	Expenditure
China (Urban)	1991	24.78	Expenditure <sup>†</sup>
China (Urban)	1992	24.17	Expenditure
China (Urban)	1993	28.47	Expenditure
China (Urban)	1994	29.22	Expenditure <sup>†</sup>
China (Urban)	1995	28.27	Expenditure <sup>†</sup>
China (Urban)	1996	29.09	Expenditure
China (Urban)	1997	29.35	Expenditure <sup>†</sup>

China (Urban)	1998	29.94	Expenditure <sup>†</sup>
China (Urban)	1999	31.55	Expenditure
China (Urban)	2001	33.32	Expenditure
India (Rural)	1977-78	34.2	Expenditure
India (Rural)	1983	30.06	Expenditure
India (Rural)	1986	30.22	Expenditure
India (Rural)	1987	30.13	Expenditure
India (Rural)	1988	29.51	Expenditure
India (Rural)	1989	28.23	Expenditure
India (Rural)	1990	27.72	Expenditure
India (Rural)	1992	29.88	Expenditure*
India (Rural)	1993	28.59	Expenditure
India (Rural)	1994	27.65	Expenditure
India (Rural)	1995	30.17	Expenditure
India (Rural)	1995-96	28.43	Expenditure
India (Rural)	1997	30.56	Expenditure*
India (Rural)	1999-00	28.11	Expenditure
India (Urban)	1977-78	35.74	Expenditure
India (Urban)	1990	33.98	Expenditure
India (Urban)	1992	35.51	Expenditure*
India (Urban)	1993	34.34	Expenditure
India (Urban)	1994	33.31	Expenditure
India (Urban)	1995	37.49	Expenditure
India (Urban)	1995-96	37.06	Expenditure
India (Urban)	1997	36.52	Expenditure*
India (Urban)	1999-00	35.00	Expenditure
Indonesia	1987	33.12	Expenditure
Indonesia	1993	34.36	Expenditure
Indonesia	1996	36.45	Expenditure
Indonesia	1998	38.36	Expenditure*
Indonesia	1999	31.73	Expenditure
Indonesia	2000	30.33	Expenditure*
Indonesia	2002	34.30	Expenditure
Mexico	1989	55.14	Income
Mexico	1995	53.73	Income
Mexico	1996	51.86	Income
Mexico	1998	53.11	Income
Mexico	2000	54.93	Income
Nigeria	1985-86	38.68	Expenditure
Nigeria	1992-93	44.95	Expenditure
Nigeria	1996-97	50.56	Expenditure
Pakistan	1987	33.35	Expenditure
Pakistan	1990-91	33.23	Expenditure
Pakistan	1992-93	34.22	Expenditure
Pakistan	1996-97	27.43	Expenditure
Pakistan	1998-99	32.99	Expenditure

Notes:

The ginis presented in this table come from the World Bank's Povcal Net. These data are probably individual-level ginis, computed from household-level data, with a few exceptions (see Chen, Datt and Ravallion 1994, p. 366).

