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GLOBALISATION, LIVING STANDARDS AND INEQUALITY

Recent Progress and Continuing Challenges

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Introduction

David Gruen and Terry O'Brien

Globalisation is perhaps the topic of the age. Globalisation means different things to different people, but a key economic dimension of it is undoubtedly the opening up of economies to international competition, allowing goods, ideas, capital and some people to move more freely between countries. Many countries around the world have embraced these aspects of globalisation, because governments have become convinced that a more dynamic economic performance awaits countries that more closely integrate with the global economy. And yet, because it brings with it more rapid domestic economic change, globalisation can be disruptive and can generate losers as well as winners. If for no other reasons than these, globalisation remains an issue about which there is much debate.

Australia's experience with globalisation has fitted this general pattern, with closer international integration being associated with an improved economic performance over the past decade or so, but also with more rapid domestic economic change. The Reserve Bank's and Treasury's interest in globalisation was stimulated both by this Australian experience, and by Australia's involvement in the G-20 group of countries.[1] The inaugural Chairman of the G-20, Canada's then Finance Minister Paul Martin, proposed in 2000 that the G-20 study the policy challenges posed by globalisation, and the Australian Treasurer, Peter Costello, suggested case studies of member countries as one aspect of that work.

The idea of a conference on the topic of globalisation, living standards and inequality grew out of this enhanced interest in globalisation on the part of the G-20. The aim of the conference, jointly hosted by the Reserve Bank and Treasury, was to bring together leading researchers in the field, along with statisticians and policy advisors from the G-20 countries, to seek answers to a range of important questions. What have been the broad trends in the global distribution of income over the past few decades? What role has globalisation played in generating these trends? Are the implications of globalisation for income inequality and poverty different for developed countries than they are for developing countries? What policy implications flow from these broad trends? What progress is being made in the international statistical architecture to improve the quality and international comparability of statistics on poverty and inequality? What more needs to be done? The papers in this volume, and the discussions which accompany them, attempt to shed light on these questions.

1. The G-20 is comprised of Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, Korea, Turkey, the United Kingdom and the United States (19 countries in all). The finance minister of the country holding the (rotating) Presidency of the European Union, the President of the European Central Bank, the Managing Director of the IMF, the President of the World Bank, and the chairpersons of the International Monetary and Financial Committee of the IMF and the Development Committee of the IMF and World Bank also participate in G-20 discussions.

Global Inequality and Extreme Poverty: The Broad Trends

There appears to be widespread agreement that global inequality widened for much of the past two to three centuries, and the absolute number of people living in extreme poverty rose (even though the proportion in extreme poverty fell over this time). From around 1980, however, there is some evidence that these trends have not continued, and may in fact have reversed.

There have been two important trends since about 1980. The first of these has been an acceleration in economic growth in many of the world's most populous countries – particularly the Asian countries of China, India, Bangladesh and Vietnam. These countries, which were among the world's poorest as recently as 1980, have all grown faster than the rich countries, in per capita terms, in the period since then. Largely as a consequence of this improved economic performance in these populous Asian countries, the poorest one-fifth of countries in 1980 had a *population-weighted* annual per capita growth rate of 4 per cent from 1980 to 1997, compared with 1.7 per cent for the richest fifth of countries over the same period, as David Dollar points out in his contribution to the volume. The experience of the fastest growth occurring in the poorest countries is a new one, at least in the modern era, with the growth rates for these same country groupings in the preceding two decades (1960–1980) being 1.8 per cent for the poor group and 3.3 per cent for the rich group.

The second, and much more problematic, trend has been the continued poor economic performance of most of the countries in Africa, with some countries experiencing declines in average living standards, not only relative to the rich countries, but even in absolute terms.[2]

These two opposing trends have had important implications for global poverty and inequality over the past two decades. On the basis of the admittedly imperfect available data, there appears to have been a huge fall in the number of people living in extreme poverty outside Africa, offset to some extent by a significant rise in extreme poverty within Africa. Dollar argues that 200 million is a conservative estimate of the net fall in the number of people in the world living in extreme poverty (subsisting on less than the purchasing power parity (PPP) equivalent of US$1 a day) since 1980 – and that this fall has occurred despite growth in the global population of about 1.6 billion people and a rise in extreme poverty in Africa of perhaps 170 million over this time.[3]

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2. It should be noted, however, that while these trends have occurred for much of Africa, there have also been some African economic success stories, such as Uganda and Botswana.

3. In a recent paper, Angus Deaton (2002) comes to a similar conclusion: 'according to recent calculations by Shaohua Chen and Martin Ravallion (2000) of the World Bank using all of the household survey data since around 1980, and with due recognition of the data's many inadequacies, the best current estimate is that there are indeed around 200 million fewer people living in [extreme] poverty now than 20 years ago'. Robert Wade, in his contribution to the volume, argues that the data are not reliable enough to be confident that the absolute number of people living in extreme poverty has fallen, although he thinks it 'quite plausible that the proportion of the world's population living in extreme poverty…has indeed fallen over the past 20 years or so' (p 42).

The divergent economic fortunes of the populous Asian countries on the one hand and much of Africa on the other, has therefore led to the 'Africanisation' of extreme poverty. The contrast is particularly stark when one compares 1960, when Africa accounted for only about one-tenth of the world's extremely poor, with 1998, when this proportion had risen to about two-thirds, as Ken Henry points out in his comments in the volume.

Turning from extreme poverty to inequality, there is a broad consensus that global inequality was on the rise throughout most of modern economic history. Indeed, one might define 'modern economic history' as that period since living standards in the leading countries of the first industrial revolution accelerated away from those in the rest of the world. The rapid economic growth experienced over the past couple of decades in the populous countries of Asia has, however, been a force acting to reduce global inequality. As with global poverty, the narrowing effect of robust Asian growth on the global distribution of income has been offset, at least to some extent, by developments in Africa.

To come to an informed view about the recent trends in global inequality, it is necessary to first decide on the appropriate way to compare income (or consumption) across countries. As explained by Peter Harper and Steve Dowrick in their contributions to the volume, the conceptually appropriate approach is to use PPP estimates to convert domestic-currency values in each country into a common currency, rather than using market exchange rates.

Ideally, a measure of global inequality should take into account both within and between-country distributions of income (or consumption). It also seems sensible to conduct the analysis in population-weighted terms (rather than giving each country an equal weight), so that each individual's experience of rising or falling income has the same weight in global inequality, regardless of where they live. Finally, inequality can be summarised using a range of different measures (such as the global Gini coefficient) that, in one way or another, collapse the whole distribution of income into a single number to allow comparisons to be made between different distributions.

Even when these conceptual choices have been made, and agreement reached about which summary inequality measure to use, some doubts remain about recent trends in global inequality. Dollar argues that, following a long period during which the global-income Gini coefficient had been rising, there has been a modest fall in this measure of global inequality over the period from 1980 to 1998. Dowrick and Akmal (2002) reach a somewhat different conclusion, finding that the global-income Gini has been essentially flat over the somewhat shorter time period, 1980 to 1993, when allowance is made for a technical shortcoming in the way PPPs have been aggregated for much of the world. It is worth noting, however, that whether global inequality (as summarised by a global-income Gini coefficient) has fallen modestly in the last couple of decades, or remained essentially flat, this development would

still represent an encouraging and little-recognised change from the long-established historical trend of rising global inequality.[4]

The Impact of Globalisation

The populous Asian countries that have grown more rapidly than the rich countries in per capita terms since about 1980 have at the same time become much more integrated into the international economy. In the important case of China, for example, in the two decades since the Deng Xiaoping-led government instituted the new national policy of 'opening-to-the-outside-world', trade has quadrupled as a proportion of GDP from 8.5 per cent in 1978 to 36.5 per cent in 1999, and China has moved from being almost closed to foreign direct investment (FDI) to being the largest destination for FDI in the developing world.

In his contribution to the volume, Dollar marshals the evidence in favour of the proposition that the move to more outward-oriented policies has been one of the crucial reasons for stronger economic growth in these countries. This evidence takes three forms: cross-country studies that suggest a causal link from more openness to faster growth; case studies of individual countries (which have now been supplemented by research within China described by Shang-Jin Wei in the volume); and firm-level studies. Dollar (this volume, pp 17–18) summarises the general tenor of this evidence with a quote from Peter Lindert and Jeffrey Williamson (2001):

> The doubts that one can retain about each individual study threaten to block our view of the overall forest of evidence. Even though no one study can establish that openness to trade has unambiguously helped the representative Third World economy, the preponderance of evidence supports this conclusion…As far as we can tell, there are no anti-global victories to report for the postwar Third World. We infer that this is because freer trade stimulates growth in Third World economies today...

What is true on average need not be true in all cases, however, and Nancy Birdsall, in her contribution to the volume, cautions that an open trading regime, or an open capital account, has not necessarily led to economic growth, particularly for developing countries with an undiversified, heavily commodity-dependent export base. She argues that these countries, as a group, have not eschewed integration with the global economy – before suffering severe adverse terms-of-trade shocks, they traded as much as less-commodity dependent countries, and they have significantly

4. The different conclusions about the recent trend in global inequality also arise as a consequence of different estimates of recent output growth in China. Both Dollar and Dowrick and Akmal are careful to point out the significant degree of statistical uncertainty surrounding their estimates of the recent trend in global inequality. The technical shortcoming in the calculation of PPPs, which is described in more detail by both Dowrick and Harper in the volume, involves the use of the Geary-Khamis method to aggregate PPPs for much of the world (although the OECD and Eurostat now use the conceptually preferable Elteto-Köves-Szulc method for comparing living standards within the OECD). It is also clear that, whether or not global inequality has been declining over the most recent couple of decades, the poor economic performance of much of Africa, were it to continue into the future, would eventually dominate the effect of robust Asian growth, with the result that the global Gini coefficient would again begin to rise some time in the next decade or so (Sala-i-Martin 2002).

reduced tariff barriers to trade – but despite that, their economic performance over the past couple of decades has been disappointing. In Birdsall's view, the international trading system has worked particularly to the benefit of countries with well-developed institutions and internal markets; for countries without these attributes, opening up to the global economy has not always been a recipe for economic success.

Robert Wade, in his contribution to the volume, makes a related point when he argues that many countries that experienced rapid economic growth, particularly those in east Asia, did not integrate with the global economy simply by eliminating barriers to international competition, but instead sought to expose domestic producers to a level of competition sufficient to make them more efficient, but not drive them out of business. In Wade's view, explicit policies for building competitive domestic industries, which might involve preferential treatment for some sectors over others, are an essential part of successful integration with the global economy.

Whether or not one agrees with these arguments, it is also of interest that integration with the global economy appears to have had little systematic effect on income inequality within developing countries, according to Dollar. He cites prominent examples where international integration has been accompanied by a widening of income inequality, such as China, and others where income inequality has narrowed, such as Vietnam.

Indeed, the links between globalisation and income inequality appear to be quite subtle ones. Returning to the example of China, the overall trends – with rapidly rising trade shares being accompanied by rising levels of national income inequality – might lead one to suspect that widening Chinese income inequality has been a consequence of international integration. But the results reported by Shang-Jin Wei in the volume suggest a more complex story.

Wei studies changes in urban/rural inequality in a large sample of Chinese 'cities' (which comprise both urban and rural counties under the jurisdiction of the city government) over the period from 1988 to 1993. He finds strong evidence that those cities that exhibited a larger increase in openness (as measured by the rise in their exports to local GDP) not only experienced faster economic growth but, more surprisingly, also a larger decline in urban/rural inequality.[5]

Integrating with the global economy has therefore had two offsetting effects on Chinese inequality. On the one hand, regions that traded more have grown more rapidly, which has tended to raise inter-regional income inequality in China (since these regions were on average richer to start with). On the other hand, however, inequality has tended to fall within regions that have become more open, with the faster average growth therefore being of disproportionate benefit to the poorer rural counties in these regions.[6] Since the slow-growing regions are often hindered by

5. Wei's statistical technique also enables him to establish the direction of causation of this relationship – with more openness causing the decline in inequality.

6. Wei's statistical estimates are too imprecise for him to determine which of these two effects dominates, and so the impact on aggregate Chinese income inequality of integrating with the global economy remains unclear.

geography and transport infrastructure from participation in trade, these regional growth differences imply domestic policy challenges to spread the benefits of growth to the poorer regions.

Adarsh Kishore, in his discussion of the Indian experience with globalisation, draws attention to a similar phenomenon. India began its economic liberalisation program in earnest in the aftermath of a balance of payments crisis in 1991, and annual economic growth in India has averaged an impressive 6 per cent since then. This improved economic performance appears to have contributed to a huge fall in the numbers of people in India living in extreme poverty. As is the case in China, however, stronger economic growth has not been spread evenly across the country, with richer states (which tend to be coastal, and more able to integrate with the global economy) tending to grow more rapidly than poorer states during the 1990s. So Kishore also argues that this uneven performance suggests a key role for national policy in broadening the regional distribution of the benefits from growth.

While globalisation appears to have had little systematic effect on income inequality within the developing countries according to Dollar, it is quite conceivable that its effects on income inequality within the developed countries might be different. Tim Smeeding, in his contribution to the volume, contrasts income-inequality trends within the OECD countries over the period from the early/mid 1970s to the mid/late 1980s, with those over the period from the mid/late 1980s to the mid/late 1990s. In the earlier period, income inequality rose in some countries and fell in others, with no clear overall pattern, while it rose across almost the whole of the OECD in the later period.

The phenomenon of rising income inequality in the developed countries in the 1990s, Smeeding argues, has been predominantly a consequence of incomes rising at the top of the distribution rather than falling at the bottom. In his view, globalisation has been one force among many accounting for this widening income inequality within the OECD, but domestic policies – labour market institutions, welfare policies, etc – remain a powerful countervailing force to market-driven inequality. As he puts it, 'globalisation does not force any single outcome on any country [because] [d]omestic policies and institutions still have large effects on…inequality within rich and middle-income nations, even in a globalising world economy.' (Smeeding (this volume), p 179)

The benefits of globalisation would undoubtedly be greater, especially for many developing countries, if markets in developed countries were more open to developing-country exports. Many of the poorest commodity-dependent developing countries would benefit greatly, in terms of overall economic growth and also poverty alleviation, if they were granted better access to developed-country markets. In his comments in the volume, Ken Henry dramatises this point with the case of Burkina Faso, a tropical land-locked African country that has been continuously among the poorest 20 countries on earth for the past quarter-century. Burkina Faso exports cotton, but world cotton prices are kept artificially low as a consequence of the recent US Farm Bill and similar policies. Were it not for these subsidies depressing world cotton prices, the numbers of Burkinabe in extreme poverty could

be halved in six years, according to IMF and World Bank estimates reported by Henry.

Statistical Issues

Statements about global poverty, living standards, and inequality, rest on statistical evidence, most of which is collected and compiled by national statistical offices. The three main relevant types of statistical information are national household surveys of income or consumption; national accounts measurement of per capita GDP; and international comparisons of the purchasing power of currencies after allowance for national price differences, using purchasing power parities or PPPs.

As noted in Peter Harper's paper in the volume, countries' preparation of national accounts has been improved and largely standardised through national statisticians' co-operation in the United Nations' Statistical Commission, leading to agreement on successive versions of the United Nations *System of National Accounts*. But international efforts to improve the quality of household income or expenditure surveys and of PPPs are not nearly so advanced, notwithstanding the *System of National Accounts'* recommendation that PPPs should be used when the object is to compare the volumes of goods or services produced or consumed per head.

The World Bank's International Comparison Program (ICP) represents an important effort to improve the conceptual coherence, statistical quality, timeliness, distribution and maintenance of PPPs, as Peter Harper's paper explains. A plan to conduct an improved round of PPP comparisons for the benchmark year of 2003 is currently well advanced, with results becoming available around 2005. This process could be assisted by widespread participation in the ICP by members of the G-20, and where appropriate, by contributions of technical or financial assistance to this important part of the world's international statistical architecture. A healthy ICP would help to improve the international comparability of price and value data, and enable technical improvements in the PPP estimates to be incorporated over time.

As Peter Harper and Tim Smeeding note in their papers, an expert group on household income statistics comprising eminent national and international statisticians, the so-called 'Canberra Group', has recently completed a framework outlining the principles of good household survey principles and practice (Canberra Group 2001). This affords the possibility for national statisticians in G-20 countries to take the lead in applying these principles and practices, thereby improving the quality and international comparability of national household surveys of expenditure or consumption.

Finally, both Peter Harper and Tim Smeeding argue that the Luxembourg Income Study (LIS) provides a co-operative means of improving the quality and international comparability of income distribution data among participating countries (so far, mainly the richer countries of the OECD). Broadening the range of G-20 members participating in the LIS would thereby also improve the quality of our estimates of global inequality and poverty.

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Global Economic Integration and Global Inequality

David Dollar[1]

Gaps between the poorest and the richest people and countries have continued to widen…This continues the trend of two centuries. Some have predicted convergence, but the past decade has shown increasing concentration of income among people, corporations, and countries.

– UN Human Development Report 1999

…globalization has dramatically increased inequality between and within nations.

– Jay Mazur, Foreign Affairs

*…inequality is soaring through the globalization period, within countries and across countries. And that's expected to continu*e.

– Noam Chomsky

…all the main parties support nonstop expansion in world trade and services although we all know it…makes rich people richer and poor people poorer…

– Walter Schwarz, The Guardian

The evidence strongly suggests that global income inequality has risen in the last twenty years.

– Robert Wade

We are convinced that globalization is good and it's good when you do your homework…keep your fundamentals in line on the economy, build up high levels of education, respect rule of law…when you do your part, we are convinced that you get the benefit.

– President Vicente Fox of Mexico

There is no way you can sustain economic growth without accessing a big and sustained market.

– President Yoweri Museveni of Uganda

We take the challenge of international competition in a level playing field as an incentive to deepen the reform process for the overall sustained development of the economy. WTO membership works like a wrecking ball, smashing whatever is left in the old edifice of the former planned economy.

– Jin Liqun, Vice Minister of Finance of China

1. Development Research Group, World Bank. Views expressed are those of the author and do not necessarily reflect official views of the World Bank, its Executive Directors, or its member countries.

There is an odd disconnect between debates about globalisation in the North and the South. Among intellectuals in the North one often hears the claim that global economic integration is leading to rising global inequality – that is, that it benefits the rich proportionally more than the poor. In the extreme claims, the poor are actually made out to be worse-off absolutely (as in the quote from Walter Schwarz). In the South, on the other hand, intellectuals and policy-makers often view globalisation as providing good opportunities for their countries and their people. To be sure, they are not happy with the current state of globalisation. President Museveni's quote above, for example, comes in the midst of a speech in the US where he blasts the rich countries for their protectionism against poor countries and lobbies for better market access. But the point of such critiques is that integration – through foreign trade, foreign investment, and immigration – is basically a good thing for poor countries and that the rich countries could do a lot more to facilitate this integration – that is, make it freer. The claims from anti-globalisation intellectuals of the North, on the other hand, lead inescapably to the conclusion that integration is bad for poor countries and that therefore trade and other flows should be more restricted.

The main goal of this essay is to link growing economic integration ('globalisation') with trends in growth, poverty, and inequality in the developing world. The phrase 'global inequality' is used to mean different things in different discussions – distribution among all the citizens of the world, distribution within countries, distribution among countries, distribution among wage earners – and the paper takes up all the different meanings.

The first half of the essay looks at the link between heightened integration and economic growth of developing countries. The opening-up of big developing countries such as China and India is arguably the most distinctive feature of the wave of globalisation that started around 1980. Individual cases, cross-country statistical analysis, and micro evidence from firms all suggest that this opening-up to trade and direct investment has been a good strategy for such developing countries as China, India, Mexico and Uganda.

How have the economic benefits of globalisation been distributed and what has happened as a result to global poverty and inequality? These are the questions addressed in the second half of this essay. In particular, Section 2 presents evidence in support of five trends in inequality and poverty since 1980:

- Trend #1 – Poor country growth rates have accelerated.
- Trend #2 – The number of poor people in the world has declined significantly, the first such decline in history.
- Trend #3 – Global inequality (among citizens of the world) has declined – modestly – reversing a 200-year-old trend toward higher inequality.
- Trend #4 – There is no general trend toward higher inequality within countries; in particular, among developing countries inequality has decreased in about as many cases as it has increased.
- Trend #5 – Wage inequality is rising worldwide (which may seem to contradict Trend #4, but it does not because wages are a small part of household income in

developing countries, which make up the bulk of the world in terms of countries and population).

The conclusions for policy from this review of globalisation and global inequality are very much in the spirit of the comments from Presidents Fox and Museveni. Developing countries have a lot of 'homework' to do in order to develop in general and to make effective use of integration as part of their development strategy. Rich countries could do a lot more with foreign aid to help with that homework. And, as Museveni indicates, access to rich country markets is important. There remains a lot of protection in OECD markets against the goods and people of the developing world, and globalisation would do more for developing country growth if developing countries and their people had freer access to those rich country markets.

1. Is there a Link from Integration to Growth?

To keep track of the wide range of explanations that are offered for persistent poverty in developing nations, it helps to keep two extreme views in mind. The first is based on an object gap: Nations are poor because they lack valuable objects like factories, roads, and raw materials. The second view invokes an idea gap: Nations are poor because their citizens do not have access to the ideas that are used in industrial nations to generate economic value…

Each gap imparts a distinctive thrust to the analysis of development policy. The notion of an object gap highlights saving and accumulation. The notion of an idea gap directs attention to the patterns of interaction and communication between a developing country and the rest of the world. (Romer 1993, p 544)

Many developing countries have become more integrated with the global economy in the past two decades, and at the same time their growth rates have accelerated (examples would be Bangladesh, China, India, Mexico, Uganda and Vietnam). A natural question to ask is whether there is a link. In other words, could countries such as Bangladesh, China, India, and Vietnam have grown as rapidly as they have, if they had remained as closed to foreign trade and investment as they were in 1980? This is not the kind of question that can be answered with scientific certainty, but there are several different types of evidence that we can bring to bear on it.

It is useful to begin with what one would expect from economic theory. As suggested by the quote from Paul Romer, traditional growth theory focused on accumulation and the 'object gap' between poor countries and rich ones. If the important thing is just to increase the number of factories and workplaces, then it does not matter if this is done in a closed environment or a state-dominated environment. That was the model followed in the extreme by China and the Soviet Union, and to a lesser extent by most developing countries, who followed import-substituting industrialisation strategies throughout the 1960s and 1970s. It was the disappointing results from that approach that led to new thinking both from policy-makers in developing countries as well as from economists studying growth. Romer was one of the pioneers of the new growth theory that put more emphasis on how innovation occurs and is spread and the role of technological advance in improving the standard of living. Different aspects of integration – sending students

abroad to study, connecting to the internet, allowing foreign firms to open plants, purchasing the latest equipment and components – can help overcome the 'idea gap' that separates poor and rich nations.

What is the evidence on integration spurring growth? There are a large number of case studies that show how this process can work in particular countries. Among the countries that were very poor in 1980, China, India, Vietnam and Uganda provide an interesting range of examples.

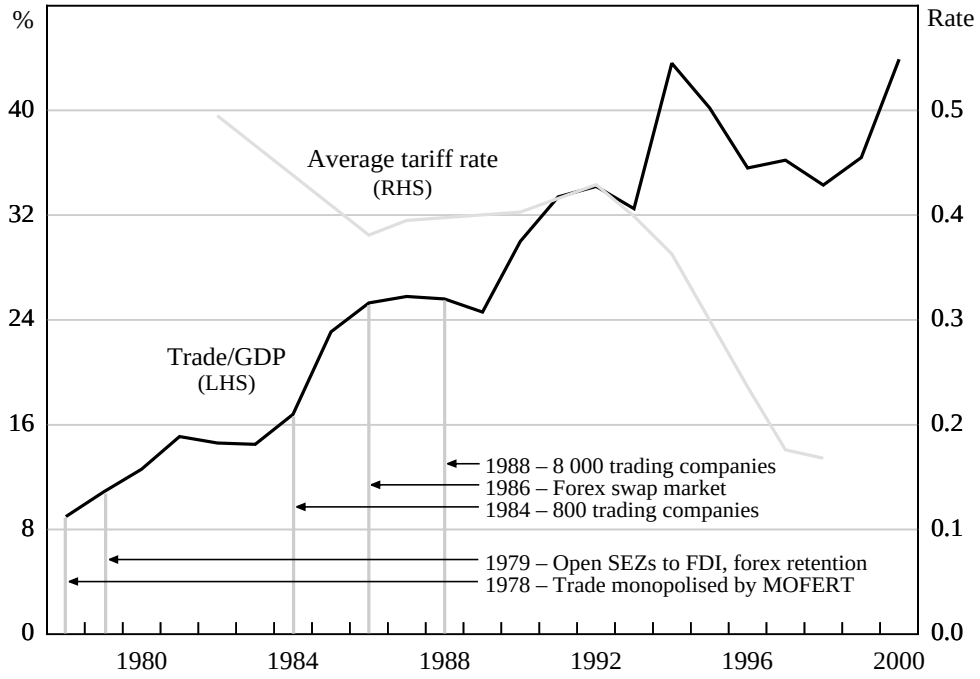
China

China's initial reforms in the late 1970s focused on the agricultural sector and emphasised strengthening property rights, liberalising prices, and creating internal markets. As indicated in Figure 1, liberalising foreign trade and investment were also part of the initial reform program. In the 1980s China removed administrative barriers to trade, before turning to major tariff reductions in the 1990s. The role of international linkages is described in this excerpt from a case study by Richard Eckaus:

> After the success of the Communist revolution and the founding of the People's Republic of China, the nation's international economic policies were dominated for at least thirty years by the goal of self-reliance. While this was never interpreted as complete autarky, the aspiration for self-reliance profoundly shaped trade policy, especially with the market economies.
>
> China's foreign trade began to expand rapidly as the turmoil created by the Cultural Revolution dissipated and new leaders came to power. Though it was not done without controversy, the argument that opening of the economy to foreign trade was necessary to obtain new capital equipment and new technology was made official policy.
>
> The creation of an 'open door' policy did not mean the end of foreign trade planning. Although Chinese policy became committed to the expansion of its international trade, the decision-making processes and international trade mechanisms of the pre-reform period continued in full force for several years, to a modified degree for several more years, and still continue to be evident in the licensing controls. At the same time, international transactions outside of the state planning system have been growing. Most obviously, enterprises created by foreign investors have been exempt from the foreign trade planning and control mechanisms. In addition, substantial amounts of other types of trade, particularly the trade of the township and village enterprises and private firms, have been relatively free.
>
> The expansion of China's participation in international trade since the beginning of the reform movement in 1978, has been one of the most remarkable features of its remarkable transformation.
>
> While GNP was growing at 9 percent from 1978 to 1994, exports grew at about 14 percent and imports at an average of 13 percent per year.
>
> The successes contradict several customary generalisations about transition economies and large developing countries – for example, that the transition from central planning to market orientation cannot be made without passing through a difficult period of economic disorganization and, perhaps decline; and that the share of international trade in very large

economies cannot grow quickly due to the difficulties of penetrating foreign markets on a larger scale. (Eckaus 1997, p 415)

Figure 1: Trade Reforms and Trade Volumes
China



Sources: China Statistical Yearbook, various issues; World Bank database

India

It is well-known that India pursued an inward-oriented strategy into the 1980s and got disappointing results in terms of growth and poverty reduction. Bhagwati crisply states the main problems and failures of the strategy:

> I would divide them into three major groups: extensive bureaucratic controls over production, investment and trade; inward-looking trade and foreign investment policies; and a substantial public sector, going well beyond the conventional confines of public utilities and infrastructure.
>
> The former two adversely affected the private sector's efficiency. The last, with the inefficient functioning of public sector enterprises, impaired additionally the public sector enterprises' contribution to the economy. Together, the three sets of policy decisions broadly set strict limits to what India could get out of its investment. (Bhagwati 1992, p 48)

Under this policy regime India's growth in the 1960s (1.4 per cent per annum) and 1970s (–0.3 per cent) was disappointing. During the 1980s India's economic performance improved. However, this surge was fueled by deficit spending and borrowing from abroad that was unsustainable. In fact, the spending spree led to a fiscal and balance of payments crisis that brought a new, reform government to

power in 1991. Srinivasan describes the key reform measures and their results as follows:

> In July 1991, the government announced a series of far reaching reforms. These included an initial devaluation of the rupee and subsequent market determination of its exchange rate, abolition of import licensing with the important exceptions that the restrictions on imports of manufactured consumer goods and on foreign trade in agriculture remained in place, convertibility (with some notable exceptions) of the rupee on the current account; reduction in the number of tariff lines as well as tariff rates; reduction in excise duties on a number of commodities; some limited reforms of direct taxes; abolition of industrial licensing except for investment in a few industries for locational reasons or for environmental considerations, relaxation of restrictions on large industrial houses under the Monopolies and Restrictive Trade Practices (MRTP) Act; easing of entry requirements (including equity participation) for direct foreign investment; and allowing private investment in some industries hitherto reserved for public sector investment. (Srinivasan 2001, p 245)

In general, India has gotten good results from its reform program, with per capita income growth above 4 per cent per annum in the 1990s. Growth and poverty reduction have been particularly strong in states that have made the most progress liberalising the regulatory framework and providing a good environment for delivery of infrastructure services (Goswami *et al* 2002).

Vietnam

The same collection that contains Eckaus's study of China also has a case study of Vietnam:

> Vietnam has made a remarkable turnaround during the past decade. In the mid-1980s the country suffered from hyperinflation and economic stagnation; it was not able to feed its population; and hundreds of thousands of people were signaling their dissatisfaction by fleeing in unsafe boats. A decade later, the government had restored macroeconomic stability; growth had accelerated to the 8–9 per cent range; the country had become the second largest rice exporter in the world; and overseas Vietnamese were returning with their capital to take advantage of expanding investment opportunities. During this period there has also been a total transformation of Vietnam's foreign trade and investment, with the economy now far more open than ten years ago.
>
> That Vietnam was able to grow throughout its adjustment period can be attributed to the fact that the economy was being increasingly opened to the international market. As part of its overall effort to stabilize the economy, the government unified its various controlled exchange rates in 1989 and devalued the unified rate to the level prevailing in the parallel market. This was tantamount to a 73 per cent *real* devaluation; combined with relaxed administrative procedures for imports and exports, this sharply increased the profitability of exporting.
>
> This…policy produced strong incentives for export throughout most of the 1989–94 period. During these years real export growth averaged more than 25 per cent per annum, and exports were a leading sector spurring the expansion of the economy. Rice exports were a major part of this success in 1989; and in 1993-94 there was a wide range of exports on the rise, including processed primary products (e.g., rubber, cashews, and coffee), labour-intensive manufactures, and tourist services.

> The current account deficit declined from more than 10 per cent of GDP in 1988 to zero in 1992. Normally, the collapse of financing in this way would require a sharp cutback in imports. However, Vietnam's export growth was sufficient to ensure that imports could grow throughout this adjustment period. It is also remarkable that investment increased sharply between 1988 and 1992, while foreign aid [from the Soviet Union] was drying up. In response to stabilization, strengthened property rights, and greater openness to foreign trade, domestic savings increased by twenty percentage points of GDP, from negative levels in the mid 1980s to 16 per cent of GDP in 1992. (Dollar and Ljunggren 1997, p 455)

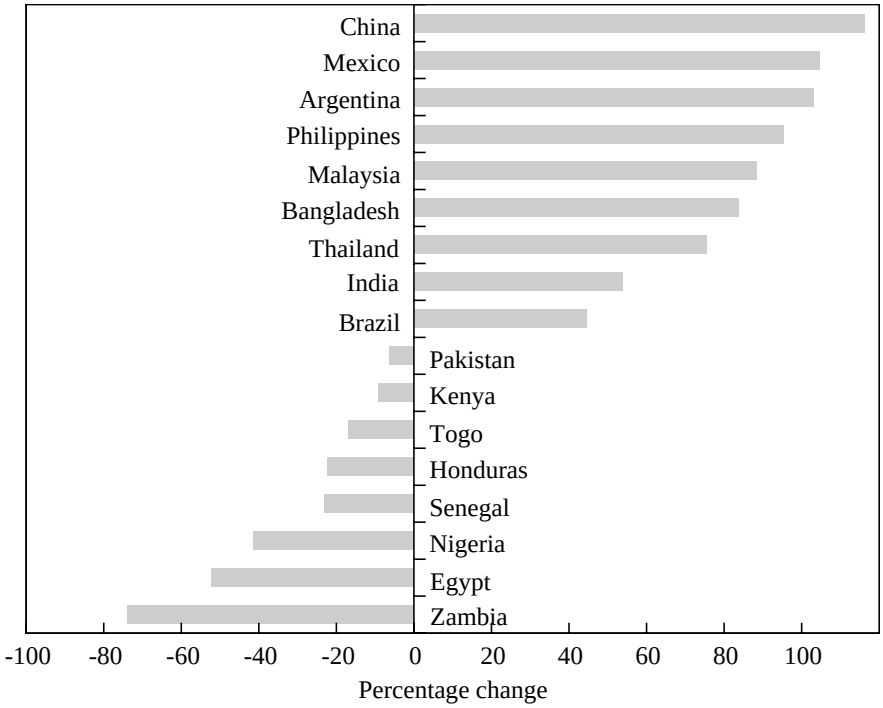
Uganda

Uganda has been one of the most successful reformers in Africa during this recent wave of globalisation, and its experience has interesting parallels with Vietnam's. It too was a country that was quite isolated economically and politically in the early 1980s. The role of trade reform in its larger reform is described in Collier and Reinikka:

> Trade liberalization has been central to Uganda's structural reform program. During the 1970s, export taxation and quantitative restrictions on imports characterized trade policy in Uganda. Exports were taxed, directly and implicitly at very high rates. All exports except for coffee collapsed under this taxation. For example, tea production fell from a peak of 20,000 tons in the early 1970s to around 2,000 tons by the early 1980s, and cotton production fell from a peak of 87,000 tons, to 2,000 tons. By contrast, coffee exports declined by around one-third.
>
> Part of the export taxation was achieved through overvaluation of the exchange rate, which was propelled by intense foreign exchange rationing, but mitigated by an active illegal market. Manufacturing based on import substitution collapsed along with the export sector as a result of shortages, volatility, and rationing of import licenses and foreign exchange. President Amin's policy toward foreign investment was dominated by confiscation without compensation, and he expelled more than 70,000 people from the Asian community.
>
> In 1986 the NRM government inherited a trade regime that included extensive nontariff barriers, biased government purchasing, and high export taxes, coupled with considerable smuggling. The nontariff barriers have gradually been removed since the introduction in 1991 of automatic licensing under an import certification scheme. Similarly, central government purchasing was reformed and is now subject to open tendering without a preference for domestic firms over imports.
>
> By the mid 1990s, the import tariff schedule had five *ad valorem* rates between 0 and 60 per cent. For more than 95 per cent of imported items the tariff was between 10 and 30 per cent. During the latter half of the 1990s, the government implemented a major tariff reduction program. As a result, by 1999 the tariff system had been substantially rationalized and liberalized, which gave Uganda one of the lowest tariff structures in Africa. The maximum tariff is now 15 per cent on consumer goods, and there are only two other tariff bands: zero for capital goods and 7 per cent for intermediate imports.
>
> The average real GDP growth rate was 6.3 per cent per year during the entire recovery period (1986–99) and 6.9 per cent in the 1990s. The liberalization of trade has had a marked effect on export performance. In the 1990s export volumes grew (at constant prices) at an annualized rate of 15 per cent , and import volumes grew at 13 per cent . The value of noncoffee exports increased fivefold between 1992 and 1999. (Collier and Reinikka 2001)

These cases provide persuasive evidence that openness to foreign trade and investment – coupled with complementary reforms – can lead to faster growth in developing countries. However, individual cases always beg the question, how general are these results? Does the typical developing country that liberalises foreign trade and investment get good results? Cross-country statistical analysis is useful for looking at the general patterns in the data. Cross-country studies generally find a correlation between trade and growth. Among developing countries, some have had large increases in trade integration (measured as the ratio of trade to national income), while others have had small increases or even declines over the past 20 years (Figure 2). In general, the countries that have had large increases in trade, have also had accelerations in growth. This relationship persists after controlling for reverse causality from growth to trade and for changes in other institutions and policies (Dollar and Kraay 2001b). All of the cross-country studies suffer from potential problems of omitted variables and mis-specification, but they are nonetheless useful for summarising patterns in the data.

Figure 2: Change in Trade/GDP
1977–1997, selected countries



A final piece of evidence about integration and growth comes from firm-level studies and links us back to the quote from Paul Romer. Developing countries often have large productivity dispersion across firms making similar things: high-productivity and low-productivity firms co-exist and in small markets there is often insufficient competition to spur innovation. A consistent finding of firm-level studies is that openness leads to lower productivity dispersion (Haddad 1993; Haddad and Harrison 1993; Harrison 1994). High-cost producers exit the market as prices fall; if these firms were less productive, or were experiencing falling

productivity, then their exits represent productivity improvements for the industry. While the destruction and creation of new firms is a normal part of a well-functioning economy, too often attention is simply paid to the destruction of firms, missing half of the picture. The increase in exits is only part of the adjustment. Granted, it is the first and most painful part of the adjustment. However, if there are not significant barriers to factor mobility or other barriers to entry, the other side is that there are new entrants. The exits are often front-loaded, but the net gains over time can be substantial.

Wacziarg (1998) uses 11 episodes of trade liberalisation in the 1980s to look at the issue of competition and entry. Using data on the number of establishments in each sector, he calculates that entry rates were 20 per cent higher among countries that liberalised compared to ones that did not. This estimate may reflect other policies that accompanied trade liberalisation such as privatisation and deregulation, so this is likely to be an upper bound of the impact of trade liberalisation. However, it is a sizable effect and indicates that there is plenty of potential for new firms to respond to the new incentives. The evidence also indicates that while exit rates may be significant, *net* turnover rates are usually very low. Thus, entry rates are usually of a comparable magnitude to the exit rates. Using plant-level data from Morocco, Chile and Columbia spanning several years in the 1980s, when these countries initiated trade reforms, indicates that exit rates range from 6 to 11 per cent a year, and entry rates from 6 to 13 per cent. Over time, the cumulative turnover is quite impressive, with a quarter to a third of firms having turned over in four years (Roberts and Tybout 1996, p 6).

The higher turnover of firms is an important source of the dynamic benefit of openness. In general, dying firms have falling productivity and new firms tend to increase their productivity over time (Liu and Tybout 1996; Roberts and Tybout 1996; Aw, Chung and Roberts 2000). In Taiwan, Aw *et al* (2000) find that within a five-year period, the replacement of low-productivity firms with new, higher-productivity entrants accounted for half or more of the technological advance in many Taiwanese industries.

While these studies shed some light on why open economies are more innovative and dynamic, they also remind of us why integration is controversial. There will be more dislocation in an open, dynamic economy – with some firms closing and others starting up. If workers have good social protection and opportunities for developing new skills, then everyone can benefit. But without such policies there can be some big losers.

I want to close this section with a nice point from the economic historians Peter Lindert and Jeffrey Williamson (2001) concerning the different pieces of evidence linking integration to growth: 'The doubts that one can retain about each individual study threaten to block our view of the overall forest of evidence. Even though no one study can establish that openness to trade has unambiguously helped the representative Third World economy, the preponderance of evidence supports this conclusion'. They go on to note the 'empty set' of 'countries that chose to be less open to trade and factor flows in the 1990s than in the 1960s and rose in the global living-standard ranks at the same time. As far as we can tell, there are no anti-global

victories to report for the postwar Third World. We infer that this is because freer trade stimulates growth in Third World economies today, regardless of its effects before 1940.' (pp 29–30)

2. Accelerated Growth and Poverty Reduction in the New Globalisers

Much of the debate about globalisation concerns its effects on poor countries and poor people. In the introduction I quoted a number of sweeping statements asserting that global economic integration is leading to growing poverty and inequality in the world. The reality of what is happening with poverty and inequality is far more complex, and to some extent runs exactly counter to what is being claimed by anti-globalists. Hence in this section I am going to focus on the trends in global poverty and inequality. Let's get the facts straight, and then we can have a more fruitful debate about what is causing the trends. The trends that I want to highlight in this section are that: (1) growth rates of the poorest countries have accelerated in the past 20 years and are higher than rich-country growth rates; (2) there was a large net decline in the number of poor in the world between 1980 and 2000, the first such decline in history; (3) measures of global inequality (such as the global Gini coefficient) have declined modestly since 1980, reversing a long historical trend toward greater inequality; (4) there is no pattern of rising inequality within countries, though there are some notable cases in which inequality has risen; and (5) there is a general pattern of rising wage inequality (larger wage increases for skilled workers relative to those of unskilled workers). It may seem that Trend #5 runs counter to Trend #4, but I will explain why it does not. Nevertheless, Trend #5 is important and helps explain some of the anxiety about globalisation in the industrial countries.

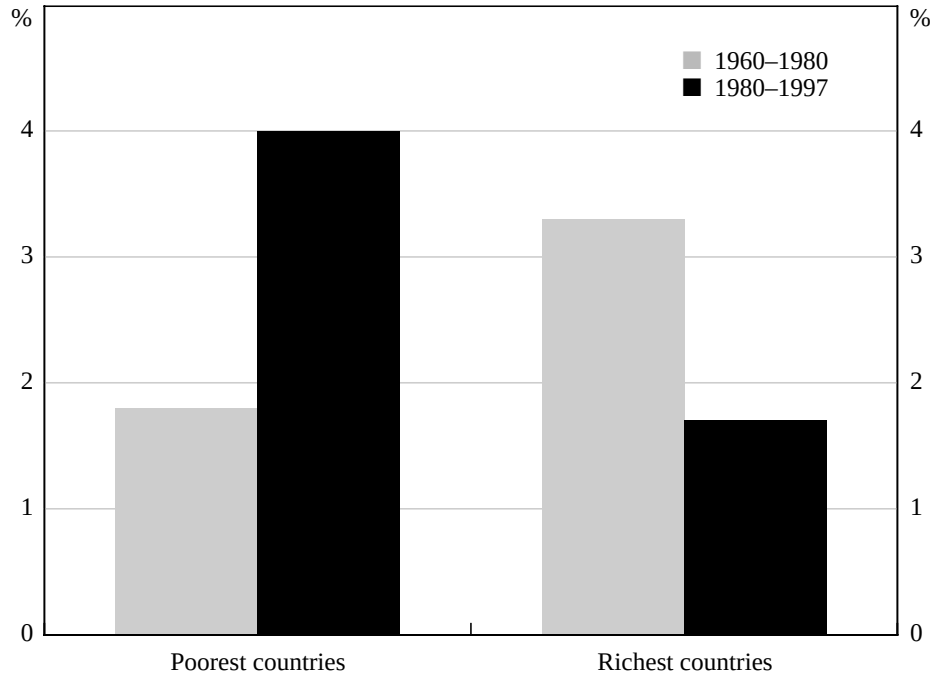
2.1 Trend #1: Poor country growth rates have accelerated

We have reasonably good data on economic growth going back to 1960 for about 125 countries, which make up the vast majority of world population. If you take the poorest one-fifth of countries in 1980 (that is, about 25 countries), the *population-weighted* growth rate of this group was 4 per cent per capita from 1980 to 1997, while the richest-fifth of countries grew at 1.7 per cent (Figure 3). This phenomenon of the fastest growth occurring in the poorest countries is new historically; the growth rates of these same countries for the prior two decades (1960–1980) were 1.8 per cent for the poor group and 3.3 per cent for the rich group. Data going back further in time are not as good, but there is evidence that richer locations have been growing faster than poorer locations for a long time.

Now, the adjective 'population-weighted' is very important. If you ignore differences in population and just take an average of poor-country growth rates, you will find average growth of about zero for poor countries. Among the poorest quintile of countries in 1980 you have both China and India, and you also have quite a few small countries, particularly in Africa. Ignoring population, the average growth of Chad and China is about zero, and the average growth of Togo and India is about

zero. Taking account of differences in population, on the other hand, one would say that the average growth of poor countries has been very good in the past 20 years. China obviously carries a large weight in any such calculation about the growth of countries that were poor in 1980. But it is not the only poor country that did well. India, Bangladesh and Vietnam have also had accelerated growth and grown faster than rich countries in the recent period. A number of African economies, notably Uganda, have also had accelerated growth.

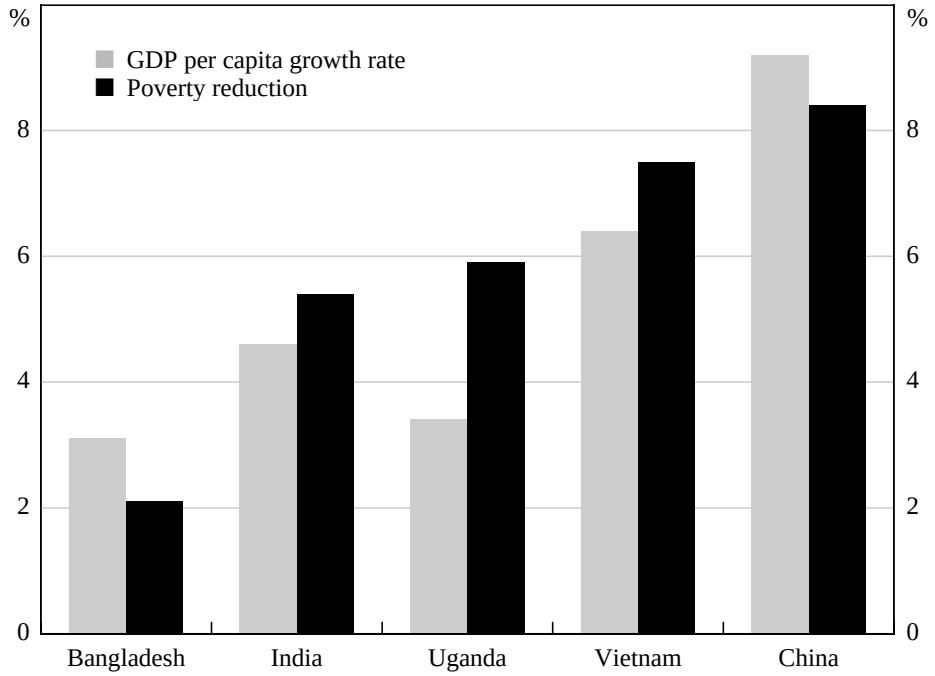
Figure 3: Growth Rates of the Poorest and Richest Quintiles of Countries
Population-weighted



2.2 Trend #2: The number of poor people in the world has declined

The most important point that I want to get across in this section is that poverty reduction in low-income countries is very closely related to the growth rate in these countries. Hence, the accelerated growth of low-income countries has led to unprecedented poverty reduction. By poverty, we mean subsisting below some absolute threshold. Most poverty analysis is carried out with countries' own poverty lines, which are set in country context and naturally differ. In the 1990s we have more and more countries with reasonably good household surveys and their own poverty analysis. Figure 4 shows five poor countries that have benefited from increased integration, and in each case significant poverty reduction has gone hand-in-hand with faster growth. Poverty reduction here is the rate of decline of the poverty rate, based on the country's own poverty line and analysis.

Figure 4: Poverty Reduction Closely Related to Growth
Per cent per annum, 1992–1998



Notes: Data for Bangladesh are for 1992–2000; data for India are for 1993–1999

China, for example, uses a poverty line defined in constant Chinese *yuan.* The poverty line is the amount of Chinese currency that you need to buy the basket of goods that the Chinese authorities deem the minimum necessary to subsist. In practice, estimates of the number of poor in a country such as China come from household surveys carried out by the statistical bureau, surveys that aim to measure households' real income or consumption. Most of the extreme poor in the world are peasants, and they subsist to a large extent on their own agricultural output. To look only at what money income they have would not be very relevant, since the extreme poor have only limited involvement in the money economy. Thus, what Chinese and other poverty analyses do is include imputed values for income in kind (such as own production of rice). So, a poverty line is meant to capture a certain real level of income or consumption.

Estimating the extent of poverty is obviously subject to error, but in many countries the measures are good enough to pick up large trends. In discussing poverty it is important to be clear what poverty line one is talking about. In global discussions one often sees reference to international poverty lines of either US$1 per day or US$2 per day, and I will explain how these relate to national poverty lines.

While Figure 4 shows the close relationship between growth and poverty reduction in five countries in the 1990s, it is not easy to extend the analysis to all countries in the world or back in time to 1980, because good household surveys are lacking for many developing countries. However, discussions of global poverty during this most recent era of globalisation are made easier by the fact that in 1980

a large majority of the world's poor lived in China and India, both of which have reasonably good national data on poverty. Bourguignon and Morrisson (2002) estimate that there were 1.4 billion people in the world subsisting on less than US$1 per day in 1980. Take this as a rough estimate around which there is a lot of uncertainty. Still, it is clear that at least 60 per cent of these poor were in China and India. So, what has happened to global poverty is going to depend to a very considerable extent on these two countries.