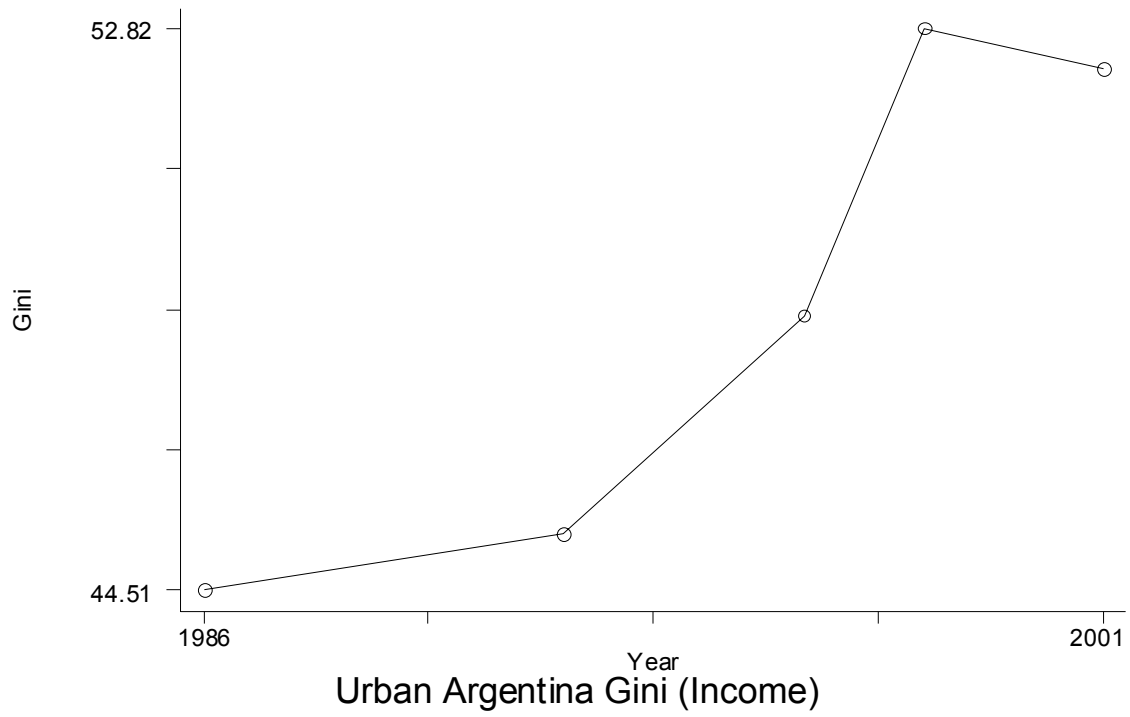
\*Assumed data type when this information was missing from both Chen and Ravallion (2004) and Povcal Net.

<sup>†</sup>Assumed data type based on Chen and Ravallion (2004).

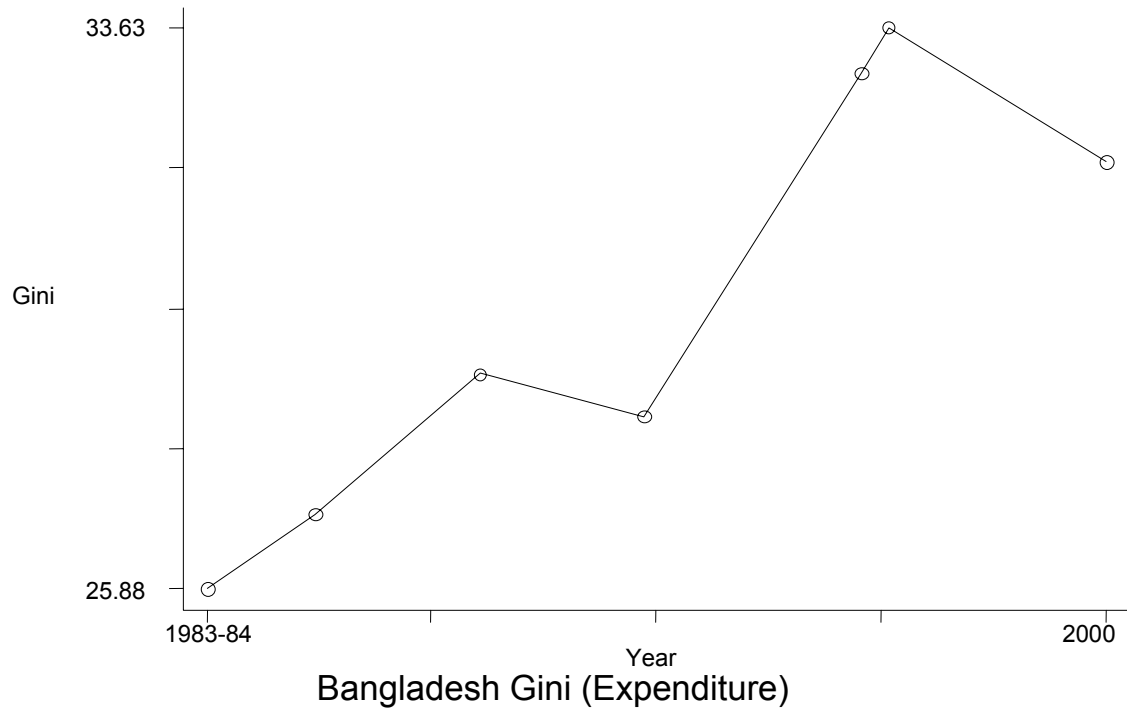
## **Appendix**

This appendix contains time series graphs of the gini coefficient for ten countries. All data come from the World Bank's PovCal database. In most cases, the gini coefficients were computed with household surveys using expenditure or income per capita. We indicate the data type (income or expenditure) in the figure titles.