The Chinese statistical bureau estimates that the number of people with incomes below their national poverty line has declined from 250 million in 1978 to 34 million in 1999 (Figure 5).[2] Now, this Chinese poverty line is defined in constant Chinese *yuan* and it is possible to translate this into US dollars for the purpose of comparison with other countries. This conversion is best done with a purchasing power parity (PPP) exchange rate. This is the exchange rate between the Chinese *yuan* and the US dollar that would lead to the same price in the US and China for a representative basket of consumer goods. It is the normal basis for making international comparisons of living standards. Evaluated at PPP in this way, the Chinese poverty line is equivalent to about 70 US cents per day – quite a low poverty line. Using information on the distribution of income in China, it is possible to make a rough estimate of the number of people with income under a higher poverty line – for example, US$1 per day at PPP. A rough estimate of the number of people in China in 1978 consuming less than US$1 per day would be in the ballpark of 600 million.[3] It may be surprising that the number is so much larger than the estimate of 250 million living on less than 70 US cents per day. But in 1978 a large mass of the population was concentrated in the range between 70 US cents and US$1.

India's official poverty data also show a marked drop in poverty over the past two decades. India's consumption-based poverty line translates to about 85 US cents per day at PPP. By that line, the Indian statistical bureau estimates that there were 330 million poor people in India in 1977, and the number declined to 259 million in 1999. We can make a similar rough estimate of the number of poor living under a higher poverty line of US$1 per day, using information on the distribution of income in Indian surveys.

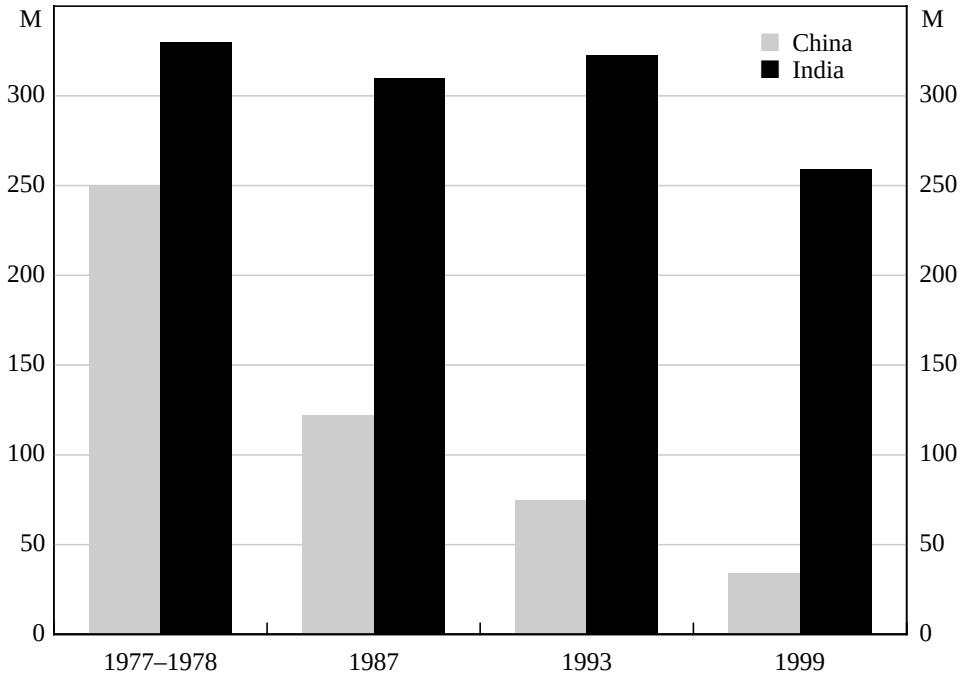
---

2. This estimate is only for the rural population of China. However, the available survey data show that there were almost no urban families living under this poverty line, either in 1980 or today. So, the estimate can be taken as a reasonable approximation of overall extreme poverty in China.

3. The mean income in the rural household survey in China, converted into 1993 US dollars with the Summers and Heston PPP exchange rate, is about US$200 per year in 1978. Using the information on the distribution of income in the 1981 sample, the earliest available, the estimated number of people in China with income less than US$1 per day would be as high as 750 million. The number *consuming* less than US$1 per day would be smaller, since even the very poor have some savings in China. Also, the early surveys may not have done a good job with imputed consumption from housing and other durables. For these reasons I take 600 million as a rough but conservative estimate of the number of poor (consuming less than US$1 per day) at the beginning of China's economic reform.

Figure 5: Poverty has Declined According to China' and India's National Poverty Lines

Number of people



Notes: India's national poverty line – roughly US$0.85 per day; China's national poverty line – roughly US$0.70 per day.

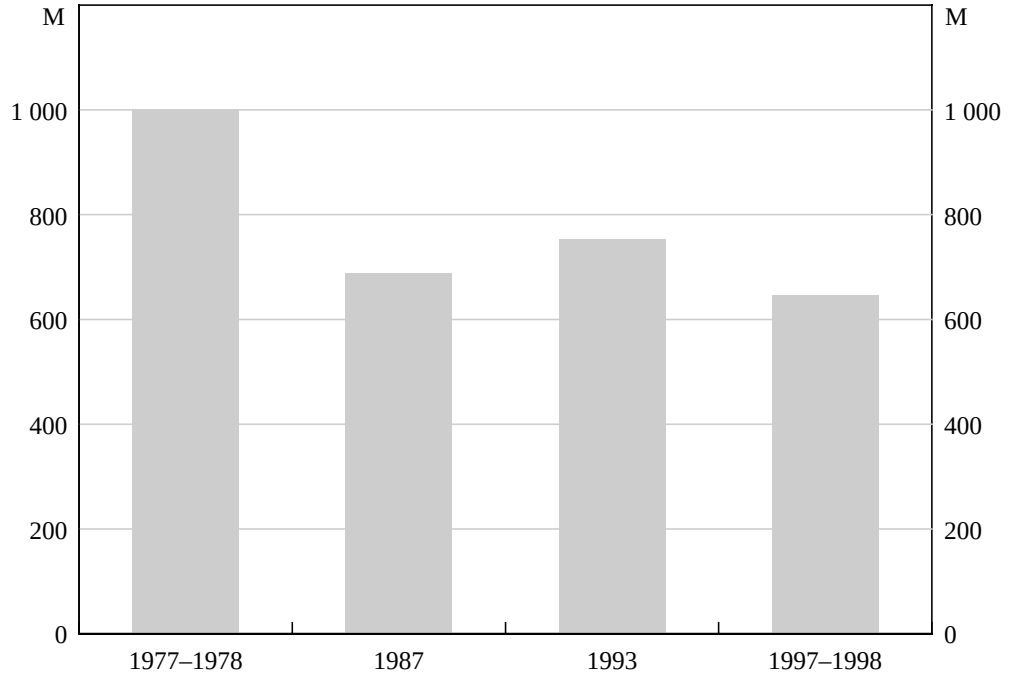
In Figure 6, I combine rough estimates of US$1 per day poverty in China and India. In 1977–78 there were somewhere around 1 billion people in these two giant countries who were subsisting on less than US$1 per day at PPP; by 1997–98 the estimated number had fallen to about 650 million (according to the estimates of Chen and Ravallion (2001)). This poverty reduction is all the more remarkable, because their combined population increased by nearly 700 million people over this period.

It is easy to quibble about specific numbers, but no amount of quibbling can get around the fact that there has been massive poverty reduction in China and India. These countries' own data and poverty analysis show large poverty reduction, using lines that are below US$1 per day. The poverty reduction using a common international line of US$1 per day would be larger.

While there has clearly been poverty reduction in Asia, it is also clear that poverty has been rising in Africa, where most economies have been growing slowly or not at all for the past 20 years. Chen and Ravallion (2001) estimate that the number of poor (consuming less than US$1 per day) in Sub-Saharan Africa increased from 217 million in 1987 to 301 million in 1998. There is not comparably good data for 1980, but we know that the region was not doing well in the 1980–1987 period. If the rate of increase of poverty was about the same in the 1980–1987 period, as in 1987–1993, then the increased poverty in Africa during the 1980–1998 period would be about 170 million people.

Figure 6: Rough Estimates of US$1 per Day Poverty for China and India Combined

Number of people

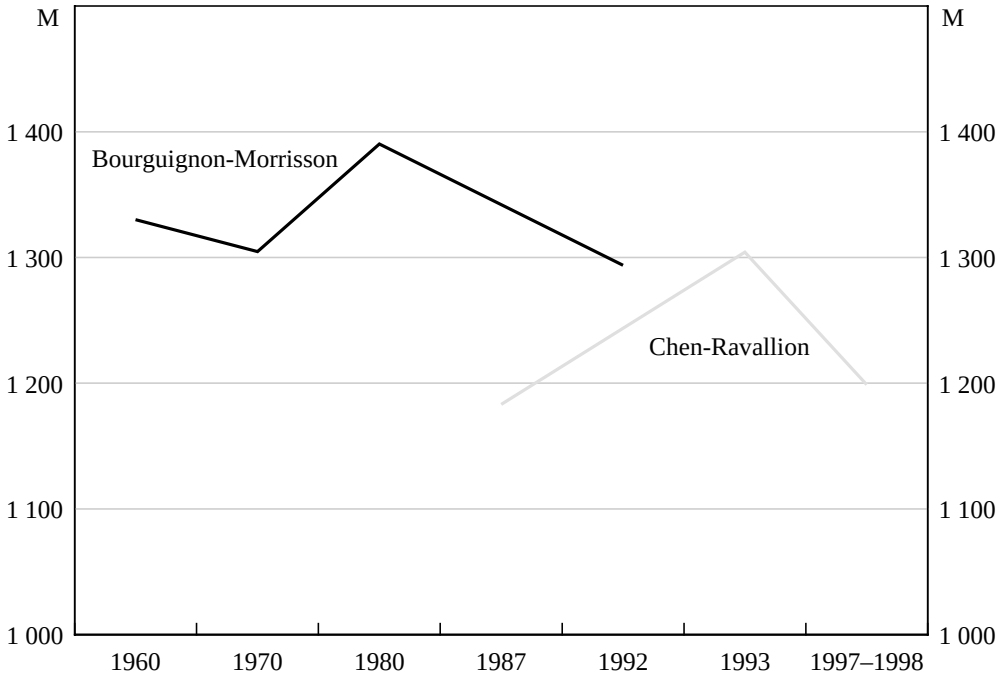


Any careful estimate of worldwide poverty is going to depend primarily on trends in China, India, and Sub-Saharan Africa. Putting together these trends reveals a large net decline in the number of poor since 1980. This is an important historical shift. Bourguignon and Morrisson (2002) estimate that the number of very poor people in the world (US$1 per day line) increased up through 1980 (Figure 7). Between 1960 and 1980 the number of poor grew by about 100 million. Between 1980 and 1992, however, the number of poor fell by about 100 million in their estimate. Chen and Ravallion (2001) use a different methodology to estimate a further decline of about 100 million between 1993 and 1998. The same study found an increase in global poverty between 1987 and 1993, which may seem at odds with the Bourguignon-Morrisson results. However, a look back at Figures 5 and 6 reveals that the poor in China and India combined have done well over the past 20 years, *except for the period from 1987 to 1993, when poverty in China and India temporarily rose.* During that period India had a macroeconomic crisis and a sharp recession, and in China the growth of rural incomes slowed significantly.

Indian data for 1999/2000 show further declines that have not been incorporated in the global estimates for 1997/98. Based on the well-documented poverty reduction in China and India, and their weight in world poverty, we can be confident that 200 million is a conservative estimate of the poverty reduction since 1980. In many ways, however, adding up the good experiences and the bad experiences conceals more than it reveals. Certainly it is good news that large poor countries in Asia have done well (not just China and India, but Bangladesh and Vietnam as well). But that is no consolation to the growing number of poor in Africa, where economies continue to languish (with the occasional bright spot such as Uganda).

Figure 7: Number of Very Poor has Fallen since 1980

Number of people living on less than US$1 per day



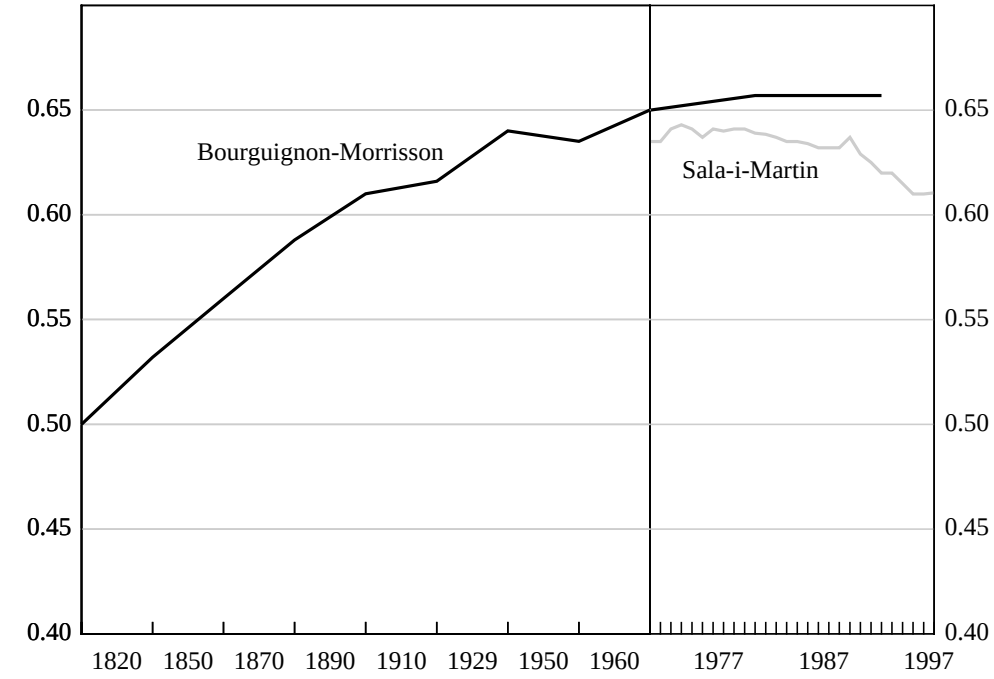
Sources: Bourguignon and Morrison (2001, 2002); Chen S and M Ravallion, 'How Did the World's Poorest Fare in the 1990s?', World Bank Development Research Group Working Paper No 2409, 2000.

2.3 Trend #3: Global inequality has declined (modestly)

People use the phrase 'global inequality' casually to mean a number of different things. But the most sensible definition would be the same one we use for a country: line up all the people in the world from the poorest to the richest and calculate a measure of inequality among their incomes. There are a number of possible measures, of which the Gini coefficient is the best known. Xavier Sala-i-Martin (2002) finds in a new paper that any of the standard measures of inequality show a decline in global inequality since 1980. Subjectively, I would describe this as a modest decline, and one about which we do not have a lot of statistical confidence. But, even if global inequality is flat, it represents an important reverse of a long historical pattern of rising global inequality and contradicts the frequent claims that inequality is rising.

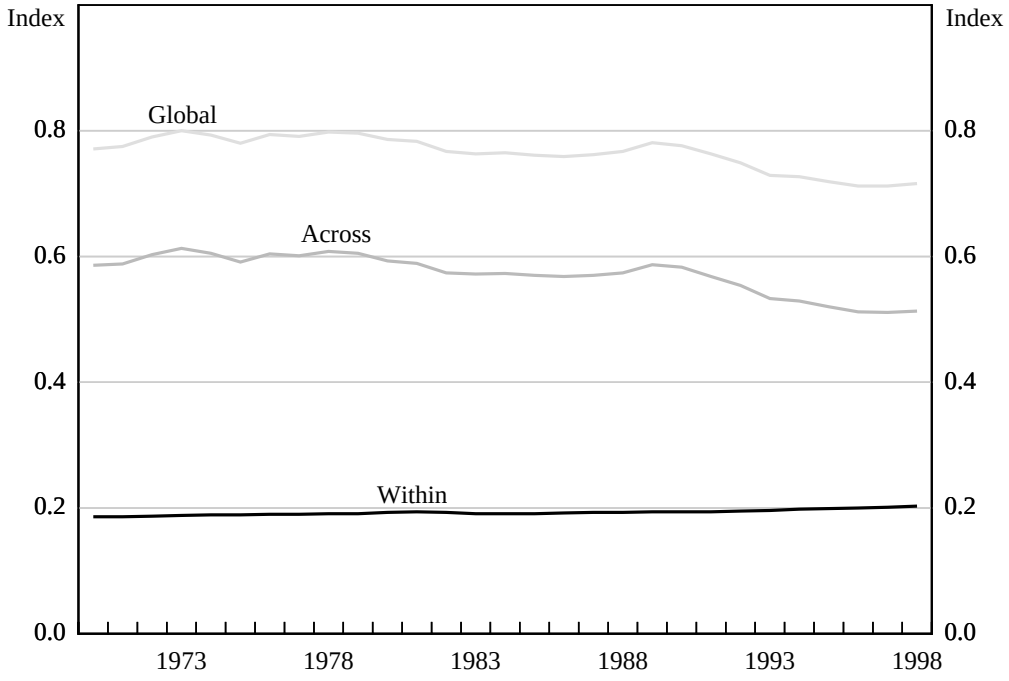
Bourguignon and Morrisson (2002) calculate the global Gini measure of inequality going back to 1820. Obviously we do not have a lot of confidence in these early estimates, but they illustrate a point that is not seriously questioned: global inequality has been on the rise throughout modern economic history.The Bourguignon-Morrisson estimates of the global Gini have it rising from 0.50 in 1820 to about 0.65 around 1980 (Figure 8). Sala-i-Martin estimates that the global Gini has since declined to 0.61. Other measures of inequality such as the Theil index or the mean log deviation show a similar decline. The latter measures have the advantage that they can be decomposed into inequality among countries (differences in

Figure 8: Bourguignon-Morrison and Sala-i-Martin – Global Gini Coefficient



Sources: Bourguignon and Morrison (2002, Table 1); Sala-i-Martin (2002, Figure 7)

Figure 9: Inequality Decomposition – Theil Index



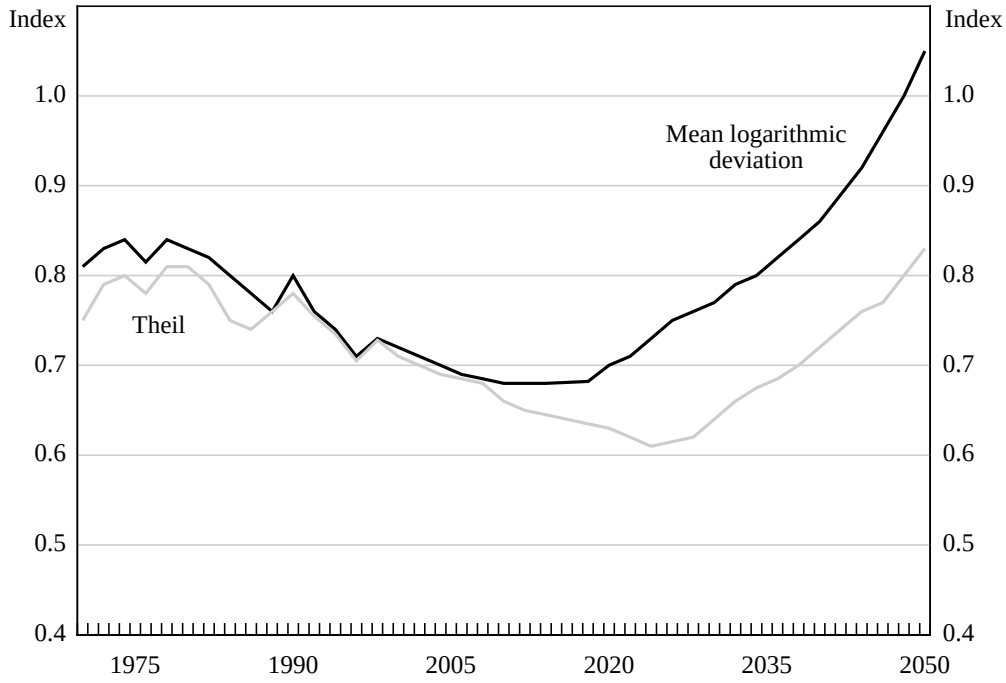
Source: Sala-i-Martin (2002, Table 2)

per capita income across countries) and inequality within countries. What this decomposition shows is that most of the inequality in the world can be attributed to inequality among countries (Figure 9). Global inequality rose from 1820 to 1980

primarily because regions already relatively rich in 1820 (Europe, North America) subsequently grew faster than poor locations. As noted above (Trend #1), that pattern of growth was reversed starting around 1980, and the faster growth in poor locations such as China, India, Bangladesh and Vietnam accounts for the modest decline in global inequality since then. (Slow growth in Africa tended to increase inequality, faster growth in low-income Asia tended to reduce it, and the latter outweighed the former, modestly.)[4]

Thinking about the different experiences of Asia and Africa, as in the last section, helps give a clearer picture of what is likely to happen in the future. Rapid growth in Asia has been a force for greater global equality because that is where the majority of the world's extreme poor lived in 1980 and they benefited from the growth. However, if the same growth trends persist, they will not continue to be a force for equality. Sala-i-Martin projects future global inequality if the growth rates of 1980–1998 persist: global inequality will continue to decline until the year 2015 or 2020 (depending on the measure of inequality), after which global inequality will rise sharply (Figure 10). A large share of the world's poor still live in India and other

Figure 10: Global Projections if Same Growth as 1980–1998



Source: Sala-i-Martin (2002, Figure 17)

4. Milanovic (2002) estimates an increase in the global Gini coefficient for the short period between 1988 and 1993. How can this be reconciled with the Sala-i-Martin findings? Global inequality has declined over the past two decades primarily because poor people in China and India have seen increases in their incomes relative to incomes of rich people (that is, OECD populations). If you refer back to Figure 6, you will see that the period from 1988 to 1993 was the one period in the past 20 years that was not good for poor people in China and India.

Asian countries, so that continued rapid growth there will be equalising for another decade or so. But more and more, poverty will be concentrated in Africa, so that if its slow growth persists, global inequality will eventually rise again.

2.4 Trend #4: There is no general trend toward higher inequality within countries; in particular, among developing countries inequality has decreased in about as many cases as it has increased

The analysis immediately above shows that inequality within countries plays a relatively small role in measures of global income inequality. Nevertheless, people care about trends in inequality in their own societies (arguably more than they care about global inequality and poverty). So, a different issue is, what is happening to income inequality within countries? One of the common claims about globalisation (see the quotes in the introduction) is that it is leading to greater inequality within countries and hence fostering social and political polarisation.

To assess this claim Aart Kraay and I (Dollar and Kraay 2001a) collected income distribution data from over 100 countries, in some cases going back decades. We found first of all that there is no general trend toward higher or lower inequality within countries. One way to show this is to look at the growth rate of income of the poorest 20 per cent of the population, relative to the growth rate of the whole economy. In general, growth rate of income of the poorest quintile is the same as the per capita growth rate (Figure 11). This is equivalent to showing that the bottom quintile share (another common measure of inequality) does not vary with per capita income. We found that this relationship has not changed over time (it is the same for the 1990s as for earlier decades). In other words, some countries in the 1990s had increases in inequality (China and the US are two important examples), while other countries had decreases. We also divided the sample between rich and poor countries to explore a Kuznets-type relationship (or, equivalently, included a quadratic term) and found that income of the poor tends to rise proportionately to per capita income in developing countries, as well as in rich ones.

Most important for the debate about globalisation, we tried to use measures of integration to explain the changes in inequality that have occurred. But changes in inequality are not related to any of these measures of integration. For example, countries in which trade integration has increased show rises in inequality in some cases and declines in inequality in others (Figure 12). So too for other measures such as tariff rates or capital controls. Figure 4 showed five good examples of poor countries that have integrated actively with the world economy: in two of these (Uganda and Vietnam) income distribution has shifted in favour of the poor during integration, which is why poverty reduction has been so strong in these cases. In low-income countries in particular much of the import protection was benefiting relatively rich and powerful groups, so that integration with the global market can go hand-in-hand with declines in income inequality.

Figure 11: Growth is Good for the Poor

Average annual change in log

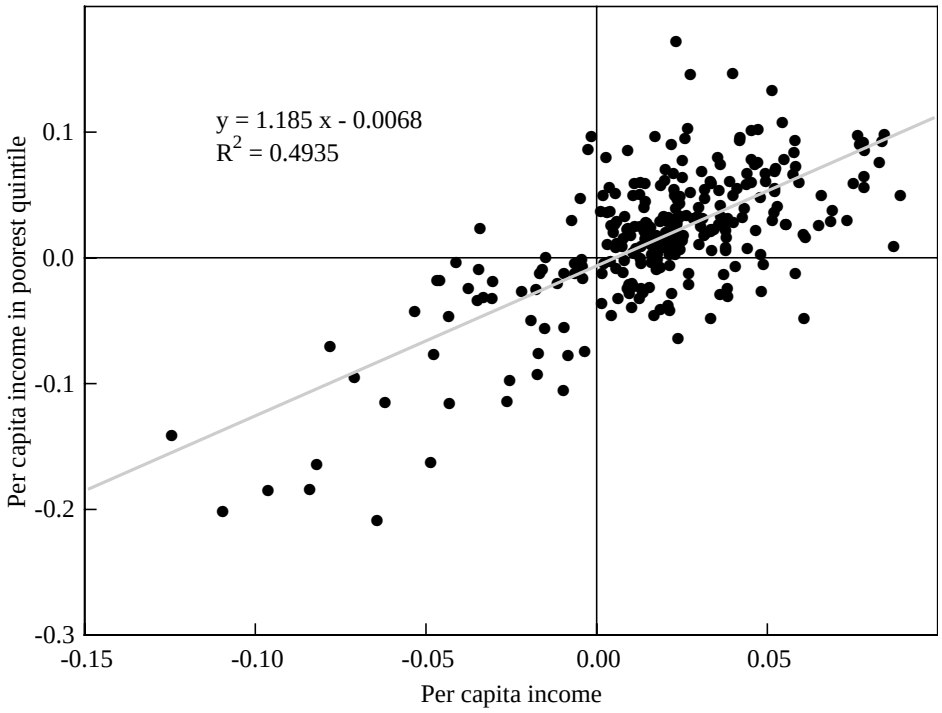
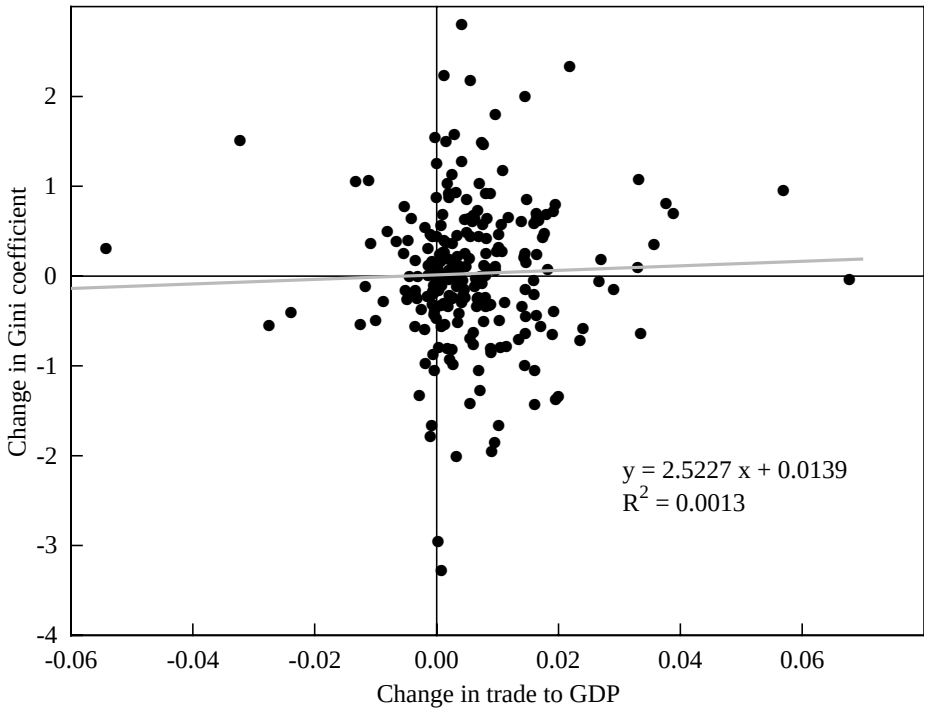


Figure 12: Increased Trade has No Correlation with Changes in Inequality



While it is true that there is no general trend toward higher inequality within countries when looking at all the countries of the world, the picture is not so favourable if one looks only at rich countries and only at the last decade. The Luxembourg Income Study (LIS) has produced comparable, high-quality income distribution data for most of the rich countries. This work finds no obvious trends in inequality up through the mid to late 1980s. Over the past decade, on the other hand, there have been increases in inequality in most of the rich countries. Because low-skilled workers in these countries are now competing more with workers in the developing world, it is certainly plausible that global economic integration creates pressures for higher inequality in rich countries, while having effects in poor countries that often go the other way. The good news from the LIS studies is that '[g]lobalisation does not force any single outcome on any country. Domestic policies and institutions still have large effects on the level and trend of inequality within rich and middle-income nations, even in a globalising world...' (Smeeding, this volume, p 179). In other words, among rich countries some have managed to maintain stable income distributions in this era of globalisation through their social and economic policies (on taxes, education, welfare).

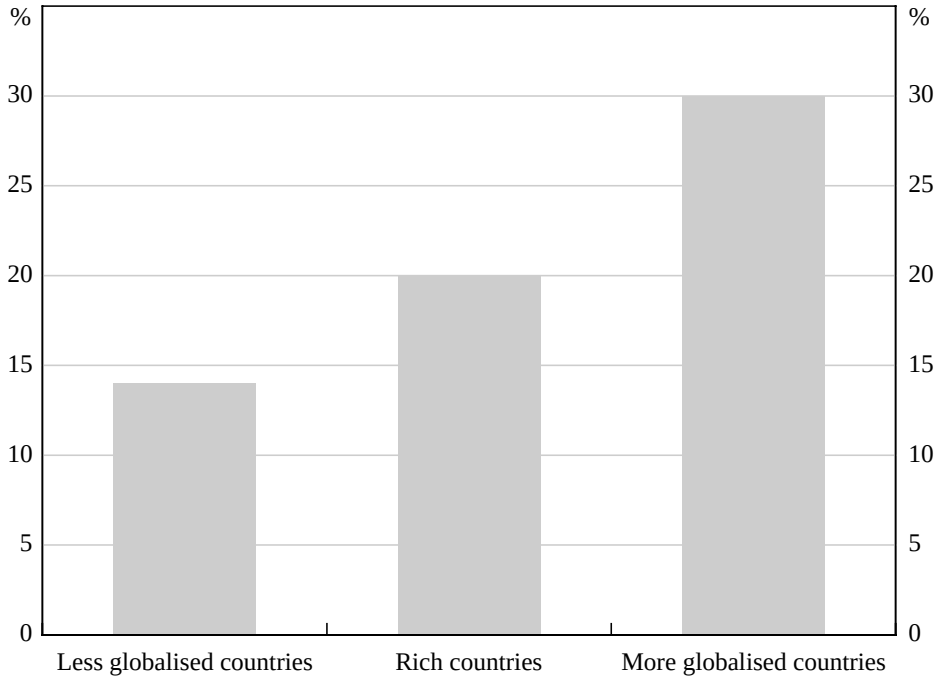
2.5 Trend #5: Wage inequality is rising worldwide

Much of the concern about globalisation in rich countries relates to workers and what is happening to wages and other labour issues. The most comprehensive examination of globalisation and wages used International Labour Organisation data on very detailed occupational wages going back two decades (Freeman, Oostendrop and Rama 2001). These data look across countries at what is happening to wages for very specific occupations (bricklayer, primary school teacher, nurse, auto worker). What the study found is that wages have generally been rising faster in globalising developing countries than in rich ones, and faster in rich ones than in non-globalising developing countries (Figure 13).[5] However, their detailed findings are far more complex. First, there is a timing issue. Trade liberalisation is often associated with reduced wages initially, followed by increases past the initial level. Second, foreign direct investment (FDI) is very strongly related to wage increases, while trade has a weaker relationship. Locations that are able to attract FDI are the ones that have had the clearest gains for workers (examples would be northern Mexico, China, Vietnam), whereas countries that liberalise trade and get little foreign investment see weaker benefits. Finally, the gains are relatively larger for skilled workers. This finding is consistent with other work showing that there has been a worldwide trend toward greater wage inequality – that is, a larger gap between pay for educated workers and pay for less educated/skilled workers.

5. Dollar and Kraay (2001b) divide developing countries into more globalised and less globalised; the more globalised are the top one-third of developing countries in terms of increases in trade to GDP between the late 1970s and the late 1990s. The Freeman, Oostendorp and Rama study uses this classification.

Figure 13: Poor Countries that Globalised Have Seen the Fastest Growth in Wages

Wage growth between 1980s and 1990s



If wage inequality is going up worldwide, how can it be that income inequality is not rising in most countries? There are several reasons why these two trends are not inconsistent. Most important, in the typical developing country wage earners are a tiny fraction of the population. Even unskilled wage workers are a relatively elite group. Take Vietnam as an example, a low-income country where we have a survey of the same representative sample of households early in liberalisation (1993) and five years later. The majority of households in the sample and in the country are peasants. What we see in the household data is that the price of the main agricultural output (rice) went up dramatically while the price of the main purchased input (fertiliser) actually went down. These price movements are directly related to globalisation, because over this period Vietnam became a major exporter of rice (supporting its price) and a major importer of fertiliser from cheaper producers (lowering its price). The typical poor family got a much bigger 'wedge' between its input price and output price, and their real income went up dramatically (Benjamin and Brandt 2002). So, one of the most important forces acting on income distribution in this low-income country has nothing to do with wages.

Quite a few rural households also sent a family member to a nearby city to work in a factory for the first time. I worked on Vietnam for the World Bank from 1989 to 1995, and one of the issues that I covered was the manufacturing sector. When I first started visiting factories in the summer of 1989, the typical wage in local currency was the equivalent of US$9 per month. Now, factory workers making contract shoes for US brands often make US$50 per month or more. So, the wage for

a relatively unskilled worker has gone up something like five-fold. But wages for some of the skilled occupations – say, computer programmer or English interpreter – may have gone up 10 times or even more. Thus, a careful study of wage inequality is likely to show rising inequality. However, how wage inequality translates into household inequality is very complex. For a surplus worker from a large rural household who gets one of the newly created jobs in a shoe factory, earnings go from zero to US$50 per month. Thus, if a large number of new wage jobs are created and if these typically pay a lot more than people earn in the rural or informal sector, then a country can have rising wage inequality but stable or even declining income inequality (in Vietnam the Gini coefficient for household income inequality actually declined between 1993 and 1998). In rich countries, on the other hand, where most people are wage earners, the higher wage inequality is likely to translate into higher household income inequality, which is what we have seen over the past decade.

A third point about wage inequality and household income inequality that is relevant for rich countries is that measures of wage inequality are often made pre-tax. If the country has a strongly progressive income tax, then inequality measures from household data (which are often post-tax) do not have to follow wage inequality, pre-tax. Tax policy can offset some of the trends in the labour market.

Finally, there is the important issue that households can respond to increased wage inequality by investing more in the education of their children. A higher economic return to education is not a bad thing, provided that there is fair access to education for all. In Vietnam, there has been a tremendous increase in the secondary school enrolment rate in the 1990s (from 32 to 56 per cent). This increase partly reflects the society's and the government's investment in schools (supported by aid donors), but more children going to school also reflects households' decisions. If there is little or no perceived return to education, it is much harder to get families in poor countries to send their children to school. Where children have decent access to education, a higher skill premium stimulates a shift of the labour force from low-skill to higher-skill occupations.

From this discussion it is easy to see why some labour unions in rich countries are concerned about integration with the developing world. It is difficult to prove that the integration is leading to this greater wage inequality, but it seems likely that integration is one factor. Concerning the immigration side of integration, Borjas, Freeman and Katz (1997) estimate that flows of unskilled labour into the US have reduced wages for such labour by 5 per cent from where they would be otherwise. The immigrants who find new jobs earn a lot more than they did before (10 times as much in one study), but their competition reduces wages of the US workers who were already doing such jobs. Similarly, imports of garments and footwear from countries such as Vietnam and Bangladesh create jobs for workers there that pay far more than other opportunities in those countries, but put pressure on unskilled wages in the rich countries.

Thus, overall the era of globalisation has seen unprecedented poverty reduction and probably a modest decline in global inequality. However, it has put real pressure on less-skilled workers in rich countries, and this competitive pressure is a key

reason why the growing integration is controversial in the industrial countries and why there is a significant political movement to restrict the opportunities of poor countries. More generally, the integration causes disruption in both rich countries and poor ones. Some people are thrown out of work, some capitalists lose their investments; in the short run there are clearly winners and losers. To some extent the extreme claims of anti-globalists that integration is leading to higher inequality across and within countries – claims that are not borne out by the evidence – distract attention from the real issues. Globalisation is disruptive, it produces relative winners and losers, and there are public policies that can mitigate these bad effects (social protection, investment in education). The key policy issue is whether to try to mitigate the bad effects of integration or to roll back integration.

3. Making Globalisation Work Better for the Poor

What are the implications of these findings – for developing countries, for rich countries, and for non-government organisations that care about global poverty? So far, the most recent wave of globalisation starting around 1980 has been a powerful force for equality and poverty reduction. But it would be naïve to think that this will inevitably continue.

Whether global economic integration continues to be an equalising force will depend on the extent to which poor locations participate in this integration, and that in turn will depend on both their own policies and the policies of the rich world. True integration requires not just trade liberalisation, but also wide-ranging reforms of institutions and policies. If we look at some of the countries that are not participating very strongly in globalisation, many of them have serious problems with the overall investment climate: Kenya, Pakistan, Burma and Nigeria would all be examples. Some of these countries also have restrictive policies toward trade, but even if they liberalise trade not much is likely to happen without other measures. It is not easy to predict the reform paths of these countries. (If you think about some of the relative successes that I have cited – China, India, Uganda, Vietnam – in each case their reform was a startling surprise.) As long as there are locations with weak institutions and policies, people living there are going to fall further and further behind the rest of the world in terms of living standards.

Building a coalition for reform in these locations is not easy, and what outsiders can do to help is limited. But one thing that the rich countries can do is to make it easy for developing countries that do choose to open up, to join the club. Unfortunately, in recent years the rich countries have been making it harder for countries to join the club of trading nations. The GATT was originally built around agreements concerning trade practices. Now, however, a certain degree of institutional harmonisation is required to join the World Trade Organisation (WTO) (for examples, on policies toward intellectual property rights). The proposal to regulate labour standards and environmental standards through WTO sanctions would take this requirement for institutional harmonisation much farther. Power in the WTO is inherently unbalanced: size matters in the important area of dispute settlement where only larger countries can effectively threaten to retaliate against illegal measures. If the US wins an unfair

trade practices case against Bangladesh it is allowed to impose punitive duties on Bangladeshi products. Owing to the asymmetry in the size of these economies the penalties are likely to impose a small cost on US consumers and a large one on Bangladeshi producers. Now, suppose the situation is reversed and Bangladesh wins a judgment against the US. For Bangladesh to impose punitive duties on US products is likely to hurt its own economy much more than the US. Thus, developing countries see the proposal to regulate their labour and environmental standards through WTO sanctions as inherently unfair and as a new protectionist tool that rich countries can wield against them.

So, globalisation will proceed more smoothly if the rich countries make it easy for developing countries to benefit from trade and investment. Reciprocal trade liberalisations have worked well throughout the post-war period. There still are serious protections in OECD countries against agricultural and labour-intensive products that are important to developing nations. It would help substantially to reduce these protections. At the same time, developing countries would benefit from further openings of their own markets. They have a lot to gain from more trade in services. Also, 70 per cent of the tariff barriers that developing countries face are from other developing countries. So, there is a lot of potential to expand trade among developing countries, if trade restrictions were further eased. However, the trend to use trade agreements to try to impose an institutional model from the OECD countries on Third World countries makes it more difficult to reach trade agreements that benefit poor countries.

Another reason to be pessimistic concerns geography. There is no inherent reason why coastal China should be poor – or southern India, or Vietnam, or northern Mexico. These locations historically were held back by misguided policies, and with policy reform they can grow very rapidly and take their natural place in the world income distribution. However, the same reforms are not going to have the same effect in Mali or Chad. Some countries have poor geography in the sense that they are far from markets and have inherently high transport costs. Other locations face challenging health and agricultural problems. So, it would be naïve to think that trade and investment can alleviate poverty in all locations. Much more could be done with foreign aid targeted to developing medicines for malaria, AIDS, and other health problems of poor areas and to building infrastructure and institutions in these locations. The promises for greater aid from the US and Europe at the Monterrey Conference were encouraging, but it remains to be seen if these promises are fulfilled.

The importance of geography also raises the issue of migration – the missing flow in today's globalisation. Migration from locations that are poor because of either weak institutions and/or difficult physical geography could make a large contribution to reducing poverty in the lagging regions. Most migration from South to North is economically motivated. This migration raises the living standard of the migrant and benefits the sending country in three ways – reducing the labour force raises wages for those who remain behind, migrants typically send a large volume of remittances back home, and their presence in the OECD economy can support the development of trade and investment networks. These benefits are strongest if the migrant is

relatively unskilled, since this is the part of the labour force that is in over-supply in much of the developing world.

Each year 83 million people are added to world population, 82 million of these in the developing world. Furthermore, populations in Europe and Japan are ageing and the labour forces there will begin to shrink without more migration. So, there are clear economic benefits to more migration of unskilled workers from the South to the North, and yet this flow remains highly restricted and very controversial because of its impact on society and culture. Because the economic pressures are so strong, however, growing volumes of illegal immigration are taking place – and some of the worst abuses of 'globalisation' occur because we are not globalised when it comes to labour flows.

Realistically, none of the OECD countries is going to adopt open migration. But there is a good case to be made to revisit migration policies. Some of the OECD countries have a strong bias in their immigration policies toward highly skilled workers, spurring 'brain drain' from the developing world. This policy pushes much of the unskilled flow into the illegal category. If OECD countries would accept – legally – more unskilled workers, it should help with their own looming labour shortages, improve living standards in sending countries, and reduce the growing illegal human trade with all of its abuses.

So, integration of poor economies with richer ones has provided many opportunities for poor people to improve their lives. Examples of the beneficiaries of globalisation will be found among Mexican migrants, Chinese factory workers, Vietnamese peasants and Ugandan farmers. Lots of non-poor in developing and rich countries alike also benefit, of course. But much of the current debate about globalisation seems to ignore the fact that it has provided many poor people in the developing world unprecedented opportunities. After all of the rhetoric about globalisation is stripped away, many of the practical policy questions come down to whether we are going to make it easy for poor communities that want to integrate with the world economy to do so, or whether we are going to make it difficult. The world's poor have a large stake in how the rich countries answer these questions.

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Globalisation, Poverty and Income Distribution: Does the Liberal Argument Hold?

Robert Hunter Wade[1]

'Globalisation' is a rag-bag, but the 'anti-globalisation' movement – a combination of trade union protectionists, passionate environmentalists, Third-World sympathisers, and antinomian activists who substitute 'globalisation' for the earlier 'capitalism' and 'multinational corporations' – is proving to be a force not lightly dismissed. Organisations like the World Bank, the UK's Department for International Development, *The Economist*, and the *Financial Times*, have mounted a vigorous defense based on four main propositions:

1. Poverty and inequality have both fallen on a world scale over the past two decades for the first time in more than a century and a half. As Martin Wolf of the *Financial Times* puts it, 'Evidence suggests the 1980s and 1990s were decades of declining global inequality and reductions in the proportion of the world's population in extreme poverty' (Wolf 2002).
2. These falls are due to the rising density of economic integration between countries ('globalisation'), and would have gone further had the poorer countries been more integrated into the world economy.
3. Therefore the empirical grounds of the anti-globalisation movement – the grounds on which it claims to be thinking for the world – collapse. Its policies would cause more poverty and more inequality. The evidence is so clear that Martin Wolf (2001b) concludes, 'The argument about globalisation, as such, must stop'.[2]
4. The governments of poorer countries should take as their top development objective, raising the economy's integration into the world economy.

This argument makes the current wave of globalisation fit well with the great liberal tradition, which presumes that economic liberalisation makes for progress and that resistance to economic liberalisation must be the result of 'special' interests. Many academics, including those not champions of liberalism, have embraced similar arguments. They point especially to the dispersal of manufacturing capacity to developing countries as a force that has eliminated the structural divide between the First and Third Worlds. In the words of two of them, 'Worldwide convergence,

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1. Professor of Political Economy, London School of Economics and Political Science. I thank Sanjay Reddy, Michael Ward, Branko Milanovic, Ron Dore, Martin Wolf and James Galbraith for good discussions. This paper began as my end of the Wade-Wolf debate 'Are global poverty and inequality getting worse?' (Wade and Wolf 2002). For my other essays on this topic see Wade (2001a, 2001b).

2. Also see Wolf (2000).

through the global restructuring of capitalism, means that the geographic breakdown of the world into north-south, core-periphery or First and Third Worlds, while still significant, is diminishing in importance' (Burbach and Robinson 1999).

Can such arguments be tested? Are theories linking such a rag-bag concept as globalisation with such multifaceted concepts as poverty and inequality bound to be vacuous? In the end, the question of whether or not by some statistical measure China's getting richer counterbalances Africa's reversion to barbaric misery does not matter much compared with the question of what to do about Africa's misery, or narrower questions like whether protectionism is justified in country *x* at time *y*. But the fact is that a lot of people do make strong claims about the trends in poverty and inequality, and they say that globalisation is the main driving force behind the trends whether for good or ill. It is worth discussing the empirical basis of the claims.

In this paper I raise doubts about the empirical underpinnings of the pro-globalisation argument – the claim that world poverty and world income inequality have both fallen over the past two decades or so, and that countries that have globalised faster have had faster economic growth and bigger falls in poverty. I then discuss a few of the deep structural causes at work in the world economy that may be invoked to explain the failure of the liberal claim. At the end I give some normative conclusions.

1. Poverty

As the economist Richard Cooper says, the record on poverty alleviation in the late 20th century is 'unambiguously positive'.[3] Things may have got worse in Africa, he admits, but the improvements in China and India mean that 'the fraction of the world's population living in poverty has gone way down'.

These and other such statements are based on World Bank figures, for the Bank is effectively the sole producer of the world poverty headcount. It declares in the opening sentence of the *2001 World Development Indicators*, 'Of the world's 6 billion people 1.2 billion live on less than $1 a day' (World Bank 2001b).[4] This number, says the Bank, was the same in 1998 as in 1987. Since world population increased, the proportion of the world's population in absolute poverty fell sharply in only 11 years from around 28 per cent to 24 per cent, an extraordinary historical reversal of trend.

Other Bank sources give different numbers, however. The *World Development Report 2000/2001: Attacking Poverty* says that the number of people living on less than $1 a day *increased* by 20 million from 1.18 billion in 1987 to 1.20 billion in 1998 (World Bank 2001a). Less than two years later, *Globalization, Growth, and Poverty: Building an Inclusive World Economy* showed that the number of people living in poverty *decreased* by 200 million in the 18 years from 1980 to 1998 (World Bank 2002).[5]

3. Richard Cooper, quoted in Jim Hoagland (1999).

4. The $1 a day is measured in purchasing power parity.

5. See Deaton (2002) for further discussion of this issue.

Here are eight reasons not to take the Bank's numbers at face value.[6] First, the Bank's comparison between 1980 and 1998 is not legitimate, because the Bank changed its methodology in the late 1990s and has recalculated backwards only to 1987. We do not know what the 1980 figure would be if calculated by the same methodology as the later figures. Hence the Bank's claim that the number of people living in poverty fell by 200 million from 1980 to 1998 ought not to be accepted.

Second, the Bank's revised purchasing power parity (PPP) numbers caused major changes in poverty counts even for the same country in the same year and using the same survey data. Table 1 shows the impact of the revision in terms of the poverty headcount in different regions *for the same year*, 1993. Notice that the revision to the Bank's PPP numbers makes for a large change in poverty rates in the different regions; and that the rates for Latin America are implausible, both absolutely (almost a quarter of the population of Latin America in the mid 1980s lived on less than US$365 a year in PPP terms?) and relative to other regions (a quarter in Latin America against only 4 per cent in the Middle East/North Africa?). As Angus Deaton concludes, 'Changes of this size risk swamping real changes, and it seems impossible to make statements about changes in world poverty when the ground underneath one's feet is changing in this way' (Deaton 2001).

Table 1: 1993 Poverty Rate using Old and New World Bank PPP Numbers
Per cent

	Old poverty rate	New poverty rate
Sub-Saharan Africa	39.1	49.7
Latin America	23.5	15.3
Middle East/North Africa	4.1	1.9

Note: The poverty rate is the proportion of the population living on less than $1 a day. The old rate refers to the 1985 PPP benchmark survey, while the new rate refers to the 1993 survey.