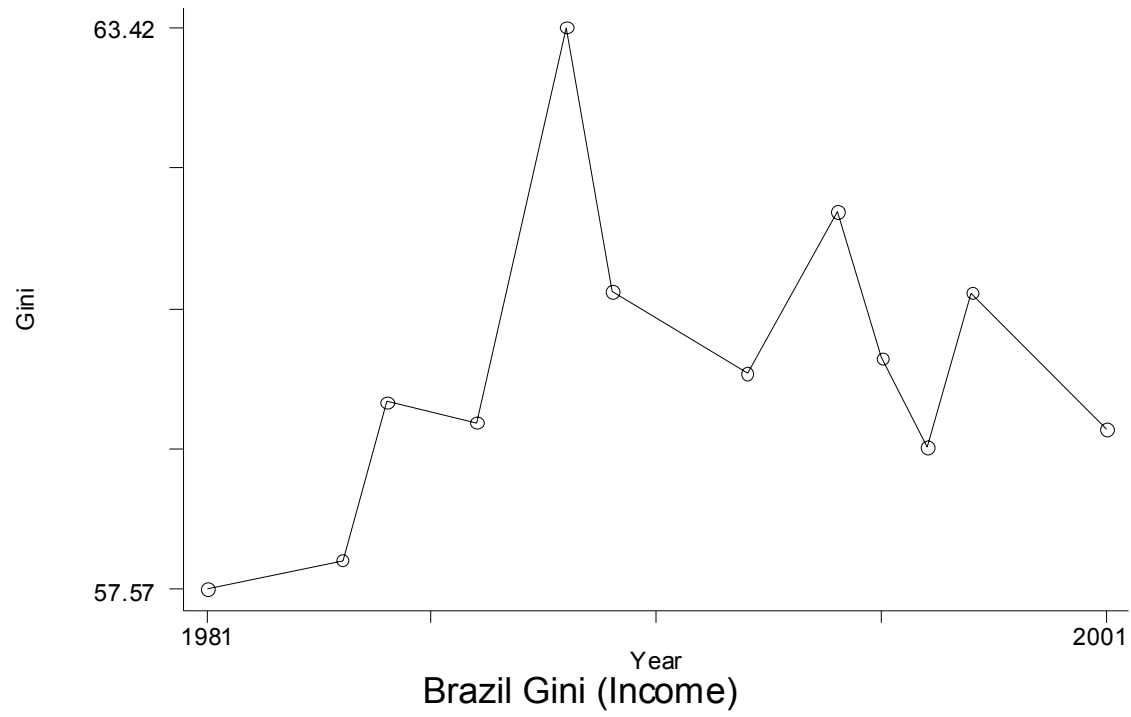
For more information about this dataset, please see Chen and Ravallion (2004).