Source: Deaton (2001)

Third, the changes in methodology notwithstanding, the Bank still uses a global poverty line – 'US$1 a day' – that is not connected to any basket of goods that makes sense for measuring poverty, such as food and other essentials (though it does have intuitive appeal to a western audience being asked to support aid). We have no way of knowing what proportion of food-and-shelter needs the Bank's poverty line captures. If the Bank were to use a basic needs-based poverty line rather than its present artificial one, the number of absolute poor would probably rise, because the national poverty lines equivalent to a global basic needs poverty line expressed in US dollars would probably rise by a lot (maybe 25–50 per cent). They would rise a

6. I am indebted to Sanjay Reddy for discussions of the points made here. See Reddy and Pogge (2002) and Karshenas (2002) for a more extensive discussion of these points.

lot because the present PPP price indices include many services that are very cheap in developing countries (e.g., massages) but irrelevant to the poor (and thus the consumption bundle needed to avoid poverty), and therefore give a misleadingly high measure of the purchasing power of the incomes of the poor. Food and shelter are relatively expensive, and if they alone were included in the PPP indices used to adjust the incomes of the poor, national poverty lines would go up.[7]

Fourth, the poverty headcount is very sensitive to the precise level of the global poverty line because income distribution in the vicinity of developing country poverty lines is typically fairly flat. Even a small increase in the line brings a large increase in the number of people below it. Hence we can expect that a shift to a poverty line based on basic needs, excluding services that are very cheap but irrelevant to the poor, would raise the number of people in extreme poverty significantly.

Fifth, the Bank's poverty count comes from household surveys. Household surveys have a number of limitations that add up to a large margin of error in national poverty numbers and so also in the world totals. Some are well-known, such as the exclusion of most of the benefits that people receive from publicly provided goods and services. Others are less well-known, such as the sensitivity of the poverty headcount to the recall period used in the survey. The shorter the recall period the more expenditure is reported. India provides a striking example. A recent study suggests that a switch from the standard 30-day reporting period to a 7-day reporting period itself lifts 175 million people from poverty using the Indian official poverty line, a nearly 50 per cent fall. Using the US$1-a-day international line, which is higher, the fall would be even greater.[8]

Sixth, when new household surveys for a country are not available the Bank assumes that income distribution is the same as it was under the last available household survey and then increases the consumption of the poor in the old survey by the growth in *average* consumption in the national accounts data, no matter that national income distribution may have changed a lot. This procedure can make poverty fall as an artifact of the methodology.

Seventh, the PPP-adjusted income figures for China and India – the two most important countries for the overall trend – contain an even bigger component of guess work than for most other significant countries. The main sources of PPP figures (the Penn World Tables and the ICP) are based on two large-scale international price benchmarking exercises for calculating purchasing power parity, one that occurred in 1985 and was carried out in 60 countries, and a second that occurred in

7. It is remarkable that the International Comparison Program (ICP), which has orchestrated the systematic collection of international price data since its founding in 1967, held its first ever panel meeting to discuss designing a PPP factor specifically relevant to the consumption bundle of the poor in March 2002, yet has been chaired by the World Bank for the past decade. The ICP's central concern has been to design ways of comparing GDPs.

8. See Deaton (2001) for further discussion of this issue.

1993 and was carried out in 110 countries.[9] The government of China refused to participate in both of them. The PPP numbers for Chinese incomes are based on guestimates from small, ad hoc price surveys in a few cities, adjusted by rules of thumb to take account of the huge price differences between urban and rural areas, eastern and western regions. The government of India declined to participate in the 1993 exercise. The numbers for India are extrapolations from 1985 qualified by small, ad hoc price surveys in later years. The lack of good data for China and India comparable with those of other countries compromises any claim about trends in world poverty (Reddy and Pogge 2002).

Finally, we need to bear in mind that the number of absolute poor is a politically sensitive number, because critics use it to attack the Bank. The majority report of the Meltzer Commission (2000), for the US Congress, said the Bank was failing at its central task of poverty reduction – as shown by the fact that the number of people in absolute poverty remained constant at 1.20 billion between 1987 and 1998.[10] (A spurious argument if ever there was one.) People who calculate politically sensitive numbers – in the Bank or anywhere else – may be inclined to make choices that flatter the result even if they remain within the bounds of the professionally defensible, even if they remain far from behaviour that could be construed as 'cooking the books'.

In short, we should be cautious about accepting the World Bank's poverty headcount as approximately correct. We should acknowledge the large margin of error. It would be interesting to know whether the late-1990s revisions to the methodology and to the PPP numbers have the effect of raising or lowering the poverty headcount, and whether they alter the direction of the trend over the 1980s and 1990s.

What can we say about the relationship between poverty and economic growth on a world scale? Some people say that the income of the poor rise 'one-to-one' with average income, implying that economic growth is good for the poor.[11] Others say that the lack of a fall in the number of people in extreme poverty despite historically high rates of economic growth – both in the world as a whole and in specific countries (notably India) – suggests that economic growth does little to reduce poverty. The fact is that our currently available data do not allow confident conclusions (Deaton 2001). The World Bank's poverty numbers come from household surveys, while the economic growth measures come from the national income accounts. In many countries there are large and growing discrepancies between income and consumption estimates from the two sources. In Asia the consumption estimates

9. An ICP benchmark survey was also done in 1996, but the quality of the data was poor because many more countries participated than expected and resources were insufficient for central coordination and data quality control.

10. Meltzer (2001) later described the fall in the proportion of the world's population in poverty from 28 per cent in 1987 to 24 per cent in 1998 as a 'modest' decline, the better to hammer the Bank.

11. '[O]n average there is a one-to-one relationship between the growth rate of income of the poor and the growth rate of average income in society' (World Bank 2002).

from household surveys tend to be well *below* the estimates from the national accounts. The ratio of household survey-based consumption to national accounts-based consumption in India (the biggest single contributor to the world poverty count) fell from around unity in the 1950s to little more than 50 per cent in recent years. A similar drift is found in China, the second-biggest contributor to the world poverty count; and also in Pakistan, Bangladesh, and Indonesia. In some Sub-Saharan African countries, on the other hand, the estimate of consumption from household surveys is two to three times *above* the estimate from the national accounts. As Deaton (2001) concludes, this means that we have no consistent empirical basis for conclusions about the extent to which economic growth reduces poverty.[12]

Some people argue that the whole exercise of constructing a global poverty line and then counting the number of poor below it is futile; not only are our current numbers not meaningful, they *could not* be meaningful. They propose to use national poverty lines to count the number of poor in each of the world's 200+ countries, and then make an interpretation based on 200 data points for one year, or 400 data points for two years. The problem is obvious. My response is that if we are to assess globalisation as a systemic phenomenon and not simply as the aggregate of national phenomena we need aggregate data to measure the overall trends. Our task is to find measures that survive scrutiny. For this we need measures and price indices specifically related to poor people, in contrast to what is presently available.

Having said all this, I think it is quite plausible that the proportion of the world's population living in extreme poverty (facing periods of food consumption too low to maintain health and unable to save enough to finance children's basic education) has indeed fallen over the past 20 years or so, thanks largely to fast growth in China and India. The broad trends in national data for these two countries, including life expectancy and other non-income measures, give grounds for confidence in this conclusion, even allowing for large margins of error.[13] But any more precise statement about the absolute number of the world's people living in extreme poverty and the change in the number over time currently rests on statistical quicksand.

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12. Dollar and Kraay (2001) conclude that, in a large sample of countries, the incomes of the poorest fifth rise 'one-to-one' with the average income. (A 4 per cent growth rate of GDP per capita is associated with a 4 per cent rate of increase in the income of the bottom quintile.) This implies a flat statistical relationship between per capita income and inequality, not a Kuznets curve (an inverted U relationship between per capita income and inequality). The conclusion appears to be hard-wired in by their choice of a linear regression equation with no quadratic term. With this assumption the share of the poor in total income cannot increase at one point in the range and decrease at another; it cannot be an inverted U. The share of the poor in total income goes up at the rich-country end because of social security transfer payments. Given the assumption of a linear relationship, this means that at the low-per-capita-income end the share of the poor in total income cannot go down. The authors justify the linear form by saying that the evidence does not allow them to reject the statistical hypothesis that the share of the bottom 20 per cent is uncorrelated with per capita income. This may be true, but does not exclude the possibility that a quadratic specification would have been a better fit. A quadratic specification would have allowed for the plausible possibility that different categories of countries – by average income, by region – show different relationships between average income and distribution. I thank Graham Pyatt and Sanjay Reddy for clarifying this point.

13. See Dollar (this volume).

2. Inequality

Many analysts claim that world income inequality fell sharply in the second half of the 20th century, especially in the final quarter.[14] But in the past several years world income distribution has become a hot topic of debate in international economics and in sociology, and there is now even less agreement about the trend of income distribution than about the poverty numbers. Whereas we *could* get better data on the poor to the extent that the numbers would command general agreement, the issues in the measurement of inequality do not admit of best solutions, even in principle. The answer to the question, 'What is happening to world income inequality?', depends on choices among the following: (a) alternative measurements of income (GNP per capita converted to US dollars using market exchange rates or GNP per capita adjusted for differences in purchasing power across countries); (b) alternative samples of countries and alternative weightings of countries (each country weighted as one unit or by population); (c) alternative measures of distribution (the Gini or other average coefficient of inequality or ratios of the income of the richest decile of world population to that of poorer deciles or of a set of developed countries to a set of developing countries); and (d) national income accounts or household income and expenditure surveys. These choices make a big difference to the results. Here are my abbreviated conclusions.[15]

2.1 Market exchange rates

If we use market exchange rates to convert national incomes into a common numeraire (the US dollar) the evidence is clear: whatever the other choices of measurement, world income distribution has been stable or widening for the past several decades.

For example, if we take the GNP per capita of developing countries as a group and express it as a proportion of the GNP per capita of the developed countries (all countries weighted by population), the share remains steady at around 4.5 per cent from 1960 to 1999 (Table 2). No reduction of the (huge) relative income gap and a big widening of the absolute gap. Indeed, the great majority of developing countries experienced a *growing* relative income gap from *both* 1960 to 1980 and 1980 to 1999 (Arrighi and Silver 2002).[16] At the regional level, Latin America, Sub-Saharan Africa, and the Middle East/North Africa all experienced a growing relative income gap with the core between 1980 and 1999; South Asia remained constant; only

14. For example, Omerod (2000) and Wright (2000) both make the same strong statement about world income distribution: it has become more equal at the same time as globalisation has accelerated. Martin Wolf has also championed the idea that globalisation improves global income distribution (see for example Wolf (2001a)). Ian Castles, a former Australian Statistican, claims that 'most studies suggest that the past 25 years have seen a reversal in the trend towards widening global inequalities which had been proceeding for two centuries' (Castles 2001).

15. In addition to the studies referenced elsewhere I draw on Firebaugh (1999), Jones (1997), Pritchett (1997), Quah (1997) and UNDP (1999).

16. The former Soviet Union countries are not included.

China, and east Asia minus Japan and China, reduced the gap. China's average income rose between 1980 and 1999 from 0.8 per cent to 2.6 per cent of the average of the developed countries. If we had been asked in 1970 to indicate what would constitute development 'success' by 1999 we would surely have set the threshold far above an increase in developing countries' (current exchange rate) income from 4 to 5 per cent of the West's. We would have said that an increase from 4 to 5 per cent in 30 years constituted failure.

Table 2: GNP per Capita of Region as a Per Cent of Developed Countries' GNP per Capita

Region	1960	1970	1980	1990	1999
Sub-Saharan Africa	5.2	4.4	3.6	2.5	2.2
Latin America	19.7	16.4	17.6	12.3	12.3
West Asia and North Africa	8.7	7.8	8.7	7.4	7.0
South Asia	1.6	1.4	1.2	1.3	1.5
East Asia (excl China and Japan)	5.7	5.7	7.5	10.4	12.5
China	0.9	0.7	0.8	1.3	2.6
Developing countries	4.5	3.9	4.3	4.0	4.6
North America	123.5	104.8	100.4	98.0	100.7
Western Europe	110.9	104.4	104.4	100.2	98.4
Southern Europe	51.9	58.2	60.0	58.7	60.1
Australia and New Zealand	94.6	83.3	74.5	66.2	73.4
Japan	78.6	126.1	134.1	149.4	144.8
Developed countries	100.0	100.0	100.0	100.0	100.0

Sources: Arrighi and Silver (2002); World Bank (1984, 2000)

But many economists say that exchange rate-based income measures are irrelevant. GNP incomes should always be adjusted by a purchasing power parity (PPP) factor to take account of differences in purchasing power, they say. One makes the adjustment by using the same relative prices for all goods and services in all countries. Since the market prices of goods and services sold only locally (not internationally traded) are significantly cheaper in poor countries relative to the market prices of goods and services facing international competition, the adjustment generally raises the income of poor countries and lowers the income of rich countries, making the distribution between them less unequal.

It is true that market exchange rate-based income comparisons suffer from distortions in official exchange rates (overvaluation is common in poor countries with trade barriers and non-convertible currency) and from sudden changes in the official exchange rate. Nevertheless, the argument that PPP-adjusted incomes should always be used in preference to incomes converted via market exchange rates should be rejected, for conceptual and practical reasons. The practical reasons

concern the intractable problems of knowing what the PPP figures mean, especially for China and India, and before the early 1990s, for countries of the former Soviet Union. The conceptual reasons have to do with the fact that we may be interested in income and its distribution not only to measure relative total purchasing power (for which purpose PPP-adjusted income is a better proxy, *in principle*), but also to measure the relative purchasing power that residents of different countries have over goods and services produced in other countries. If we are interested in any of the questions about the economic and geopolitical impact of one country (or region) on the rest of the world – including the capacity of developing countries to repay their debts, to import capital goods, and to participate, avoid marginalisation in the international political economy – we should use market exchange rates. After all, the reason why many poor countries are hardly represented in negotiations that concern them directly is that they can't afford the cost of hotels, offices and salaries in places like Washington DC and Geneva, which must be paid in hard currency bought at market exchange rates, not in PPP-adjusted dollars.

To repeat, all the plausible measures of inequality using market exchange rates to compare incomes in different countries show that world income distribution has been stable or widening for the past several decades. It is plausible that this matters not only as a cause of the marginalisation of developing countries but also as a cause of trends in relative PPP-based living standards.

2.2 Purchasing power parity

Purchasing power parity (PPP) figures show trends in world income distribution that are more ambiguous than market exchange rate figures, and more conditional on precisely which combination of measures one uses. But the evidence does strongly support the following three propositions.

First, if one uses ratio measurements of inequality (such as richest to poorest decile) rather than the Gini or other measure of inequality over the whole distribution, then PPP-adjusted income distribution has become *much more unequal* over the past two decades, whether countries are weighted equally or by population. World income *polarisation*, in other words, has increased unambiguously.

Second, if one uses a measurement of the entire distribution and weights countries equally (China = Uganda), inequality between countries' average PPP-adjusted income has also *increased* since at least 1980. And if one measures inequality in terms of the dispersion of per capita GDPs across the world's (equally weighted) countries, this too *rose* between 1950 and 1998, and especially fast over the 1990s. The dispersion of per capita GDP growth rates has also risen, suggesting wider variation in performance among countries at each income level. One study using these dispersion measures concludes, there is 'no doubt as to the existence of a definite trend towards distributive inequality worldwide, both across and within countries' (ECLAC 2002, p 85).[17]

17. The dispersion of per capita GDP/PPP is measured as the average logarithmic deviation, the dispersion of growth rates as the standard deviation.

Third, if one uses a measurement of the *entire* distribution, and *weights* countries by population, inequality between the country averages has been *constant* or *falling* since around 1980. This is the result that Martin Wolf, *The Economist*, and many others celebrate. But it comes entirely from fast average growth in China and India. If they are excluded, even this measure of inequality shows inequality widening since 1980.

In any case, this last measure – the average income of each country weighted by population – is interesting only as an approximation to what we are really interested in, which is income distribution among all the world's people or households regardless of which country they live in. We would not be interested in measuring income inequality within the US by calculating the average income for each state and weighting it by their populations if we had data for all people or households.

One recent study makes an approximation to the distribution of income among all the world's people by combining between-country inequality in PPP-adjusted average incomes with within-country inequality. It finds that world inequality *widened* between 1980 and 1993 using all of four common measures of inequality over the entire distribution (and weighting countries by population) (Dowrick and Akmal 2002).[18]

A study of the most comprehensive set of data drawn only from household income and expenditure surveys (it does not mix data from these surveys with data from national income accounts) finds a sharp *rise* in world inequality over as short a time as 1988 to 1993, using both the Gini coefficient and ratio (or polarisation) measures (Table 3).[19]

Table 3: World Income Distribution by Households

	1988	1993	Per cent change
Gini	0.63	0.67	+6
Richest decile/median	7.28	8.98	+23
Poorest decile/median	0.31	0.28	–10

Source: Milanovic (2002)

18. They use between-country comparisons of 'true' PPP-adjusted incomes, complemented by the Deininger-Squire measures of within-country inequality. (They make the PPP adjustment with Sidney Afriat's 'true index' methodology designed to counter the upwards, 'developed-country' bias in the Summers-Heston price relativities.) With this methodology they find a slight increase in world inequality between 1980 and 1993 on four common measures of inequality: Gini, Theil, coefficient of variation, and variance of log income. Their results are, however, sensitive to assumptions made about Chinese PPPs, as are results from other authors.

19. Milanovic is currently working on 1998 data.

We have to be cautious about this finding partly because household surveys have the kind of weaknesses described above (though these weaknesses do not make them worse than the alternative, national income accounts, which have their own problems), and partly because the five-year interval is very short, suggesting that some of the increase may be statistical error.

What about the much-cited article by Dollar and Kraay (2002) of the World Bank that reports a sizable decline in worldwide income inequality since its peak in about 1970? Their underlying method is to calculate the percentage gap between a randomly selected individual and the world average. The bigger the gap, the more unequal the distribution of world income. The article reports that this gap peaked at 88 per cent of world average income in 1970, before falling to 78 per cent in 1995, roughly back where it was in 1950.

This study illustrates again how the conclusion about the trend in world income distribution depends on the choice of measures. Dollar and Kraay's choice flatters the result for the following reasons: (a) The person chosen as the random individual is most likely to be Chinese or Indian; (b) China and India have had much faster growth than the world as a whole over the recent period; (c) The gap between the income of the 'random person' (which is likely to have risen with the average income of China or India) and the world average has been falling; (d) But this does not straightforwardly suggest that world inequality has been falling, because it omits the increasing poverty of less populous countries (Africa), and because it omits rising internal inequality in both China and India (see below). In short, Dollar-Kraay's methodology weights heavily what happens in the *middle* swathe of world population and gives little weight (compared to other accepted measures) to what happens towards the lower and upper ends of the distribution.

By way of summary, a fourth proposition regarding PPP-adjusted incomes: the only set of measurements where the evidence clearly supports the liberal argument of falling inequality is the one using population-weighted countries' *per capita* PPP-adjusted incomes, plus a measure of inequality over the whole distribution. On the other hand, ratio measures show clear evidence of rising inequality (or polarisation), whatever the choices of other measures. And even measures of inequality over the whole distribution, when applied to either household survey data or to the combined inequality between countries and within countries (as distinct from only inequality between countries' average income), show a widening of inequality. We can conclude that world income inequality among households has probably been widening even when measured across the whole distribution, and emphatically so when measured in terms of the richest 10 per cent to the poorest 10 per cent.

2.3 China and India

China and India have grown fast over the past decade (India) or two (China) and together account for nearly 38 per cent of world population. If the figures are to be believed, China has experienced a quite extraordinarily fast rise in its average PPP income from 0.3 of the world average in 1990 to 0.45 in 1998, or 15 percentage points in only eight years. The biggest single issue in world income distribution is how

China and India have moved through the hump of world income distribution. Don't they create a presumption that world income distribution has become more equal over the past 20 years? Not necessarily.

First, recall the point made earlier, that the governments of China and India declined to participate in one (India) or both (China) of the benchmarking price comparison exercises, and therefore the PPP-adjusted figures for China and India contain an even bigger component of guess work than for most other countries.

Second, problems with the PPP adjustments aside, China's income statistics are manipulated in a (sometimes) blatant way. For example, in Table 4, China's level of GNP per capita converted to US dollars at market exchange rates was lower in 1998 than in 1997. However, according to the same World Bank database, China recorded a growth rate of 6.4 per cent between 1997 and 1998! These statistics are, clearly, inconsistent. Behind these numbers is a tale of the Chinese government's arm-twisting of the World Bank (especially after the allegedly accidental US bombing of the Chinese embassy in Belgrade in May 1999) to lower China's average income below the threshold of eligibility for concessional International Development Association (IDA) lending from the Bank. China wanted not so much the cheap IDA loans as the privilege extended to companies from IDA-eligible countries to add 7.5 per cent to bids for World Bank projects.

Table 4: China's GNP Per Capita (GNPPC) and Growth Rate

	1997	1998	1999
GNPPC (US$)	860	750	780
Annual growth rate of GNPPC (per cent)	7.4	6.4	6.1

Source: World Bank (1999, 2000, 2001b)

As further suggestive evidence: Chinese government figures show total real GDP growth of 25 per cent between 1997 and 2000, whereas energy consumption figures show a drop of 13 per cent. (Some of the fall may be due to replacement of inefficient coal-fired furnaces.) Again, government figures show annual real GDP growth of 7–8 per cent in 1998 and 1999. One analyst estimates the real figure at between –2 and +2 per cent (Kynge 2002b).[20]

Over the whole of the 1990s, China's annual growth rate is more likely to have been 5–6 per cent than the 8–10 per cent that the official statistics show. This one change (assuming constant internal distribution) would make a tangible difference to our conclusions about what has been happening to world income distribution. If the official figures are correct, and if we choose one particular combination of measures (rather than other plausible ones), world income inequality has narrowed.

20. Kynge is drawing on the work of Thomas Rawski.

If we use the more plausible lower range, virtually all the plausible measures of world inequality show no change, or a widening, even before China's widening *internal* income distribution is taken into account.

This brings up the other reason for being sceptical of the claim that China and India's fast growth is reducing world income inequality. Whatever reduction in world income inequality comes from relatively fast growth of average income in China and India may be offset by the widening income inequality within the two giants – though careful calculations of the relative strength of the two contrary effects have not yet been made.[21] China's surging inequality is suggested by the ratio of the average income of the richest to poorest province: 7 in the early 1990s, 11 in the late 1990s. The corresponding figure for India in the late 1990s was 4.2, for the US, 1.9.

2.4 Pay inequalities

More doubts are cast on the falling inequality hypothesis by a distinctly different kind of data – trends in industrial pay inequality within countries. Pay inequality within countries was stable or declined from the early 1960s to 1982, then sharply increased from 1982 to the present. 1982 marks a dramatic turning point towards greater inequality in industrial pay worldwide.[22]

Some might claim that these data are irrelevant because few of the world's poor earn wages that get reported. It is true that few of the world's poor are included in figures of pay, but not true that this makes pay dispersions irrelevant to the overall distribution of household incomes. The dispersion of industrial pay measures the difference in pay rates for relatively skilled workers in activities like petroleum refining, chemicals, machinery, and transportation equipment, and the pay rates for the relatively numerous, less-skilled workers in textiles, garments, food processing and similar activities. Workers in, say, garments, are readily recruited from the masses in agriculture or services, whereas workers in oil or machinery are not. For this reason of elastic supply, wages in the low-wage industries are likely to bear a close relationship to the wages of the uncounted masses, whereas wages in the high-wage industries are much less likely to have that relationship. Therefore, when the industrial pay dispersion widens, it is usually because low-wage workers in general are suffering relative to high-wage workers. (We can check this for some countries, including the US and China, and the broader national data sets for these countries bear this out. But they are not available on an internationally comparative basis.) When the pay data show rising inequality in Chile after the coup in 1973, or

21. Evidence for rising inequality in India over the past two decades is set out in Jha (2000). Deaton (2002) agrees that inequality in India has been increasing 'in recent years', and that consumption by the poor did not rise as fast as average consumption.

22. See the work of James Galbraith and collaborators in the University of Texas Inequality Project, available at <http://utip.gov.utexas.edu>. Galbraith has not yet attempted to calculate trends in world pay dispersions. Indeed, it is unclear what the appropriate country weights should be. For example, should the weights be calculated using per capita GDP, the absolute size of each country's manufacturing sector, or the per capita inequality between countries?

falling inequality in Iran in 1979, or rising inequality throughout Central Europe after 1989, it is clear that these measures reflect larger social phenomena beyond formal industry.

Their great advantage is that they are available, accurately and consistently, for many countries on an annual basis over many years, which is not true of the World Bank's inequality data set. (The Bank's data set does not do well on the laugh test – it shows Spain as the most equal country in Europe, France as much more unequal than Germany, and India and Indonesia in the same equality league as Norway.[23]) In short, the pay dispersions should not be disregarded, and they suggest a sharp increase in inequality since the early 1980s.

2.5 The bottom line

Several concluding points about world poverty and income inequality should be made at this juncture: First, all the thunder and lightning about trends can divert attention from what should be our central preoccupation, the sheer magnitude of poverty and inequality. For all the earlier caveats about the statistics, we can be confident in saying that roughly 85 per cent of world income (measured at market exchange rates) goes to 20 per cent of the world's population, 6 per cent to 60 per cent of the world's population. Can this meet any plausible test of distributive justice? It is difficult, for example, to see how it could meet the Rawlsian principle that a given degree of inequality is acceptable if it is somehow necessary for the worst off to be better off.[24]

A second striking feature is the limited mobility up and down the income hierarchy. Very few countries over the past several decades have changed their quintile in a ranking of countries' per capita income, and those few account for an insignificant proportion of world population (Korzeniewicz and Moran 1997, 2000).[25] If economic performance were as sensitive to pro-globalising or anti-globalising policies as the globalisation champions say, one would expect to find more mobility up and down quintiles. The lack of country mobility over several decades is a big fact in need of explanation.

On the trends themselves, the number of people in extreme poverty has a large margin of error and is probably higher than the World Bank says. Whether the trend since 1980 is up or down we really cannot say. But it seems quite plausible that the *proportion* of the world's population living in extreme poverty has indeed fallen.

As for world income distribution, it has certainly become more unequal over the past two decades if measured in terms of market exchange rates. Measured in terms of purchasing power parity (PPP) and in terms of *average* inequality (with the Gini

23 This is the Deininger and Squire data set.

24. Rawls thinks in terms of distribution within states (or 'peoples'), and claims, unconvincingly, that his principles support only meagre income redistribution beyond these units (see Caney (2001)).

25. The data relate to 1965–1990.

coefficient) it has *probably* either remained fairly constant or increased, almost certainly not decreased. Measured in terms of ratios, income polarisation has *increased*, even using PPP-adjusted incomes. A rising proportion of the world's population is living at the extremes of the world income distribution; and a rising share of the world's income is going to those at the top.

One other point is worth mentioning here. Our measures of inequality refer to relative income gaps, not absolute income gaps. We say that income inequality remains constant if the ratio of developing country income to developed country income remains at 5 per cent. But this of course implies a big increase in the absolute size of the income gap. Even if inequality falls by this measure the absolute gap may still increase. In the general case the absolute income gap between a country with average income of US$1 000 growing at 6 per cent and a country with average income US$30 000 growing at 1 per cent continues to widen until after the 40th year! Absolute differences should not be treated as irrelevant, as they generally are, for they too relate to important ethical values and to feelings of disempowerment and deprivation. China and India are reducing the absolute gap with the faltering middle-income states like Mexico, Brazil, Russia and Argentina, but they are not reducing the absolute gap between their average incomes and the averages of the countries of North America, Western Europe and Japan. In the world at large, absolute gaps are increasing fast and will continue to do so for several generations, of this we can be sure.

So what? Many people say that we should not be concerned about rising inequality, relative or absolute, provided the poor are not becoming worse off. This applies within countries and even more so to inequalities between countries. The question of whether we should be concerned about rising inequalities between countries needs a good deal more research than it has received.

On the face of it, the more globalised the world becomes, the more that the reasons why we might be concerned about within-country inequalities also apply to between-country inequalities. Educated people who earlier compared themselves to others in their neighbourhood or nation now compare themselves to others in much richer nations. In this way, the high and rising (relative and absolute) gap in incomes of the richest countries and the poorer ones is bound to affect the national political economy in the poorer states. It may, for example, predispose the elites to be more corrupt as they compare themselves to elites in rich countries and squeeze their own populations in order to sustain a comparable living standard. It may encourage the educated people of poor countries to migrate to the rich countries, and encourage unskilled people to seek illegal entry. It may generate conflict between states, and – because the market-exchange-rate income gap is so big – make it cheap for rich states to intervene to support one side or the other in civil strife. These effects may be presumed to operate even if relative income gaps are declining but absolute income gaps are widening.

3. Globalisation

Now let us examine the second main proposition of the globalists' argument, that globalisation – in the sense of rising integration of poorer countries into the world economy, as seen in rising trade/GDP, foreign direct investment (FDI)/GDP, and the like – is the world's most powerful means of reducing poverty and inequality.

Clearly the proposition is not well-supported at the world level if we agree that globalisation has been rising while income inequality and poverty have not been falling. But it might still be possible to argue that globalisation explains differences between countries: that more globalised countries have a better record of economic growth, poverty reduction and inequality reduction than less globalised ones.

Much of the evidence comes from World Bank studies. One of the best-known, *Globalization, Growth, and Poverty*, distinguishes 'newly globalising' or 'more globalised' countries from 'non-globalising' or 'less globalised' countries (World Bank 2002). It measures globalising by *changes* in the ratio of trade to GDP between 1977 and 1997. Ranking developing countries by the change, it calls the top-third the globalising or more globalised countries, the remaining two-thirds as less globalised countries or weak globalisers. The globalising countries are then found to have had faster economic growth, no increase in inequality, and faster reduction of poverty than the weak globalisers. The conclusion? 'Thus, globalisation clearly can be a force for poverty reduction'.

The first doubt to raise about this conclusion concerns the 'changes in trade/GDP' criterion of globalisation.[26] The list of 'globalisers' includes China and India, as well as countries like Nepal, Côte d' Ivoire, Rwanda, Haiti, and Argentina. As the cases of China and India suggest, it is quite possible that 'more globalised' countries are less open in terms of *levels* of integration than 'less globalised' countries; and also less open in terms of trade policy than 'less globalised' countries. A country with very high trade/GDP and very free trade could still be categorised as a weak globaliser. Indeed, it turns out that the globalising countries are mainly ones that initially had very *low* trade/GDP in 1977. Many of them also had relatively low trade/GDP at the *end* of the period, in 1997. To call them globalisers and countries with much higher ratios of trade/GDP non-globalisers is an audacious use of language.

The criterion shapes the conclusions. Excluding countries with high but not rising levels of trade to GDP from the category of more globalised countries excludes many very poor countries dependent on a few natural resource commodity exports, which have had very poor economic growth. The structure of their economy and the low skill endowment of the population make them very dependent on trade. If they were included as globalisers their poor economic performance would question the proposition that the more globalised countries have the best performance.

On the other hand, the inclusion of China and India as globalisers – whose good economic performance over the past one or two decades is attributed in large part to their globalisation – guarantees that the globalisers will show better performance

26. In this section I draw on the arguments made in Rodrik (1999, 2001).

than the non-globalisers. But two big facts question the Bank's argument. First, China and India experienced a sharp increase in the trend rate of growth about a decade prior to their liberalising trade and investment reforms. Second, they have followed policies far from those advocated by the globalists. They have been heavily protected economies. And even today the World Bank would be the first to denounce their current trade policies and internal market-restricting policies as growth- and efficiency-inhibiting if they had not been growing fast. Their trade barriers remain very high, and they maintain a selective approach to foreign direct investment.

Their experience, and that of Japan, South Korea and Taiwan earlier, shows that countries do not have to adopt liberal trade policies in order to reap benefits from trade and in order to grow fast (Wade 1990).[27] It shows only that as countries become richer they tend to liberalise trade, which is not the same thing. The sensible ones liberalise in line with the growth of domestic capacities – they try to expose domestic producers to enough competition to make them more efficient but not enough to kill them, which is very different from a presumption that trade liberalisation is a good thing and that the costs will be short term as resources shift to more productive uses. China and India today (Vietnam too), and Japan, South Korea and Taiwan earlier, suggest a policy prescription that is not close to what the Bank says, but nor is it 'anti-globalisation'.[28]

Yet for all the Bank study's qualifications (such as 'We label the top third "more globalised" without in any sense implying that they adopted pro-trade policies. The rise in trade may have been due to other policies or even to pure chance'), it nevertheless concludes that trade liberalisation has been the driving force of the increase in developing countries' trade: 'The result of this trade liberalisation in the developing world has been a large increase in both imports and exports' (World Bank 2002).

4. If Poverty and Inequality are Not Falling Despite Globalisation – Why Not?

If the number of people in absolute poverty is probably not falling and is probably higher than the World Bank says, and if income inequality is not falling and by several plausible measures probably rising, why? Not because of the failure of

27. As I document, many neoclassical economists have tried to argue that the economic success of Taiwan and South Korea is a function of their shift towards free markets, coupled with investment in education, law and order, and the like. They argue as though the only positive causal impact of a fall in tariffs from, say, 50 to 40 per cent is the 10 per cent fall, nothing to do with the 40 per cent that remains. They airbrush away the policies for building competitive industries and firms, some of which entailed some sectoral targeting.

28. The folly of presenting integration and openness as anything close to a sufficient condition of development is also suggested by the long experience of southern Italy, which operates in a completely free market with northern Italy but has an output and income gap with the north that has resisted determined state investment to reduce it (Wade 1982). I describe the fight between the World Bank and the Japanese government over appropriate development strategies in South East Asia in Wade (1996).

industrialisation in developing countries. If we take the share of GDP in manufacturing in each country and aggregate up to developing countries as a group and developed countries as a group, we find a remarkable convergence – developing countries as a group now have a *larger* share of GDP in manufacturing than developed countries (Table 5). But each additional increment of what is measured as manufacturing in developing countries is yielding less income, while each additional increment of what is measured as services in developed countries is yielding more income. This is quite contrary to the understandings of the 'modernisation' champions of the 1950s to 1980s, ancestors of today's globalisation champions. They thought that industrialisation was the route to development, and that (market-friendly) industrialisation would be the vehicle to carry developing countries to the living standards of the developed world. The failure of this prediction may help to explain why industrialisation as such is given little attention in today's development debates. It has virtually disappeared from the agenda of the World Bank.

Table 5: Share of Manufacturing in GDP
Per cent

	1960	**1980**	**1998**
Developed countries	28.9	24.5	19.8
Developing countries	21.6	24.3	23.3

Source: Arrighi and Silver (2002)

If we cannot say that income inequality has not fallen because industrialisation has not occurred throughout the Third World, what other factors might explain widening or at least non-declining income inequality? Differential population growth is one: population is rising several times faster in the low-income parts of the world than in the rich, raising the share of world population living in countries in the low-income zone. Falls in the terms of trade facing developing countries are another: the prices of industrial goods and services exported from high-income countries are increasing faster than the prices of goods and services exported by low-income countries, and much faster than the prices of goods and services produced in low-income countries that enter little into international trade. By regions, Latin America and Africa concentrate on export products that experience relatively slow-growing demand, while developing Asia has a higher concentration in export products with above world-average export growth, like machinery and equipment.

4.1 Spatial clustering of high-value-added activities

Underlying these patterns of trade and prices is a general property of modern economic growth related to spatial clustering. We know that some kinds of economic activities and production methods are more lucrative than others, have stronger spillover benefits (positive externalities), and more positive effects on growth and productivity; and that countries with higher proportions of such activities enjoy a

higher level of real incomes than others. We also know that in free market conditions (and not as a result of market 'imperfections') high-value-added activities cluster spatially; and that these poles are predominantly located in the already high-cost, high-wage zone of the world economy.

This – superficially surprising – clustering of new rounds of high-value-added activities in the high-wage zone, instead of shifting to a low-wage zone, occurs for several reasons. First, costs per unit of output, especially labour costs, may not be lower in the lower-wage – but also lower-productivity – zone.

Second, the 'capability' of a firm relative to that of rivals (the maximum quality level it can achieve, and its cost of production) depends on the knowledge and social organisation of its set of employees, where both knowledge and social organisation are collective properties of the firm rather than of the individuals who make it up; and where much of the knowledge and social organisation is essentially *tacit*, not able to be transferred easily from place to place in the form of (technical and organisational) blueprints or embodied in machinery (Baumol and Gomory 1992; Sutton 2000).[29] If a firm were to move to a lower-wage zone and some of its employees were not mobile, the costs to the firm's capacity, including the loss of tacit knowledge, may outweigh the advantages of relocation.

Third, manufacturing firms in the OECD countries are engaged in dense input-output linkages with other firms. (About two-thirds of manufacturing output in the OECD is sold by one firm to another firm.) The presence of a dense and spatially concentrated network of input-output linkages provides spillover (non-priced) benefits to other firms in the network. So does the presence of well-functioning factor markets and a supply of formally educated people able then to gain technology-specific (and partly tacit) knowledge at low cost. The transfer of tacit knowledge, whose economic value typically increases even as the ratio of tacit to codified knowledge goes down with computerisation, is sensitive to physical distance, social relationships, and cultural similarity. These network effects compound the tendency for any one firm not to move to a low-wage zone, or to move only its *low*-value-added activities by outsourcing or establishing subsidiaries.

All the more so because for many products and services, quality – and value added – goes up not continuously but in steps. Getting to higher steps may require big investments, critical masses, targeted assistance from public entities, long-term supply contracts with multinational corporations seeking local suppliers; and 'normal' market processes may keep producers and countries stuck at low steps. (To take an extreme example, ball bearings below a certain quality threshold are useless; they have to be given away.)

But this is still not the end of the story. At the next round the greater wealth and variety of economic activities in the high-wage zone mean that it can more readily absorb the Schumpeterian shocks from innovation and bankruptcies in the high-wage zone, as activity shifts from products and processes with intense competition to those closer to the innovation end, with less competition and higher returns. There is less

29. I continue to draw on these two papers throughout this section.

resistance to the 'creative destruction' of market processes, even though organising people to pursue common (resistance) objectives tends to be easier than in the low-wage zone. Enron may go bankrupt, but there are plenty more companies to take on its business and employ its employees.

These effects – plus limited labour movement from the low-wage zone to the high-wage zone when international borders intervene – help to explain a stably 'divided world' in which high wages remain high in one zone while low wages elsewhere stay low. The important point is that 'normal' free markets in a highly globalised world economy produce, 'spontaneously', a stable equilibrium division of activities between the high-wage zone and the low-wage zone – a stable equilibrium that is hardly desirable for the low-wage zone.

This mechanism can explain the reproduction of the income gap between developing and developed countries even as developing countries have eliminated the industrialisation gap (in terms of industrial output to GDP or industrial employment to total employment).

Empirically, of course, the picture is more complicated. We do see a rapid growth in the capabilities of firms – domestic and foreign – in China, and the early stages of China-based networks of firms dense enough to bestow sizable spillover benefits on individual firms and hence keep them in China and close to other participant firms even as cheaper wage locations open up. Technological learning (a proxy for capabilities) is proceeding at a furious pace in parts of China and east Asia, a more sedate pace in India, a snail's pace in most of Latin America, and even slower, if at all, in Sub-saharan Africa, the Middle East and central Asia (Amsden, Tschang and Goto 2001; Kynge 2002a; Mathews 2002; Mathews and Cho 2000). China and India are likely to experience a shift towards more internal income equality when they come near to full employment five to ten decades from now. But any such shift in the other developing regions is likely to be even further away.

Yet even about east Asia we should not get too optimistic. Only a miniscule portion of world R&D work is done in (non-Japan) east Asia; virtually all of it continues to be done in the developed countries of North America, Western Europe and Japan. Even Singapore, that looks to be an Asian center of R&D, does not do 'real' R&D; its R&D labs mostly concentrate on adapting products developed in North America and Europe for the regional market and listening in on what competitors are doing (Amsden *et al* 2001). So much for the 'globalisation of R&D'.

4.2 The international monetary system

The post-Bretton Woods (PBW) international monetary system generates financial instability and slow growth in the world economy 'endogenously', and particularly handicaps developing countries. Four features combine to produce this result:

1. The 'original sin' of not allowing economic actors to engage in international payments in their own national currency, requiring them to obtain hard currency, generally US dollars, for paying for imports or for repaying foreign loans.

2. *Private* foreign exchange markets and settlement systems – via private banks, not via central banks.
3. A fiduciary currency, the US dollar, as the main international currency, meaning a currency whose issuance is unconstrained by any supply-side factor (such as a US dollar-gold link).
4. Largely unrestricted capital flows.

This PBW system gives hard-currency (= some rich country) governments, above all the US government, a much freer hand than before to print money and incur fiscal and current account deficits. The amount of US currency in circulation and the size of total international reserves (mostly in US assets) have grown almost exponentially since the early 1970s, associated with rapidly rising trade imbalances and cross-border flows of short-term capital. These trade imbalances and short-term capital flows have become major sources of instability and slow growth in the world economy at large. In particular:

1. The US current account deficit is a 'facilitating condition' of the economic overheating and asset price booms in Japan, the east Asian Crisis countries, China and the US (Duncan 2002). Chronic deficits have caused an explosion of international liquidity (credit). They are financed by the sale of US assets (especially bonds of corporations and government-sponsored agencies like Fannie Mae, as well as stocks and Treasury bills). As they accumulate in surplus countries' banking systems, they have the same impact as high-powered money injected by the central bank into the banking system: they are deposited, lent, re-deposited, and re-lent many times over. They can easily blow out asset price bubbles and industrial over-investment, which end in recessions or depressions. This was the story of the Japanese bubble and crash in the second half of the 1980s and the 1990s, also the story of the east Asian bubble and crash in the 1990s, and China is currently well along this path. The continuing credit expansion being created by record US external deficits ensures that credit bubbles will blow out around the 'emerging market' world with much higher frequency than in the Bretton Woods era; and their bursting will cause bigger economic and social costs. As crisis-affected countries devalue their currencies in order to increase their current account surpluses (a practice sanctioned by the IMF and the World Bank), they make the systemic instability worse.
2. The PBW system makes foreign exchange markets prone to volatility, reflecting essentially speculative movements of funds related to changes in the prices of financial assets rather than to changes in demand for goods and services or costs of production, movements that are *pro-cyclical*, that amplify rather than dampen swings in economic activity.
3. The PBW system makes debtor countries (other than hard-currency ones) vulnerable to exchange rate volatility, because when the domestic currency falls in value the burden of debt service denominated in US dollars rises, which can tip domestic firms into insolvency.

4. The PBW system forces debtor countries (all except the US) to restructure their economies towards exports with which to earn the hard currency needed to pay for imports and to service debt, which can *short-change* domestic demand and national economic articulation (rising density of national, perhaps regional input-output linkages) as sources of growth.

The PBW system liberates the US government from concerns about what other governments do, while constraining other governments more tightly by what the US does. This is the great paradox of globalisation: debtor countries are generally not masters of their fate, but globalisation and the PBW monetary system allow the biggest debtor of all to harness the rest of the world to its rhythms. The system forces all countries to lend to the US at cheap rates, because they hold their reserves mainly in US public and private securities. Other countries' willingness to accumulate US securities (without redeeming them in the form of US-made goods and services) allows the US to continue living far beyond its means. The fact that the world's savings are flowing disproportionately to the US, the richest country, impoverishes everyone else, including the Europeans – European investment levels are held down because European savings flow to the US. On the other hand, the US's platinum credit card, on which it need only pay (low) interest, not principal, allows the US to invest heavily, to accumulate military armaments, and generally to accelerate the density of its hegemony.

In short, I have suggested that the benign effects of free markets as celebrated in the liberal argument may be offset by tendencies for high-value-added activities to cluster in areas of other high-value-added activities, which can create a stable division between a high-value-added, high-wage-zone, and a low-value-added, low-wage zone – even as ratios of manufacturing to GDP, total trade/GDP, and manufacturing exports/total exports rise in the low-value-added, low-wage zone. I have also suggested that this tendency for non-convergence may be compounded by something as apparently remote from matters of poverty and inequality as the international payments system. No doubt there are other basic drivers as well. By highlighting these two drivers I mean to illustrate how 'ordinary' market processes may operate to block the development process, suggesting the need for 'extraordinary' measures of intervention if sizable parts of the world's population are to catch up in living standards over the next half century or so.

5. Conclusions

To go back to the beginning: The globalists set up the debate with a Manichean dichotomy between pro-globalist and anti-globalist positions. My conclusions embrace elements from both. I agree with the globalisers that to raise the living standards of the world's poorer people economic growth is essential (but so are changes in our measures of economic growth to weigh environmental quality and public services properly). I agree that more open markets in the West for labour-intensive and land-intensive exports from developing countries would help, and that more foreign direct investment from the West, more technology transfer, are generally to be welcomed. Attempts at national self-sufficiency are foolish (though

few countries apart from North Korea are trying). Protectionist business associations and trade unions in the wealthiest countries, who claim that any threat to jobs must be because of 'unfair competition' from elsewhere, are generally to be resisted; and if industry-specific protection is granted in the wealthiest countries, it should be for a limited period and be accompanied by open access to foreign firms to establish their own production facilities in the country and compete against domestic firms in the same industry.

5.1 The trends?

On the other hand, I part company from the globalists in my reading of the trends in poverty and income distribution. My strong conclusion about the magnitude and trend in world poverty is that we must be agnostic, on the grounds that our current statistics are too deficient to yield a confident answer (though it is quite plausible that the *proportion* of the world's population in extreme poverty has fallen in the past two decades). My weaker conclusion is that the numbers are probably higher than the Bank says – though whether rising or falling over time we cannot say with confidence.

On the trends in income distribution my strong conclusions are that world inequality is increasing when incomes are measured in current exchange rates (and this is more relevant than PPP-incomes for judging relative impacts of one part of the world on others, including the marginalisation of developing countries). Income inequality is increasing too when PPP-adjusted inequality is measured in terms of ratios of richer to poorer, which better captures the idea of polarisation than the Gini or any other average statistic. My weaker conclusion is that the several other measures of income inequality yield more ambiguous trend results, and are more contingent on things like the precise time period and the precise countries included in the sample. But as I have shown, several recent studies, using different combinations of measures, countries and time periods, do find that world income inequality has clearly widened since the early 1980s. This evidence cannot be dismissed with a wave of the hand.

Finally, absolute income gaps between the West and the rest are widening, even in the case of relatively fast-growing countries like China and India, and are likely to go on widening for another half century, at least. No one disputes this, but globalists tend to focus on relative incomes only. I suggested earlier several kinds of negative effects likely to follow from widening absolute income gaps even when relative income gaps are falling.

5.2 The value on inequality?

I also part company with the globalists by giving higher priority to reductions not only in world poverty but also in world income inequality. This cannot be a direct objective of public policy, which has to focus on inequalities within nation states or (via trade rules, aid, etc) inequalities among states. But it can be taken as a higher-level objective and built into our measures of world development. We should

not accept the commonly heard assertion that widening world income inequality is not to be seen as a negative provided that 'real' indicators like life expectancy are improving and the proportion living in extreme poverty is going down.

5.3 Globalisation as the driver?

I again part company with the globalists over the proposition that globalisation is the driver of the allegedly positive poverty and inequality results. The point is not that 'globalisation' cannot be precisely defined for these purposes; it is that the definitions used in the 'globalists' studies do not survive scrutiny. In particular, the main World Bank studies, by defining globalisation in terms of *increases* in trade/GDP or FDI/GDP and ignoring the level, manage to include China and India as 'globalisers' and many highly trade-dependent but badly performing African countries as 'non-globalisers'. As I said earlier, this is an audacious use of language.

Having placed well-performing China and India into the category of globalisers, the Bank does not go on to emphasise that the economic policies of the main 'globalisers' – China in particular – are far from the core economic policy package that it has recommended over the past two decades. The disingenuousness brings to mind the *World Development Report 1987* (World Bank 1987) which defined 'strongly outward oriented' countries as those where 'Trade controls are either nonexistent or very low...There is little or no use of direct controls and licensing arrangements', then found that in a set of 41 developing countries for 1963–73 and 1973–85 the strongly outward-oriented countries had much better economic performance than the others (moderately outward, moderately inward, strongly inward). The strongly outward-oriented countries included only South Korea, Singapore and Hong Kong, or in effect, only South Korea, since the results were weighted by GDP. Only the most determinedly one-eyed advocate could say that South Korea in 1963–85 met the Bank's criteria for strongly outward-oriented trade policy.

5.4 The policies for catch-up

Evidence from the countries and regions that have succeeded in significantly reducing the relative and absolute income gaps with the West – to the point of rising above 50 per cent of the West's average income – suggests that the current development emphasis on openness, deregulation, privatisation and good governance is not likely to go with sufficient technological learning for a large demographic mass – think of 1 billion people – to move over the next two to four decades from material living standards less than a quarter of the West's to more than a half. Most of the now developed countries used more active measures to promote the growth of new industries at the time of their catch-up, and there is no reason to suppose that markets have changed to the point of making this unnecessary today (Amsden *et al* 2001; Chang 2002; Kozul-Wright 1995).

We must make a distinction between two senses of the word 'integration'. One sense is 'external integration', which is the meaning of 'integration' in today's

discussion. The other sense is 'internal integration', creating a national (or regional) economy with denser input-output linkages, a matter of much interest to development economists of the 1950s to the 1970s and since the 1980s largely dropped off the agenda of the international development community. The experience of the successful developers shows that 'export orientation' (external integration) and 'import substitution' (part of internal integration) need not be opposed, they can complement each other. The question of public policy is how to nurture competitive industries and upgrade technologies in existing industries – for example, how to use the power of the state to encourage supply linkages between subsidiaries of multinational corporations and domestic firms, and to encourage firms to invest in higher-technology processes sooner than they would in free market conditions without inter-firm coordination. If we are to slow down and even reverse the present tendency to widening absolute (and perhaps relative, depending on how measured) income gaps these questions must be returned to centre stage.

So too must the questions implied in my discussion of the PBW monetary arrangements. We should consider establishing – as an extreme option, the better to concentrate minds on more realistic improvements – a system that allows countries to make cross-border payments in their own currency, and that gives the central management role in international payments to public institutions – central banks and a new international clearing agency (D'Arista 1999). In this new architecture the key point is that banks receiving payments in foreign currency would be required to exchange them for domestic currency deposits at their national central banks; and the national central banks would in turn be required to present the foreign currency payments to an international agency for clearing. Net payments through the international agency would be debited or credited against a member country's reserve account (held in the country's own currency). Exchange rate changes would be made in-house in accordance with changes in reserves, at regular intervals. The exchange rates would reflect costs of production and demand for goods and services, not speculation against future movements. They would become an order of magnitude more stable than under the PBW system. This system, I suggest, could speed up the catch-up of developing countries, or hold them back less.

5.5 Exogenous statistics and exogenous research

The discussion about the potential bias in the World Bank's statistics on poverty should remind us of the dangers of having the Bank as the near-monopoly provider of key development statistics; and the discussion of the Bank's recent study of globalisation, growth and poverty should remind us of the dangers of having the Bank as the world's main centre of development economics research. The Bank is too committed to an 'official view' of how countries should seek development, too exposed to arm-twisting by its leading member states, too compelled to defend itself against criticism. It faces constant pressures from within and without for its statistics and its research to be made 'endogenous' to the debate.

The problem stems from the Bank's strategy for maintaining legitimacy. Lacking coercive power, it depends on 'voluntary' compliance. It seeks to bolster its

legitimacy – its chances of obtaining voluntary compliance – by appealing to 'technical' economics findings that show that the policies behind the Bank's market-opening conditionalities will generate higher growth and faster poverty reduction in developing countries, while also bringing benefits to the rich non-borrowing members in terms of better market access in developing countries. Mutual benefit must reign. Indeed, the more politically intrusive the Bank's conditionalities have become – the more its rich non-borrowing countries have required it to adopt policies that require borrowing governments to agree to politically sensitive things they may not wish to do ('participation' and 'indigenous peoples' protection plans' in China, for example, or rapid trade liberalisation everywhere) – the more the Bank must justify the conditionalities and policies on 'technical' grounds, as being thoroughly in the interests of the borrowing countries, as demonstrated by the best research using the best statistics.

In this light we can understand the apparent discrepancy between the *World Development Report 2000/2001* (World Bank 2001a), which said that the number of people in extreme poverty *increased* between 1987 and 1998, and *Globalization, Growth, and Poverty* (World Bank 2002), which said that the number of people in extreme poverty *decreased* between 1980 and 1998. When the first was being written in the late 1990s the key ideas-controlling positions in the Bank were held by Joe Stiglitz and Ravi Kanbur (respectively, Chief Economist and Director of the *World Development Report 2000/2001*), not noted champions of the Washington Consensus;[30] and at that time the Bank was trying to mobilise support for making the Comprehensive Development Framework the template for all its work, and hence emphasised the lack of progress in development in order to justify a new approach. By 2000/01 the Bank needed to defend itself against attacks from the US Congress and the Meltzer Commission; hence it wished to show progress in development. Also, both Stiglitz and Kanbur were gone by this time, and David Dollar, a prominent Bank economist, was in the ascendancy. He was chief author of *Globalization, Growth, and Poverty*. The data and the choice of methodologies seem to change with the people and the organisation's needs.

Data provided by a monopoly that are then used to judge the performance of the monopoly are doubly unreliable. We would not want Philip Morris' research labs to be the only source of data on the effects of smoking, even if the research could be shown to lie within the bounds of professional standards. At the least, the Bank should have an independent auditor to verify its main development statistics; or else the Bank should give up producing statistics and cede the work to an independent agency, perhaps under UN auspices, with a carefully specified contract. Much the same applies to the whole of the Bank's development research function.

30. See Wade (2002) for further discussion. This paper uses Stiglitz's firing and Kanbur's resignation to illuminate the US role in the Bank's generation of knowledge.

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A Stormy Day on an Open Field: Asymmetry and Convergence in the Global Economy

Nancy Birdsall[1]

1. Introduction

Openness is not necessarily good for the poor. Reducing trade protection has not brought growth to today's poorest countries, including many in Africa, and open capital markets have not been particularly good for the poorest households within many developing countries, including many of the emerging market economies of Asia and Latin America.

Too often, the word 'openness' has been used to embrace the entire scope of policies and outcomes that characterise a healthy economy. But this makes 'openness' unachievable from a policy point of view. Here, I use the word to refer narrowly to an open policy stance, the opposite of protectionism. Defined this way, 'openness' does not, unfortunately, guarantee growth, and in some circumstances it makes poverty reduction more difficult.

Many students of globalisation have remarked that certain countries and groups have been 'marginal' to the process.[2] It is less often remarked that many have remained marginal despite being, by some measures, 'open'. That this is so is of course perfectly consistent with the evidence that trade is good for growth and growth is good for the poor, since what is true on average need not be true for every country.[3] But it does put a different spin on that evidence, one that raises concerns about the way the global economy is working that proponents of market-led globalisation have tended to overlook.

The particular concern I want to emphasise is that globalisation, as we know it today, is fundamentally asymmetric. In its benefits and its risks, it works less well for the currently poor countries and for poor households within developing countries.

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1. President, Center for Global Development (nbirdsall@cgdev.org). I am grateful for the comments of participants in the G-20 conference, especially Benoît Coeuré, David Dollar and Edward Gramlich, and to William Cline, William Easterly, Carol Graham, Ruth Levine, John Nellis, Sonal Shah, and John Williamson. I am particularly grateful to Amar Hamoudi for his comments, redrafts, and his usual creative approach to exploiting available data.

2. A stronger statement is that the poor have been 'marginalised'. That word suggests or at least allows for some effort by some party to push the poor to the margin, and seems too strong an assertion, or at least an assertion that would be hard to document.

3. On growth is good for the poor, the recent study of Dollar and Kraay (2001) has been widely cited. See also World Bank (2001) on trade, growth and poverty. Ravallion (2001) shows that what is true on average is not true for every country or time period.

Because markets at the national level are asymmetric, modern capitalist economies have social contracts, progressive tax systems, and laws and regulations to manage asymmetries and market failures. At the global level, there is no real equivalent to national governments to manage global markets, though they are bigger and deeper, and if anything more asymmetric. They work better for the rich; and their risks and failures hurt the poor more.

In fact, we think of globally integrated markets as generally open and competitive, providing the paradigmatic level playing field. In the series of contests on this level playing field, there's plenty of room for disagreement and wrangling among teams (countries) about the rules and their interpretation and implementation. So the team owners constitute themselves members of a league (as in the World Trade Organization (WTO), the Bank for International Settlements and so on) and in the interests of the game they get together often to agree on the rules, adjust them to changing times, and manage their application.

The problem is that a level playing field and good rules are not sufficient to ensure competitive games. If some teams have better equipment, more training, and a long and successful history with money in the bank to sustain the investments that help them retain their advantages, then they are likely to win the league year after year. In soccer the big, powerful and wealthy teams tend to stay in the premier division, and the teams in the third or lower divisions rarely move up. In US baseball the richer, big city teams, such as the New York Yankees, tend to dominate year after year. In sports leagues, however, a lack of competition cannot persist for long. If the spectators lose interest the team owners lose money, so the team owners collaborate to implement rules that minimise the problem – such as the order of draft picks or caps on teams' spending on salaries. But here the analogy to the global market system breaks down because national governments face much greater obstacles to the kind of collaboration that team owners can manage.

Obviously a level playing field is insufficient to ensure competitive games if the rules of the game have been designed to favour one type of team over the other, or if the referee, in implementing sensible rules, consistently favours one side over another.[4] In the case of poor versus rich countries, the protection of agriculture and textiles by the rich is a good example of a rule designed to favour one type of team over another. Sometimes it is the interpretation or implementation of WTO rules that seems to favour one side. The interpretation of the TRIPs (Trade-Related Intellectual Property Rights) agreement (as limiting the use of compulsory licensing in public health emergencies) for a while reflected backdoor pressure of the United States on the referees. Then there is the case of antidumping. A few of the bigger teams have

4. Referring to unfair interpretation of trade rules, then-President Jorge Quiroga of Bolivia said in a recent speech at the Center for Global Development: 'We were out of shape, high deficits…high tariffs…We got in shape…we started practising…So we come in and score a goal with our foot and they say 'No, no, you can't do that, you can only score with your head.' And we're not very tall to begin with, so it's kind of tough. . .Then we score a goal from 18 yards away and they say, 'No, no, you can only score from 35 yards away'…huge agricultural subsidies that keep you out…And if you have a good midfielder, oops, red card, antidumping, he's selling too much, take him out…' The rest of his extended metaphor is available at <http://www.cgdev.org>.

players who are prepared to interrupt the game (crying injury!) when they are beginning to lose their advantage. Smaller teams are learning the trick too, but will never have the same resources to make their interruptions stick. (At some point the owners may have to tighten up the injury rule if they want to preserve the integrity of the game.)

In this note, however, I do not focus on the unfair rules and their imperfect interpretation and implementation (though that subject merits considerable discussion in itself).[5] Instead I concentrate on two more subtle shortcomings of open global markets for the poor. I state them here, continuing with the sports league metaphor, and in two subsequent sections discuss and document them.

First, openness in open global markets does not necessarily lead countries to grow (and growth is necessary if not always sufficient for reducing poverty). Like sports teams, countries without the right equipment are in trouble from the start – even on a perfectly level playing field. Countries highly dependent on primary commodity exports two decades ago provide a convincing example. Their particular training and equipment, in retrospect, seems to have condemned them indefinitely to the lowest division in the globalisation league.

Second, for weaker teams with the wrong equipment and inadequate training, openness may actually be dangerous. For weaker teams, bumps in the level playing field (market failures/negative externalities) are hard to handle. A ruined pass or a twisted ankle (on a rough soccer field) can be particularly costly, and the less experienced players on weak teams may be especially vulnerable.

2. Openness does not Necessarily Lead to Growth

Consider the situation of many of the world's poorest countries, including most of the poor countries of Sub-Saharan Africa. Many are highly dependent on primary commodity and natural resource exports. In Birdsall and Hamoudi (2002), we define a group of countries in terms of the composition of their exports in the early 1980s. Using data on exports for 115 developing and 22 developed countries for each year between 1980 and 1984, we classified all exports (except those in SITC 9 – 'unspecified' products) as primary commodities or manufactures. For each country in each year we then calculated the share of primary commodities in total (specified) exports. Developing countries that fell into the top-third of primary commodity exporters for at least four of the five years we labeled as 'most commodity dependent' (34 countries), and those that fell into that category for zero or one year we labeled as 'least commodity dependent' (72 countries). All the developing countries were in fact highly commodity-dependent, with the average share of primary commodities in total exports for the least and most commodity-dependent groups at 62 and 98 per cent respectively. More to the point of this paper, the most commodity-dependent countries (defined as of the early 1980s) have not been any

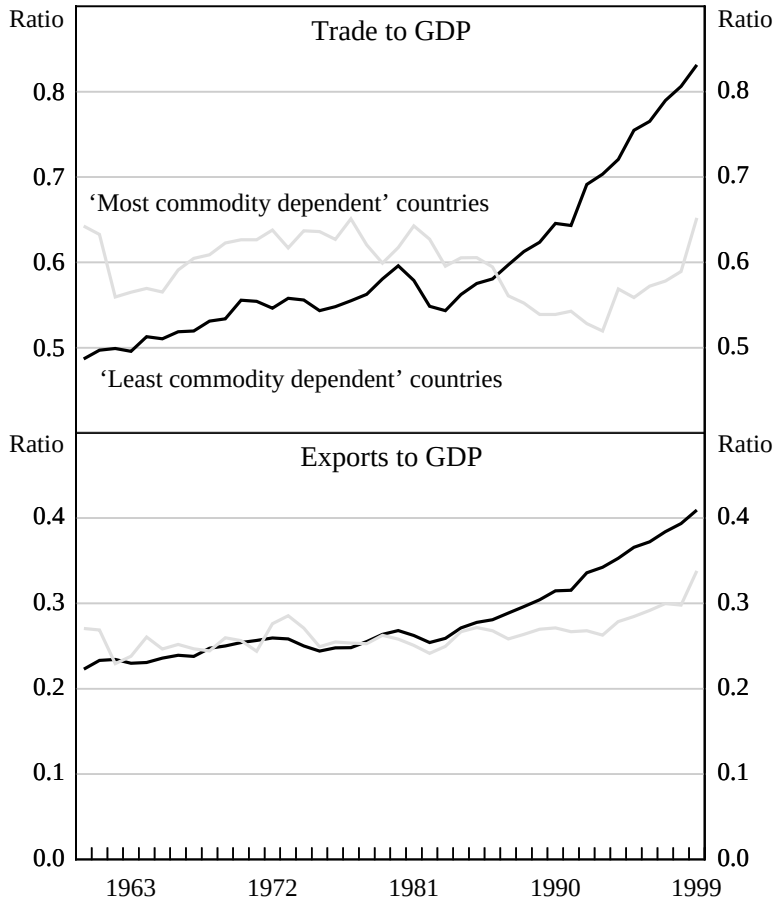
5. Though I do not agree with some of the details, the recent Oxfam report (Oxfam International 2002) on the effects of the rich countries' protected markets on the poor raises many of the right points, as did President Quiroga.

more reticent than the least commodity-dependent countries about participating in international trade. They:

- generally traded as much as countries in the category of 'least commodity dependent' between 1960 and 1980, if the level of trade is measured in terms of the ratio of exports plus imports to GDP (Figure 1);

Figure 1: 'Commodity Dependent' Countries and Participation in Global Trade

Measured in local currency units, unweighted average ratio



Notes: The averages shown here include only those countries for which data were available for all years between 1960 and 1999; therefore, only 11 of our 'most commodity dependent' countries and 35 of our 'least commodity dependent' countries, as defined in Table A1, are included. Allowing the sample size to vary by year in order to include all available countries in each year does not significantly change the results – especially the basic points that (a) until 1980 the two classes of countries were not particularly different in terms of 'openness' as it has been defined in the past, and (b) the trade to GDP ratio remained reasonably high even in the 'most commodity dependent' countries after 1980. For more details, see Birdsall and Hamoudi (2002).

- continued to participate in global markets in the period 1980–1995 by this definition, with an export to GDP ratio in the year 1999 similar to the ratio among the 'least commodity dependent' countries (Figure 1); and
- have been as open from a policy point of view as the 'least commodity dependent' group.[6] For example, their tariff rates have been at or below the rates of the least commodity-dependent group. For countries in the two groups for which we have data on tariff rates, the most commodity-dependent group cut their tariffs from an average of 24 per cent in the late 1980s to 17 per cent in the late 1990s; the least commodity-dependent countries cut their tariff rates more, but from a higher initial rate in the late 1980s to the same average rate in the late 1990s, i.e., from 29 per cent to 17 per cent (see Table 1).

Table 1: The 'Most Commodity Dependent' Countries have not Eschewed Global Trade

	Tariff rates	'Least commodity dependent' countries	'Most commodity dependent' countries
1985–89	Mean	0.29	0.24
	Median	0.22	0.30
	No of countries	45	20
1995–97	Mean	0.17	0.17
	Median	0.13	0.17
	No of countries	45	20

Notes: Mean and median tariff rates among the 'most commodity dependent' and 'least commodity dependent' countries. The commodity-dependence classifications are as shown in Table 2 of Birdsall and Hamoudi (2002). Tariff rates are as reported in Dollar and Kraay (2001). Tariff data are only available for 45 of the 72 countries in our 'least commodity dependent' classification, and 20 of the 34 in our 'most commodity dependent' classification. For more details, see Birdsall and Hamoudi (2002).

6. It is worth making a distinction between trade policies and what could be called 'trade infrastructure.' Winters (2001) notes that low tariff rates are misleading if they are unevenly and artificially applied, as in Uganda in the 1980s when there was dire conflict and considerable corruption by border and customs officials. But these kinds of barriers usually reflect not 'trade policy' or any policy intent, but poor governance and a weak state in general, leading to inadequate 'trade infrastructure', best thought of as a result of (endogenous to) a country's poverty and lack of growth.

But despite their substantial engagement in trade and the decline in their tariff rates, the most commodity-dependent countries have failed to grow, especially after 1980. They grew at lower rates than the least commodity-dependent group in the 1970s and 1980s, and have not grown at all since 1980 (Table 2).[7]

Table 2: The 'Most Commodity Dependent' Countries have not Grown

Average annual rate of growth of real PPP-adjusted GDP per capita		'Least commodity dependent'	'Most commodity dependent'
Growth during the 1980s	Mean	0.011	–0.009
	Median	0.005	–0.013
	25th percentile	–0.007	–0.024
	75th percentile	0.030	0.004
	No of countries	65	32
Growth during the 1990s	Mean	0.015	0.000
	Median	0.017	0.004
	25th percentile	0.000	–0.016
	75th percentile	0.032	0.016
	No of countries	68	28

Notes: Growth experience for the 'most commodity dependent' and 'least commodity dependent' countries. The classification of countries is as shown in Table 2 of Birdsall and Hamoudi (2002). Average annual rates of growth of real PPP-adjusted GDP per capita during the 1980s and during the 1990s are taken from the data set underlying Dollar and Kraay (2001), which the authors were generous to share. The samples do not include all 34 'most commodity dependent' and 72 'least commodity dependent' countries because some countries had to be dropped for lack of income data. In the 'most commodity dependent' group the observations which had to be dropped were: DR Congo (1990s), Liberia (1990s), Libya (1980s and 1990s), Saudi Arabia (1980s), Sierra Leone (1990s), Somalia (1990s), and United Arab Emirates (1980s); and in the 'least commodity dependent' group: Afghanistan (1980s and 1990s), Côte d'Ivoire (1980s), Djibouti (1980s), Guyana (1980s), Kiribati (1980s), Kuwait (1980s), Lebanon (1980s and 1990s) and New Caledonia (1980s and 1990s). All statistics are unweighted. For more details, see Birdsall and Hamoudi (2002).

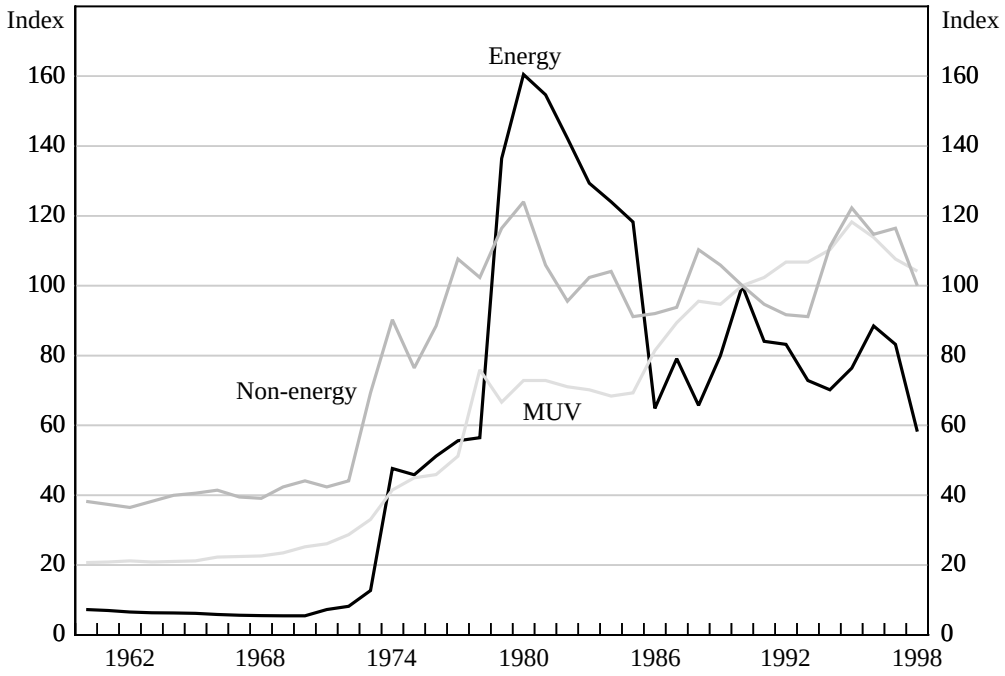
What happened? The countries that were most commodity dependent in the early 1980s entered that decade as relatively successful exporters of goods whose relative prices had been steady in the 1960s and increased rapidly in the 1970s (Figure 2). In the early 1980s, when the prices of their principal exports began to decline, their export revenue and capacity to import fell. Despite that decline in their terms of trade,

7. Our group of most commodity-dependent countries overlaps closely with the 'non-globalisers' in Dollar and Kraay's now well-known classification, as shown in Table A1. (The only 'globalisers' in our commodity-dependent group are Mali and Rwanda.) Their 'non-globalisers' were also 'open' in the early 1980s. However, their 'non-globalisers' are defined not in terms of countries' level of openness but in terms of their change in openness in the subsequent two decades. Non-globalisers are those where 'openness' did not increase in the last two decades (in comparison to globalisers where 'openness' did increase). Figure A1 compares the initial levels and trends using the two classifications.

they for the most part failed to diversify their exports. The problem may have been that producers and investors believed that relative prices would recover. More important, most of the countries dependent on primary commodities had accumulated debt; when the value of their exports fell, they lost access to additional borrowing and were forced to cut imports and unable to diversify. Figure 3 shows the large drop in their imports in the 1980s, and the relatively low level compared to the 1970s ever since. It is also likely that their infrastructure, governance, human capital and overall institutional setting were not propitious for diversification.

Figure 2: Primary Commodity Prices versus Manufactures Unit Value Index (MUV)

1990 = 100



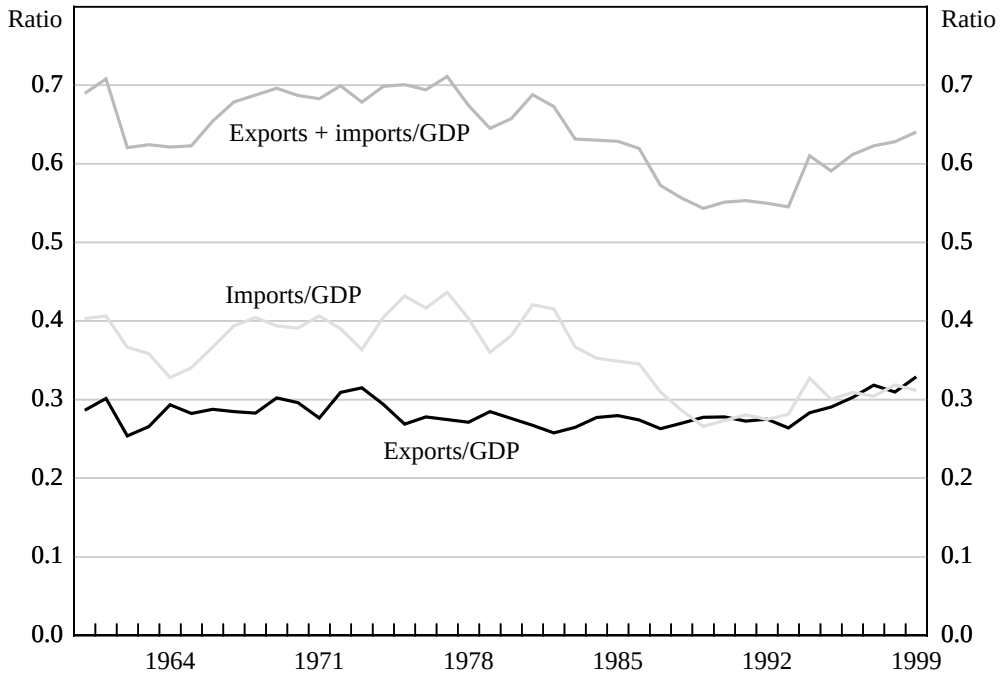
Source: Reproduced from World Bank (2000)

Whatever the reason, the fact remains that these countries have been 'open' for more than two decades – in the sense that they have been clearly engaged in global markets, and have reduced their own tariff rates. But with the value of their exports stagnating or even declining over the past two decades, their capacity to increase imports has been reduced. As a result, the amount of trade that occurs between these countries and the rest of the world has failed to increase relative to their GDP increases.

In short, their initial and continuing relatively high degree of openness has not bought them subsequent healthy rates of growth. Their lack of growth is apparently due to factors that have little to do with whether they are open, and much to do with their continuing dependence on commodity exports. In addition to the direct fiscal and import constraints, it seems likely that they are trapped in some sort of bad equilibrium, in which commodity dependence is associated with institutional

Figure 3: 'Most Commodity Dependent' Countries and Decomposition of the Changes in their Trade/GDP Ratio

Unweighted average ratios



Notes: The averages shown here include only those countries for which data were available for all years between 1960 and 1999; therefore, only 11 of our 'most commodity dependent' countries, as defined in Table A1, are included. Allowing the sample size to vary by year in order to include all available countries in each year does not significantly change the results – especially the basic point that these countries were forced to dramatically reduce their imports in the early 1980s in order to close their trade deficits when the prices of their main exports began to decline. For more details, see Birdsall and Hamoudi (2002).

failures[8] that have made escape from commodity dependence difficult. In settings where initial political and economic institutions are relatively weak, production based on natural resources appears to encourage predatory government behaviour and rent-seeking and to discourage development of the predictable, stable, democratic institutions that are conducive to growth. It also provides poor incentives for human capital investment, and discourages learning by doing, knowledge spillovers and increasing use of technology, at least compared to production of manufactured goods.[9] Of course there are other possible traps besides heavy dependence on

8. Highly commodity-dependent countries' difficulty in increasing their trade share may itself be bad for their governance. Krueger (1974) suggested that openness is likely to reduce rent-seeking; Ades and Di Tella (1999) show that a higher ratio of imports to GDP is associated with less corruption, and that a high proportion of fuels and minerals in exports is associated with more corruption. Wei (2000) shows that countries that are 'naturally open', including due to good geography, have better government institutions; corruption is negatively correlated with the difference between actual and predicted openness.

9. Birdsall and Hamoudi (2002) include a brief review of the relevant literature.

commodity exports in the early 1980s (though they may well be highly correlated with and reinforced by such dependence). Frankel and Romer (1999) present evidence of the effect of what might be called trade-enhancing geography (or conversely trade-reducing geography) on growth, including the effects of country size (small size is bad for growth) and landlocked status (bad). The impact of trade-enhancing geography on growth is large and positive, perhaps because good geography enhances not only trade itself but also other 'income-enhancing interactions' such as the spread of ideas.

To return to the sports metaphor, success in global markets depends on arriving at the game with the right equipment and training. Most of the countries with a comparative advantage in primary goods in the early 1980s (unless they already had developed good institutions) have not done well – no matter how open they have been – on the level playing field.[10] At least for the last two decades, their resources have turned out to provide the wrong equipment for the globalisation game.[11] This does not imply that these countries would have been better off with more protectionism – only that lack of policy openness is not the constraint to their future growth.

3. Openness May Be Dangerous

There is also evidence that the poor within countries benefit less (and may even lose in absolute terms) from openness in trade and in the capital account. Two issues are worth setting out: first, the relationship between openness in both trade and the capital account and volatility; and second, the effects of an open capital account on income inequality within countries.

3.1 Openness, volatility and the poor

For all countries, Easterly, Islam and Stiglitz (2000) show that both the ratio of trade to GDP and of the standard deviation of capital flows to GDP are correlated with volatility in growth rates. Their multivariate regressions of the volatility of growth across countries suggest that 'openness' (defined using the trade to GDP ratio[12]) leads to increased volatility. This is so especially in developing countries; the

10. This is obviously not true for all commodity-dependent countries – Botswana, Chile, and Indonesia, have had high average growth rates since 1980. But it does appear to be true for our 'most' commodity-dependent countries – those for which in the early 1980s more than 90 per cent of exports were primary commodities.

11. Moreover their failure to grow has apparently made it tough to acquire better equipment. This is the case even though some of the poorest countries have been receiving net annual transfers amounting to as much as 10 per cent of their GDP. Even discounting the value of net transfers to take into account that much of the aid has been tied and has come in the uncoordinated, and sometimes unpredictable, form of multiple projects financed by multiple donors, the failure to grow suggests that institutional problems have been paramount, and that dependence on commodity exports, if it has constrained growth, has done so for reasons beyond its disadvantages from a financial point of view.

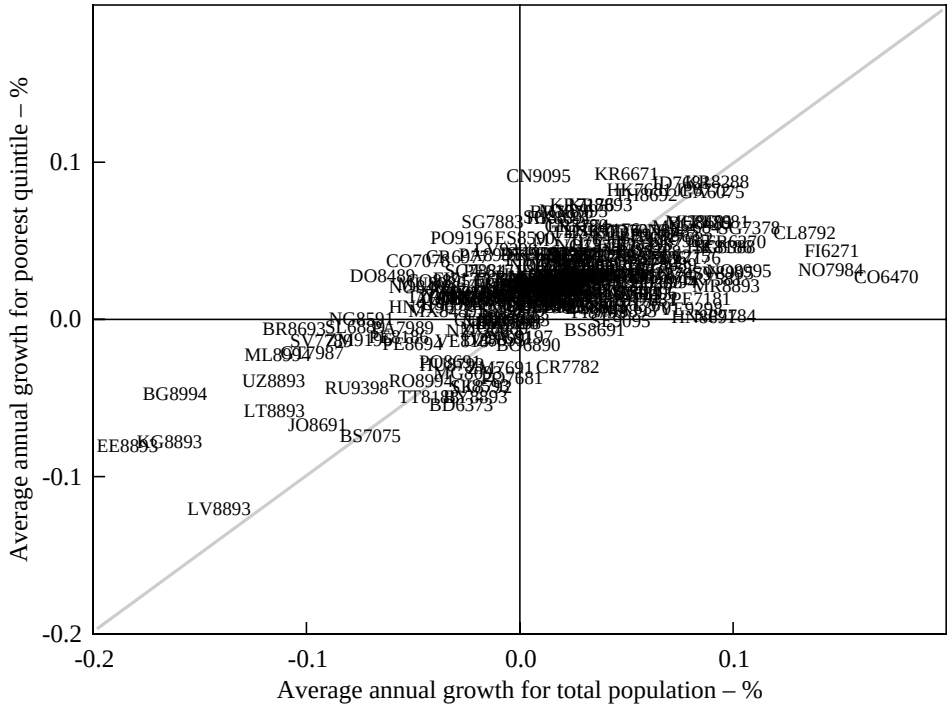
12. As emphasised and explained in Birdsall and Hamoudi (2002), the trade to GDP ratio is not meaningful as a measure of policy openness. What this finding really shows is that growth is more volatile in countries that run larger trade deficits, or have smaller populations, or are commodity- dependent.

effect is almost completely attenuated in rich countries. Though openness defined as private capital flows to GDP is not statistically significant, their indicator of financial depth (the ratio of credit to the private sector to GDP) appears to be key to reducing growth volatility. Again it is the developing countries that are vulnerable, with private sector credit to GDP of only 25 per cent on average, compared to 64 per cent in the OECD countries (in the Easterly *et al* (2000) sample).

Thus it is not surprising that the volatility of growth has been much greater overall in developing countries – more than twice that in OECD countries in the Easterly *et al* (2000) sample. Combined with lower mean annual growth (0.7 per cent with a standard deviation of 6.1 per cent, compared to 2.7 per cent for the OECD countries with a standard deviation of 2.6 per cent[13]), their downside volatility has clearly embraced some negative growth spells. Negative growth spells are in turn particularly bad for the poor.

Consider Figure 4, which simply uses data from Dollar and Kraay (2001) to plot the annual income growth rate of the poor on the average annual overall income growth rate for a sample of countries during various growth spells. The evidence suggests that though expansions are on average good for the poor, contractions are

Figure 4: Income Growth Rates for Poorest Quintile and Total Population



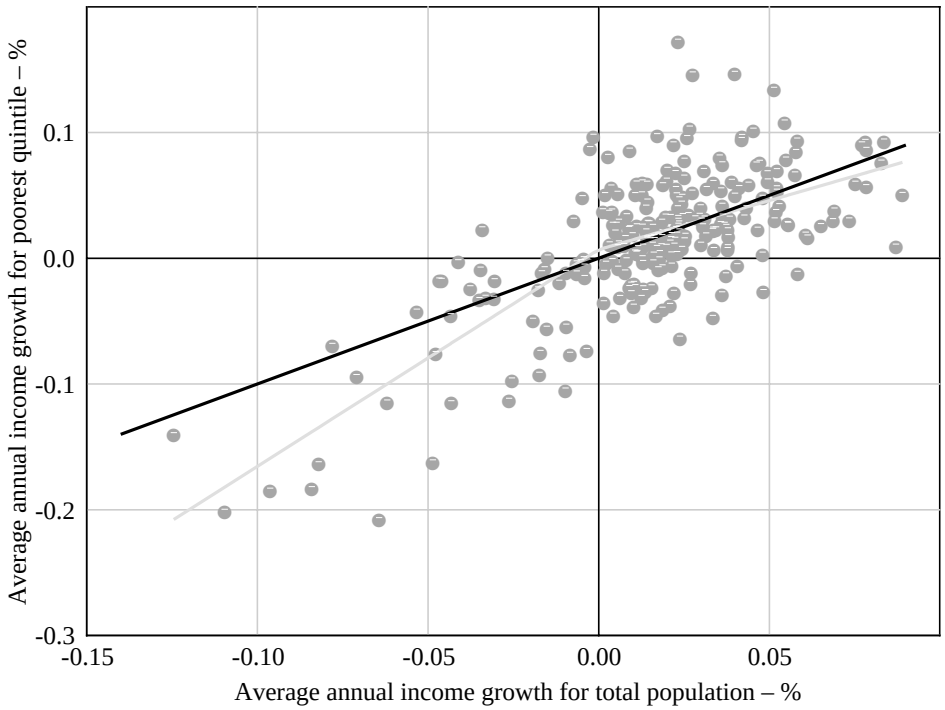
Notes: Data from Dollar and Kraay (2001) on average annual growth of the total population and average annual growth of the poorest quintile, identifying countries and time periods of 'growth spells'. The 45-degree line is drawn for reference.

13. Their sample includes 74 countries in a panel created by aggregating over the periods 1960–78 and 1979–97.

more than proportionately bad for the poor. Figure 5 shows the results of a simple OLS regression, including an interaction term[14] to distinguish the effect of contractions on the poor from the effect of expansions. The slope of the best-fit line in the southwest quadrant is about 1.6; in the northeast quadrant, it is only about 0.8. Of course, we must be mindful of the fact that the countries and time periods in the southwest quadrant are different from the countries and time periods in the northeast quadrant, and it may be that contractions and expansions in different places have very different effects on the poor. (The observations in the southwest quadrant include not only the growth spells in the transition economies of Eastern Europe and the former Soviet Union, but also spells in Mali, Peru, Brazil, Guatemala, Zambia, Jordan, Mexico, Honduras, Nigeria, and others.) This suggests an important

Figure 5: The Effect of Contractions on the Poor from the Effect of Expansions

OLS regression



Notes: Graphical representation of the results of a regression of income growth in the total population against income growth in the poorest quintile, with an interaction term to allow for differential effects of contractions as opposed to expansions. The regression includes 258 observations, and produces an R^2 of 0.54; the coefficient on average income growth is 0.78 (se 0.12), plus an additional 0.94 (se 0.24) in times of contraction. The intercept term is nearly at the origin (0.006, se 0.004). The standard errors given use the Huber/White/Sandwich estimator of the variance in order to be robust to heteroskedasticity, but are not corrected for possible serial correlation. The coefficient on income in times of contraction is significantly greater than one, implying that there may be a systematic correlation between contractions in average income and declines in the income share of the poorest quintile. The 45-degree line (black) is drawn for reference.

14. Dollar and Kraay do not include the interaction term that we use to distinguish negative growth spells.

qualification to Dollar and Kraay's findings about the *general* relationship between average growth and the share of the poor (see Table 3).[15]

Table 3: The Relationship between Growth and the Poverty Headcount may not be Symmetric – Distinguishing Contractions from Expansions Changes the Picture

Dependent variable: average annual proportional change in poverty headcount	Full sample	Only negative growth spells	Only positive growth spells	Full sample	Full sample, excluding EEFSU
Average annual income growth during spell	–2.161 (0.375)**		–1.008 (0.834)	–1.292 (0.770)	–1.620 (0.450)**
		–2.384 (0.655)**			
As above if above is negative; otherwise, zero				–1.490 (1.064)	–1.209 (0.832)
Constant	0.003 (0.022)	0.011 (0.058)	–0.054 (0.040)	–0.032 (0.033)	–0.042 (0.028)
Observations	125	46	79	125	109
R^2	0.25	0.19	0.03	0.26	0.33

Notes: OLS regressions relating average annual proportional change in the poverty headcount to average annual income growth. Data are taken from the data set underlying Ravallion (2001) and Chen and Ravallion (2000), which Ravallion was generous to share. The variable in row 3 is an interaction term of average annual income growth with a dummy indicating whether average annual growth was negative.

'Robust' standard errors in parentheses (using the Huber/White/Sandwich estimator of the variance). * and ** indicate significant at the 5% and 1% levels, respectively.

EEFSU: Eastern Europe and the Former Soviet Union

Openness, because it increases the likelihood of volatility, can therefore indirectly hurt the poor within developing countries. For example, Lundberg and Squire (1999), using country data on changes in income for different quintiles of the income distribution, report that the negative consequences of terms of trade changes are 'far greater' for the poorest 40 per cent than for the middle 60 per cent and wealthiest

15. Similarly, a regression of the average annual proportional change in the poverty headcount against average annual income growth (along the lines of Ravallion (2001)) indicates that the effects of contractions increase the number of poor more than the effects of expansions increase their numbers. The poverty headcount is about twice as sensitive to income contractions as it is to income expansions, though that may simply reflect the larger number of people above compared to below the poverty line (in, for example, a log-normal distribution of income).

40 per cent of households (overlapping groups), with that vulnerability, not surprisingly, exacerbated by a country's openness.[16]

In the case of trade, we observe that poor countries and poor people within countries can lose out when they enter markets that work, in which prices reflect reasonably well supply and demand. In the case of capital markets, the poor suffer because global markets fail, and interact with developing countries' relatively weak domestic markets and government failures in ways that increase risks.

The failures of financial markets are well known; the global financial crises of the 1990s were only the most recent in a long history of financial bubbles that have burst. Financial crises are not special to poor and emerging markets; but the crises of the last decade suggest that whether induced by domestic policy problems or global contagion (or the combustible mix of both), the same crisis can be more costly for relatively poorer countries, if only because their local financial markets are thinner and less resilient and local and foreign creditors more skittish than in deeper markets.[17] Indeed one of the ironies of globalisation may be that emerging market economies, if they are to exploit the benefits of a global market, simply cannot afford the policy errors and institutional weaknesses that are characteristic of being 'emerging'.

Despite those risks, the trend among developing countries over the past three decades has been toward greater capital market openness; the number of developing countries declaring their currencies convertible on capital account transactions increased from 34 (30 per cent of IMF member countries) to 143 (77 per cent) between 1970 and 1997 (Dailami and ul Haque 1998). It makes sense for countries that are capital-scarce to open their capital accounts, and in principle an open capital account could make it easier for a country to manage shocks. On the other hand, an open capital account in good times raises problems and in bad times makes it easier for capital to exit as well as enter, including due to an external shock such as a liquidity crisis elsewhere in a global market.[18] In emerging market economies, that has tended to reinforce a self-fulfilling loss of confidence. The problem for the poor is compounded because to restore confidence, emerging markets are forced to abstain from otherwise sensible countercyclical fiscal and monetary policy – and

16. Lundberg and Squire also conclude that the costs of adjusting to 'openness' have been borne '*exclusively*' (their italics) by the poorest 40 per cent of households. Their results are suggestive but not definitive since they use the Sachs-Warner index of openness, which includes country characteristics such as the black market premium that reflect outcomes of many policies and not just of trade policy itself.

17. Countries with a history of inflation, as is the case in the emerging market economies of Latin America, have the particularly grim problem that their bad history leads the markets to demand procyclical fiscal austerity during crises.

18. Including pressures on the exchange rate, a greater risk of asset bubbles etc. Chile-type disincentives to restrain short-term capital inflows, along with high reserves to protect economies during global crises can help, but these also imply costs to emerging markets that the 'emerged' economies need not bear.

therefore have difficulty sustaining the social insurance programs on which the poor necessarily rely during downturns.

We cannot conclude that openness is a principal cause of volatility, and certainly not that closing trade markets and the capital account would reduce volatility or increase growth. Indeed growth in the developing world could well have been even lower than it has been with less open trade and capital markets (although China and India have remained relatively closed they are large enough economies to have large internal markets). But neither can we deny that with greater average dependence on exports whose prices are volatile and on financial markets that are smaller and less resilient, among other problems typical of developing countries (thus they are 'developing' not developed), openness poses greater risks than it does for the richer economies, and is particularly risky for the poor within developing countries, especially to the extent that it increases the risks of negative growth spells and compounds the difficulty of managing a countercyclical social safety net.[19]

3.2 Open capital markets and inequality within developing countries

An additional problem is that open capital markets are likely not only to slow poverty reduction, but to contribute to persistent or even worsening inequality within developing countries, in particular increasing the income gap between the rich and other households. To the extent that open capital markets contribute to inequality, they may indirectly reduce growth, since in developing countries inequality seems to exacerbate the negative effects of weak capital and other markets on growth, and may contribute to social and ethnic tensions that make good management of the economy politically difficult.[20]

Less noted is the fact that open capital markets also seem to be associated with the persistence of income inequality. In part this turns out to be the case for 'good' reasons. For example, because capital and skilled labour are complementary, increased access to capital is likely to increase the returns to highly skilled labour and thus increase the wage gap between the skilled and unskilled. Behrman, Birdsall and

19. Regressions of spells of income growth for the poorest quintile across countries in the 1990s, on the openness of countries' capital account and other standard variables suggested no obvious association between capital openness and the changing shares of the poor. However the measure of countries' capital openness, available from the IMF, exists for only a single year late in the 1990s; there is no measure that I could find of the change in capital openness. And the measure used is probably crude. There has been much less effort to quantify openness of the capital account than of the trade regime.

20. For evidence that income inequality reduces growth in developing countries though not in developed countries (presumably because government and market failures are lesser in the latter), see Barro (2000). Birdsall (2001) discusses why inequality matters. Birdsall and Londoño (1997) emphasise that it is asset inequality, not necessarily income inequality itself, which is associated with low growth; they show that inequality of education and of land are associated with reduced growth across countries. See also Deininger and Olinto (2000). Aghion, Banerjee and Bacchetta (2000) suggest how unequal access to credit markets can reduce aggregate investment returns.

Székely (2000) report dramatic increases in the return to higher (post-secondary) education in most countries of Latin America, especially compared to secondary education. They test the effects of various liberalising economic reforms on the wage differential between the skilled and unskilled, using household survey data combined with country and year-specific indices of policy, across 28 countries of Latin America over several decades.[21] Their results indicate that capital account liberalistion (and domestic financial market liberalistion) are associated with an increase in the wage differential that is substantial for several years and then diminishes.[22] This market-led effect is not small, but in principle it should increase the demand for higher education as an equilibrating mechanism, and indeed that is likely to be happening in Latin America and worldwide.

More disturbing is the evidence of more patently non-market and 'unfair' disadvantages for lower-income groups associated with open capital markets. In Turkey, Argentina and Mexico, with repeated bouts of inflation and currency devaluations in the last two decades, the ability of those with more financial assets to move those assets abroad, often simultaneously acquiring bank and corporate debt that is then socialised and paid by taxpayers, has almost certainly increased inequality.[23] In east Asia, inequality of income increased (in Thailand and Malaysia, and probably in Indonesia) during the boom years of high capital inflows in the mid 1990s; as portfolio inflows and high bank lending fueled demand for assets such as land and stocks, inequality of wealth no doubt increased even more, though data on the distribution of wealth are not reliable (due mostly to under-reporting) and many of those who accumulated wealth no doubt lost much of it when the crisis hit. Still, some evidence suggests that the lower-middle and working classes in those countries were hit hardest by the crisis, especially in terms of lost employment[24], and to the extent the poor also lost out, their losses in welfare terms would be particularly great. In addition there is the likelihood that the high interest rates to which the affected countries resorted to stabilise their currencies – both in east Asia and then in 1998–99 in Brazil – also had a redistributive effect, hurting most capital-starved enterprises and their low-wage employees.

In addition, the bank bailouts that generally follow financial crises tend to create substantially more public debt relative to GDP in developing than in developed countries. Indonesia's recent financial crisis cost it 45 per cent of GDP.[25] The cost

21. They estimate differences in differences; the dependent variable is the difference between two survey points in the private rate of return to education for males aged 20 to 55. Their results demonstrate the relevance, and the limits, of Stolper-Samuelson.

22. Other reforms, including trade liberalisation and privatisation have a zero (trade) or negative (i.e. beneficent, for privatisation) effect. The short-term 'bad' effects of the financial and capital account variables are sufficient to ensure an overall 'bad' effect of an aggregate country and year-specific reform index.

23. Pfeffermann (2002) puts together the relevant pieces of data on crises and devaluations for Latin America, suggesting that if the rich can manage capital flight, they can exploit the crises.

24. Birdsall and Haggard (2000) present evidence on this point. Consumption levels of these groups were mostly preserved, presumably by their using savings and otherwise reducing their assets.

25. Author's calculations from World Bank (2002).

of crises in developing countries is usually over 10 per cent of GDP compared to below 5 per cent in the OECD. The US savings and loan crisis of the early 1990s cost an estimated 2–3 per cent of GDP (Norton 1997). The resulting high public debt in developing countries usually helps sustain high-income inequality, since public debt generally implies a transfer from taxpayers to rentiers. Even when depositors are protected, the distributive effect is probably perverse, as long as depositors are on average from higher-income households than taxpayers. That seems a good possibility in many developing countries, since they tend to rely heavily on indirect trade taxes and the value-added tax, which are not progressive. There is also the point that the poor benefit more from higher public expenditures, and the medium-term effect of the public financing of bailouts is to reduce public expenditures from whatever they might have been.[26]

Consistent with the story above, Diwan (2001) finds, using a panel of country data, that the share of labour in GDP usually falls sharply following a financial crisis, and recovers only partially in subsequent years. He suggests that the declining labour share reflects not only the relatively automatic asymmetry in the effects of crises to which I have referred, but also a 'change in the distribution rules' with crises. If the state feels compelled to bail out the banking sector (to avoid a run on deposits and a collapse in output), it is likely to be labour that in the short run finances the bailout through reduced employment and real wage cuts.[27] With capital able to shield itself more easily from the costs of adjustment, labour takes the brunt of the adjustment. His results are also consistent with our estimations above of the disproportionate effect of contractions on the income of the poor, assuming there is a correlation between effects on the labour share and effects on the poor.

4. Implications

That openness is not necessarily good for the poor does not imply that it is necessarily bad for the poor. Only that it all depends. It depends on the resolution of two existing asymmetries in the way the global economy operates. (In addition to these two asymmetries there is the problem that the powerful make and implement the rules, as the limited access of developing countries to certain rich country markets suggests. That problem, though politically difficult to fix, is conceptually straightforward, and even avid globaphiles would agree that change is needed.)

26. Take the case of Argentina. The public sector assumed substantial debt in the early 1990s when the convertibility policy was introduced, and this reduced its ability to finance greater spending on social programs throughout the decade; the same phenomenon is likely to repeat itself given the 2002 crisis.