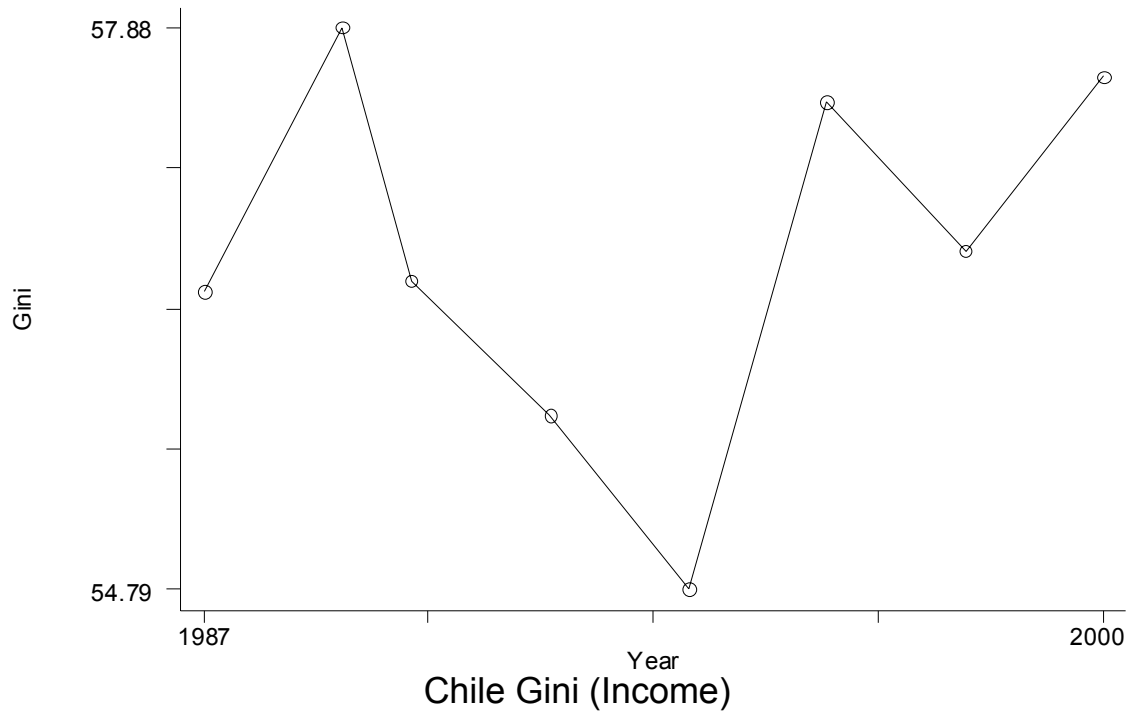
Notes: Data source is the World Bank PovCal Database. Data type information is missing for the 1986 gini, and we assume that its data type is income.



Notes: Data source is the World Bank PovCal Database. Data type information is missing for the 1995-96 gini, and we assume that its data type is expenditure.