27. The trigger can be a loss in public sector creditworthiness with confidence in the value of deposits eroding, as in Argentina recently, or private sector losses which the public sector ends up having to assume, as during the east Asian crisis.

First, some teams are trying to play without the right equipment. On a level playing field, participation in the game by ill-equipped teams does not provide an equal opportunity to win. Open markets (a level playing field) naturally reward most those who are well-equipped and trained – in economic terms those who already have the most productive assets. At the individual level, those with land, financial assets, and human capital naturally have a leg up. The analogue of these individual assets at the country level seems to be effective and stable political and social institutions, particularly deep financial markets – a characteristic still confined almost completely to the OECD economies. Countries that are already ahead, with deep financial markets, stable political systems, secure property rights, adequate banking supervision, reasonable public services, and so on, have a much higher probability of staying ahead. They are able not only to adjust and diversify their economies in the face of changing global opportunities, but to attract more local and foreign investment, better exploiting their own peoples' entrepreneurial energy and skills. Though it is true that, all other things the same, capital will flow to places where it is most scarce because those are the places where its return will be highest, and that therefore convergence in income across countries ought to happen, it is also true that all other things are not the same. Because they are not the same, as much as 80 per cent of all foreign investment occurs among the industrialised countries, and just 0.1 per cent of all US foreign investment went to Sub-Saharan Africa in 2000 (UNCTAD 2001).

Second, the global market is far from perfect. Its market failures create risks for all countries, but the risks are asymmetric – greater for the more vulnerable developing countries. The evidence is clear in their greater growth volatility, the higher cost to them of financial crises, and the special risk that their government and institutional failures will combine with weak markets to exacerbate and perpetuate high inequality – in turn reducing their growth.

These two asymmetries put the idea of convergence in the income and welfare of rich and poor countries, and of rich and poor individuals, at risk. The status quo of the global economy does not produce the equal economic opportunities for all that would justify the mainstream view that the current global regime will more or less automatically bring growth and poverty reduction to everyone – if only all countries would get 'globalised'. Like domestic economies, the global economy needs the civilising hand of appropriate intervention if we are to see a reduction in global poverty and increased income convergence across countries. What that appropriate intervention would be is too large and complex a topic to tackle here. But it would surely include more transfers from rich to poor countries than the current 0.3 per cent of the formers' combined GDPs (compared to transfers from rich to poor in the US more than 10 times as great), and more active management of such global problems as money laundering, tax evasion, sovereign bankruptcy, and capital flight, not to speak of global health and environmental issues. Because the market works and rewards more the more able and productive, the global economy would be enriched in the long run by a global social contract that financed equal opportunity investments

in the initially weak and disadvantaged countries.[28] And because the global market is ridden with the usual market failures, we need global arrangements that, via some mechanisms equivalent to the usual taxes, subsidies, and regulatory arrangements we have in modern capitalist economies, reduce the difference between individual country returns and the social return to the global economy and all its players.

Thus the discussion of whether globalisation and openness are good or bad for the poor should move on to a discussion of the appropriate global social contract and appropriate global arrangements for minimising the asymmetric risks and costs of global market failures.

28. Thus we have such institutions as the World Bank and bilateral development assistance programs. They tend to operate more in the spirit of charity, however, than as part of a global social contract in which both 'sides' benefit.

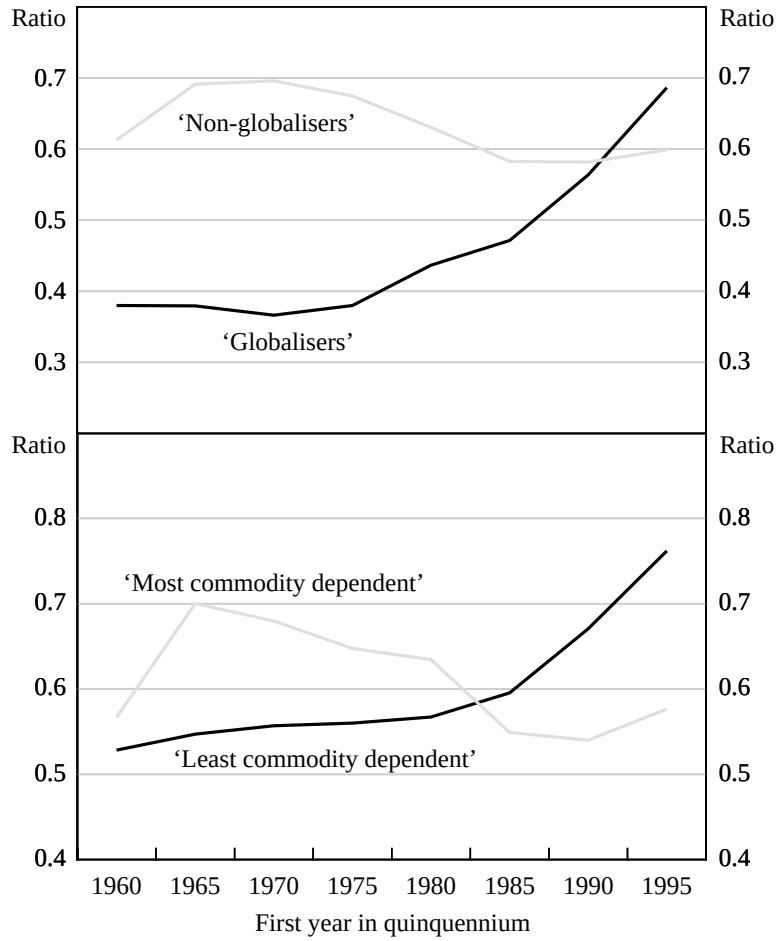
Appendix

Table A1: Highly Commodity-dependent Countries Tend to Appear Less Engaged in Global Trade

	Least commodity dependent (1980–84)	Most commodity dependent (1980–84)	Neither most nor least commodity dependent
Non-globalisers	Benin; Burkina Faso; Egypt; El Salvador; Fiji; Guatemala; Honduras; Indonesia; Israel; Kenya; Madagascar; Mauritius; Morocco; Pakistan; Peru; Senegal; South Africa; Sri Lanka; Syria; Togo; Trinidad & Tobago; Tunisia	Algeria; Burundi; Cameroon; Central African Republic; Rep Congo; DR Congo; Ecuador; Gambia; Ghana; Iran; Mauritania; Myanmar; Nigeria; Papua New Guinea; Sierra Leone; Venezuela; Zambia	Chad; Gabon; Guinea-Bissau; Malawi; Niger
Globalisers	Argentina; Bangladesh; Brazil; China; Colombia; Costa Rica; Côte d'Ivoire; Dominican Rep; Haiti; Hungary; India; Jamaica; Jordan; Malaysia; Mexico; Nepal; Nicaragua; Philippines; Thailand; Uruguay; Zimbabwe	Mali; Rwanda	Paraguay
Not included in Dollar and Kraay	Afghanistan; Albania; Barbados; Belize; Bhutan; Bulgaria; Cambodia; Comoros; Cyprus; Djibouti; Guyana; Hong Kong; Kiribati; Kuwait; Laos; Lebanon; Maldives; Malta; Mongolia; Mozambique; New Caledonia; Panama; Poland; Romania; Seychelles; St Kitts & Nevis; South Korea; Tanzania; Vietnam	Angola; Bahamas; Bolivia; Ethiopia; Guinea; Liberia; Libya; Oman; Saudi Arabia; Solomon Islands; Somalia; Sudan; Suriname; Uganda; United Arab Emirates	Bahrain; Equatorial Guinea; Yemen
Total	72 Countries (of which 43 included in Dollar and Kraay)	34 Countries (of which 19 included in Dollar and Kraay)	9 Countries (of which 6 included in Dollar and Kraay)

Notes: Reproduction of Table 2 from Birdsall and Hamoudi (2002). For detailed notes, see Birdsall and Hamoudi (2002).

Figure A1: Trend in Trade to GDP Ratios
Unweighted average during quinquennium



Notes: Reproductions of Appendix Figures A and B from Birdsall and Hamoudi (2002). For detailed notes, see Birdsall and Hamoudi (2002).

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Discussion

1. Benoît Coeuré[1]

Introduction

The second half of the 20th century has been marked by an unprecedented move towards worldwide financial and commercial integration. This integration has led to an overall rise of welfare. Economic theory has proved that trade generates considerable gains. These gains arise from the specialisation of each country according to their comparative advantages, and from their access to larger markets, which enable countries to benefit from economies of scale and to diversify their production. During the second half of the 20th century, world GDP experienced a six-fold increase while world population increased by only around 2.5 times. But the effect of globalisation on income distribution remains a debated issue.

Skeptical opinions are heard, in both developing and industrialised countries, be it in civil society or among economists, which denounce an increasing dispersion of income both within countries and between countries, ascribed to financial and/or commercial globalisation.

This debate matters for three main reasons. From the standpoint of ethics, the community ought to keep a watchful eye on both overall income disparities and the income levels of the poorest people in the community. From the standpoint of economic efficiency, income disparities on too large a scale can threaten the stability of growth and the integration of the most unprivileged populations. Finally, from a political point of view, the globalisation process can be accepted and legitimate only on the condition that everyone benefits from it.

This analysis presents methodological difficulties. First, globalisation covers a range of phenomena that have different consequences and act over different time scales. Second, measuring income inequalities is difficult: the different methods available lead to diverging perceptions of the phenomenon. On the whole, it appears that the evolution of inequalities in the course of the globalisation process exhibits some concerning features. To sum up the main facts:

- Income inequalities have apparently stabilised during the last two decades; but it should not hide the fact that inequalities have increased dramatically throughout the century. This discrepancy is mainly the result of growth differentials between countries. Africa is clearly the first hit in that respect.
- Beyond short or medium-term changes, the main ground for concern is the very high *level* of income disparities.

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1. This text sums up the main conclusions of a report written by Luc Eyraud for the French Treasury. We are grateful to François Bourguignon, Pierre Jacquet, Jean-Pierre Landau and Daniel Cohen for their comments.

- The number of people in extreme poverty remained stable during the 1990s.

The report aims at assessing whether the high level of inequalities is linked to globalisation and, in addition, at drawing possible ways to make the distribution of gains from globalisation more equitable.

Is globalisation creating inequalities?

Recent academic research demonstrates that globalisation undoubtedly generates wealth but that the distribution of this wealth among and within countries is at issue and seems unequal. More precisely, it seems that:

- Market opening is necessary, but is probably not sufficient to reduce inequalities between countries.
- Other things being equal, the opening also has redistributive effects within both developing and industrialised nations.

Globalisation and inequalities between countries

A direct link between trade opening and income inequality is hard to establish, both in theory and in facts. But the question is not to weigh up the pros and cons of trade opening. Undoubtedly, trade opening is an essential condition for convergence. However, its benefits do not show automatically:

- Opening generates opportunities for development, but seizing them is another issue. For example, history shows us that 'under-development traps' that prevent countries from benefiting from trade, can exist.
- Opening has its own costs and risks, which are unequally distributed among economic players (as demonstrated by the new 'economic geography' theories).

As a consequence, reducing inequalities requires trade opening, but not just of any sort. This raises the question of how the opening process can be conducive to a reduction of inequalities.

Inequalities within developing countries

Trade opening is essential for developing countries to catch up, and therefore for reducing 'within-country' inequalities, but it also can be seen as a shock that has consequences for domestic income distribution. In the end, does trade opening improve or reduce the living standard of the poor? According to classical international trade theories, opening reduces inequalities in developing countries, endowed with low-paid labour, because it prompts specialisation in areas that require comparatively more of these workers.

Empirical studies suggest that the increase in wealth brought about by globalisation delivers benefits to the overall income distribution, and thus improves the income of the poorest. This evidence leads to an optimistic assessment of globalisation. However, it takes more to assess globalisation's impact on internal inequalities

because it also induces indirect effects stemming from global shocks (such as AIDS, financial crises, collapses of commodity prices), which affect poor populations more seriously.

Inequalities within industrialised countries

There is a widespread consensus that unskilled workers are those who 'lose' from globalisation in the industrialised countries, because it makes the demand for their labour both lower and, according to some authors, more volatile.

The question is whether the decline in the demand for unskilled labour should be attributed to globalisation (through the competition exerted by developing countries, relatively more endowed with this factor) , or to the emergence of technical progress that is biased in favour of more skilled workers.

Academic research attaches more importance to technical progress. However, the two explanations are not exclusive. If globalisation reinforces a new division of labour that gives a central role to technical advances in the North, then it will aggravate inequalities. For example, this will happen if globalisation prompts the North to reallocate activities towards research and development and towards the production of high-value-added goods, which, because they require the mastering of technical skills, reduce the demand for unskilled workers.

However, new trends call for confidence in the future. The demand for low-skilled workers could rise under two forces:

- Technical advances (especially, information and communication technologies) can deliver benefits directly to unskilled workers. Indeed this underlies efforts by the international community to reduce the so-called 'digital divide'.
- Reactivity to the market, which becomes a key issue in corporate strategy, leads to a concentration rather than a relocation of activities.

Towards a more even distribution of the gains of globalisation

There are different ways to make the distribution of wealth more even by implementing appropriate economic policies.

Fighting inequalities between countries

How to minimise risks and costs, while benefiting from the opportunities provided by globalisation? The report identifies several conditions to be met by the opening process in order to enable developing countries to catch up on a stable basis:

- *A sound opening*: good governance and appropriate institutions to ensure the efficient functioning of markets (implementation of the standards and codes agreed by the international community, a sound financial system, creation of supervisory and competition authorities, participation in multilateral regulation bodies, etc) are essential to mitigate the shocks that open economies are exposed to.

- *A diversified opening*, with an aim to find growth-conducive market specialisations and to promote new information and communication technologies.
- *A cautious opening*: as far as capital flows are concerned, there is now a widespread consensus that the opening has to be progressive and conditional on the implementation of sound macroeconomic policies and an appropriate supervisory and institutional framework. Regarding the flow of goods, the opening process must ensure effective progress towards complete openness and eliminate rents, entrenched advantages, and economic inefficiencies, while preventing the shocks that weaken the poorest populations.
- *A reciprocal opening*: rich countries should open and provide developing countries with new markets (as illustrated by initiatives like 'Everything But Arms') and help these countries strengthen their trade capacities.
- *An opening accompanied* by international development aid. Aid must be better allocated and better used. It should support, in priority, countries where it will best be used, i.e., those with the best governance and where its allocation can be monitored. It must finance projects 'owned' by the recipient countries and which are embedded in a global development strategy; it must be managed more efficiently and in a more coordinated manner by donors; finally, its volume must grow to meet the infrastructure, education and health needs of developing countries.

Fighting inequalities within developing countries

Should we aim at fighting absolute poverty (a 'Rawlsian' criterion) or income inequality? Although it is difficult to settle the question, this report considers the reduction of poverty as the main objective: priority must be given to the improvement of the situation of the most vulnerable, who bear the cost of the opening process without taking advantage of its opportunities. Analysing the consequences of globalisation on the distribution of income on the whole is necessary, though only as a second step.

Therefore, the report advocates the implementation of policies targeted at the poor. These policies should aim at:

- giving the poor access to markets, as suggested by Sen, who stresses the importance of the inequality in opportunities. Policies against inequalities should favour economic, political and social integration of the poor; and
- reducing the exposure and vulnerability to risks of the poorest populations.

Aid must play a key role in the fight against 'within' inequalities, because these are not only related to internal causes. The poor are directly affected by factors that are beyond their control, and sometimes also beyond the control of their governments: fluctuations of the global economy, financial crises, the consequences of technical progress, pandemics, and regional conflicts.

Fighting inequalities within industrialised countries

Effective means of preventing the exclusion of unskilled workers are available to the governments of industrialised countries:

- In the short run, traditional income redistribution, support of the demand for unskilled work (for example, by lowering social security contributions for the lowest paid) and, particularly, encouraging return to work (for instance, by introducing earned income tax credits and by restructuring unemployment benefits to provide more incentives to work) can balance the effects of globalisation on unskilled workers, without challenging the functioning of the labour market.
- In the long run, the problem should be tackled at its root by raising professional qualification levels through initial and lifelong training, encouraging redeployment towards the most dynamic sectors of activity, and enabling the South to enjoy progressively the social standards of the North.

Yet, the issue of financing policies that counteract income inequality remains, especially when countries' tax bases are increasingly mobile. There is a risk that, ultimately, the less mobile segment of tax bases might be relatively more taxed, which would penalise the poorest. First, governments must aim at a sound management of public finances and at re-allocating their resources in accordance with their priorities, among which is the fight against inequalities. A certain degree of coordination is also necessary in the field of tax policies in order to fight the most harmful forms of tax competition.

In the very long term, in the prospect of an increasing integration of economies, analysis has to be carried out concerning various proposals of international levies meant to reduce global inequalities. Proposals already discussed publicly are, *inter alia*: levies on carbon dioxide emission, on arms trade, on international financial transactions, or the allocation of a fraction of corporate taxes on a global scale. However, the implementation of redistribution tools on a global scale should not be detrimental to economic and fiscal efficiency and to the continuation of opening.

2. Edward M Gramlich

I appreciate the hospitality in Sydney, and congratulate the Australians on having such a nice conference on such an important topic. I am a relative novice to the field of globalisation and inequality, but I found the three papers this morning very interesting and plan to bring in material from all three. Since this is a research conference and since I have not had a chance to show my remarks to others at the Fed or the US Treasury, my remarks represent only personal opinions, not official positions.

The papers ask two central questions:

1. Does openness lead to economic growth?
2. Does growth reduce poverty?

There seems to be little dispute about the second question but much about the first, so I begin there.

Does openness lead to growth?

The earlier view was that import substitution, numbers of factories and workplaces was the key to economic development. Sometime around 1980 most people became disabused of this opinion and changed their minds. But there has been a split on what they changed to.

The Dollar-Romer view, in Dollar's paper, focuses on innovations and their connections to globalisation. The internet, and technology brought in by foreign firms and learned by students studying abroad, are key transmission factors. The spread of technologies around the world eliminates the idea gap and permits emerging market economies to grow. Openness is important to emerging market economies, as are reductions in barriers to openness. But logically this view does not mean that openness without the technology spread will work and Birdsall shows why. She has pretty convincing evidence that commodity-dependent countries were open, but did not grow well. Moreover, capital account liberalisation can actually increase growth volatility, which can be especially damaging to the poor.

The theoretical opposite to the Dollar-Romer view can be found in Wade's paper. He stresses internal integration, input-output networks, supply chains and technology spillovers. He cites the industrial policies of Japan, South Korea and Taiwan as focusing on these networks and being highly successful.

Can we reconcile these views? Partly. It is not impossible to have both together – openness to ideas with some attention to internal integration. For example, US graduate schools had many students from Japan, South Korea and Taiwan in these countries' growth spurt periods.

Beyond that, I can see how openness would raise imports of capital, technology and ideas, constrict sheltered industries and promote growth – a basic lesson of European economic history. But I can also see, *à la* Birdsall, how measured openness could leave a country with just its earnings from a cash crop, leave it subject to the vagaries of world commodity prices, and never promote internal integration.

Similarly, I can see how industrial policies could work. But I can also see how industrial policies could get captured by politicians and turn into a gigantic rent-seeking machine.

The basic point here is that openness as such seems like a statistical instrumental variable, somewhat but not perfectly correlated with policies that are truly designed to stimulate growth. These policies are sensible monetary and fiscal policies, efficient tax systems, enforceable contracts, support of human capital investment and stamping out corruption. Openness is valuable to the extent that it enhances

these. But if it does not enhance these, openness as such may not be all that valuable. As Birdsall says, it all depends.

Poverty reduction

As said before, there is not much doubt that economic growth leads to poverty reduction. But there is an empirical debate on how much poverty reduction there has been. I'll let Dollar and Wade fight it out on that issue but I would like to make some methodological comments regarding the measurement of poverty reduction.

One involves poverty and inequality. Take a population mired in poverty, as much of the world was around 1980. How can it improve its status? By the economic equivalent of a magic wand moving the whole income distribution up? Probably not. By some countries getting lucky or following sensible policies? Probably more likely. But inequality statistics will show increased inequality when this happens by stretching out the right side of the income distribution. There are some times when inequality statistics might be very meaningful, but here is a case where they are not. For these cases analysts are better advised to focus directly on poverty reductions, which will give appropriate signals.

My second methodological comment refers to geography – the difference between a country and the world. Many papers use worldwide distributional statistics – line up everybody in the world according to their per capita income and compute Gini coefficients or some other distributional statistics. There may be some use for statistics like this but it reminds me of computing worldwide GDP. I've never seen anybody compute that and wouldn't know what to make of it if they did.

I would instead argue for measures that permit individual country data to be analysed separately. First, the data are of different qualities for different countries. Second, living styles may differ, family sizes may differ and the interpretation of per capita statistics could be clouded by family economies of scale. Third, and most basic, policies are made by individual countries, poverty line norms differ from country to country, public good provision differs from country to country and it makes sense to analyse different countries separately.

Civilising hand

Nancy ends her paper with a reference to a civilising hand designed to make openness work. Except that she doesn't say what she means by that. Let me try to fill in the blanks, separately for emerging market countries, developed countries and the rules of the game.

Emerging market countries

Emerging market countries are of course affected by external factors, but recent experience has shown that they can do a lot to put their own houses in order. They need proper fiscal policies to promote national saving and capital formation. They need efficient tax systems and a system of enforceable contracts. They need to limit

rent-seeking and corruption. They need monetary policies to promote low inflation. The real reason they cannot settle international accounts in their currencies, or borrow long-term in their currencies, is that the international community does not trust their currencies. There are plenty of things that emerging market countries can do to put their own houses in order, and many countries around the table are doing just that.

Developed countries

One can perhaps debate openness for emerging market countries, but not for developed countries. Developed countries should be open, period. They should eliminate trade barriers and subsidy programs. They should eliminate capital barriers and have generous aid policies. They should control their own rent-seeking politicians. I would even say that they should be open to immigration and when a developed country has an ageing population, this openness can be a win-win situation for emerging and developed economies alike. No developed country in the world is a perfect model, my own included, but we should all strive harder to achieve this goal.

Rules of the game

Beyond the requirements for individual countries, we should also strive for rules of the game that are fair to both parties. There are valid disputes on matters such as intellectual property rights but countries should be able to sit down and negotiate differences, perhaps ceding some sovereignty in the process.

None of this will be easy for any country. But it is important to make openness work for growth and poverty reduction in all countries.

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3. Masahiro Kawai

Introduction

Globalisation is a hot issue that has attracted considerable attention among policy-makers, international organisations, academics and researchers, mass media, and civil society from both developed and developing countries. While globalisation appears successful in raising the living standards of a large number of people in many parts of the globe, there is a concern that its benefits are distributed unevenly in favour of the rich and not the poor, that it has been widening the income disparity between rich and poor nations as well as between the rich and the poor within nations, and that it makes many developing countries vulnerable to the vagaries of global capitalism. Opponents of globalisation often argue that it has harmed developing countries by increasing poverty and exacerbating income inequality across nations and within nations.

Hence it is quite appropriate to: (a) explain how certain developing countries have successfully integrated themselves with the world economy; (b) establish statistical facts regarding economic growth, poverty conditions, and income distribution for both globalising and non-globalising developing countries; and (c) identify factors and policies that have led a certain group of developing countries to benefit from globalisation in the form of higher growth and poverty reduction, and those that have prevented another group from doing so. I would like to commend the organisers of this workshop for undertaking to tackle these complex issues.

David Dollar, a World Bank economist, and Robert Hunter Wade, an academic from the London School of Economics and Political Science, present and analyse data on poverty and inequality, discuss implications of globalisation for developing countries' economic growth, poverty and income distribution, and provide some policy lessons. They reach quite different assessments on the progress on poverty reduction and income distribution, with equally different policy implications.

David Dollar argues that globalisation has been accompanied by higher economic growth of poor countries, a considerable reduction in global poverty, and a modest improvement in global income distribution over the last 20 years. He cautions, however, that globalisation can be disruptive and has not always been accompanied by improvements in national income distribution. Progress made in a group of globalising developing countries – such as China, India, Vietnam, Bangladesh and Uganda – in terms of faster economic growth and significant poverty reduction has contributed to global inequality reduction, while Sub-Saharan African countries have not been successful in globalisation, growth or poverty reduction. He asserts that globalisation, if accompanied by complementary reforms of policies and institutions, is a driving force of economic growth and poverty reduction.

Robert Wade, on the other hand, throws serious doubt about the positive role of globalisation for reducing poverty and income inequality. He argues that poverty data are subject to such a large margin of error that the number of poor could be higher than estimated by the World Bank, and that world income distribution may have become more unequal over the past 20 years. He asserts that earlier successful globalisers, particularly those in east Asia including Japan and the Asian tigers, have not simply liberalised external regimes, deregulated domestic markets or privatised public enterprises in a way the 'Washington Consensus' might prescribe, but they instead opened their economies gradually and selectively and began to liberalise in line with the natural development of domestic industries. According to Wade, the key to success lies not in globalisation or external liberalisation, but in internal economic integration that focuses on spatial clusters and input-output networks among producers.

Though some aspects of the analyses by Dollar and Wade are mutually consistent with each other, the largest difference between the two lies in their assessment of data. I divide my discussion into four parts: issues on data and statistical facts; relationships among globalisation, economic growth, poverty and income distribution; the development experience in east Asia; and policy implications.

Data and facts

Five trends on poverty and income distribution

David Dollar presents five statistical trends on poverty and income distribution. Let me summarise them first and then introduce criticisms by Robert Wade:

1. *Poor country growth rates have accelerated.* During the period 1980–1997, the population-weighted average growth rate of the poorest one-fifth of countries in 1980 (4 per cent per capita per annum) has been higher than that of the richest one-fifth of countries (1.7 per cent per capita per annum). This is in contrast with the experiences for the prior two decades (1960–1980), where the growth rate for the poor group (1.8 per cent) was lower than that for the rich group (3.3 per cent).
2. *The number of poor people in the world has declined significantly, the first such decline in history*. Over the period 1977/78 to 1997/98, there has been a large net decline in the number of poor due to massive poverty reduction achieved in China and India, which more than offsets an increase in poverty in Sub-Saharan Africa. The only exception over the past 20 years is found for the period 1987 to 1993, when poverty in China and India rose due to temporary setbacks.
3. *Global inequality (among citizens of the world) has declined modestly over the last 20 years.* Global inequality, measured by indicators such as the global Gini coefficient, has declined modestly since 1980, reversing a 200-year-old historical trend toward higher inequality. Rapid growth in Asia (China, India, Bangladesh and Vietnam) has been a force for greater global equality because that is where the majority of the world's extreme poor lived in 1980 and they benefited from the growth.
4. *There is no general trend toward higher or lower inequality within nations; in particular, among developing nations inequality has decreased in about as many cases as it has increased.*
5. *Wage inequality is rising worldwide.* There is a general pattern of rising wage inequality, i.e., larger wage increases for skilled and/or educated workers relative to those for unskilled and/or less educated workers. This does not contradict Trend (4) because wages are a small part of threshold income in developing countries, which make up the bulk of the world in terms of countries and population.

Criticisms by Robert Wade

Robert Wade provides important criticisms against the statistical procedures employed by the World Bank, thus implicitly those by David Dollar. One of his criticisms is that it is virtually impossible to make accurate statements about progress on poverty reduction and global income distribution. The reason is that internationally comparable headcount estimates of the poor, i.e., the number of people whose consumption is below some pre-defined threshold level like $1 a day at purchasing power parity (PPP), are subject to the quality problem of national household

expenditure surveys, PPP estimates, and other assumptions and hence are very sensitive to changes in the underlying assumptions.

For example, international poverty data for a developing country are often constructed by using national data that are based on household expenditure surveys. For international comparison, a country's nationally defined poverty line, expressed in local currency, has to be converted into an internationally common unit of account like the dollar at the PPP rate. If this PPP-based poverty line is below or above the World Bank's threshold level, say $1 a day per person, then the number of people with consumption under $1 a day needs to be estimated using information on the distribution of individual consumption (or income) for the country. If the national poverty line is originally defined in terms of income, then a consumption-based poverty line needs to be redefined by using survey information on the difference between income and consumption of the poor. When new household surveys are not available for a country, poverty data need to be constructed by assuming that conumption (or income) distribution remains the same as in the last available survey and that the consumption of the poor has grown at the same rate as average consumption in the national income accounts data, which are available every year.

Wade forcefully argues that the poverty headcount in developing countries is thus very sensitive to: the precise level of the national or international poverty line because consumption distribution in the vicinity of developing country poverty lines is typically flat; the PPP conversion rate used because the implied consumption basket may be inappropriate for the poor due to the inclusion of many non-essentials that are cheap in developing countries but are irrelevant to the poor; and the assumed rate of change in the consumption of the poor – which tends to be overestimated, particularly in Asia – because there are large discrepancies between consumption estimates from household expenditure surveys and estimates from the national income accounts. Based on these observations, Wade claims that the margin of error is so large that one does not have definitive knowledge as to whether there has been real progress on poverty reduction, and that the number of people in extreme poverty is probably much higher than the World Bank's estimate, thus rejecting the view that there has been a significant decline in the absolute number of poor in the last 20 years.

Wade also rejects the well-accepted (at least among economists) notion that for making international comparisons of standards of living and assessing global income distribution, PPP rates should always be used, but instead insists on using market exchange rates. He reasons that there are intractable problems associated with the PPP figures and that the data need to capture the economic and geopolitical impact of one country on the rest of the world. Based on market exchange rates, he claims that world income distribution has become more unequal over the past 20 years. Even when measured in terms of PPP, he claims that world income inequality has worsened as long as countries are weighted equally, because this procedure minimises the bias posed by the fact that China and India dominate statistical results.

What do we get?

Despite data deficiencies, as noted by Wade, the preponderance of statistical evidence appears to support the proposition that a group of 'globalising' developing countries that have successfully integrated their economies with the rest of the world has achieved faster economic growth and significant poverty reduction. Assessment of global poverty conditions and the global income distribution is more complex because it involves various types of aggregation problems. Nonetheless, if countries are population-weighted and incomes and consumptions are expressed at the internationally comparable PPP dollar – which is a well-accepted procedure for many economists – there has been a reduction in both poverty and income inequality at the global level.

For a better international comparison and aggregation, however, comparable data on incomes, consumption, income distribution, and poverty must be collected and analysed. The quality of national household expenditure surveys must be improved, the surveys' national coverage expanded, and their frequencies raised. More accurate data on income/consumption distribution need to be obtained or constructed within each developing country. Better estimates of PPP conversion rates need to be constructed to better reflect the typical consumption basket of the poor.

It must be noted that any chosen threshold for poverty lines, for example $1 a day at PPP, is not fully satisfactory because there is no significant difference between consumption of $0.99 and $1.01, and the distribution of the poor around the threshold level is flat. Given that the measure does not capture the shape of the income distribution around the $1-a-day threshold, it would be desirable to provide additional information such as the number of poor for the threshold of $2 a day at PPP.

Relationship among globalisation, growth, poverty and inequality

Dollar and Wade agree that there is no definitive relationship among globalisation, economic growth, poverty, and income inequality. Nancy Birdsall (this volume) also states that globalisation is not necessarily good for growth, for the poor, or for fair income distribution.

All we know is that there must be sustained economic growth for systematic poverty reduction, that is, sustained growth is a necessary – though not a sufficient – condition for countrywide poverty reduction. Without economic growth, there will be no poverty reduction. On the other hand, even in the presence of economic growth, poverty may not be reduced if the growth is not accompanied by higher demand for unskilled labour. Economic growth accompanied by the development of labour-intensive sectors, particularly in manufacturing, is likely to result in poverty reduction. Poverty reduction is only possible through raising the rate of return on assets the poor have or have access to, such as unskilled labour and small plots of land. The challenge is how developing countries can exploit the opportunities provided by globalisation to generate economic growth and employment for the poor.

Growth, poverty and global inequality

On the relationship between globalisation and growth, Dollar claims that openness to foreign trade and investment is likely to lead to faster growth in developing countries if accompanied by complementary reforms. For example, cross-country statistical analyses generally find that countries with greater trade openness have higher growth after controlling for reverse causality from growth to trade. Firm-level studies also reveal that open economies are more innovative and dynamic – if accompanied by privatisation, deregulation and greater competition – due to higher entries, exits, and turnover of firms. In contrast, Wade argues that there is no serious evidence that opening to trade – lowering tariffs and other barriers – generally results in subsequent faster growth, holding other factors constant.

As noted by Dollar, five successful globalising countries (China, India, Vietnam, Bangladesh and Uganda) have all benefited from increased integration in terms of faster economic growth and significant poverty reduction. Faster growth and significant poverty reduction in these countries contributed to a reduction of global income inequality, while slow growth in most of Sub-Saharan Africa contributed to a rise in global inequality. The net result is a modest global decline in inequality with the former outweighing the latter.

The net results from the average are important, but it would be more informative to uncover what is happening behind the average. The relevant questions are: why have certain countries such as China, India, Vietnam and Bangladesh been successful in generating growth and poverty reduction under globalisation and why have others, such as most of the Sub-Saharan African countries, not done so? The issue here is not only whether and how countries have implemented external liberalisation policies and other complementary policy reforms – such as domestic deregulation and institution building – but also how they have overcome unfavourable initial conditions (such as low levels of industrial infrastructure, poor geography, poor health, and poor human resources) and nurtured private sector development.[1] The challenge is how developing countries can create a favourable investment climate that can generate growth and employment.

National income inequality

One of the common claims about globalisation is that it leads to greater inequality within nations and hence fosters social and political polarisation. Dollar finds that changes in national income inequality are not related to any of the measures of globalisation. For example, greater trade integration is associated with rises in national inequality in some countries and declines in others. Among the five successful globalisers, only two (Vietnam and Uganda) have achieved an improvement in income distribution in favour of the poor.

1. Private sector development is often led by private investment in labour-intensive manufacturing and services industries.

One may argue that national income inequality induced by globalisation may be a natural phenomenon that takes place in the course of economic development and structural changes. For example, in a labour surplus economy, the real income of unskilled labour hardly rises, and thus, at early stages of economic development there can be rising inequality under globalisation. Labour, capital and other productive resources naturally migrate away from less productive sectors/areas of the economy to more productive ones. Income inequality facilitates such resource re-allocation and would eventually be eliminated in the long run. So, one may argue that there is nothing to worry about it. Nonetheless, to the extent that rising income inequality becomes a potential source of social and political instability, there is room for public policy to mitigate the negative effects of development under globalisation through social protection and investment in education and health.

The east Asian development experience

The early successful globalisers in east Asia – including the high-income industrialising economies (Singapore, Hong Kong, Korea, and Taiwan) as well as the middle-income ASEAN countries (Malaysia, Thailand, Indonesia and the Philippines) – achieved rapid economic development and remarkable poverty reduction over the last 30 years. China and Vietnam have been following similar patterns of development. East Asia's historical experience reveals that three essential elements contributed to their successes:[2]

- political stability, sound policies, the right institutions, and national ownership;
- outward orientation with a focus on private sector development and the investment-trade nexus; and
- effective development assistance.

Political stability, sound policies, the right institutions and national ownership

First, political stability, sound policies, and the right institutions played an essential role in the economic development process in east Asia during the two to three decades leading up to the financial crisis in 1997–98. Needless to say, the crisis has revealed inadequacies and weaknesses of economic institutions – particularly in the financial and corporate sectors – across crisis-affected east Asia, which should have been strengthened through appropriate regulatory and supervisory frameworks in a way commensurate with the pace of globalisation. Nonetheless, the east Asian economies had, until the age of financial globalisation, institutional and governance capabilities that facilitated sustained growth, rapid development and poverty reduction. The presence of sound policies, the right institutions and stable and predictable policy regimes were particularly important.

2. Some of these elements, but not all, and others have been analysed in the World Bank's study, *The East Asian Miracle: Economic Growth and Public Policy*, Oxford University Press, New York, 1993.

In addition, the east Asian economies had clear national ownership over long-term economic development programs and structural reforms. The rigorous implementation of policy and institutional reforms backed by national ownership was an important driver of successful economic development. Strengthening institutional capacities and human resources was indispensable in their efforts to enhance national ownership.

Outward orientation, private sector development and investment-trade interactions

Second, the east Asian economies embraced the notion of globalisation by adopting outward-oriented policies with emphasis on private sector development and investment-trade linkages. Many of them initially focused on import substitution and then shifted to export promotion. A major mechanism for export sector growth was through the expansion from sales in domestic markets to sales in international markets. Successful domestic market development was made possible by product and factor market integration and the creation of spatially concentrated clusters of firms, supplier networks and distribution systems. This provided the basis for successful export expansion. Export expansion in turn helped each economy overcome the limits of the domestic markets and foreign exchange constraints, promoted learning and technology upgrading, economies of scale, and production networks. It was also accompanied by the liberalisation of imports, foreign direct investment (FDI), and the use of foreign technologies and ideas. Formation of regional FDI-trade linkages has been a natural consequence of their market-based, outward-orientated policies.

These east Asian economies emphasised the role of investment – in capital equipment, human resources, and market knowledge – and its nexus with trade as a basis for sustained economic development. Their governments focused on the creation of a favourable investment climate, reduction of the risks and uncertainty of investment activity, and ensured the availability of finance for productive investment opportunities. Their pro-growth development strategy was supported by the mutually reinforcing interactions between investment and trade. Investment – by both domestic firms and foreign multinationals – and trade stimulated each other, thereby contributing to output growth. Output growth in turn stimulated further investment and trade.

Effective Official Development Assistance (ODA)

Third, external development assistance was used very effectively in east Asia. The number of people living in extreme poverty (i.e., below $1 per day at PPP) in east Asia declined substantially from 450 million in 1990 to 260 million in 1999. The amount of ODA that east Asia received during this period totalled US$78 billion, or less than US$8 billion per year on the average. This ODA performance in east Asia is outstanding. It helped to achieve more rapid economic growth and poverty reduction than in any other part of the developing world. For example, a total of US$166 billion was disbursed as ODA in Sub-Saharan Africa during 1990–99 but the number of poor rose (from 240 million to 300 million) rather than declined.

The reason behind the successful ODA performance in east Asia was that it was used as a catalyst to support the broad, nationally-owned development programs. These programs focused on overcoming unfavourable initial conditions – particularly low levels of industrial and social infrastructure such as power, telecommunications, transport, water, health and education – of the recipient countries, providing them with a basis for pursuing private sector-driven, outward-oriented, pro-growth strategies. ODA in east Asia essentially helped create a favourable investment climate and interacted positively with the recipient countries' political stability, stable macroeconomic policies, predictable business environments, and right institutions.

Policy implications

On balance, globalisation can be a driving force for economic development and poverty reduction if accompanied by complementary policy and institutional improvements, and a good investment climate. Nonetheless, globalisation can aggravate national income inequality, and be disruptive, thereby producing winners and losers.

Need to improve the quality of data

There is clearly a case for obtaining, or developing, better statistical data on incomes, consumption, poverty, and income distribution in developing countries. In order to make objective, internationally comparable assessments about national and global trends in poverty conditions and the distribution of income, there is an urgent need to improve the quality, coverage and frequency of national household expenditure surveys, to obtain more accurate data on income distribution within each developing country, and to construct accurate estimates of PPP to better represent a reasonable consumption basket of the poor.

Maximising the benefits and minimising the costs of globalisation

There is no way to stop the globalisation process. Doing so would be highly counterproductive. If globalisation provides significant benefits as well as costs, policy-makers should focus on how to manage the process of globalisation, by maximising its benefits and minimising its costs. Table 1 summarises the benefits and costs of globalisation for developing and developed countries.

The discussion so far has focused on 'real' globalisation, that is, integration through trade and FDI with the world economy. In practice, it is quite important to make a clear distinction between 'real' and 'financial' globalisation, the latter referring to integration through financial sector opening and capital account liberalisation. Financial globalisation calls for greater care on the part of policy-makers, because it can amplify shocks and increase turbulence affecting the country, as was witnessed in east Asia in 1997–98. Sequencing of liberalisation, provision of financial safeguards, and the choice of exchange rate regime are some of the other policy issues that the authorities must pay attention to.

Table 1. Benefits and Costs of Globalisation

	Benefits	Costs
Developed countries	• Greater efficiency of resource allocation • Greater consumer benefits	• Pressure for domestic industrial adjustment and dislocation • Potential for greater domestic income inequality • Potential for loss of policy autonomy
Developing countries	• Access to developed countries' product markets, capital, technology, and knowledge • Greater efficiency of resource allocation if accompanied by structural reforms	• Potential for greater domestic income inequality • Greater vulnerability to external shocks

Implications for developing countries

If a country wishes to benefit from globalisation by liberalising trade and FDI regimes, it must not only establish a nationally-owned development strategy and pursue a variety of complementary structural reforms – including privatisation, deregulation, and greater competition – but also strengthen the capacity of policy and institutions to manage economic and social risks due to globalisation, including social protection and financial safeguards. Simply maintaining sound macroeconomic policy and pursuing external liberalisation and domestic deregulation is not enough for this purpose. A country must go beyond the Washington Consensus and focus on wide-ranging reforms of institutions and policy frameworks and strengthen market infrastructure so as to be able to benefit from globalisation at smaller costs.

In addition, the country must set market-friendly environments for private sector activity, particularly private investment, by ensuring political and social stability, increasing business predictability, establishing the rule of law and property rights, and providing necessary industrial infrastructure. Globalisation can be beneficial if accompanied by internal economic integration, leading to the creation of a dense and spatially-concentrated network of input-output linkages among firms and entrepreneurs, which can provide spillover benefits to the rest of the economy. Though Robert Wade puts greater emphasis on the importance of internal market integration, both external and internal integration should deepen simultaneously and interact with each other.

At times, globalisation can be disruptive, by forcing certain industries to shrink and others to prosper, which may call for public policies (social protection, investment in education and health) to mitigate these negative effects. The provision of social safety nets should be an important component of structural reform policy under globalisation because it cushions the damage done to the most severely affected, it helps the momentum of these reforms, and it avoids a backlash against the distributional and social consequences of globalisation. Where informal social safety nets based on families and communities play an important role, the public sector must find a complementary mechanism to support the existing informal arrangement.

Implications for developed countries

The developed countries can help developing countries benefit from trade and investment openness by maintaining a liberal trading system and providing market access to their exports of agricultural and labour-intensive manufacturing products. For this purpose, the developed countries must be ready to accept industrial adjustment on their part by making their labour markets more flexible. Transfers of production technology and organisational skills through FDI are also crucial to enabling developing countries to accumulate knowledge and participate in the innovation process.

Given that many developing countries had disadvantageous initial conditions, developed countries should extend ODA to assist them to overcome these unfavourable initial conditions and pursue private sector-led development under globalisation. As the east Asian experience demonstrates, ODA can have a greater positive impact, in terms of economic development and poverty reduction, on the recipient economies if it stimulates private investment and trade and leads to economic growth.

4. General Discussion

The papers by David Dollar, Robert Wade and Nancy Birdsall generated wide-ranging discussion. Among the most important issues discussed were: the nature of the appropriate policy recommendations for developing countries to raise their living standards; the extent to which uncertainties about trends in poverty and inequality cast doubt on these policy recommendations; the effects of globalisation on the observed trends in poverty and inequality; whether openness was a necessary or sufficient condition for developing countries to improve their living standards; whether trade liberalisation should occur before capital account liberalisation; what institutional features were required in developing countries to realise the potential gains from liberalisation; and whether concerns about income inequality across (and within) countries should be secondary to the goal of reducing global poverty.

Some concern was expressed that the imperfect data used to estimate poverty and inequality for developing countries make it difficult to draw confident conclusions about longer-run trends. The point was also made that time spent debating trends was time lost addressing the question of how to reduce absolute poverty and/or global inequality. In response, one participant agreed that considerable uncertainty would always remain about the total number of people in the world living in absolute poverty, but argued that the total number had almost certainly fallen over the past couple of decades, and that this reversal of a long-standing trend was encouraging, newsworthy, and yet not widely recognised.

The question of what role globalisation had played in generating the observed trends in the global distribution of income then generated a discussion about the nature of policies that developing countries should pursue to raise their average living standards, and particularly the living standards of the poor. One participant pointed to the re-unification of East and West Germany as a good example of how the integration of two economies with different levels of productivity could raise living standards in the low productivity economy. Another participant argued that developed countries had in the past used a range of policy interventions in industry, education, and trade that had assisted their development, and suggested that ruling out these policy options for currently developing countries would have unfavourable implications for their future growth. That position was challenged, however, with a warning against policies that encouraged developing countries to 'pick winners', on the grounds that industry policy was not necessary for convergence, that it could encourage countries to favour industries in which they did not have a comparative advantage, and that industry policy had a poor track record in developing nations. Finally, one participant suggested that despite disagreement about precisely what role government should play in developing-country economies, the complete absence from the historical record of any autarkic success stories was striking, and strongly suggested that linkage with the global economy was a crucial ingredient for economic success.

It was widely agreed that openness alone was not a sufficient development policy. Some participants expressed scepticism about the proposition in Nancy Birdsall's paper that openness to trade and foreign direct investment flows could be bad for growth in countries heavily dependent on commodity exports. One participant questioned the classification of a number of commodity-dependent countries as 'open', arguing that factors such as inefficient ports and corruption in customs services served to raise barriers to trade, and lock developing countries into commodity dependence. Another suggested that it was not commodity dependence *per se* that was bad for growth, but a lack of commodity diversification, which left many developing countries particularly vulnerable to shocks.

Another feature of this discussion was participants' keenness to differentiate between different types of openness. Some participants argued that capital account liberalisation should be considered separately from trade liberalisation, and that developing countries should proceed cautiously with the former, especially when institutions were weak, or the macroeconomic environment was unstable. One participant also argued that policy-makers should broaden their definition of

openness. First, it was argued that openness as an outcome (summarised, for example, by the ratio of trade to GDP) should be distinguished from openness as a policy, because it was possible to have an open trading regime and yet still have a relatively low ratio of trade to GDP. Second, countries could in principle pursue policies such as targeted industry assistance (which was argued to have occurred in the 'Asian Tigers') and still be described as 'open', provided the transfer of technology and ideas to the domestic economy was encouraged.

In emphasising the point that openness might not, by itself, generate higher growth rates in developing countries, it was argued that good governance was important in providing an economic environment conducive to investment both by domestic firms and by foreign firms that facilitated technology transfer to the domestic economy. Good governance was interpreted quite broadly by most contributors to this discussion, and included institutional features such as democracy, the maintenance of law and order, contract enforcement, and measures designed to reduce corruption. It was also suggested that raising the skill and training levels of the domestic workforce was vital to building and maintaining institutions, as well as framing policy, and that aid should be targeted at assisting developing countries to build this capacity.

Another issue that sparked debate was whether high levels of inequality across (and within) countries should be of as much concern as absolute poverty. Putting this debate in stark terms, one participant remarked that reduced inequality within developing countries was presumably not desirable if it was accompanied by lower absolute living standards for the poor. Another raised the experience of Ireland as an example of a country where income inequality had risen significantly in the recent times, but because economic growth had been so strong, almost everyone was much better off, and hence there was little debate about inequality at all. Another participant drew a distinction between two different types of inequality: constructive and destructive inequality. Inequality was constructive, it was argued, when income differentials acted as an incentive for people to work, invest, and educate themselves. Destructive inequality, by contrast, arose if wide income differentials were a consequence of unequal access to services such as education and health, which limited the opportunity for some groups to raise their living standards. Because only destructive inequality had deleterious implications for growth, it was important to determine which type of inequality (if any) globalisation was connected with, before policies to reduce inequality were recommended.

Some also observed that the starting point of inequality in particular countries was relevant to judging the acceptability of subsequent trends. Some rich countries had relatively low inequality but incentive-damaging tax and transfer systems which needed reform, and some relatively poor former command economies also had low levels of inequality that were not readily compatible with the structural changes and economic modernisation they wanted to achieve.

Another topic of discussion concerned the role of multilateral institutions (including the IMF and the World Bank), as well as individual developed countries, in creating an international environment in which developing countries could thrive – including

assisting financially constrained countries with help to develop effective domestic institutions. One participant remarked that as developing countries became more open to flows of goods and money, they would also become more vulnerable to international crises (such as the Asian crisis). To maintain support for liberalisation within the developing world, it was therefore important for institutions such as the IMF to work on crisis prevention, and to properly manage crises if they arose.

Finally, it was pointed out that inadequate attention was often paid within developed countries to the issue of reciprocity in trade liberalisation. Many developed countries have highly subsidised agricultural sectors, and effectively close their domestic markets to many agricultural imports from developing nations. Reducing such subsidies could, it was argued, generate large welfare gains for developing nations and help consolidate the benefits of domestic liberalisation.

China as a Window to the World: Trade Openness, Living Standards and Income Inequality[1]

Shang-Jin Wei[2]

1. Six Reasons to Look at China

This article draws on my recent research paper with Yi Wu on trade openness and income inequality in China (Wei and Wu 2001). There are at least six reasons why the Chinese case may be interesting for researchers and policy-makers alike. Some of them have to do with the fact that China is a large and important country. However, equally if not more important reasons have to do with a methodological innovation: many problems surrounding typical cross-country comparisons can be mitigated substantially by a careful look at within-country variations through a single-country case study.

1.1 Reason #1

China is a major example of a developing country that has recently embraced globalisation in the area of trade and foreign direct investment. Before 1978, the country had relatively little trade with the outside world. In 1978, the Deng Xiaoping-led Chinese government formally adopted the 'opening-to-the-outside-world' principle as a new national policy. Since then, the trade to GDP ratio has quadrupled from a mere 8.5 per cent in 1978 to 36.5 per cent in 1999. The country also transformed itself from one with virtually no foreign-invested firms in 1978 to the largest developing-country destination for foreign direct investment.

1.2 Reason #2

Poverty in China is a major component of the worldwide poverty story. In 1980, using the World Bank's US$1-a-day poverty line, there were 600 million poor people in China.[3] Thus, the poor in China accounted for approximately a third of the

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1. This paper was prepared for the G-20 Workshop on 'Globalisation, Living Standards and Inequality: Recent Progress and Continuing Challenges', sponsored by the Reserve Bank of Australia and the Australian Treasury, and held in Sydney, Australia on 27–28 May 2002. The paper summarises my research with Yi Wu cited in the reference list. I thank the conference participants, particularly my discussant Mr Xie Ping, for very helpful comments, and Hayden Smith for research assistance. Everything said in the paper represents my personal views rather than the official position of the IMF or any other organisation that I am affiliated with.

2. The author is a Senior Fellow at the Brookings Institution, an Advisor at the IMF, and a Faculty Research Fellow at the (US) National Bureau of Economic Research.

3. I thank David Dollar for this estimate.

worldwide poverty head count. Any change in poverty in China would necessarily have a significant impact on the worldwide poverty estimate.

1.3 Reason #3

A single-country case study of China would avoid two problems that arise when using cross-country comparisons, the most common approach in the empirical literature on trade, growth and inequality. The first criticism is that the data on income or on inequality in different countries are not comparable, either because the purchasing power parity adjustments necessary for such comparisons are not reliable or because the methodologies underlying different countries' numbers are too diverse to be pooled together, or both.[4] The second criticism is that many factors other than openness, such as the culture, legal system, or other institutions, may influence growth or inequality. Some of these factors are difficult to observe or quantify, and are thus difficult to control for completely in cross-country regressions. Including fixed effects in the regression would not correct this problem if the influence of these factors interacts with openness. As a consequence, there is a big risk of mis-attributing variations in income or inequality to variations in trade openness.

While avoiding the above criticisms, a single-country case study that explores variations within a country can provide very useful information to complement cross-country studies. Data are much more comparable for different regions within a country, and the culture, legal system and other institutions are much more similar within a country than across countries.

1.4 Reason #4

The Chinese experience provides a quasi-natural experiment. Even though any change in tariffs applies to all regions in China, different parts of the country have experienced vastly different *effective changes in openness* due to variations in natural barriers to trade, such as the distance to major seaports. For example, during 1988–1993, while some cities saw an increase in the ratio of exports to local GDP by 50 percentage points, others actually experienced an absolute decline in their trade to local GDP ratios.[5] This regional variation is very useful for researchers to study the relationship between openness, local growth and local inequality.

1.5 Reason #5

An obvious, but nonetheless important economic observation is that China is, geographically, a large country. For example, in 1988, there were 434 cities in China

4. Atkinson and Brandolini (2001) pointed out that for a few countries for which multiple measures of inequality are available (households *vs* individuals, consumption-based *vs* income-based), the various measures can give different, sometimes contradictory, patterns even for the same time periods.

5. See Tables 1a and 1b in Wei and Wu (2001), p 28.

(and the number of entities classified as cities has grown over time). Consequently, researchers have a lot of observations to work with, providing them with the opportunity to make statistically powerful inferences. Other economies such as Bangladesh and Costa Rica have also experienced a huge increase in their trade to GDP ratio in the last two decades, but their relatively smaller territories imply that it would be much harder to conduct a statistically reliable analysis based on different regions within these countries.

1.6 Reason #6

Another less obvious, but methodologically important point, is that the peculiar geography of China turns out to be very useful for researchers attempting to disentangle causality and correlation between openness and inequality. Let me explain this point in three steps. First, in making cross-country comparisons, if increases in openness are associated with increases in the growth rate (or a reduction in poverty rates), how can one be sure that this reflects the causal impact of openness on growth or poverty rather than just a lucky correlation or even a reverse causality? This is one of the major challenges facing empirical researchers. Second, a methodological innovation in the context of cross-country regressions is to use geography as an instrumental variable for openness.[6] The idea is that a country's openness has a lot to do with its geography. At the same time, its geography is unlikely to be influenced by its growth or poverty performance. It would be useful if one could apply the same methodological innovation to a single-country case study. Third, it turns out that the Chinese geography makes it very suitable to adopt this strategy. There is an ocean to the east and south-east of the country but then there is a gigantic desert in its far north and west and a very high mountain range – the highest in the world – in its south-west. Therefore, as a first approximation, regional variation in trade openness (or changes in trade openness in the last two decades) is explained to a large extent by regional variation in the distance to major seaports. In fact, two seaports, Hong Kong and Shanghai, have played a dominant role in China's trade with the rest of the world. Up to the mid 1990s, roughly half of China's total trade went through either Hong Kong or Shanghai. Thus, one can use a region's distance to these two major seaports as an instrumental variable for openness.

As a major benefit of using this geography feature to instrument regional openness, one can be relatively more confident in saying that the correlation between regional openness and inequality (or growth) may reflect a causal relationship going from the former to the latter. It is useful to note that a similar exercise may be more difficult to carry out for Indonesia or the United States where the access points for international trade are more diffuse.

6. Frankel and Romer (1999).

2. Distilling the Facts from Within-country Variations

2.1 Data

The unit of a region in our analysis is a 'city', which comprises an urban area and several rural counties under the jurisdiction of the city government. Not all peasants live in counties that are administered by a city. However, 783 counties, or 45 per cent of the total number of rural counties in China are under the jurisdiction of a city. In other words, the rural areas that fall into this category are not a trivial part of China.

The relationship between openness and growth across different parts of China was studied in Wei (1995). In this paper, our objective is to examine the relationship between the openness of a region and the change in inequality within the same region. Due to data limitations, we focus on urban-rural income inequality. In principle, a developing country's overall inequality can be conceptually decomposed into three parts: inequality within the rural area, inequality within the urban area, and inequality between the urban and rural areas. The previous literature has established that in the Chinese case, urban-rural inequality dominates the other two types of inequality. For example, the World Bank (1997) estimated that urban-rural inequality accounted for more than half of the overall inequality in the country in 1975, and that the change in urban-rural inequality explained about 75 per cent of the change in overall income inequality between 1984 and 1995. Similar conclusions have been reached by researchers investigating a particular province or provinces within China.

We focus our analysis on the period from 1988 to 1993. 1988 was the first year in which urban-rural inequality can be computed for a large number of cities. 1993 was the last year in which trade data at the city level (value of exports, to be precise) were collected. As the reform deepened, the number of firms granted the right to conduct foreign trade mushroomed very fast. It was decided by the State Statistics Bureau after 1994 that it was no longer possible to collect reliable trade data at the city level.

2.2 Results from the statistical analysis

We define $q(k, t)$, the inequality in city k in year t, as the ratio of the average per capita income in the urban area to the average per capita income in the rural area in city k. We define openness for a city as the ratio of its exports to local GDP in logarithm.

As our benchmark, we regress the change in a city's inequality, $q(k, 93)–q(k, 88)$, on the change in its openness, and a vector of other variables that can potentially affect the inequality.

The slope coefficient on the change in openness is negative and statistically significant at the 5 per cent level. In other words, *cities that have exhibited a faster increase in openness on average have also experienced a faster decline in the local urban-rural inequality* (Table 1).

Table 1: Openness and Urban–Rural Income Inequality
OLS in first difference with robust standard errors

	Dependent variable: change in log (urban GDP per capita/rural GDP per capita) from 1988 to 1993			
	(1)	(2)	(3)	(4)
Change in log (exports/GDP) over 1988–93	–0.084* (0.036)	–0.085* (0.037)	–0.091* (0.037)	–0.091* (0.036)
Initial inequality in log		–0.030 (0.053)	–0.038 (0.054)	–0.044 (0.054)
Growth rate of per capita GDP			–0.009*** (0.006)	–0.007 (0.005)
Dummy for coastal open cities				–0.015 (0.071)
Change in log ratio of urban/rural fixed capital per capita (1988–94)				0.073* (0.029)
R^2	0.06	0.06	0.08	0.12
No of observations	100	100	100	95

Notes: Robust standard errors are in parentheses. *, **, and *** denote statistically significant at the 5 per cent, 10 per cent and 15 per cent levels, respectively. An intercept is included in all the regressions but not reported to save space. Special economic zones are not in the sample.

This pattern continues to hold as we add other control variables, including a city's initial level of inequality, the average growth rate of local GDP, a dummy for cities that are officially designated 'coastal open cities' (and special economic zones)[7], and a measure of differential investment rates in the urban and rural areas.

We then correct for possible endogeneity of the openness measure by an instrumental variable approach. We use a city's minimum distance to either Hong Kong or Shanghai as the instrumental variable. A small number of seaports handle a large portion of the freight traffic in China. Hong Kong and Shanghai alone handled about half of the total trade in China during our sample. The idea of the instrumental variable regression is to capture the exogenous component in the variation of

7. Four cities were designated as 'special economic zones' at the beginning of the Chinese reform. In the mid 1980s, 14 additional cities were designated as 'coastal open cities'. These cities were allowed to carry out certain market reforms ahead of the rest of the country.

openness across regions, and to check if this exogenous variation in openness helps to explain the differential change in inequality across regions.

In the instrumental regression (see Table 2), we find that the slope coefficient on the change in openness is again negative and statistically significant. Figure 1 presents a conditional scatter plot of the change in inequality against openness based on the IV regression in the last column of Table 2. These results suggest that the

Table 2: Instrumental Variable Regressions

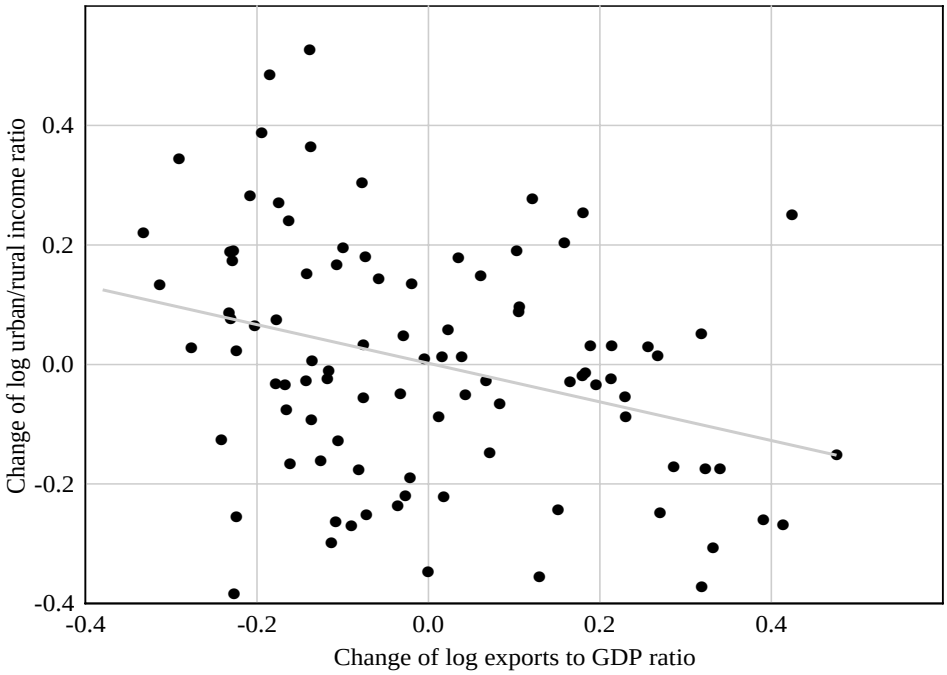
	Dependent variable: change of log (urban GDP per capita/rural GDP per capita) from 1988 to 1993			
	(1)	(2)	(3)	(4)
Methodology	IV	IV	IV	IV
Change in log (exports/GDP)	–0.305*	–0.323*	–0.274*	–0.316*
over 1988–93	(0.128)	(0.134)	(0.114)	(0.125)
Initial inequality in log		–0.051	–0.057	–0.057
		(0.065)	(0.060)	(0.061)
Growth rate of per capita GDP			–0.012**	–0.014**
			(0.007)	(0.008)
Dummy for coastal open cities				–0.003
				(0.081)
Change in log ratio of urban/rural				0.079**
fixed capital per capita: 1988–94				(0.047)
No of observations	100	100	100	95
First-stage *F* on the instrument	11.6	10.9	13.5	11.6
p-value for Hausman test	0.03	0.02	0.04	0.02

Notes: Robust standard errors are in parentheses. *, **, and *** denote statistically significant at the 5 per cent, 10 per cent and 15 per cent levels, respectively. R^2s in the IV regression are not reported, as they do not have the standard interpretation.

The null hypothesis for the Hausman test is that the coefficients in the OLS and the IV regressions are not different systematically. A rejection of the null implies that the OLS estimate is biased.

First-stage *F* is the *F*-statistic for the null hypothesis that the coefficients on the instruments are zero.

Figure 1: Openness and Urban/Rural Income Disparity
Conditional correlation from a IV regression
coefficient = –0.316, t = –3.09



Note: Figure 1 corresponds to column (4) in Table 2. It shows the relationship between change of urban–rural inequality and change in openness after accounting for other factors that may also affect the change in inequality. The average relationship between the two variables is represented by the straight line in the figure.

negative correlation that we observe between openness and inequality likely reflects a causal relationship: an increase in trade openness creates opportunities for a reduction in urban-rural inequality.

2.3 Mechanism

What may be the channel through which greater openness has helped to reduce income inequality? Poor people in developing countries such as China reside overwhelmingly in rural areas. If a country has scarce land resources, so that agriculture is not obviously its comparative advantage, the most reliable way for the poor to raise their standard of living is to industrialise. We speculate that openness has helped the poor in China because it has offered them more opportunities to industrialise.

A peculiar feature of the Chinese industrialisation process is something called ‘township-village enterprises’, or TVEs, which are industrial firms established in previously rural areas. This policy, which was set up because of the government’s concern with possible over-population in existing urban areas, encourages farmers to set up factories in their rural counties rather than migrating to the cities. Although

the policy has not been executed perfectly, it has been binding 'on the margin' nonetheless. In other words, the rural-to-urban migration has been substantially smaller than it otherwise would have been (even though the transformation of the economic structure from agriculture to industry has been fast). As a result, many former peasants have been transformed into workers (or entrepreneurs) without physically leaving their counties of residence. We suspect that TVEs or other industrial or service firms grow especially well in more open areas.

This hypothesis can be checked against the data. If we separate urban and rural areas in the database, we find that across the country, those rural areas that are more open also grow faster (in their per capita income). Similarly, more open urban areas also grow faster than less open urban areas.

We have also examined the growth rate of industrial output in the rural and urban areas. Again, the second-sector output tends to grow faster in more open areas. If one looks at the growth rate of industrial output in the rural areas relative to the adjacent urban area, one finds that it is positively related to a region's openness.

2.4 Inter-regional inequality

The finding that more open areas grow faster than less open areas suggests that the inter-regional inequality must have increased as a result of the dramatic increase in openness. Suppose one simultaneously takes into account the effect of openness on urban-rural inequality within a given region, summed over all regions, and the effect of openness on inter-regional inequality, what would be the net effect? This is a very interesting question, but unfortunately, at this stage, our estimates are not precise enough to give a definitive answer to this question.

However, all regions in China, including less open areas, have been growing relatively fast in the last two decades. Therefore,widening inter-regional inequality resulting from a faster rise in the standard of living for some people rather than at the expense of the others cannot, by itself, be a bad thing.

Even if we hope to moderate overall inequality in China, reducing openness using trade policy is not the answer. A positive way forward would be to find ways to raise the effective openness of currently less open areas rather than to set up trade barriers to reduce the openness of the currently more open areas.

3. Implications of the Chinese Case for Cross-country Comparisons

As I said at the beginning of the article, the importance of this case study goes beyond the importance of China itself. In this last section, I would highlight three implications for cross-country studies from this case study.

First, impressions from the aggregate statistics can be misleading. Over the last two decades, overall inequality in China has risen together with an increase in openness. It may be tempting to conclude that the greater openness is somehow responsible for the greater inequality. Yet, this conclusion is incorrect as the

evolution of inequality is influenced by many factors in addition to openness. Within China, regions that have experienced a faster increase in openness have also experienced a faster reduction, rather than an increase, in inequality. So embracing trade openness has in fact created opportunities for poor people in rural areas not only to grow, but to grow at a faster pace than their relatively more fortunate urban neighbours.

Second, reducing inequality should not be an end-objective by itself. Inter-regional inequality in China has risen partly as a result of an uneven distribution of effective openness across different regions. However, all regions have grown relatively fast. Widening inter-regional inequality largely reflects a faster increase in the standard of living in more open areas, which has not occurred at the expense of other people in the country. Any policy that slows the growth of more open areas without raising the growth of the less open areas cannot be a good policy, even if it improves equality. The challenge is to find ways to raise the effective openness of the currently less open areas, and/or to find fair and least-distorting ways to distribute some of the overall gains from openness more evenly across the country.

Third, raising trade barriers is the equivalent of imposing a bad geography on the country that renders it inaccessible to trade. Across different regions in China, as across different countries in the world, effective openness is closely linked to geography. Regions/countries with a more favourable geography (e.g. easy access to sea or proximity to major world markets) tend to have higher trade to GDP ratios, and tend to grow faster. While overcoming geography is not easy, improvements in transportation infrastructure and communication technology helps. An equally important implication is that raising tariff barriers or quotas is equivalent to artificially imposing a difficult geography on oneself.

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Towards an Indian Approach to Globalisation

Adarsh Kishore[1]

1. Quests and Doubts

1.1 Introduction

The Sovereign Democratic Republic of India occupies a small proportion of India's long history – the half century since 1950. Within this short time span however, its economic regime has experienced two radical transformations. First, with the establishment of the Planning Commission in March 1950, India launched upon a unique experiment in state-led 'growth with social justice' within the constitutional framework of parliamentary democracy. However, this policy matrix came under significant pressure in the 1980s, culminating in the unprecedented balance of payments crisis in 1990–91. The Indian government responded to this crisis with an equally forthright policy regime grounded in a reform trinity popularly referred to as 'Liberalisation, Privatisation, and Globalisation' (LPG). These three economic concepts have necessitated a series of (ongoing) policy reforms by the Union and State governments.

Since June 1991, India has been a member of a small club of 24 'globalisers' (Dollar 2001). Internationally, globalisation has yielded impressive growth dividends, including for relatively poor developing countries. The list of 'post-1980 globalisers' includes Argentina, Brazil, China, Hungary, Malaysia, Mexico, the Philippines and Thailand which, as a group, experienced an acceleration in average growth from 1.4 per cent per annum in the 1960s, to 2.9 per cent per annum in the 1970s, 3.5 per cent in the 1980s, and 5 per cent in the 1990s.

1.2 Globalisation in India: basic premises and parameters

In this paper, we attempt to delineate India's national experience with globalisation keeping in mind the following points:

- Hesitant and intermittent initiatives apart, India began liberalising only after 1990–91.
- India's transition to globalisation is from an economic regime of state-led growth. This regime had a strong commitment to a development strategy of 'self-reliance' and import-substitution industrialisation based on massive public investments in long-term capital-intensive projects.

1. The views reflected therein are personal and do not reflect the opinion or view of the Government of India.

- India's planning strategy was, besides the accumulation of industrial capital in the public sector, also geared towards ideals of distributive justice, balanced regional growth and positive discrimination in favour of weaker sections of society.[2]
- Implicitly since 1947, and explicitly since 1970–71, 'direct attack' on poverty has been a priority on India's development agenda.[3]
- As a constitutionally mandated 'Union of States', virtually all major economic policies in India are cast in a 'federal' mould, with 35 states and Union territories important stakeholders in economic reforms.

1.3 Change and continuity

As India has steered its economic policies towards increased participation in the global economy, a range of political, ideological and economic parameters have been modified, while others are likely to be more drastically revised in the future. However, because India's basic commitment to its Constitution remains paramount, globalisation will continue to be subject to the democratic process.

The economic policies promoting LPG, that were initiated by an incoming minority Union government in 1991, have been continued by the successive coalition governments that were formed after the national elections of 1996 and 1998. This is despite variation in the ideological complexion of the political parties that have formed these coalitions, and considerable turnover in state governments.

1.4 The path to economic liberalisation

The liberalisation process was initiated following a balance of payments crisis in 1990–91. India's economic reform program has emphasised gradualism and evolutionary transition rather than rapid restructuring or shock therapy. Gradualism has been the inevitable approach in India's democratic and highly pluralistic polity, given that reforms can only be implemented if they are supported by a popular consensus. The important reform measures undertaken so far are:

(i) The dismantling of the industrial licensing regime.

(ii) Throwing open industries reserved for the public sector to private participation.

(iii) Abolition of the *Monopolies and Restrictive Trade Policies* (MRTP) *Act*, which necessitated prior approval for capacity expansion or diversification by large industrial houses.

(iv) The switch from a fixed exchange rate regime operating in an environment of restrictive trade policy to a market-determined exchange rate operating in an environment of liberalised trade.

(v) The removal of quantitative restrictions on imports.

(vi) The reduction of the peak customs tariff from over 300 per cent prior to reforms, to the 30 per cent rate that applies now.

2. These included women, scheduled tribes, scheduled castes, and other disadvantaged groups.

3. In particular, policy has attempted to reduce rural poverty.

(vii) Allowing foreign direct investment (FDI) across a wide spectrum of industries and encouraging non-debt flows.

(viii) A cautious and gradual restructuring of the capital account.

(ix) Severe restrictions on short-term debt and allowing external commercial borrowings based on external debt sustainability.

(x) Wide-ranging financial sector reforms in the banking, capital markets, and insurance sectors, including the deregulation of interest rates, strong regulation and supervisory systems, and the introduction of foreign/private sector competition.

These economic reforms have yielded the following significant benefits:

- Gross domestic product (GDP) growth accelerated from 5.2 per cent between 1982/83 and 1991/92, to 6 per cent in the post-reform era (1992/93 to 2001/02).
- Foreign capital inflows increased from around US$100 million in 1990/91 to US$5 billion in 2000/01. FDI soared from less than US$100 million in 1990/91 to US$2.3 billion in 2000/01.
- The current account deficit has hovered at less than 1 per cent of GDP in recent years.
- Foreign exchange reserves currently stand at more than US$54 billion. These were less than US$1 billion during the 1990–91 balance of payments crisis.
- The composition of debt is also favourable. Short-term debt amounts to 3.5 per cent of external debt and concessional debt amounts to 36.5 per cent of total debt.
- The external debt burden looks sustainable according to a range of measures of indebtedness.[4] Both debt service payments as a proportion of current receipts, and the external debt-to-GDP ratio have been falling steadily during the 1990s, and currently stand at around 17 per cent and 22 per cent, respectively.

1.5 The Indian approach to globalisation

The Indian experience with globalisation and liberalisation, although durable and not reversible, has been, during the last decade of reform, somewhat different than most of the other G-20 members.

The authorities in India have revealed a preference for an India-specific brand of globalisation in which the content, sequence, and timing of policy measures are modulated to contain potential adverse shocks, while maximising the benefits of cross-border integration. This cautious approach has been guided by the perceived risk-return trade-off.

In India, the almost imperceptible transformation of the British East India Company from a humble trader into the political successor of an illustrious empire

4. Areas of concern remain, however, including India's continually large fiscal deficits, which have hovered above 5 per cent of GDP during the 1990s, and the disparate growth performance of the states during the 1990s, which has accentuated regional disparities.

continues to haunt the political class. The spectre of the return or a re-run of India's political capitulation to economic players outside the country has been raised at all levels of political activity, and continues to constrain governments' attempts to actively promote openness to external economic forces.[5]

India has, and always has had, an impressive amount of capital – fertile arable land, flourishing market towns and long-distance trade routes, fabulously rich *Nagar Seths* and functional small-scale manufacturing enterprises, palaces and other elite luxuries – but its life and culture were shaped by politics and priests, *not* by economic magnates. Thus, *capitalism* is a relatively new cultural force for the vast majority of Indians, *including* millionaires and billionaires. Indians are still nostalgic about Queen Victoria, Akbar the Great, and Ashoka, but their cultural pantheon does not include any capitalist, even though multinational companies like Liptons were active in Indian markets for several decades prior to 1947.

The impact of globalisation is also not uniform across countries and across different sections of the population within a country. 'Globalization is an uneven process, with unequal distribution of benefits and losses, both across the countries and within a country across different income groups' (Khor 2000, p 7).

In the context of the 'tyranny of the missing alternative', globalisation seems to be an inevitable reality. In India also, there is little objection to globalisation as such. However, it remains important to harness the force of globalisation to benefit human welfare and try to limit some of its adverse effects. Kaushik Basu (Basu 2001) echoed a similar view when he observed that, 'Globalization will bring with it many ills…But on balance, it will open up more windows of opportunity for India than close' (p 3842).

Stern (2001) corroborated these views when he observed that 'globalization has been with us for centuries, and it is here to stay…India has the resources to use globalization as a force for development and poverty reduction, as indeed it has already begun to do'.

Globalisation may have an adverse effect on social rather than economic goals. 'Globalization may be good for economic prosperity but is definitely bad for social goals... Globalization may be economically benign but...it is socially malign' (Bell 2001, p 114). According to Bardhan (Bardhan 2001), 'all around the world today many advocates of social justice are in some state of despair. Some of them fear that social justice is a lost cause in a global economy' (p 479).

1.6 Data constraints

Although India is today, in purchasing power parity (PPP) dollars, the fourth largest economy in the world after the US, China and Japan, it was, until the late 1970s, insular and inward-looking. It accorded highest priority to capital formation

5. India's increasing outward orientation is reflected in its participation in various global fora, including the G-20, the Enhanced Highly Indebted Poor Countries (HIPC) Initiative, and its contribution to the Standard Data Dissemination System (SDDS).

and poverty alleviation, and the Union and State governments dominated the economy, leaving the private sector to play a secondary role. Adoption of the LPG reform trinity, and throwing open the economy to internal and international markets have certainly brought about a great deal of change in India. However, although a lot of quantitative data are available, there are a number of reasons why it remains difficult to make conclusive inferences about the overall effect of globalisation on India:

- Because the scope of globalisation is ill-defined, it is very difficult, if not impossible, to determine whether or how much change is due to globalisation, and what and how much change took place during the globalisation era.
- On account of the large residue of pre-reform economic policies still in operation, it is almost impossible to separate the effect of globalisation from the effect of other, pre-globalisation, structures and processes.
- Because the LPG-related policy reforms were implemented gradually, rather than with a 'big bang', many globalisation initiatives are yet to 'take off'. Further, the requisite monitoring and evaluation mechanisms are not yet in place for even those policies that are a decade old.

Until these barriers are overcome, a detailed analysis and description of the consequences of globalisation on India's economy, and society, will not be possible.

2. Globalisation, Income Inequalities and Regional Disparities

2.1 Introduction

India is a nation in which economic and social inequalities are prevalent. Inequality in the economic realm takes two principal forms: income inequality, and wealth inequality. Income inequality has three further dimensions: inequality between individuals, inequality between regions, and inequality between the residents of rural and urban areas.[6]

Attempts to tackle income inequalities have had a long history in India. The egalitarian thrust of the Republic of India was highlighted within two months of coming into existence when the Union government headed by Nehru established the Planning Commission. With the establishment of Five Year Plans, egalitarian policies became especially prominent. However, the efficacy of these policies was called into question when the socialist opposition leader, Ram Manohar Lohiya, claimed that the massive planned expenditures had in fact had no discernable effect on economic inequality in India at all.

The question of whether economic inequality was rising or falling gained prominence once again towards the end of the 1960s when Hazari published a study

6. This third dimension of inequality is actually a special case of the second, but because of the high proportion of people that continue to live in urban areas, and the magnitude of inequality between urban and rural areas, we identify it separately.

about the concentration of industrial capital amongst the leading business houses of India. The resultant furore led to the establishment of the Monopolies and Restrictive Trade Prevention (MRTP) Commission, which was charged with preventing the growth of inequality in the industrial sector of the Indian economy.

Public interest in inequality was, however, diverted towards poverty when Dandekar and Rath (1971a, 1971b) published a study entitled *Poverty in India*, which showed that over 40 per cent of the population lived below their designated 'poverty line'. Although this pioneering study included data outlining trends in inequality as well as poverty, this dimension of the study was forgotten amidst the public excitement about 'poverty'. Indeed, this was so much the case that Indira Gandhi's 'Quit Poverty' slogan enabled her to sweep to power in the 1970/71 Lok Sabha polls.

Of course, poverty in India is massive and pervasive. World Bank data indicate that 44.2 per cent of the population was living below the poverty line (BPL) in 1994–1998.[7] However, although nearly 450 million Indians can be described as 'poor', just over the same number of Indians do *not* live below the poverty line. Further, the distribution of income in the segment of the population above the poverty line is much wider than the distribution of income in the segment below. Thus, preoccupation with the alleviation of poverty has obscured the massive income inequality amongst people with incomes above the prevailing poverty line.

Scarcity of income distribution data makes it very difficult to arrive at a precise assessment of the impact of globalisation on income inequality, but it is clear that a vast gulf exists between different income earners. Table 1 shows that after seven to eight years of intensive pursuit of globalisation, the top 20 per cent of income earners had a total income of US$165.6 billion, a sum slightly higher than the total income (US$164.4 billion) of the poorest 60 per cent of the population. Hence, the key question before India is: does globalisation reduce the 'poverty gap' or accentuate and even aggravate existing income inequalities?

Table 1: Income Distribution in India
1999

	Population Million	**Size of income** US$ billion	**Per capita income** US$
Bottom 20%	196	38.8	187.8
Second 20%	196	54.8	279.4
Third 20%	196	70.8	381.1
Fourth 20%	196	91.4	466.4
Highest 20%	196	165.6	844.7

Source: World Bank (1999)

7. Using the familiar measure of US$1 per day.

2.2 Indicators of inequality

The spectrum of income inequalities can be viewed more vividly through the lens of either life-related data, or data pertaining to access to basic services such as water and electricity. While detailed data are hard to come by, there are, however, some firm indications that both these forms of inequalities have fallen in India during the last decade.

The literacy rate is one of the most potent indicators of individual inequalities. Literacy in India increased from 48.54 per cent in 1991 to 54.16 in 2001, making the majority of Indian people literate for the first time in recent history.

Another sign of falling inequality in India is the increase in the percentage of rural households with access to improved water sources from 73 in 1990 to 86 in 2000 (GOI 2002a). This shows, at a minimum, that globalisation is not choking off the development delivery systems in rural India, and that universal access to potable water is fast becoming a reality.

Finally, data showing that life expectancy in India increased from 54 in 1980 to 63 in 1998, and that the infant mortality rate fell to 70 per 1000 in 1999 from 115 in 1980, suggest that globalisation is a force improving living standards in India.

2.3 The development radar of well-being in India

The *National Human Development Report 2001* released by the Planning Commission recently (GOI 2002a) has utilised a new tool for scanning 'well-being' in India.[8] The 'Development Radar' is a composite octagonal socio-economic indicator that summarises changes over time in the following eight parameters:

(i) Per capita expenditure

(ii) Poverty

(iii) Safe water

(iv) Pucca house

(v) Literacy

(vi) Formal education

(vii) Life expectancy

(viii) Infant mortality ratio

Since the 1980s there has been an improvement in every development indicator, with particularly strong improvements in the proportion of the population with access to safe water, life expectancy, and education.

8. Amartya Sen's concept of well-being includes not only income-related dimensions such as education and health, but also vulnerability and exposure to risks.

2.4 Regional inequality in India

One of the earliest attempts to measure inter-state economic disparities was made by Dholakia (1985). Covering the period from 1960/61 to 1980/81, and restricting himself only to those states whose population exceeded 1 per cent of the total population of the country, he found that 'State Product inequalities have increased in India over the period of twenty years from 1960/61 to 1979/80' (p 62).

A major policy implication of the study was that although increasing government expenditure and providing incentives to boost private investment does lead to increases in the capital-labour ratio, such measures also invariably result in raising the capital-output ratio, thereby offsetting most of the advantages from a higher capital-labour ratio. Dholakia therefore suggested that India's development strategy should concentrate on technological improvement, especially in the primary sectors of the backward states.

In the post-1980 period there has been a proliferation of studies of inter-state inequality using better data and more sophisticated analytical tools. However, most of these studies have been inconclusive about whether 'conditional' or 'unconditional' convergence has taken place, and have failed to determine why inter-state differences in living standards have been so persistent. In any case, studies analysing the effect of globalisation on inter-state inequalities are scarce.

One major study of inter-state differences in net state domestic product (NSDP) growth rates found that Madhya Pradesh and Rajasthan had performed well during the 1980s, while some states with otherwise positive scores on various development indicators lagged behind (Ahluwalia 2002).

Constructing time-series data for the Gini Coefficient in the years 1979 to 1981 and 1997 to 1998, Ahluwalia concluded that inter-state inequalities had 'clearly increased', but also noted that the perception that 'The rich states got richer and the poor states got poorer' was not 'entirely accurate'.[9]

Drawing on Dutta, the United Nations Development Programme (UNDP) has also concluded that between 1980–84 and 1990–1994, 'there has been an increase in this (inter-state) disparity' (UNDP 1999, p 2). The ratio of per capita NSDP of the richest state (Punjab) and the poorest state (Bihar) rose from 3.30 in 1980–1984 to 3.78 in 1990–1994.

The following quantitative indicators of regional growth variations also underline the growing chasm between states' economic fortunes:

- Gross state domestic product (GSDP) growth during the 1980s varied from 3.6 per cent per annum in Kerala to 6.6 per cent in Rajasthan, a ratio of highest to lowest of less than 2. The ratio increased in the 1990s to more than 3.5, with Bihar's growing at 2.7 per cent per annum and Gujarat growing at 9.6 per cent.

9. In this study, Ahluwalia did not study the effect of globalisation on inter-state differences in NSDP growth rates.

- In the 1980s, average per capita growth varied from 2.1 per cent per annum in Madhya Pradesh to 4.0 per cent in Rajasthan. The spread widened in the 1990s from 1.1 per cent per annum in Bihar to 7.6 per cent in Gujarat.
- In 1991, Maharashtra had a credit/deposit (C/D) ratio of 72.3 while Bihar's C/D ratio was 38.3. By 2001, the ratio in Maharashtra had shot up to 85.4 while in Bihar it had fallen to 21.3.
- Across states, and between rural and urban areas, the 'digital divide' in India is disconcerting. Rural tele-density (telephones per 100 people) in Bihar in 2001 was a quarter of that in Rajasthan, which in turn was less than a third of that in Punjab (Table 2).

Table 2: Tele-density by State
As at 31 March 2001

State	Tele-density	Rural tele-density
Bihar	0.80	0.20
Assam	1.26	0.25
Orissa	1.42	0.48
Uttar Pradesh	1.45	0.29
Madhya Pradesh	1.51	0.42
West Bengal	2.30	0.44
Rajasthan	2.35	0.81
Andhra Pradesh	3.45	1.33
Haryana	3.80	1.34
Karnataka	4.00	1.60
Gujarat	4.67	1.42
Tamil Nadu	5.04	0.45
Maharashtra	5.43	1.24
Punjab	6.06	2.49
All India	**3.04**	**0.85**

Source: Company information of Bharat Sanchar Nigam Ltd, 2002, available at <http://www.bsnl.co.in>.

A more detailed scrutiny of inter-state growth variations reveals that the two states with the highest average per capita income between 1980 and 1991, Punjab and Haryana, lost momentum in the 1990s, so much so that Maharashtra and Gujarat overshot them. This indicates that the Green Revolution lost momentum during the globalisation era, while industry, the growth base of Maharashtra and Gujarat, was gathering speed.[10] If current relative economic growth rates continue, inter-state inequality will continue to increase.

10. Punjab and Haryana are primarily agricultural economies.

Thus, even though overall growth has been higher during the globalisation era, inter-state disparities are widening, thereby posing a challenge to policy-makers who must ensure that the benefits of globalisation extend to *all* states.

2.5 Globalisation, planning and poverty reduction

In 2001, Sachs, Bajpai and Ramiah (2002) observed that following the Green Revolution, high growth occurred in Punjab and Haryana and, to a lesser extent, in the adjacent states of Rajasthan, Gujarat and Maharashtra. The populous eastern states like Uttar Pradesh and Bihar, however, failed to take advantage of the Green Revolution. The authors thus regarded the differential effect of the Green Revolution as a cause of 'divergence' in inter-state living standards.

In another detailed analysis, Kurian (2000), used data relating to: (i) private investment; (ii) bank branches, deposits and credit; and (iii) trends in infrastructure development, to clearly establish that there are considerable disparities in socio-economic development across the states.

In particular:

- efforts through the planning process during the first decades of the Indian Republic had *only partially succeeded in reducing regional disparities*;
- the acceleration of economic growth since the early 1960s, with the increased participation of the private sector, appears to have *aggravated regional disparities*; and
- ongoing economic reform since 1991, and in particular stabilisation and deregulation, appears to have *further aggravated inter-state disparities.*

2.6 Unequal sharing of external aid

Although the studies cited above are rich in data analysis, they are, generally speaking, short on identifying the 'causes' of widening inter-state inequalities in India.[11] Recent data released by the government do, however, highlight the potential for globalisation to exacerbate existing disparities.

The data released by the Controller of Aid Accounts in the Ministry of Finance (GOI 2001) show that a very high proportion (between 60 per cent and 75 per cent) of total external assistance received by India between 1990/91 and 1998/99 was concentrated in only 7 of the 35 states and Union territories (Table 3).[12]

An even more worrying aspect of the above data is that aid may be accentuating regional income disparities in some cases. For example, Uttar Pradesh (a relatively poor state) saw its share of external assistance decline from 24.5 per cent (in 1990/91) to 7.7 per cent (in 1998/99) in only eight years, while the wealthier states of West Bengal and Andhra Pradesh saw their shares of external assistance increase.

11. Let alone isolating the effect of globalisation on these inter-state disparities.

12. Although these states' shares did decline by almost 15 percentage points over this period.

Table 3: External Assistance – Relative Shares of States

	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98	1998/99
All states (Rs million)	18 870	33 260	37 410	34 470	38 320	38 720	52 520	50 960	63 560
Share of total (%):									
Andhra Pradesh	9.0	11.1	19.0	17.1	11.9	11.8	10.0	16.3	16.2
Gujarat	12.2	8.6	12.0	3.0	1.7	2.2	7.8	3.9	4.6
Karnataka	5.9	7.7	6.5	7.7	6.8	3.3	3.6	3.4	4.8
Maharashtra	11.2	10.2	13.0	15.3	16.4	21.4	19.2	12.7	9.2
Tamil Nadu	9.3	8.7	10.3	11.6	15.8	10.6	7.8	6.0	5.1
Uttar Pradesh	24.5	23.1	10.1	12.8	5.5	7.9	11.4	10.6	7.7
West Bengal	3.4	3.4	2.4	2.1	1.9	1.4	4.6	11.0	15.1
Total share of seven states	75.5	72.8	73.3	69.6	60.0	68.6	64.4	63.9	62.7

Source: GOI (2001)

2.7 The distribution of FDI among the states

Maharashtra (3 716 rupees per capita) and Tamil Nadu (3 587) received the first and third largest FDI injections per capita, respectively, between 1991 and 2001, while Uttar Pradesh (253) and Bihar (89) lagged behind. Indeed, even Rajasthan, which recorded rapid growth over the 1990s, received only just over 10 per cent of the FDI per capita that Maharashta received during this period (GOI 2002b). Further, the relatively small FDI flows into Punjab and Haryana suggest that FDI tends not to flow to agricultural regions.

2.8 Globalisation and the emergent geo-economic divide

According to a new measure of inter-state inequality, GSDP per capita as a proportion of India's GDP per capita, the 15 major states fall into two economic clusters or groups (Table 4).

Table 4: Per Capita GSDP as a Percentage of All India per Capita GDP

		Three-year average of incomes at current prices centred on:			
State No	**State**	1981/82	1985/86	1990/91	1997/98
Group I (G1)					
1	Andra Pradesh	87.4	82.4	92.5	92.9
2	Gujarat	125.3	124.4	118.8	137.4
3	Haryana	146.5	139.9	146.6	139.4
4	Karnataka	92.8	93.7	95.4	107.2
5	Kerala	90.5	90.9	87.8	116.4
6	Maharashtra	143.0	134.7	144.7	167.5
7	Punjab	168.6	165.0	169.7	146.5
8	Tamil Nadu	92.8	97.0	100.0	119.5
Group II (G2)					
9	Assam	83.6	92.1	83.1	62.2
10	Bihar	58.8	60.6	53.5	44.2
11	Madhya Pradesh	80.8	74.8	78.1	73.5
12	Orissa	75.0	74.7	66.9	61.8
13	Rajasthan	76.6	74.0	79.3	81.1
14	Uttar Pradesh	75.8	71.9	70.6	64.4
15	West Bengal	103.0	102.9	91.7	85.1
All India		**100.0**	**100.0**	**100.0**	**100.0**

Source: Kurian and Bagchi (2002)

A distressing feature of the data is not only that there is an economic clustering of states, but that the states are also spatially clustered. For example, G1 states tend to be coastal, and it is striking that the two poorest performing G1 states since 1981/82 were located in India's interior. Thus, the data point to a dangerous trend whereby non-coastal regions are consistently outperformed by coastal regions, a trend that must be addressed by Indian policy-makers in the near future.

2.9 Per capita income versus the Human Development Index

Inter-state differences in per capita income (PCI) are highly correlated with inter-state differences in other areas such as electricity consumption, literacy, health, and other indicators. But how highly correlated are states' relative PCI with their relative score on the Human Development Index (HDI)? Table 5 helps us to answer this question by allowing us to compare the rank order of 15 major states' PCI with their ranking in terms of life expectancy of females at birth, a proxy for a state's HDI score.

Table 5: Relationship between PCI and HDI in Major Indian States

State	Per capita or SDP rank 1990–1994	Female life expectancy at birth /years 1990–1992
Andhra Pradesh	8	8
Assam	13	na
Bihar	15	10
Gujarat	4	9
Haryana	2	4
Karnataka	6	4
Kerala	12	1
Madhya Pradesh	10	14
Maharashtra	3	3
Orissa	14	12
Punjab	1	2
Rajasthan	9	11
Tamil Nadu	5	6
Uttar Pradesh	11	13
West Bengal	7	7

Source: UNDP (1999, pp 2 and 7)

Although, in general, there is a high correlation between a state's PCI ranking and its HDI ranking, there are circumstances in which a state with a low (high) PCI ranking has a significantly higher (lower) HDI ranking. For example, Gujarat ranks fourth in PCI, but only ninth on the HDI. A similar story applies in reverse to Bihar.

This suggests that more research is required to better understand the relationship between living standards measured by per capita income and the HDI (Table 6). There is a further lesson for policy-makers. The experience of the states of Maharashta and Tamil Nadu shows that improvements in relative PCI and HDI can occur without corresponding improvements in the other. For example, although Maharashta became the state with the highest PCI between 1991/92 and 1999/00, there was no improvement in its HDI rank during this period. Thus, policy-makers may not be able to rely on growth to automatically improve broader measures of human welfare in India.

2.10 State policy in the globalisation era

Because Union and State governments played the dominant role in the economy until 1990/91, after which reforms to reduce the role of the state in the economy were introduced, there is considerable interest in how government policy has affected interstate income inequality since this time.

Drawing upon Planning Commission data, Kurian (2000) has produced a comprehensive data set covering developmental and non-developmental expenditure per capita in 15 major states between 1980/1981 and 1995/96. The data show that developmental expenditure as a proportion of non-developmental expenditure has fallen in all states except Maharashtra. Indeed the average ratio fell from 3.2 to 2.1, suggesting that, 'In 1995-96 as compared to 1980-81, the relative importance of development expenditure vis-à-vis non-development expenditure has come down as far as the state governments are concerned' (Kurian 2000).[13]

Interestingly, if we split the states into the same two groups as before (G1 and G2), and compare states' per capita incomes with per capita government expenditure, we find, unsurprisingly, that states with higher per capita incomes (G1) tended to have higher expenditures per capita. Thus, state governments' developmental expenditure appears to reinforce existing differences in per capita incomes.

Another indicator of the widening gulf between the G1 and G2 states is their share of India's population living BPL. G1 states' share of the total Indian population BPL fell from 36 per cent in 1983/84 to 28 per cent in 1999/2000. In contrast, the share of the Indian population living below the poverty line in G2 states increased from 62 per cent to 70 per cent over the same period (Table 7).

Thus, it is evident that during the post 1990/91 globalisation era, the coastal, more urbanised, and more industrialised G1 states have been more successful in reducing poverty than the G2 states. This outcome suggests that corrective policy may be required, especially as developmental expenditure has fallen in G2 states over the same period.

13. However, Kurian also reveals that the reason for the proportionate fall in developmental expenditure is the very rapid increase in non-developmental expenditure, rather than falls in developmental expenditure.

Table 6: Per Capita Net State Domestic Product (PCNSDP) and State Human Development Index (HDI) Ranking

State	PCNSDP 1981/82		HDI 1981		PCNSDP 1991/92		HDI 1991		PCNSDP 1999/00		HDI 2001	
	Rupees	Rank	Value	Rank	Rupees	Rank	Value	Rank	Rupees	Rank	Value	Rank
Andhra Pradesh	5 235	7	0.298	9	7 120	7	0.377	9	9 318	9	0.416	10
Assam	5 062	10	0.272	10	5 686	12	0.348	10	9 170	10	0.386	14
Bihar	3 541	15	0.237	15	4 132	15	0.308	15	4 475	15	0.367	15
Gujarat	6 934	4	0.360	4	7 923	5	0.431	6	13 022	4	0.479	6
Haryana	7 606	2	0.360	5	11 093	2	0.443	5	13 709	3	0.509	5
Karnataka	5 146	8	0.346	6	7 354	6	0.412	7	10 928	6	0.478	7
Kerala	5 545	6	0.500	1	6 892	9	0.591	1	10 107	7	0.638	1
Madhya Pradesh	5 069	9	0.245	14	5 732	11	0.328	13	7 564	12	0.394	12
Maharashtra	7 182	3	0.363	3	10 001	3	0.452	4	15 410	1	0.523	4
Orissa	4 010	14	0.267	11	4 757	14	0.345	12	5 411	14	0.404	11
Punjab	9 079	1	0.411	2	12 079	1	0.475	2	14 678	2	0.537	2
Rajasthan	4 480	12	0.256	12	6 119	10	0.347	11	8 272	11	0.424	9
Tamil Nadu	5 771	5	0.343	7	7 988	4	0.466	3	12 504	5	0.531	3
Uttar Pradesh	4 126	13	0.255	13	5 261	13	0.314	14	6 373	13	0.388	13
West Bengal	4 735	11	0.305	8	6 355	9	0.404	8	9 425	8	0.472	8
All India	**5 555**		**0.302**		**7 212**		**0.381**		**10 067**		**0.472**	

Sources: PCNSDP – Directorates of Economics & Statistics of respective State Governments; HDI data – Planning Commission, Government of India

Table 7: Share of BPL Population by State and Group of States

	State	1983/84	1987/88	1993/94	1999/00
Group I (G1)					
1	Andra Pradesh	5.10	5.22	4.81	4.57
2	Gujarat	3.65	3.98	3.28	2.61
3	Haryana	0.92	1.83	1.37	0.67
4	Karnataka	4.64	5.17	4.88	4.01
5	Kerala	3.31	2.58	2.39	1.58
6	Maharashtra	9.01	9.55	9.53	8.76
7	Punjab	0.89	0.82	0.73	0.56
8	Tamil Nadu	8.05	7.53	6.31	5.01
Sub-total G1		**35.57**	**35.38**	**33.35**	**27.77**
Group II (G2)					
9	Assam	2.41	2.40	3.01	3.63
10	Bihar	14.31	13.71	15.40	16.36
11	Madhya Pradesh	8.61	8.61	9.32	11.47
12	Orissa	5.62	5.00	5.01	6.50
13	Rajasthan	3.93	4.60	4.01	3.14
14	Uttar Pradesh	17.24	17.47	18.87	20.36
15	West Bengal	9.87	9.35	7.95	8.20
Sub-total G2		**61.99**	**61.55**	**63.57**	**69.66**
All India		**100.00**	**100.00**	**100.00**	**100.00**

Source: Kurian and Bagchi (2002)

2.11 Urban-rural differentials

India's large population is divided into two distinct socio-economic groups, the almost one-quarter of the population that lives in urban areas, and the three-quarters that live in rural areas. That there is an economic chasm between the two groups can be seen in Table 8.