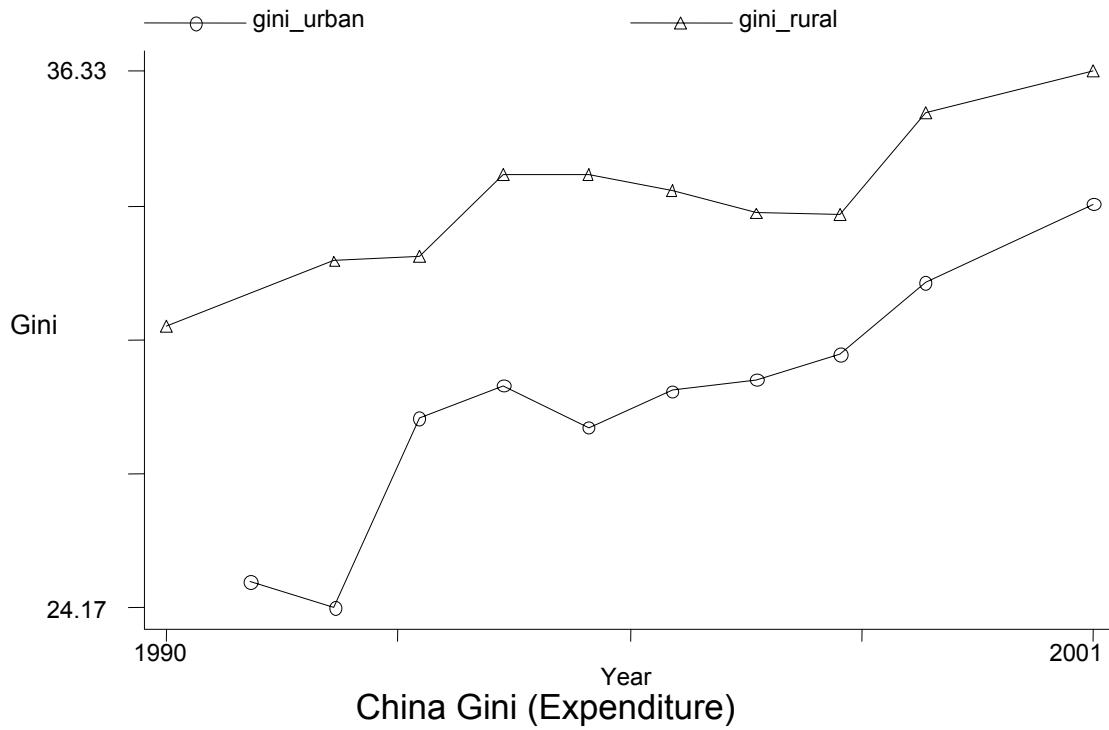


Notes: Data source is the World Bank PovCal Database.

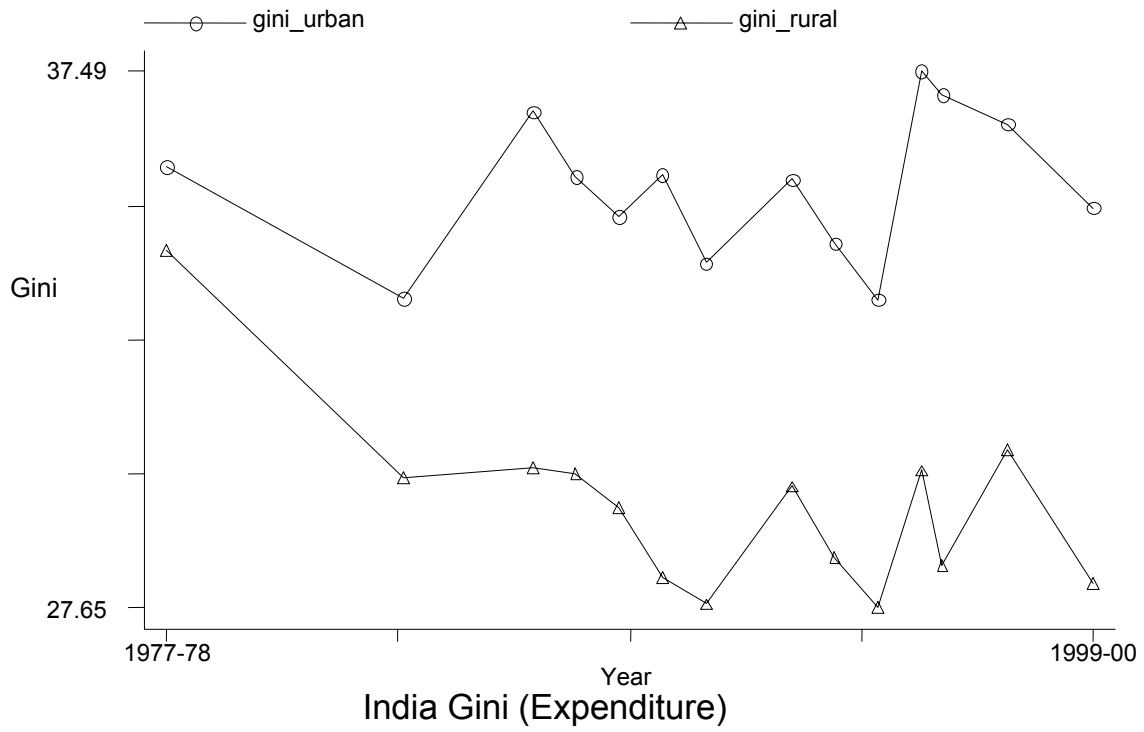


Notes: Data source is the World Bank PovCal Database. Data type information is missing for the 1989 and 2000 ginis, and we assume that these data types are income.