The data show that although there was a similar proportional decline in poverty in rural and urban areas between 1985/86 and 1990/91, rural poverty remained much higher than in urban areas.

Table 8: Poverty (HPI) Differentials in Urban and Rural India
Per cent

	Urban poverty	Rural poverty
1985/86	38.33	49.02
1990/91	30.65	39.65

Source: Devaki, Prabhu and Iyer (2001)

3. Foreign Trade

3.1 Introduction

Through the ages, the Indian subcontinent has been a hub of oceanic as well as overland trade routes, especially between 1750–1830 when India was an important global manufacturer and was relatively highly industrialised (Table 9).[14]

Table 9: Indian Subcontinent's Relative Shares/Position
Per cent, including present-day Pakistan and Bangladesh

	1750	1800	1830	1860	1880	1900
Share of world manufacturing output	24.5	19.7	17.6	8.6	2.8	1.7
Per capita level of industrialisation	7	6	6	3	2	1

Source: NCRWC (2002)

In more recent times, however, India's share in world trade and world exports has fallen drastically, with the proportion of exports of goods and services to GDP remaining in single digits for most of the last 20 years (Table 10). However, since India's pro-globalisation reforms, its trade to GDP ratio has grown from 14.5 per cent (the average between 1981 and 1989) to 21.9 per cent (the average between 1990 and 1998). Indeed the acceleration in the growth rate of exports from 5.3 per cent per annum between 1980 and 1989, to 11.1 per cent per annum between 1990 and 1998, is a signal of the nation's intention to participate more fully in the global economy.

14. India's share of world manufacturing output ranged between 24.5 per cent and 17.6 per cent, and its per capita levels of industrialisation (relative to the UK, 1900 = 100) were as high as 7 (in 1750) and 6 (in 1830), compared with 4 and 14 in the US; 7 and 7 in Japan; and 10 and 25 in the UK.

Table 10: Exports of Goods and Services
Per cent of GDP

	1980–84	1985–89	1990–94	1995–98
East Asia and Pacific	21.5	24.0	27.6	34.1
Latin America and Caribbean	13.5	14.7	13.4	15.1
Middle East and North Africa	36.0	23.4	31.8	30.1
South Asia	7.4	7.6	10.6	12.4
Bangladesh	4.9	5.5	7.9	12.1
Bhutan	13.9	23.8	31.0	34.3
India	5.9	6.0	8.9	10.8
Maldives	20.8	31.8	na	na
Nepal	11.4	11.5	16.0	24.0
Pakistan	11.5	12.6	16.2	15.8
Sri Lanka	29.0	25.7	31.7	25.8
Sub-Saharan Africa	26.9	27.5	26.5	29. 3
Low income	11.7	13.0	18.7	21.8
World	19.5	18.7	20.0	22.1

Source: World Bank (2000)

3.2 Importance of becoming a 'globaliser'

India's emergence as an export-led economy during the era of economic reforms must, however, be juxtaposed against the 40 years of high import levels of high-value merchandise (e.g., petroleum), when imports of most consumer goods were prohibited either through quantitative restrictions or high tariff rates. Most of these physical and economic import controls have been dismantled since 1990/91, while tariff and non-tariff barriers to imports have been reduced. However, the question remains: is what is good for the 'globalisers', as a group, also good for India? Watkins (2002), of Oxfam, has already locked horns with the Dollar-Kraay case (Dollar and Kraay 2001) over the benefits of openness, while India-specific studies itemising the trade liberalisation measures adopted since 1990/91 have proceeded without a rigorous analysis of their social and/or economic impact. Specifically, more rigorous analysis of the effect of trade liberalisation on the Indian economy is needed.

4. Aspects of Globalisation of the Indian Economy

4.1 Foreign direct investment (FDI)

For almost three decades following the establishment of the Republic of India, foreign inflows of funds were not allowed. In any case, India's industry-led import-substitution policy of 'self-reliant' growth repelled foreign firms which saw it as incompatible with the free enterprise ideology reigning in the major industrially advanced countries of the world.

Thus, until the early 1980s the inflow of foreign funds for investment was very small. However, in the last two decades the average value of FDI increased from an average of US$110 million (between 1980 and 1989) to US$1 898 million (between 1990 and 1998). While FDI has increased rapidly, it is reasonable to conclude that until now FDI inflows have mostly targeted India's domestic markets, and have therefore made a negligible contribution to export-led growth. FDI is now growing rapidly as a result of transparent economic policies, social and political stability, and equal treatment of all Indian registered companies. The important challenge for India is to steer FDI towards the export sector and to ensure that FDI does not go entirely to the already successful coastal states.

4.2 Portfolio investment

Apart from FDI, portfolio investment has also been growing since 1990/91. Indeed, portfolio investment is almost as important as FDI to the Indian economy (Table 11).

Table 11: Relative Size of FDI and Portfolio Investments in India
US$ million

	Direct investment	Portfolio investment
1991	143.62	6.0
1992	258.00	4.0
1993	582.94	827.2
1994	1 048.54	2 164.8
1995	2 171.98	1 191.4
1996	3 020.99	3 058.2
1997	4 579.13	1 746.7
1998	3 377.17	–338.0
1999	4 016.10	1 559.9
2000	4 498.07	1 492.2
2001	4 281.10	2 843.3

Source: Securities Exchange Board of India

The acceleration of portfolio investment inflows into India, especially through the institutional route that has been encouraged, is a direct result of reforms undertaken to create a new financial architecture for regulating the financial markets. The deepening and indexing of equity markets, and stability in the foreign exchange market, are direct outcomes of these financial sector reforms. Indications are that the maturity of the corporate sector, stock markets and financial services sector has led to this rapid growth. Nevertheless, concerns about the volatility of such portfolio flows remain. With the degree of openness achieved in these sectors there is a perception that international companies have gained control of many parts of the economy, without developing a significant stake in the economy.

4.3 Globalisation and information technology

Contemporary India exists in several centuries at once and hence, bullock carts and postcards continue to vie for economic presence with new information and communication technologies emanating from Silicon Valley. Yet, Indian software professionals have established a major presence not only in the US but also in remote 'processing' centres in India. Indeed, the information technology (IT) industry in India grossed annual revenue of US$6.7 billion, and recorded a 53 per cent growth rate in 1999/2000. Because the globalisation of information in India in the last two decades has been driven by liberalisation, the Indian IT industry is forecast to grow substantially over the coming years.

5. Globalisation and Poverty

One of the most familiar maxims in India's school textbooks in the 20th century used to be that India was a rich country inhabited by poor people. While accurate historical estimates are difficult to come by, it seems that this statement is most accurate when describing the last 150 years. The rapid rise in the rural population, the slow growth of off-farm economic enterprises, and the negligible infusion of new technology into the agriculture sector, combined to push the bulk of India's rural population into a vicious circle of under-employment and poverty during this period.

The incidence of poverty, expressed as percentage of people below the poverty line, has, however, declined over the last 25 years, from 54.9 per cent in 1973/74 to 36 per cent in 1993/94. According to the latest (55th round) large sample survey data on household consumer expenditure made available by the National Sample Survey Organisation (NSSO), the poverty rate has continued to fall in the period to 1999/00, and is now 26.10 per cent (Table 12).[15]

The acceleration in the decline of poverty during the globalisation era is most welcome, and if the post 1993/1994 trend continues, the end of rural poverty may be in sight by 2015. This testifies to the positive pay-offs of globalisation, even though there are difficulties in comparing poverty estimates across time in India.

15. This is the estimate when a 30-day recall period is used. The poverty rate is lower when the shorter period of 7 days is used.

Table 12: Estimates of Poverty

	All India		Rural		Urban	
	Number Million	Poverty ratio Per cent	Number Million	Poverty ratio Per cent	Number Million	Poverty ratio Per cent
1973/74	321	54.90	261	56.40	60	49.00
1977/78	329	51.30	264	53.10	65	45.20
1983	323	44.50	252	45.70	71	40.80
1987/88	307	38.90	232	39.10	75	38.20
1993/94	320	36.00	244	37.30	76	32.40
1999/00						
30-day recall	260	26.10	193	27.09	67	23.62
7-day recall	233	23.33	171	24.02	61	21.59

Source: Planning Commission, Government of India

Prior to 1993/94 the impressive poverty decline rates recorded were insufficient to reduce the absolute number of poor, which remained almost unchanged at around 320 million. However, the absolute decline in the number of poor in the post-reform period to 260 million in 1999/2000 suggests, perhaps, that India will not be the world's largest contributor to the global poverty headcount for much longer.

State poverty rates have also declined since 1973/74, although rural/urban and inter-state disparities are still visible. For example, poverty rates are higher in Orissa, Bihar, and the north eastern states, than in states such as Madhya Pradesh, Kerala and Gujarat. States have employed a number of methods to reduce poverty. Punjab and Haryana reduced poverty by achieving high growth in the agricultural sector; West Bengal implemented land reform; while the government of Andhra Pradesh took responsibility for the distribution of food grains.

Evidence presented by the World Bank (1997) suggests that declining poverty in India has been associated with the acceleration of GDP growth. The poverty rate declined, on average, by just over 0.9 per cent per annum between 1951 and 1975, at a time when per capita incomes grew by a modest 1.7 per cent per annum. When, between the mid 70s and late 80s, per capita growth increased to about 2.5 per cent per annum, the poverty rate declined by 2.4 per cent per annum.

However, the relationship between economic growth and poverty remains complex. For example, Ravallion and Datt (1999) found that there was only a weak positive correlation between a headcount index of poverty and trend growth in non-farm output per capita across India's 15 major states between 1960/61 and 1993/94. Thus, they concluded that, 'There is…enormous heterogeneity in the impact of non-farm economic growth on poverty' (Ravallion and Datt 1999). Their finding that, 'higher average farm yields, higher state development spending, higher (urban and rural) non-farm output and lower inflation were poverty reducing', does,

however, give policy-makers some guidance as to the policy mix most likely to generate poverty reductions. In particular, it suggests that there is a role for the State in ensuring that growth reduces poverty, particularly in rural areas.[16]

6. Globalisation and Employment

6.1 Introduction

According to the latest data (Table 13), work participation rates in rural India for both men and women have declined since the early 1970s, although the decline has been more pronounced for women (Mahbub ul Haq 2002). If this decline can be attributed to globalisation, it seems clear that policy-makers will need to work hard to develop policies to reverse the trend.

Table 13: Work Participation Rates for Men and Women in Rural India
Per cent

	Men	Women
1972/73	54.5	31.8
1977/78	55.2	33.1
1987/88	53.9	32.3
1989/90	54.8	31.9
1990/91	55.3	29.2
1993/94	55.3	32.8
1994/95	56.0	31.7
1995/96	55.1	29.5
1997	55.0	29.1
1998	53.9	26.3

Source: Mahbub ul Haq (2002)

By looking at Tables 14, 15 and 16, we can make the following observations about the Indian labour market since the early 1980s:

- Total employment increased from 308 million in 1983 to 397 million in 2000.
- The rate of employment growth fell from 2 per cent per annum between 1983 and 1994, to 1 per cent per annum between 1994 and 2000.
- The labour force participation rate fell across all age cohorts between 1994 and 2000, a trend reflected in the deceleration of labour force growth from 2.3 per cent

16. For example, in those states with low literacy in 1960, subsequent growth was not poverty reducing because the poor were unable to take up the new opportunities. See Ravallion and Datt (1999) for further discussion.

per annum between 1988 and 1994, to 1 per cent per annum between 1994 and 2000.

- In 2000, organised sector employment represented 7 per cent of total employment. This had fallen from 8 per cent in 1988, largely because of the lack of public sector employment growth.
- In contrast, organised private sector employment growth accelerated from 0.45 per cent per annum between 1983 and 1994, to 1.9 per cent per annum between 1994 and 2000.

Table 14: Population, Labour Force and Employment Growth
Per cent per annum

	Rate of growth of population	**Rate of growth of labour force[(a)]**	**Rate of growth of employment[(a)]**
1972/73 to 1977/78	2.27	2.94	2.73
1977/78 to 1983	2.19	2.04	2.17
1983 to 1987/88	2.14	1.74	1.54
1987/88 to 1993/94	2.10	2.29	2.43
[1983 to 1993/94]	[2.12]	[2.05]	[2.04]
1993/94 to 1999/00	1.93	1.03	0.98

(a) Usual Principal and Subsidiary Status (UPSS)
Source: Planning Commission, Government of India

Table 15: Total Unemployment Scenario in India

Total number of open unemployment 1999/00			9 million
Unemployment rate (% of labour force):			
	Rural	Urban	All India
1987/88	1.98	5.32	2.62
1993/94	1.20	4.52	1.90
1999/00	1.43	4.63	2.23

Source: Ministry of Finance, Government of India

Table 16: Employment and Organised Sector Employment

	Employment Million				Growth rate Per cent per annum	
	1983	**1988**	**1994**	**1999/00**	**1983–94**	**1994–2000**
Total population	718.21	790.00	895.05	1 004.10	2.12	1.93
Total labour force	308.64	333.49	381.94	406.05	2.05	1.03
Total employment[a]	302.75	324.29	374.45	397.00[c]	2.04	0.98
Organised sector employment[b]	**24.01**	**25.71**	**27.37**	**28.11**	**1.20**	**0.53**
– Public sector	16.46	18.32	19.44	19.41	1.52	–0.03
– Private sector	7.55	7.39	7.93	8.70	0.45	1.87

(a) The total employment figures are on UPSS basis.

(b) The organised sector employment figures are as reported in the Employment Market Information System of the Ministry of Labour and pertain to 1st March 1983, 1988, 1994, 1999 and 2000.

(c) The rate of growth of total employment and organised sector employment are compounded rates of growth.

Sources: Ministry of Finance and Ministry of Labour, Government of India

6.2 Prospects for employment growth

In the unorganised sector, although agricultural employment fell from 76 per cent of the total in 1961 to 65 per cent in 1993/94, the relatively slow rate of decline means that even in the era of globalisation the agriculture sector will continue to be the main source of employment for years to come.

Of particular concern is the pressure on firms to reduce costs to maintain competitiveness. Indeed, there is some concern that India is heading toward jobless growth, as evidenced by the steady growth in the number of people registered at employment exchanges since 1990/91 (Table 17).

Finally, as revealed in Table 18, there have been, and will to continue to be, sharp differences in employment growth rates across industries. For example, employment growth in agriculture has been consistently lower than the national average over the last 20 years, while growth in the finance, insurance and real estate (FIRE) industries has been consistently higher.[17] Also of interest is that manufacturing employment growth, which was weak between 1980 and 1994, has been stronger than any other industry since 1994.

17. This may be of concern because the FIRE sector employs mainly high-skilled professionals, while the agriculture sector employs mainly the unskilled. Thus, if this sectoral imbalance in employment growth rates is related to globalisation, it may be a force for widening inequalities in India.

Table 17: Employment Exchange Registrations
1992–2001

	Number of registered job seekers (live registers)	
	No of persons	Annual growth %
1992	36.76	1.3
1996	37.43	1.9
1997	39.14	4.6
1998	40.10	2.4
1999	40.37	0.7
2000	41.34	2.6
2001	41.99	1.6

Source: Ministry of Labour, Government of India

Table 18: Annual Compound Growth in Employment – by Industry
Per cent

	1980–91	**1990–94**	**1994–98**
Agriculture, forestry, fishing and hunting	0.9	–0.4	0.1
Mining and quarrying	1.5	0.5	–2.8
Manufacturing	0.3	0.4	2.0
Electricity, gas and water supply	2.8	1.1	0.7
Construction	0.5	–0.1	–0.9
Trades, hotels and restaurants	1.3	0.9	1.1
Transport, storage, communications	1.1	0.7	–0.2
Financing, insurance, real estate	4.4	2.4	1.1
Community, social, personal services	2.2	1.1	0.9
National average	1.6	0.8	0.8

Source: Jha (2000)

Because the periods 1988–1994 and 1994–2000 roughly coincide with the pre-reform era, and the post-reform era in which the Indian economy became more integrated with the global economy, we can make some inferences about the effect of globalisation on the Indian labour market.

First, the globalisation era coincided with a decline in the rate of employment growth. This seems related, in part, to a decline in the elasticity of employment growth with respect to GDP growth, which stems from globalisation's effect on labour productivity and capital intensity. Second, because the agricultural sector still

employs the bulk of Indian workers, Indian policy-makers need to pay special attention to the impact of globalisation on this sector.

Finally, in the post-reform era, there has been a divergence in employment growth rates across industries, which has, in part, been related to the growth of FDI in specific sectors such as manufacturing, FIRE and communications. This makes it increasingly important for policy-makers to ensure that workers are equipped with the skills to move from low-growth industries to high-growth industries.

7. Conclusion

Globalisation is a complex process that is having a massive impact on living standards across both the developed and developing world. In general, the balance of evidence suggests that globalisation is helping to reduce poverty and raise living standards. There is also, however, evidence that globalisation has deleterious consequences as well. For example, in India, inter-regional inequality appears to have widened during the globalisation era.

The challenge before India is in many ways unique. It is a country rich in knowledge and the production of technology. Historically, it has not, however, seen this knowledge as a commodity. In recent decades this has changed somewhat, and India has rapidly increased its integration with the global economy. Indeed the World Bank recently judged India to be one of the world's 'fast globalisers'. Despite the large steps taken by India recently, the rest of the world must recognise that India's democratic tradition, and its history of diverse views, mean that the reforms will continue to be implemented unevenly, and slowly. India will, however, get there in the end.

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Discussion

1. Moisés J Schwartz[1]

Globalisation, living standards and equity: the case of Mexico

Introduction

One of the distinguishing patterns of the ongoing wave of globalisation is the depth of economic integration. Measured in terms of trade and capital flows, the current wave of globalisation is certainly without precedent. As presented in a recent study by the World Bank (2002b), this third wave of globalisation (with the first one occurring between 1870 and 1914 and the second one between 1945 and 1980) offers unique opportunities to many developing countries – the 'new globalisers' as they are called in the study – to improve national welfare.

Mexico appears not only as one of the most aggressive 'new globalisers', but also as one of the most relevant test cases when assessing the social benefits of globalisation, given its longstanding history of poverty and income inequality. Like many other countries in Latin America, these unfavourable social conditions can be traced back to Mexico's birth as an independent nation nearly two centuries ago. Improving social conditions of the population has thus been one of the most pressing challenges for policy-makers.

Poverty and inequality in Mexico can be attributed to three key elements: unequal factor endowments (land, natural resources), lack of human capital formation (education and health care) and poor institutions (flawed institutional design, poorly defined property rights and lack of contract enforcement).[2] This paper argues that globalisation has provided a window of opportunity to overcome these factors and break the cycle that perpetuated poverty and inequality from generation to generation in vast segments of the population. It shows that, despite the setbacks of the 1994–95 crisis, some of the benefits of a more globalised economy have already happened nationwide as indicated by broad social indicators, including education and health. Moreover, the paper points out that those regions of Mexico that have been more exposed to global economic integration, as reflected by growing trade and capital flows, have also shown the most significant social improvements.

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1. Moisés J Schwartz is Director General for International Financial Affairs at the Mexican Ministry of Finance. This paper reflects his personal views and by no means can be considered an institutional point of view. The author would like to thank Salvador Pérez Galindo, Paula Villavicencio, Karla Mejía and Moramay López Alonso for their valuable contribution to this paper.

2. Corbacho and Schwartz (2002) mention the first two factors for Mexico, whereas Easterly (2001) stresses the latter for several countries, including Mexico.

To expand the benefits of globalisation more broadly, particularly in a country deeply divided along regional and social cleavages like Mexico, strengthening domestic institutions and policies is crucial. Mexico's experience with a pro-growth and pro-'public spending on the poor' policy, while promoting macroeconomic stability, has been of paramount importance for better equipping the poor and most vulnerable social groups in order to benefit from globalisation.

Mexico's experience with globalisation shows that progress in equity and living standards cannot be achieved without an appropriate economic policy mix aimed at securing stability and economic growth. In recent years, economic growth has resumed while inflation and the public deficit have been drastically reduced. Moreover, interest rates have shown a declining trend while domestic savings and foreign direct investment have increased, thus allowing Mexico to be considered a stable and sound economy. This has been possible thanks to the implementation of coherent fiscal and monetary policies and by Mexico's clear commitment to deepen structural reform. With poverty and inequality still prevalent in Mexico, the maintenance of stability and reform is crucial so that globalisation can truly work for all.

The paper is structured in three sections. The first section presents a brief overview of Mexico's insertion to globalisation, highlighting the fact that the impact has been clearly differentiated along regional lines. For this purpose, the data used throughout the paper are presented on a regional basis. The second section analyses the social impact of globalisation in terms of both poverty and income distribution, based on official information provided by the National Household and Income Surveys from the National Institute of Statistics, Geography and Informatics (INEGI), as well as in regard to broader internationally used indices and other specific indicators such as health and education. The third section discusses some public policy responses and ongoing challenges, particularly by looking at the recent trends in public spending. Finally, we present some concluding remarks.

Mexico's insertion into the third wave of globalisation: a tale of regional disparities

Over the past two decades, Mexico underwent a radical transformation, shifting from being a closed and tightly government-controlled economy to being one of the most open and market-oriented economies in the world. The turning point of this transformation can be traced back to the debt crisis of the early 1980s, which forced the implementation of drastic stabilisation and adjustment policies, leading eventually to the opening of the economy in an unprecedented manner. In 1986, Mexico joined the GATT in a three-fold effort to stimulate non-oil exports, enhance economic efficiency and impose price discipline on domestic firms.

The success of this policy became more evident in the late 1980s, when the non-oil export sector became the driving force of economic growth. Automobile and computer plants, together with *maquiladoras* (in-bond industry), settled under special fiscal programs along the northern border, thus becoming the most dynamic sectors of the economy, turning around the composition of exports in Mexico.

Oil-related products' share of total exports decreased from 90 per cent in 1982 to 25 per cent in 1990, dropping later on to less than 10 per cent a decade later.

The consolidation of an export-oriented economy was achieved in the early 1990s through the implementation of a number of free trade arrangements. In 1994, the North American Free Trade Agreement with the US and Canada (NAFTA) was implemented and Mexico further institutionalised its commitment to integrate into the world economy. This was subsequently enhanced through the implementation of similar trade arrangements with a wide array of countries, including Chile, Bolivia, Colombia, Venezuela, Costa Rica, Nicaragua, Guatemala, Honduras, El Salvador, Israel, the European Union and the European Free Trade Association.

As a result of this policy, total foreign trade increased three-fold (from US$117 billion in 1993 to more than US$340 billion in 2000), while foreign trade doubled its share in the economy during the decade (from around 30 per cent of GDP in 1991 to 60 per cent in 2000). In the seven years since NAFTA was implemented, Mexican industry has been able to boost its US market shares in leading US import sectors, such as motor vehicles and auto parts (from 9 per cent to 16 per cent), electrical equipment (from 3 per cent to 17 per cent) and communications equipment (from 8 per cent to 22 per cent).

In addition to an ambitious trade liberalisation policy, the capital account was rapidly liberated in the early 1990s. Prior to that, foreign direct investment (FDI) faced very restrictive regulation. Attracting FDI was crucial not only for covering external financing needs, but also for stimulating competition and developing a more efficient economy. Following several legal reforms undertaken during the 1980s, a new law was enacted in 1993, repealing prior regulations and gradually allowing for up to 100 per cent foreign ownership in areas comprising nowadays more than 90 per cent of the economic activities accounted for in the national accounts. Free trade agreements such as NAFTA have been a driving force behind FDI increasing inflows, with multinational firms moving production lines to Mexico in order to enhance the efficiency of their regional and global networks.

Accordingly, annual FDI flows steadily expanded: from US$1.5 billion in 1984, to US$4.3 billion in 1993, and more recently up to US$23 billion in 2001 with the boost of a major acquisition by Citigroup in the banking sector. Between 1994 and 2001, FDI was concentrated primarily in manufacturing (51 per cent of total inflows) and services (33 per cent), with the remainder in mining and infrastructure.

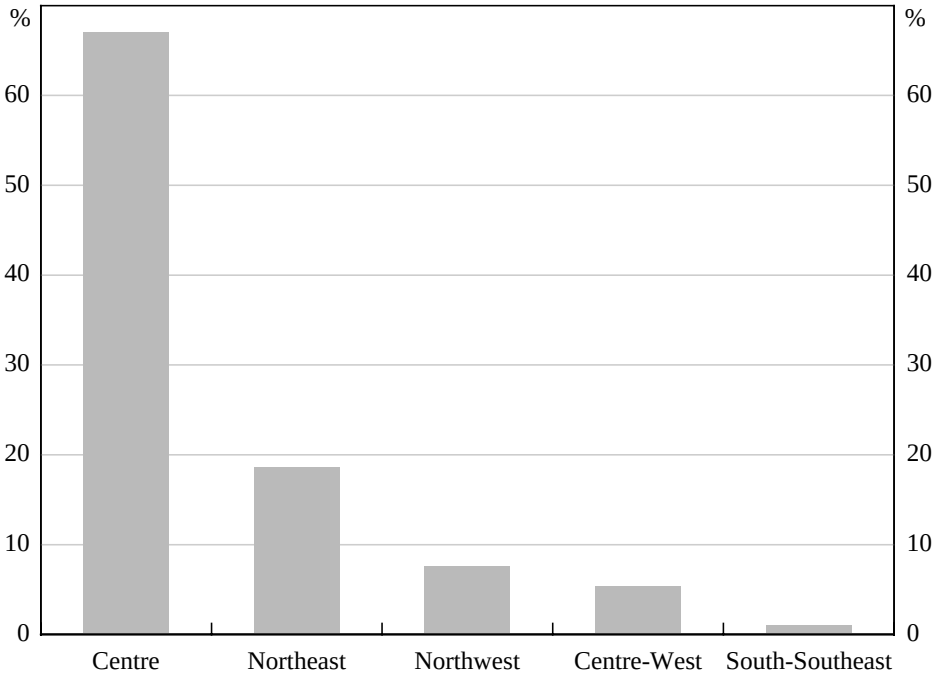
The benefits of rapid global economic integration, however, have been unevenly distributed across the country, concentrating primarily in those regions with better infrastructure and closer to the US border. These regions host most of the *maquiladora* industry, traditional and high-tech, established in Mexico throughout the 1990s, which in turn accounts for a large share of Mexico's exports (48 per cent of total exports and 53 per cent of manufacturing exports in 2001).

The extent to which regions have been able to benefit from integration with the international economy has also been limited by Mexico's historical pattern of industrialisation and urbanisation, concentrated in a handful of cities. As mentioned in some recent studies, this pattern was reinforced by concentrated public investment

and physical infrastructure in these regions (Tamayo-Flores 2001). Given the strong relationship between FDI and growth of exports seen in Mexico since the opening of the economy, it is worth considering how FDI flows have been distributed across the country and how this has affected regional economic growth.

Based on the regions established by the *National Development Plan 2001–2006*[3], 67 per cent of a total US$96.2 billion recorded in FDI between 1993 and 2001 went to the Centre, followed by the Northeast (19 per cent), the Northwest (8 per cent) and the Centre-West (5 per cent). The South-Southeast attracted practically no FDI during the period, with barely 1 per cent of total FDI flows (Figure 1).

Figure 1: Foreign Direct Investment by Region
1993–2001, per cent of total



Source: Mexico Ministry of Economy (2001)

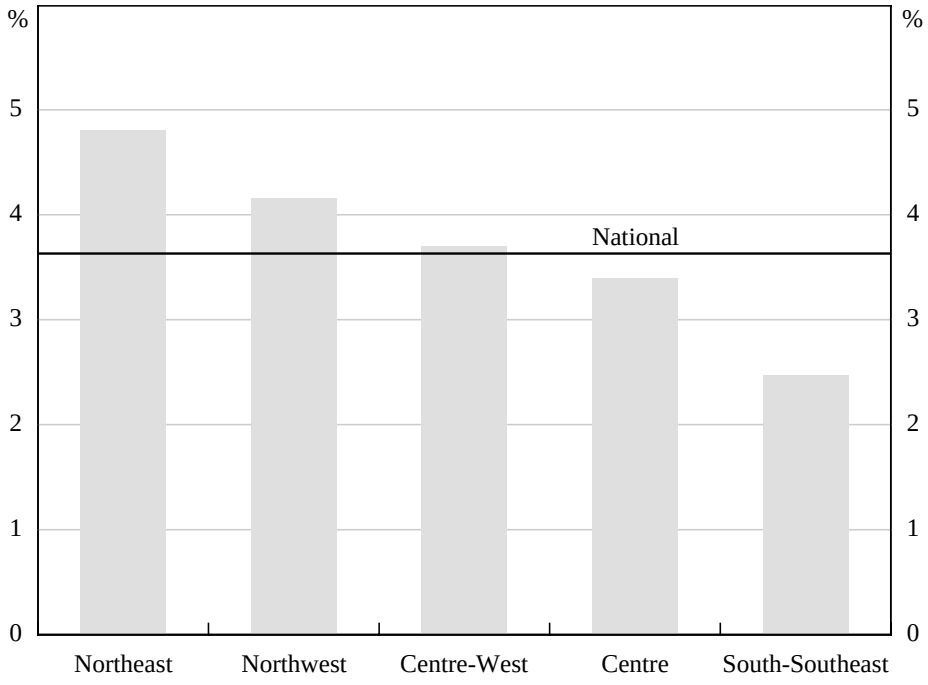
3. The 2001–2006 National Development Plan identifies the following five regions:
   - the Centre, comprising the Federal District, Hidalgo, Morelos, Querétaro, the state of México and Tlaxcala; concentrating 32.1 per cent of total population;
   - the Centre-West, including Michoacán, Aguascalientes, Colima, Guanajuato, Jalisco, Nayarit, San Luis Potosí and Zacatecas, with 23.5 per cent of the population;
   - the Northeast, comprising Chihuahua, Coahuila, Durango, Nuevo León and Tamaulipas, with 13.6 per cent of total population;
   - the Northwest, including Baja California Norte, Baja California Sur, Sinaloa and Sonora, with 7.6 per cent of total population; and
   - the South-Southeast, comprising Campeche, Chiapas, Guerrero, Oaxaca, Puebla, Quintana Roo, Tabasco and Veracruz, with the remaining 23.2 per cent of total population.

Given the concentration of FDI in manufacturing and services, those regions which benefited most from the opening of the economy were clearly the more urbanised and industrialised ones. By contrast, the agriculture-based economies of the South-Southeast were unable to either expand their exports or attract FDI. Indeed, agricultural export opportunities have been limited to a handful of modern producers, most of which enjoy the benefits of good infrastructure built around industrialised regions.

Regional economic growth reflects these disparities. Nationwide, Mexico's GDP grew at an annual average rate of almost 4 per cent between 1993 and 2000, despite the 6 per cent decline in economic activity seen in 1995 due to the crisis stemming from the abrupt peso devaluation.

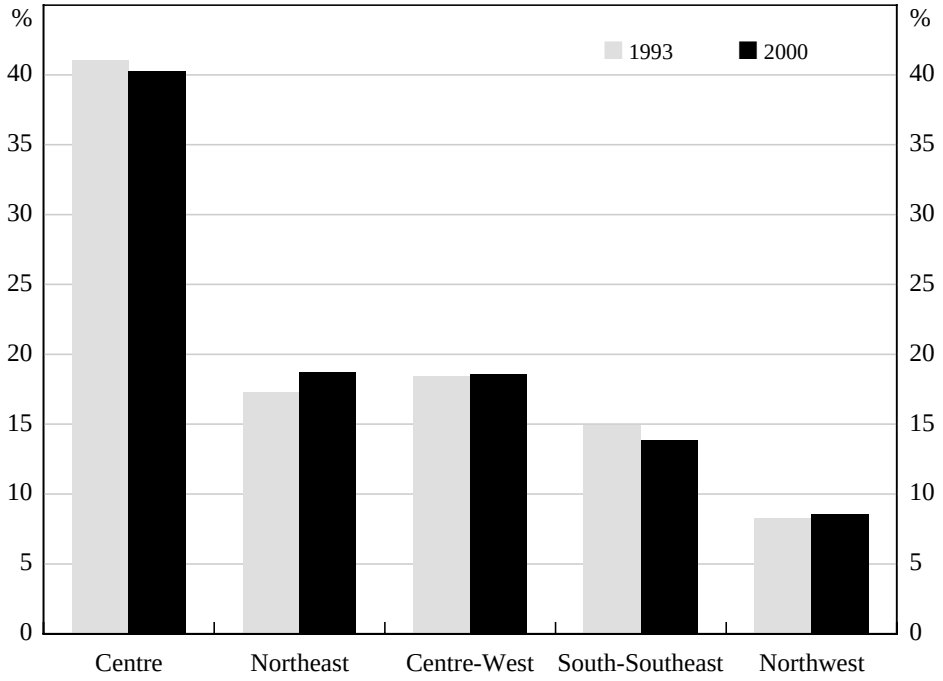
Available data for the period 1993–2000 show that inter-regional disparities in terms of GDP growth have actually widened. In contrast with the Northeast region, which grew at an annual average rate of almost 5 per cent, the South-Southeast recorded only a 2.5 per cent annual average rate of growth. This differentiation is also reflected in terms of national GDP shares: whereas the Northeast increased its share of total national GDP from 17 per cent in 1993 to 19 per cent in 2000, the South-Southeast region's share declined from 15 per cent to 14 per cent during the same period. The Centre maintained an overwhelming share of total GDP at around 40 per cent (Figures 2 and 3).

Figure 2: Average GDP Annual Growth Rate by Region
1993–2000



Source: INEGI (2002)

Figure 3: Regional Contribution to GDP
Per cent of total



Source: INEGI (2002)

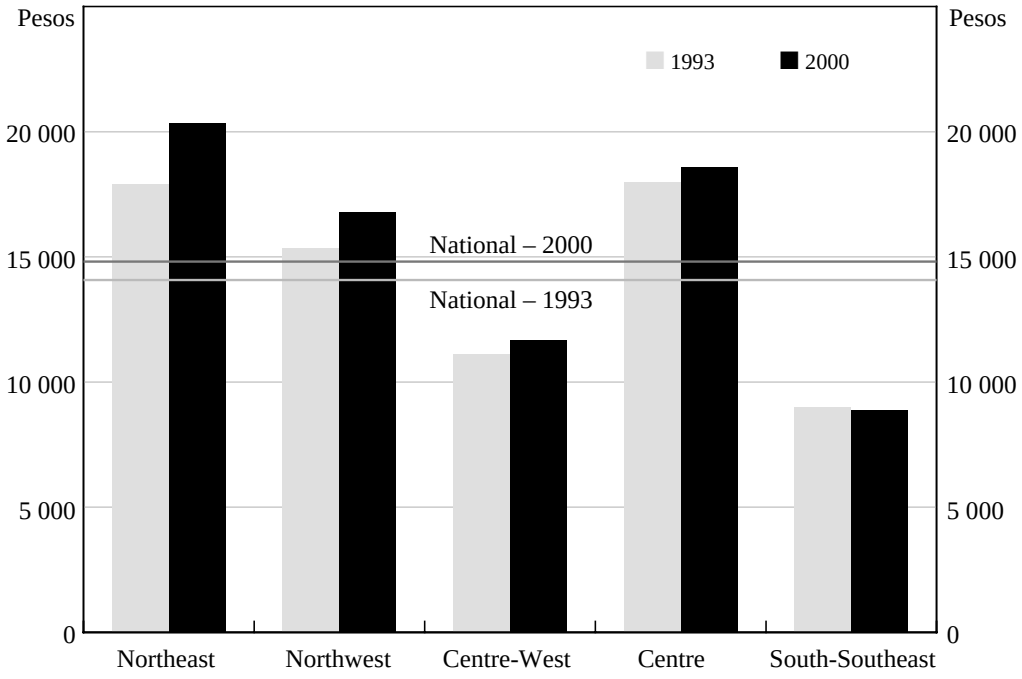
Similarly, product per capita shows significant differences across regions: in 2000 the South-Southeast region had the lowest regional product per capita (8 858.04 pesos), whereas the Northeast recorded the highest of the country (20 339.45 pesos). Moreover, the Northeast experienced the greatest variation in product per capita throughout the last decade, growing at an annual rate of 2 per cent between 1993 and 2000, moving from 17 887.39 pesos to 20 339.45 pesos, respectively (Figure 4).

Income disparities among the 32 entities in which Mexico is administratively divided have persisted, and even increased. For example, consider the Southern state of Chiapas and the Federal District (the city capital), the entities with the lowest and highest income per capita in the country, respectively. Between 1993 and 2000, relative income per capita between these two areas grew from 5.7 to 6.1 in favour of the Federal District.

In sum, the economic reforms that accelerated Mexico's insertion into globalisation in the last decade have had a highly differentiated impact along regional lines. On the one hand, those states which have been able to attract FDI and increase exports have benefited the most in terms of economic growth. However, the South-Southeast

has not experienced these developments, concentrating economic activity along a handful of traditional tourist and oil-related activities, with few or non-existent economic links with the rest of the region. The way this has affected population living standards is considered in the next section.

Figure 4: Regional Product per Capita
1993 pesos



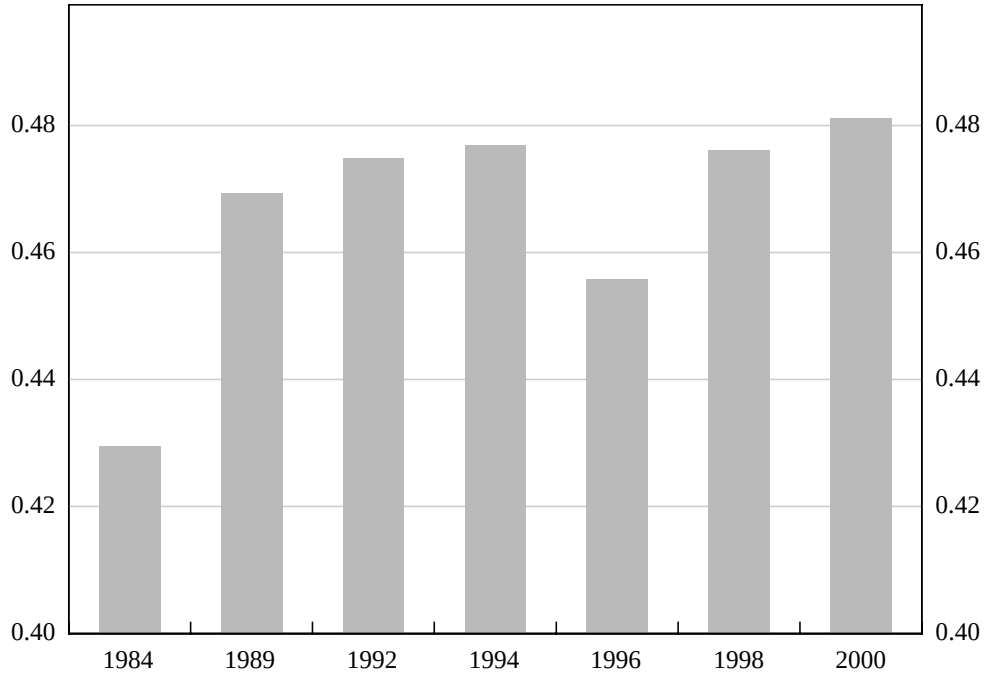
Sources: CONAPO (2002c); INEGI (2002)

Evolution of social indicators

Income distribution and poverty

Assessing the evolution of income distribution and poverty in Mexico over the past two decades is not an easy task given the lack of consistent methodologies, as well as the difficulties with assessing the impact of the 1994–95 crisis. According to the data provided by INEGI, based on bi-annual income and expenditure surveys among Mexican households, income inequality during the 1990s remained relatively unchanged, following a surge in the late 1980s. With the exception of a fall in 1996 – as a result primarily of the drop in the share of income held by the top quintile in the aftermath of the 1994–95 crisis – the Gini coefficient rose slightly, reaching about 0.48 in 2000 (Figure 5).

Figure 5: Evolution of the Gini Coefficient
1984–2000



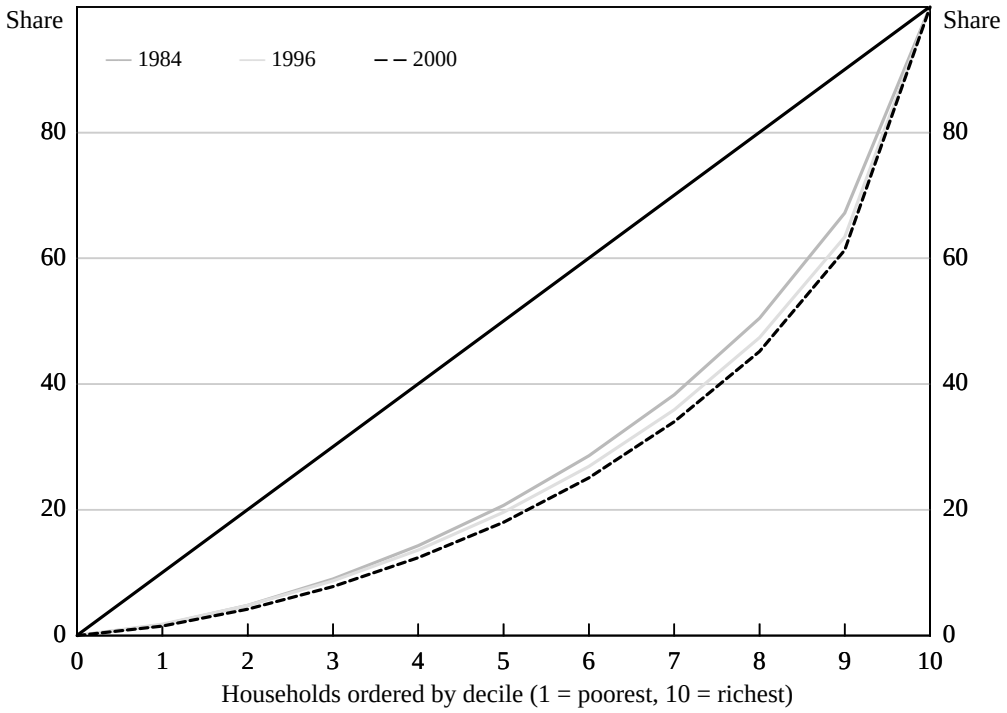
Source: INEGI, Encuesta Nacional de Ingresos y Gastos de los Hogares, various years

As seen in the Lorenz curve, this increase in income inequality reflects the growing income gap between the very rich and the rest of the population (see Figure 6 and Table 1).[4] In 2000, the richest 10 per cent of the population held 38.7 per cent of national income, considerably higher than the 32.8 per cent in 1984. By contrast, the poorest 10 per cent of the population held practically the same percentage of income as it did in the mid 1980s. The fifth to ninth deciles are the portion of the population that showed the most significant decline in income held. This means that rising inequality in the past 15 years has hit the middle and upper-middle classes the worst. According to some experts, this is a similar pattern to what has been observed in the rest of Latin America, and among other so-called 'new globalisers'.[5]

4. The Lorenz curve reflects the degree of income inequality in a society. It is supposed that in a society with perfectly equal income distribution, the cumulative share of income would be equal to the cumulative population share (represented by the 45° line). The Gini coefficient measures the deviation with respect to such a line, with a value of '0' being the most equal and '1' the most unequal.

5. See Corbacho and Schwartz (2002) and World Bank (2001). However, the World Bank recognises that international comparisons are particularly difficult to undertake given the differences in concepts measured.

Figure 6: Lorenz Curve based on Current Income
Cumulative share of total household income



Source: INEGI, Encuesta Nacional de Ingresos y Gastos de los Hogares, 1984, 1996, 2000

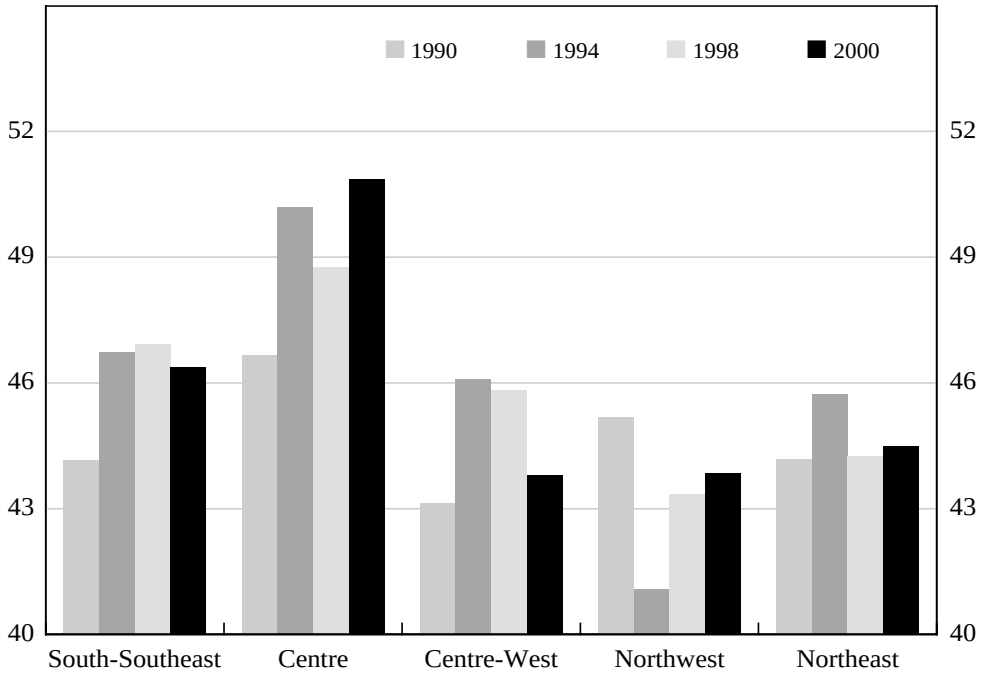
Table 1: Distribution of Household Income[(a)] by Decile
1984–2000

Decile	1984	1989	1992	1994	1996	1998	2000
1 (poorest)	1.7	1.6	1.6	1.6	1.8	1.5	1.5
2	3.1	2.8	2.7	2.8	3.0	2.7	2.6
3	4.2	3.7	3.7	3.7	3.9	3.6	3.6
4	5.3	4.7	4.7	4.6	4.9	4.7	4.6
5	6.4	5.9	5.7	5.7	6.0	5.8	5.7
6	7.8	7.3	7.1	7.1	7.3	7.2	7.1
7	9.7	9.0	8.9	8.7	9.0	8.9	8.8
8	12.2	11.4	11.4	11.3	11.5	11.5	11.2
9	16.7	15.6	16.0	16.1	16.0	16.0	16.1
10 (richest)	32.8	37.9	38.2	38.4	36.6	38.1	38.7

(a) Refers to total current income; includes monetary and non-monetary income
Source: Author's estimates based on data from INEGI, Encuesta Nacional de Ingresos y Gastos de los Hogares, various years

Domestically, income inequality has varied across regions. According to urban-based data collected by Andalón-López and López-Calva (2002), during the 1990s the Gini coefficient increased considerably in two regions: in the South-Southeast it moved from around 0.44 in 1990 to just over 0.46 in 2000, while in the Centre it increased from about 0.46 to 0.50. In contrast, the Northwest was the only region in which the Gini coefficient showed a slight improvement, moving from about 0.45 in 1990 to 0.43 in 2000. The Northeast remained practically unchanged (Figure 7).