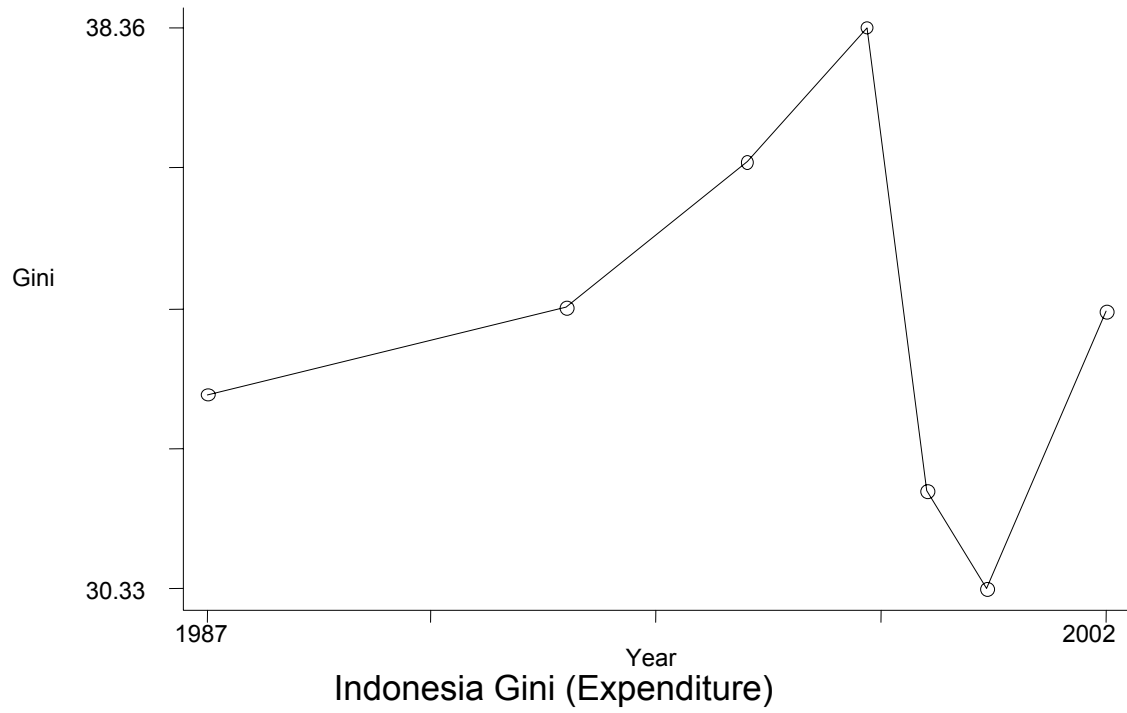




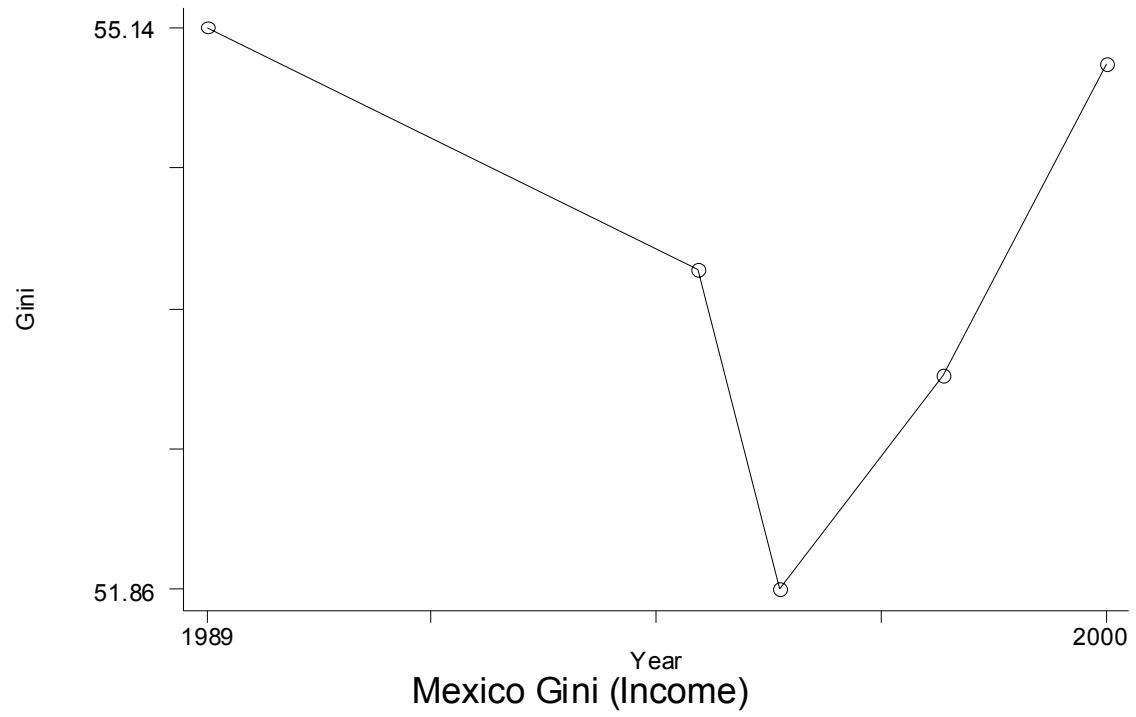
Notes: Data source is the World Bank PovCal Database. The ginis for 1992, 1993, 1996, 1999, and 2001 are computed using expenditure data. We assume the remaining gini coefficients are also computed with expenditure data based on Chen and Ravallion (2004).



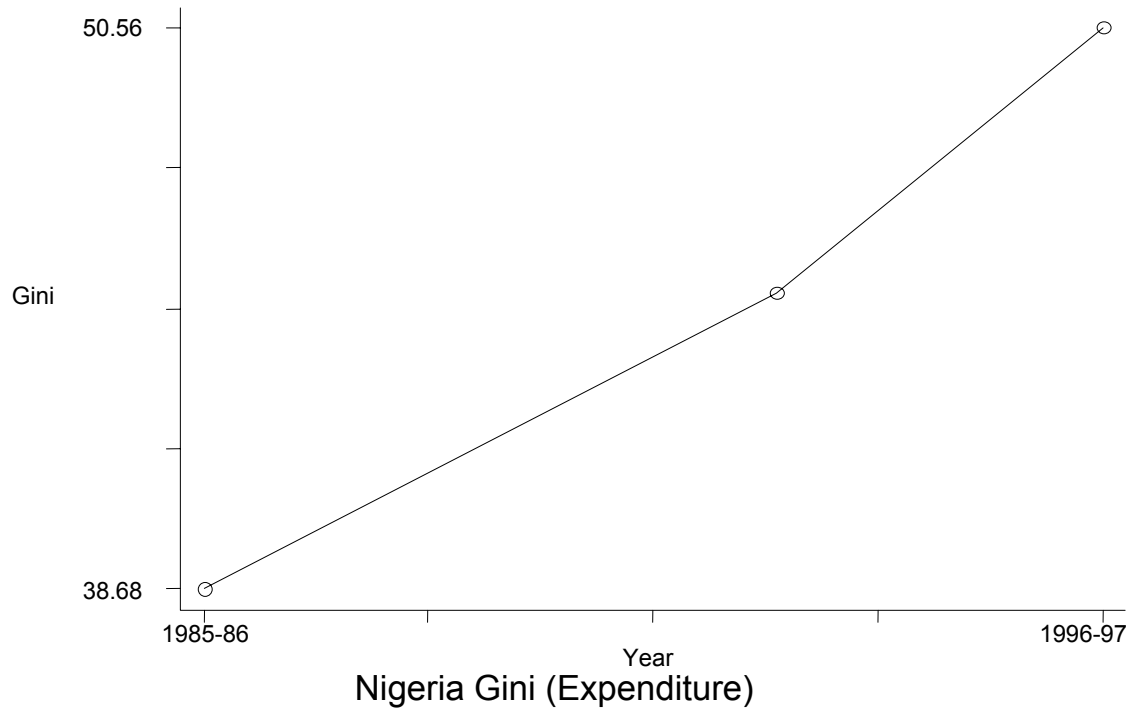
Notes: Data source is the World Bank PovCal Database.



Notes: Data source is the World Bank PovCal Database. Data type information is missing for the 1998 and 2000 ginis, and we assume that their data types are expenditure.



Notes: Data source is the World Bank PovCal Database.



Notes: Data source is the World Bank PovCal Database.