Figure 7: Inequality in Urban Zones by Region, 1990–2000
Measured by the Gini coefficient multiplied by 100



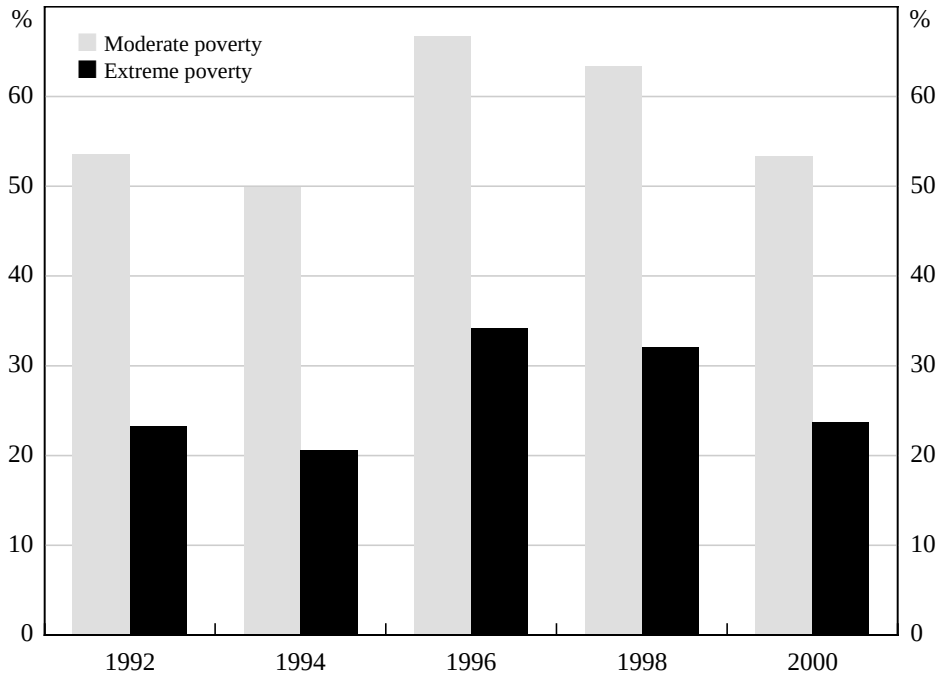
Source: Based on data from Andalón-López and López-Calva (2002)

Broader differences arise when assessing poverty evolution. Based on the definition used by INEGI,[6] poverty and extreme poverty showed a downward trend which was reversed in the aftermath of the 1994–95 crisis, and then was later resumed in the late 1990s. By 2000, national levels of moderate poverty and extreme

6. Moderate poverty is defined as the proportion of population with a daily per capita income of less than the value of a food basket with the minimum nutrients and calories for survival, plus housing, clothing, education and health. This daily income is equivalent to the value of a food basket multiplied by 2 and 1.75 for urban and rural zones, respectively. Extreme poverty is defined as the proportion of population with a daily per capita income of less than the value of the same food basket, excluding housing, clothing, education and health. As of April 2002, the daily income to be considered poor was equivalent to approximately US$4.83 for urban areas and US$3.58 for rural areas; whereas to be considered extremely poor it was US$2.41 and US$1.79, respectively.

poverty were practically the same as in 1990, at 53 per cent and 23 per cent, respectively, of total population (Figure 8). However, due to demographic growth there was an increase in the absolute number of Mexicans living in poverty (from 45.4 million in 1992 to 52.4 million in 2000) and extreme poverty (from 19.7 million in 1992 to 23.3 million in 2000).

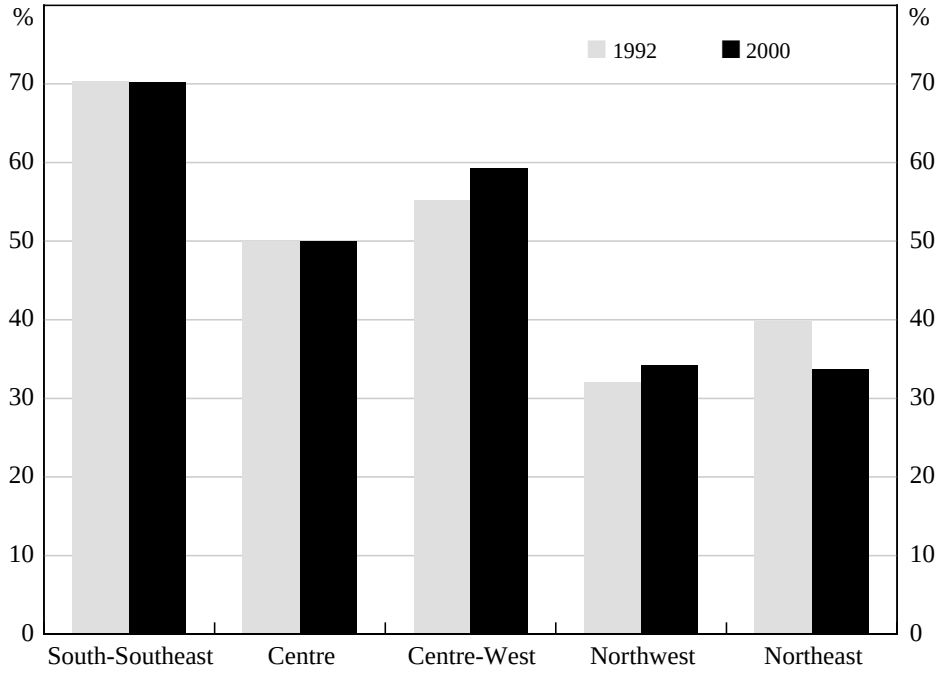
Figure 8: Evolution of Poverty and Extreme Poverty
1992–2000, per cent of total population



Source: Mexico Federal Executive (2002)

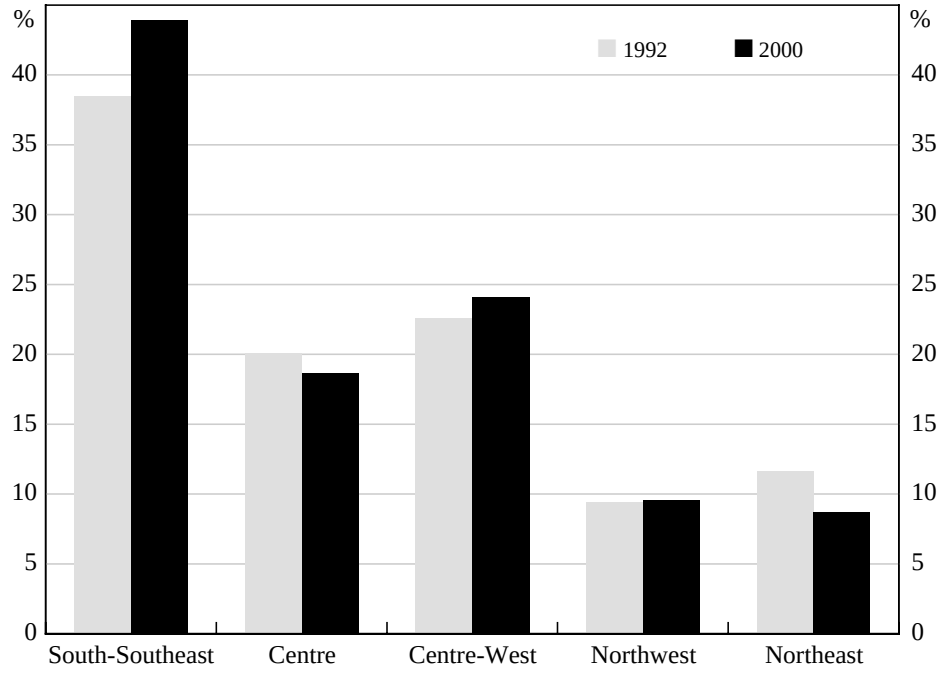
On a regional basis (Figure 9), the South-Southeast emerges with the worst picture, with 70 per cent of households below the poverty line throughout the 1990s. Although poverty levels remained unchanged in this region, the population in extreme poverty actually increased from 38 per cent in 1992 to 44 per cent in 2000 (Figure 10).

Figure 9: Poverty by Region
Per cent of total population



Source: Mexico Federal Executive (2002)

Figure 10: Extreme Poverty by Region
Per cent of total population



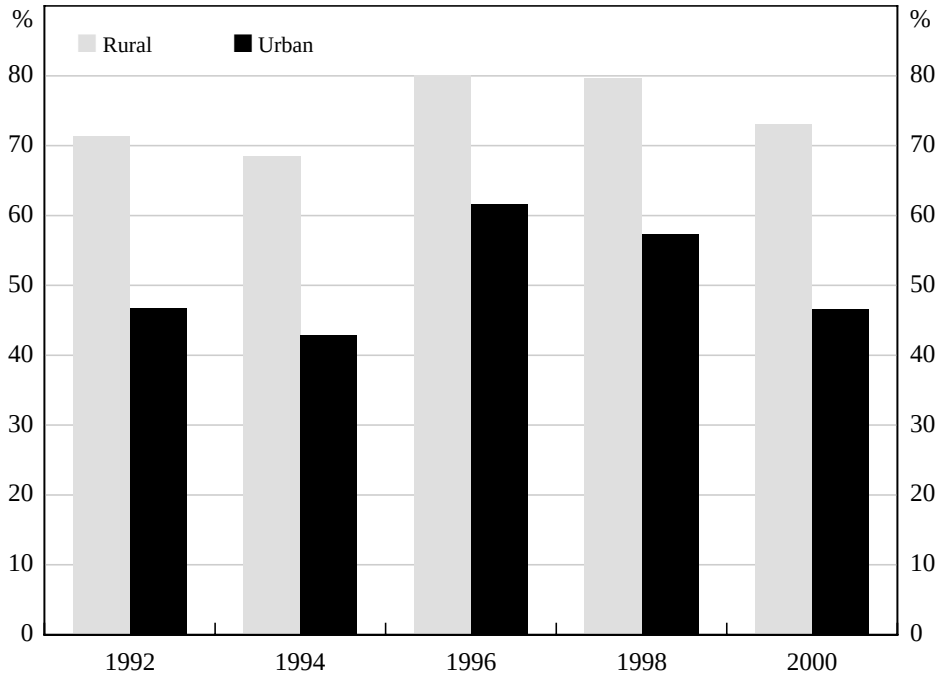
Source: Mexico Federal Executive (2002)

In the Centre, poverty also remained unchanged, with 50 per cent of the population under the poverty line, while extreme poverty slightly decreased. In the Centre-West and Northwest, poverty and extreme poverty increased slightly. By contrast, the Northeast – one of the most 'globalised' regions in the country – showed a significant overall improvement, with poverty dropping from 40 per cent in 1992 to 34 per cent in 2000 and extreme poverty falling from 12 per cent to 9 per cent, respectively.

In addition to regional differences, poverty assessments are further complicated by the strong bias against rural areas (Figure 11). Available information from INEGI indicates that the gap between rural and urban areas is significant, with the latter showing the most significant improvement in the late 1990s, following the sharp increase in the aftermath of the 1994–95 crisis. Overall, this is a significant improvement considering that 75 per cent of the population is concentrated in urban areas, and therefore better positioned to benefit from increasing global economic integration. By contrast, the fact that the remaining one-quarter of the population is widely dispersed in 184 000 rural villages, with less than 2 500 inhabitants each, poses a significant challenge for extending the benefits of globalisation and thus reducing poverty (Mexico Federal Executive 2002).

Figure 11: Rural versus Urban Poverty

Per cent of total population



Source: Mexico Federal Executive (2002)

Social indices and Mexico's standing

An alternative way to see whether there have been any social improvements in Mexico under increasing globalisation is by looking at some aggregated indices which include other variables such as per capita income, life expectancy, education and health. The three main international indices considered in this regard are the Human Development Index (HDI), the Basic Welfare Index (BWI) and the Physical Quality of Life Index (PQLI).[7] The HDI was first introduced by the United Nations in 1990, whereas the BWI and PQLI have been used by some scholars (van der Lijn 1995) for purposes of comparing international well-being indicators. With the exception of the BWI, Mexico's recent evolution shows a steady improvement (Table 2).

Table 2: Mexico's Recent Evolution of Social Indices

	1975	1980	1985	1990	2000
HDI[(a)]	68.78	72.05	75.01	76.83	78.60
BWI	55.64	57.61	60.07	60.52	56.16
PQLI	47.80	48.99	51.67	52.69	56.14

(a) The HDI is multiplied by 100 for comparison purposes. In all cases, the higher the indices are, the more socially developed the country is.

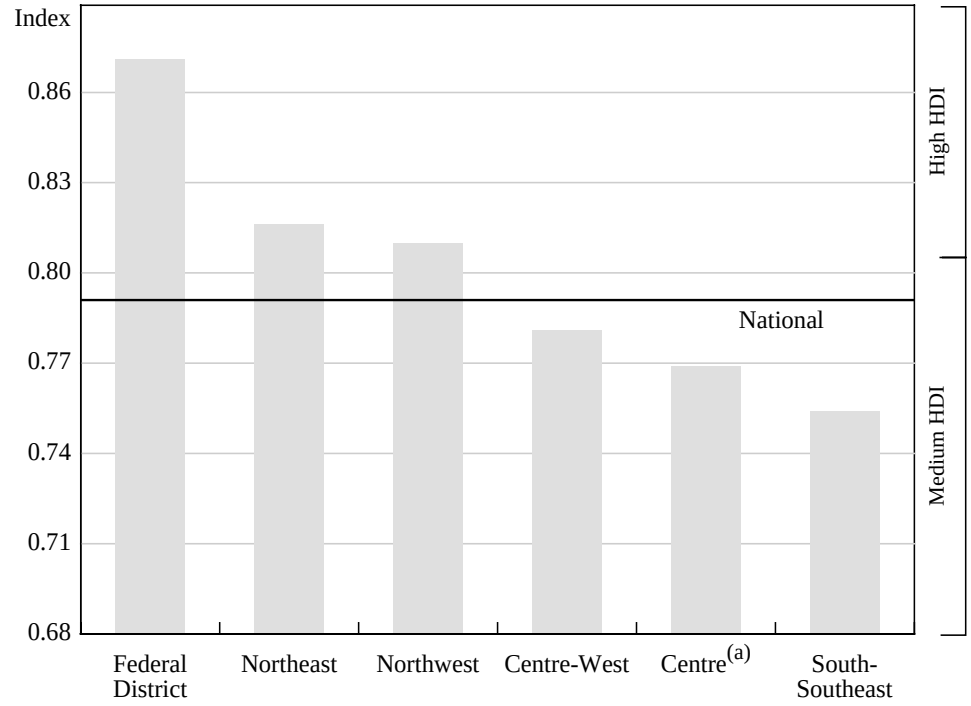
Source: Author's estimates based on World Bank (2002a), INEGI (2002) and UNDP (2001)

A recent study (CONAPO 2002a) applies the HDI methodology domestically to analyse variations among states with data for 2000 (Figure 12). The results confirm that those regions more open to trade and capital flows have the highest ranking, while those lacking links with global economic integration are left far behind. The differences across states are remarkable: the Federal District had an HDI of 0.93 in 2000 – considered as 'high human development' in terms of the United Nations methodology – whereas the Southern state of Chiapas had an HDI of 0.51, ranking it closer to what would be internationally classified as 'low human development'.

A similar picture arises when looking at the Marginalisation Index (MI) developed domestically by the National Population Council (CONAPO). This index shows the intensity of social marginalisation by looking at the population's access to basic goods and services.[8] According to this Index, the South-Southeast is the region with

7. The HDI is based on three indicators: (i) longevity, as measured by life expectancy at birth; (ii) educational attainment, as measured by a combination of adult literacy (two-thirds weight) and the combined gross primary, secondary and tertiary enrolment ratios (one-third weight); and (iii) standard of living, as measured by real GDP per capita measured at purchasing power parity dollars. The BWI is calculated with four indicators equally weighted at 0.25: (i) adult literacy; (ii) life expectancy at first year; (iii) infant mortality; and (iv) secondary education enrolment. Finally, the PQLI is based on two health indicators and one about education, each of them weighted equally as one-third: (i) adult literacy; (ii) life expectancy at first year; and (ii) infant mortality.

Figure 12: Human Development Index by Region
2000



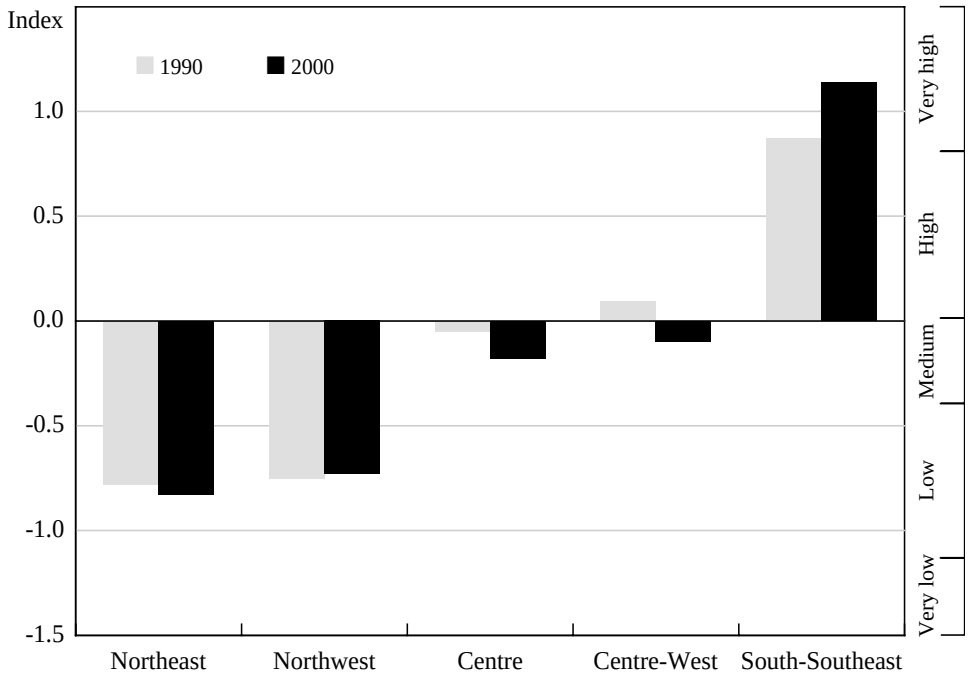
(a) Excludes the Federal District
Source: CONAPO (2002a)

the highest marginalisation rate, exceeding by far the rest of the country. In contrast, the Northeast and Northwest show the lowest marginalisation, while the Centre and Centre-West are located between the two extremes. It should be noted that three Mexican regions showed a reduction in marginalisation during the 1990s, namely the Northeast, Centre and Centre-West (Figure 13).

Differences in the MI are even stronger when looking at specific states rather than regions. The Federal District, as well as other outward-oriented states (such as Nuevo León, Baja California, Coahuila and Aguascalientes), have the lowest national ranking in marginalisation. On the opposite side, the southern states of Chiapas, Guerrero, Oaxaca, and Veracruz present the highest marginalisation scores. The Federal District is the least marginalised entity at the national level with –1.53, while the most marginalised state is Chiapas with 2.25.

8. The Marginalisation Index has five levels of intensity: very high, high, medium, low and very low. It combines the following variables: percentage of illiterate individuals older then 15 years of age; percentage of individuals living in their own house with no sewerage; percentage of individuals living in their own house with no electricity; percentage of individuals livings in their own house with no drinking water system; percentage of population living in overcrowded housing; percentage of individuals living in soil-floor houses; and percentage of working population earning less than two minimum wages.

Figure 13: Marginalisation Index by Region
1990 versus 2000



Source: CONAPO (2002b)

Education and health as driving forces of social improvement in Mexico

Over the past decade, Mexico achieved significant improvements in education and health, although several challenges remain. Three particular achievements in education are worth mentioning based on the results of the 2000 Census: reduction of illiterate population, expansion of enrolment rates and increase in average years of education.

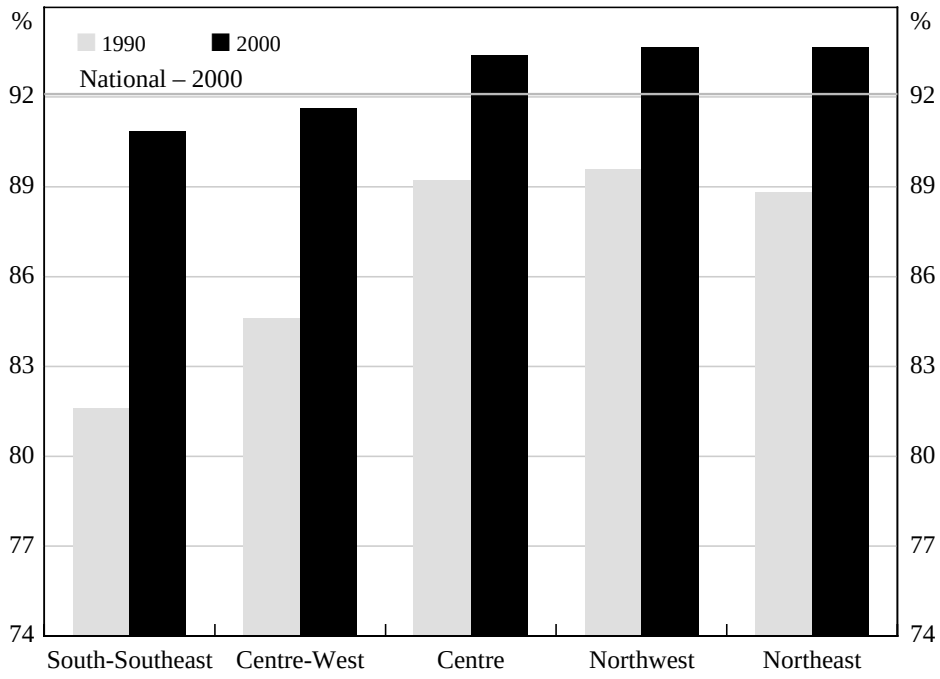
Illiteracy rates were improved from 13 per cent in 1990 to 10 per cent in 2000, although significant regional differences persisted. For instance, in the Centre and northern regions illiteracy rates were around 5 per cent in 2000, whereas in the Southern state of Chiapas they were close to 27 per cent, despite the reduction in 6 percentage points observed by the latter during the decade.

Basic education enrolment rates for the population between 6 and 14 years old increased from 86 per cent in 1990 to 92 per cent in 2000 (Figure 14). Moreover, these improvements in basic education were accompanied by reductions in gender differences, with girls recording a higher enrolment rate than boys in some grades.[9] Finally, average years of schooling for the population as a whole increased to 7.6 years, in contrast to 6.6 years in 1990 and 3 years in 1970.

9. Data for 1997 indicate that this was the case for 8 and 9-year-old children. In the former case, boys had an enrolment rate of 97.1 per cent and girls 97.6 per cent, while in the latter it was 97.5 per cent and 97.7 per cent, respectively (World Bank 2001).

Figure 14: Regional Enrolment Rates for Population between 6 and 14 Years Old

Per cent



Source: INEGI (2000)

A recent study by the World Bank (2001) has also highlighted improvements in terminal efficiency in primary education in Mexico, with the rate rising from 70 per cent in 1990 to 86 per cent in 1999. These improvements reflected lower repetition and dropout rates. However, there were also striking differences among states: the South-Southeast region recorded an efficiency rate in primary education of 72 per cent, almost 15 percentage points below the national average.

Improvements in basic education also reflected changes in the allocation of public resources. Public spending in education, for instance, increased from 3 per cent of GDP in 1989 to 5 per cent of GDP in 1999. More importantly, public education spending per student increased despite the growth in total student population.

However, as indicated by the World Bank study, there are at least three challenges that are yet to be solved. First, improvements in quantity in the supply of educational services need to be accompanied by an increase in quality factors. Second, enrolments need further improvement, particularly in lower secondary level where it is still low (68 per cent in urban areas). Third, the gap between urban and rural areas needs to be reduced. In primary education, for instance, access in urban areas is close to universal, whereas in the poorest rural areas attendance is still relatively low (85 per cent).

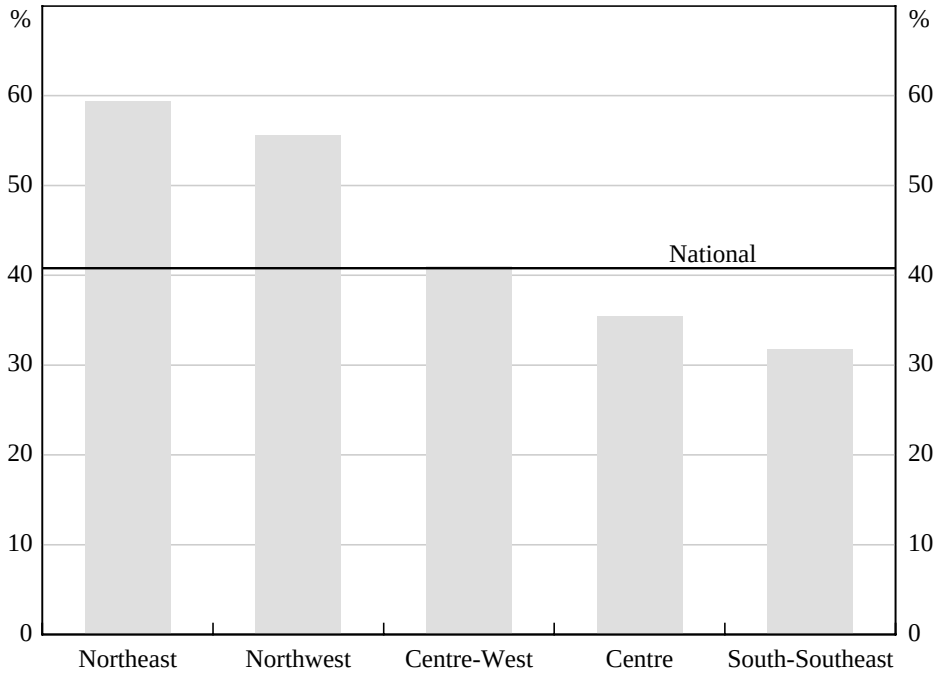
Health and social security is another equity-enhancing area where there has been significant improvement over the past decade. According to the World Bank, 'Mexico's many achievements in the health sector over the past several decades have

led to significant improvements in the health status of the population, a broadening of access to basic services, and support of important public health measures. Rising prosperity has brought an increase in life expectancy, reductions in infant mortality and a decline in the death rate' (World Bank 2001, p 410). Among the most outstanding improvements of the past decade are: the drop in mortality rate for children under age 5, which fell 37 per cent in that period, and in mortality from pneumonia and diarrhoea, which dropped 65 per cent. Vaccine-preventable diseases in general were drastically reduced (World Bank 2001).

These achievements were due to far-reaching health and anti-poverty measures, through the use of centralised institutions and vertical programs. However, when looking at regular health care services through social security, it is clear that these improvements have not equally benefited all regions (Figure 15). Nationwide, the 2000 Census indicated that only 41 per cent of the population had access to health care through social security. It is worth pointing out that in the northern state of Coahuila this increased up to 70 per cent of the total population, while in the southern state of Chiapas it was less than 20 per cent.

Figure 15: Individuals with Access to Healthcare Services through Social Security Institutions by Region

2000



Source: INEGI (2000)

Expanding social security is particularly important given the changing epidemiological profile typical of middle-income countries like Mexico. With chronic diseases and injuries becoming the main cause of death or disability, and emerging public health concerns such as AIDS, the demand for specialised health care has increased. Mexico still faces major challenges in terms of integrating a

fragmented health care sector and ensuring equity through issues of coverage and funding priorities, particularly since health expenditure in Mexico is lower than in other OECD and Latin American countries.

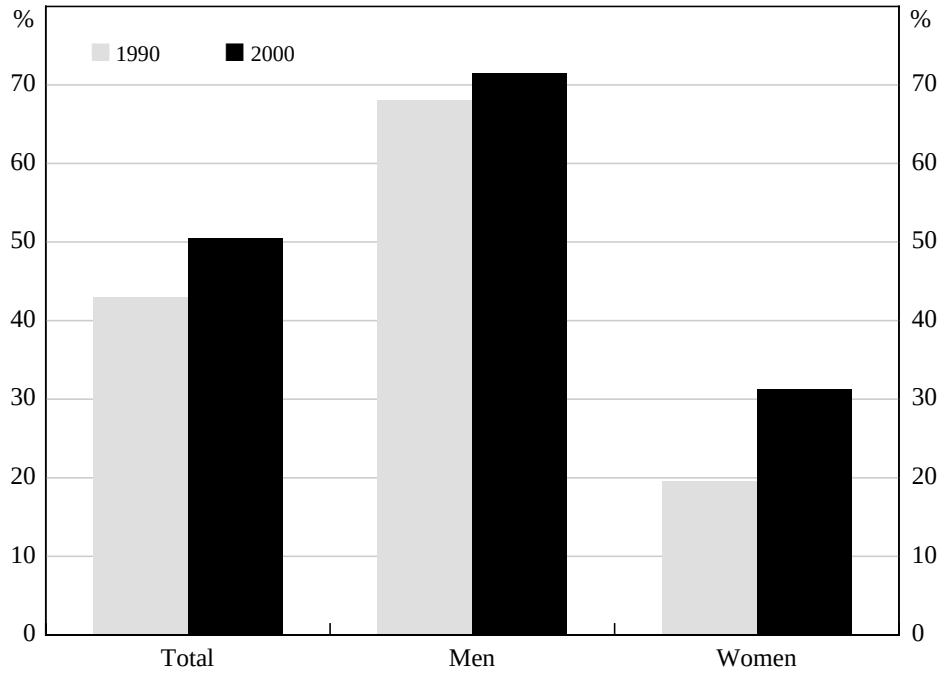
Employment and wages

Analysing the effects on employment and wages is crucial for assessing the benefits for workers stemming from global economic integration. After opening up the economy, Mexico saw a significant shift in the employment structure during the 1990s. As shown by the 2000 Census, the industry sector remained practically unchanged, accounting for 28 per cent of the total employed population. By contrast, commerce and services increased from 46 per cent to 54 per cent, at the expense of the primary sector, which in turn dropped from 23 per cent to 16 per cent.

The 2000 Census revealed that women have been increasing their participation in the labour market. In 1990, only 20 per cent of women in productive age were in the labour market, whereas in 2000 this increased to 31 per cent (Figure 16).

Figure 16: Participation in Labour Market by Gender

1990 versus 2000, per cent of total workforce

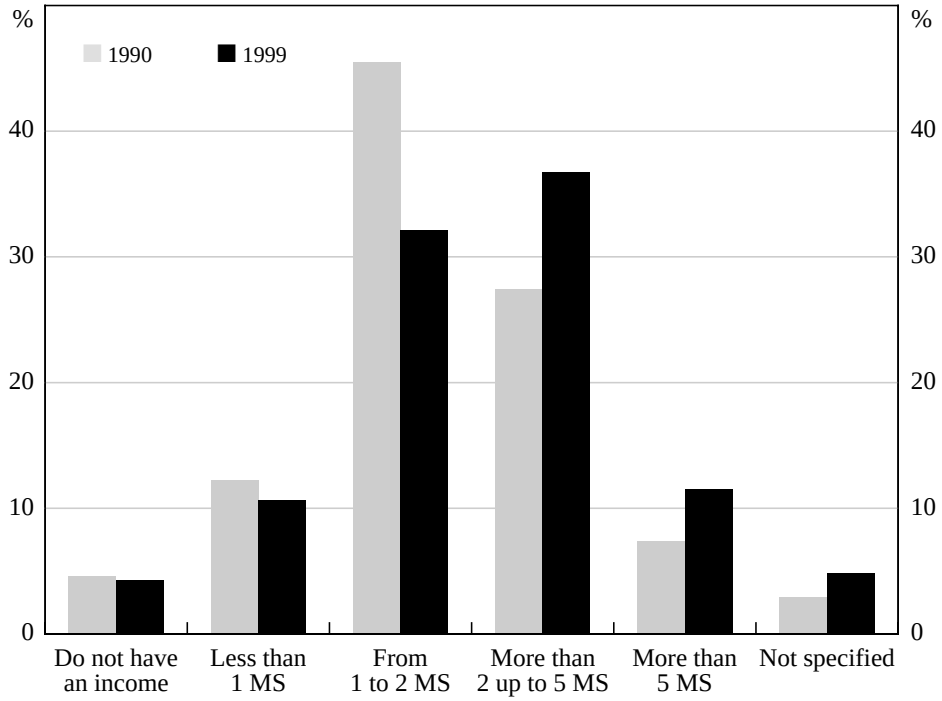


Source: INEGI (2002)

The Census also shows some improvements in income levels, specifically among urban workers (Figure 17). Those receiving less than one minimum salary decreased from around 12 per cent in 1990 to 11 per cent in 1999, while those earning between one and two minimum salaries dropped from 46 per cent to 32 per cent, respectively. By contrast, urban workers earning between two and five minimum salaries reportedly increased from 27 per cent to 37 per cent, while those earning more than five minimum salaries moved from around 7 per cent to 12 per cent.

Figure 17: Income Evolution among Urban Workers on Minimum Salaries (MS)

Per cent of total workforce



Source: INEGI (2002)

Additionally, it should be noted that empirical evidence in Mexico confirms the notion that FDI brings a skill premium, that is, the extra pay that skilled workers get relative to unskilled workers – a pattern which has been observed in several developing countries (World Bank 2001). When examining the evolution of relative wages for skilled workers in Mexico during the 1980s, Feenstra and Hanson (1997) found that, in regions where FDI is concentrated, growth in FDI can account for over 50 per cent of the increase in the skilled labour wage share that occurred in the late 1980s. Similarly, in a more recent study undertaken in the North of the country, where FDI in the form of *maquiladoras* is highly concentrated, Mendoza Cota (2002) found out that, on average, the pay for manufacturing workers increases 4 per cent for each additional year of education.

Policy responses and challenges for the future

Mexico's experience with globalisation indicates that no sustainable improvements in equity and living standards can be achieved without first securing macroeconomic stability and economic growth. As shown in the 1994–95 crisis in Mexico, as well as in other recent international episodes, globalisation exposes bad economic management with unprecedented severity and a high social cost, affecting living standards and wiping out many social improvements. For this reason, Mexican

authorities are committed to securing conditions for sustainable economic growth as the cornerstone of any successful policy aimed at raising living standards.

However, economic growth is a necessary but not sufficient condition for improving equity and living standards, particularly in countries such as Mexico, with a long-standing legacy of poor income distribution and far-reaching regional disparities. Specific public policies can therefore play a key role in addressing the sources of inequality, while equipping the population with the means to benefit from increasing links with the world economy. Fiscal policy – taxation and spending – appears, therefore, as the most evident tool for tackling this challenge.

With tax policies increasingly showing their limitations, particularly given the reduced margin for manoeuvering under closely intertwined economies, the expenditure side of the budget has thus become a more effective equity-enhancing tool. As recognised by the IMF, 'the link between income distribution and social spending – especially spending on health and education, through which governments can influence the formation and distribution of human capital – is particularly strong, and public investment in human capital can be an efficient way to reduce income inequality over the long-run' (IMF 1998, pp 6–7).

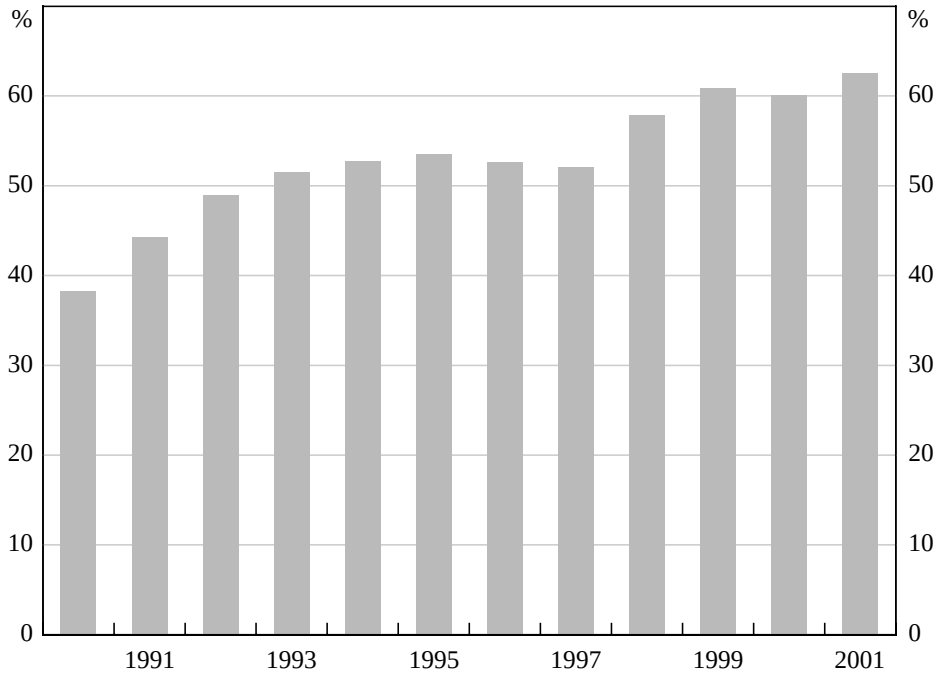
Over the past few years, Mexico has developed a consistent social policy under this approach; that is, reducing poverty and enhancing human capital formation through increasing and more focused public spending. This policy has revolved around six strategic guidelines:

1. Increasing budgetary resources for social spending

Social spending in Mexico has reached historical levels. After a decade of steady increase, in 2001 it represented 62 per cent of total programmable spending, compared to 38.2 per cent in 1990 (Figure 18). This has entailed a significant restructuring in public spending, as indicated by the fact that between 1994 and 2000 social spending per capita increased by almost 13 per cent, despite the 5 per cent reduction in programmable spending per capita observed during that period of time.

More importantly, this steady increase in social spending has been achieved keeping fiscal discipline and despite relatively low taxation levels. With tax revenues remaining unchanged at levels of 12–13 per cent of GDP over the past decade, increasing tax revenues remains a major challenge for expanding social spending in Mexico, particularly since it still remains low by OECD standards.

Figure 18: Share of Social Spending in Total Programmable Spending



Source: Mexico Federal Executive (2002)

2. Enhancing the redistributive impact of social spending

Spending on social security, education, health and labour training has been emphasised due to their high redistributive impact. A fundamental step in this direction was the 1997 social security reform, which increased coverage and established the basis for improving the system's financial viability. In addition to a major overhaul of the pension system of the private sector – which included the introduction of a fully funded system in place of the old pay-as-you-go scheme – the costs of contribution to the health segment of social security were thus reduced for both employers and employees.

Equity concerns in the reform of the social security system led to the development of mechanisms to provide health services to the uninsured population through a low fixed contribution. The pension component also had a redistributive impact in favour of the low-income workers, since the government makes a lump-sum transfer to the savings account of all workers regardless of their wage level. In addition, by expanding education and health services to the low-income segments of the population, including scholarships and other incentives for securing access for the poorest families, the equity orientation of social spending was enhanced.

This is a particularly relevant shift in government expenditure, considering that in the past public spending actually increased income inequality through transfers to better-off population groups. This included, for instance, across-the-board food subsidies or agricultural credit subsidies, which were later eliminated or modified.

In this aspect, the opening of the Mexican economy and the need to improve public finances contributed to including more and better focused equity concerns in public spending.

3. Targeting spending in poverty alleviation programs

Special emphasis in social spending has been placed on programs specifically targeted at poverty alleviation. In particular, two specific changes in the nature of subsidies have been incorporated:

(a) a shift from pure income transfers to transfers conditional on investment in human capital (health, education and nutrition); and

(b) a shift from generalised to targeted food subsidies, along with a better balance between urban and rural areas.

The measures to enhance human capital formation attempted to improve both supply and demand. On the supply side, actions were taken to improve quantity and quality of health and education services for the most vulnerable segments of the population. At the same time, demand-side measures were incorporated through new mechanisms such as school breakfasts and school grants. One of the main instruments of this demand-side instrument was the creation of the integrated Education, Health and Nutrition Programme (PROGRESA) in 1997. Originally covering only isolated rural areas, PROGRESA was modified in 2001 to include poor urban areas as well. Currently, PROGRESA covers more than 3 million families in 31 states.

PROGRESA combines a traditional cash transfer programme with financial incentives for families to invest in the human capital of their children.[10] The size of the cash transfer is large, approximately one-third of household income for the beneficiary families. Another specific feature of the program is that the mother of the family receives the cash transfers, in the belief that this way the funds can be more effectively channelled to children's education and nutrition. Recent evaluations undertaken by the Washington-based Food Policy Research Institute have found that PROGRESA has been an effective tool in reducing poverty levels while increasing education attainments, reducing child work and improving overall health conditions.[11] Indeed, this success has led several experts to recommend the application of similar programmes in other countries (Krueger 2002).

In addition to investment in human capital, poverty alleviation policies in Mexico have included investment in basic social infrastructure (sewerage, drinking water,

10. The family only receives the cash transfer if: (a) every family member accepts preventive health services; (b) children aged 0–5 and lactating mothers attend nutrition monitoring clinics where their growth is measured, they obtain nutrition supplements, and they receive education on nutrition and hygiene; and (c) pregnant women visit clinics to obtain prenatal care, nutritional supplements and health education. An additional cash transfer is given to households with school-age children if the children are enrolled and attend school.

11. For a summary of these evaluations, see IFPRI (2002).

rural roads, telephones, etc) and development of income generation programs (public works, micro-enterprises, etc).

4. Decentralising social spending

Social spending in Mexico is increasingly channelled through the state and municipal governments rather than the federal government, as it used to be in the past. A drastic change in the composition of social spending between the federal and the state and local governments has occurred through two mechanisms: federal grants (*aportaciones federales*) and resource allocation agreements or decentralisation agreements.[12]

Created in 1998, federal grants are allocated to the states for specific social programs on an annual basis, according to transparent rules and clear responsibilities of the three levels of government (federal, state and municipal) regarding the execution, monitoring and accountability. Federal grants are divided into funds earmarked for specific attributions: basic education, health care services, poverty alleviation, technological and adult education, etc. This way, sub-national governments act as an agent of the federal government for carrying out a coherent nation-wide social policy, while providing legal security over resource availability.

Resource allocation agreements have been another mechanism to decentralise social spending. Although keeping their status as federal ear-marked resources, overall management of the funds is transferred to the states. This scheme has been used primarily for fuelling resources for education and health care services.

It should be noted that decentralisation of public spending, of which education and health care services have been a large component, has been a major transformation in Mexico's public finances. Whereas in 1993, sub-national governments spent only 39 centavos for each peso spent by the federal government, by 2002 this proportion had been reversed and sub-national governments were spending 1.32 pesos for each peso spent at the federal level.[13] It is considered that this process has reached a limit since federal transfers have not been matched by revenue-enhancing measures among sub-national governments. This indeed has become a major challenge, not only for increasing funds for local social development, but also for enhancing the effectiveness of public spending.

12. Federal participations (*Participaciones federales*) are the third mechanism for transferring federal public spending to sub-national governments. These are transfers in the form of revenue sharing, that is, they are determined automatically as a pre-established percentage of revenue. Once the funds are transferred, they are considered local resources which are spent depending upon the priorities of each sub-national government.

13. This proportion refers to primary expenditure, excluding state-owned enterprises. It is obtained by dividing the expenditure of states and municipalities by the expenditure exercised directly by the Federal Government of Mexico (SHCP 2001).

5. Increasing transparency and accountability

Over the past few years, important steps have been taken to increase transparency and accountability in public spending, while reducing discretionary powers. Since 1999, for instance, the Budget Decree establishes the obligation for all federal agencies to publish specific operation rules for any program entailing income transfers. These operation rules include: criteria for identifying the target population, mechanisms for regular evaluation, clear limitations to discretionary powers and coordination requirements among public agencies to avoid duplication and promote consistency across the board.

Although significant improvements have been taken at the federal level, consolidating this process among local authorities remains a major challenge. This entails institutional strengthening and a more active involvement of society.

6. Incorporating regional considerations into social spending

Given the significant regional gaps in social development, Mexican authorities have recently incorporated a major regional component in their social spending strategy through two programmes launched in 2001:

- The Puebla-Panama Plan is a far-reaching long-term plan aimed to develop the South-Southeast region by strengthening economic links with Central America.[14] In addition to an international dimension involving a portfolio of integration projects, domestically the Puebla-Panama Plan includes a comprehensive set of social development, infrastructure, and productive policies.
- The Micro-Regions Programme, in turn, was designed to provide a comprehensive set of social policies targeting 476 municipalities throughout the country, including all the 5 regions in which the country has been divided for planning purposes. These municipalities were identified as having the highest social marginalisation indices in Mexico, comprising to a large extent indigenous people.

Concluding remarks

Mexico's insertion into what has been considered the 'third wave' of globalisation has brought several benefits, although strongly differentiated along regional lines. Economic growth, export performance and FDI flows are closely linked with

14. The Puebla-Panama Plan is a joint governmental effort launched with the support of the Inter-American Development Bank, aimed at boosting integration and economic development in nine states in the South-Southeast region of Mexico (Campeche, Chiapas, Guerrero, Oaxaca, Puebla, Quintana Roo, Tabasco, Veracruz and Yucatan), as well as in seven Central American countries (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama). This region stretches over more than one million square kilometres and has approximately 65 million inhabitants. Despite its wealth of natural resources and proximity to major markets, its extreme poverty index is three times higher than the Latin American average.

broader social improvements, as seen in those Mexican regions with stronger global economic integration.

Poverty and extreme poverty show a downward trend, particularly notable in urban and more outward-oriented regions. Income inequality has remained relatively unchanged at a national level, while some improvements can be seen in northern urban areas, where global economic integration is growing. In terms of education, health and broader social indices, substantial improvements at a national and regional level have occurred over the past decade.

Mexico's experience with globalisation also shows that progress in equity and living standards cannot be achieved without an appropriate economic policy mix aimed at securing both macroeconomic stability and economic growth. Nevertheless, the fact that half of the population is still in poverty or extreme poverty calls for renewed efforts on human capital formation, institution-building and reform, so that the benefits of globalisation can be effectively extended to broader segments of the population.

Economic policy-makers in Mexico have therefore speeded the pace of structural reform and adopted a pro-growth and pro-'public spending on the poor' policy through increasing equity and social considerations. Social development and equity policies have been increasingly addressed by relying more on the public spending side of the budget, without affecting the overall soundness of public finances.

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2. Xie Ping

The Chinese economy has grown very quickly over the 20 years since China began opening to the outside world, although income per capita remains low because of the country's large population.

Economic growth has inevitably increased inequality, including inequality between city and rural areas, between different regions, and between the employed and unemployed. The Chinese government has introduced a number of measures to

reduce inequality, which the government hopes will contribute to social stability. These measures include:

- Setting up a safety net that provides income security as well as job opportunities for the unemployed.
- Introducing a strategy called 'developing the west', aimed at reducing inequality between coastal and inland cities, and between northern and southern cities.

On the topic of measuring poverty, I do not believe that the standard poverty measure of 'one dollar per person per day' is appropriate. For example, it cannot be applied to all countries because consumption and price levels may not be comparable across countries or regions. This measure is particularly unsuitable for measuring poverty in inland and rural China.

With regard to the effect of globalisation on poverty and inequality, I think of it as a double-edged sword. This is especially true for developing countries. Although globalisation has brought China significant economic benefits it has, at the same time, enlarged the gap between the rich and poor. Many other developing countries have had the same experience. In addition, it is important that the currently developed countries also become more open. For example, some developed countries only allow the flow of goods and capital from developing countries, not technology and labour. This only puts more obstacles in the path of developing countries' attempts to improve their living standards.

Here are some thoughts on how inequality across countries can be reduced:

- Developed countries should provide more opportunities and more capital to developing countries. They could provide debt relief, open their markets, and facilitate technology transfer to developing countries.
- Developing countries should make efforts to find the 'comparative advantages' and development paths that will allow them to benefit from globalisation.

3. Y Venugopal Reddy

I would like to place on the record our deep appreciation for the excellent arrangements made for the G-20 Workshop, the outstanding hospitality of the Australian authorities, and the insight of the papers presented.

The idea to present country case studies has proved to be quite useful. In particular, the paper on India was comprehensive, thorough, and captures most of the features of India's experience with globalisation. Dr Kishore should be complemented for this.

By way of summary, Dr Kishore characterised India's experience with globalisation as, in many ways, unique. He outlined how Indian policy had changed with respect to external trade, capital flows, and the financial sector. His analysis of the effect of globalisation showed that: average growth increased from 3.5 per cent per annum

prior to 1983, to 5.6 per cent per annum between 1983 and 1992, and to 6.1 per cent per annum after 1992; evidence about the effect on employment trends was mixed; the financial sector was stable and strong; inflation was benign; forex reserves increased; and trade openness increased after 1987.

His analysis also showed that living standards improved significantly, although it should be remembered that 'well-being' is more important in the Indian context. The paper also noted that inequality had increased in India between individuals and regions. He concluded by arguing that there was no single model for countries attempting to become more integrated with the world economy, and that no causality from globalisation to growth and poverty reduction had been established. He thought that there was a clear role for governments in ensuring that growth was equitable, and that the transition to an open economy was managed properly.

The comments on India's experience with globalisation that follow are offered wearing my academic hat rather than my central banker's hat, and relate to the broader questions that arise from this experience.

First, the link between economic performance and globalisation must be assessed. Because India's average growth rate during the 1990s was about the same as during the 1980s (and even a percentage point lower since 1997), it is unclear whether globalisation (which commenced in India in 1992) or domestic deregulation (which began in the 1980s) had a larger effect on Indian growth. Indeed, the lower average growth since 1997 has coincided with a deepening of India's integration with the world economy and a period of global uncertainty.

Second, in his presentation Professor Wade alluded to the need to distinguish between internal and external integration. In India, of the seven important reforms undertaken since the 1980s, three were part of the deregulation of the domestic sector[1], and four related to the external sector.[2] There are clear difficulties in identifying which reforms (and in what combination) had the largest effect on the Indian economy, and hence identifying the impact of globalisation. It does seem, however, that Professor Wade's comments are valid and that improving both India's internal and external integration have been important.

Third, with regard to the stability of the economy, I agree with Dr Kishore that the economy showed great resilience to internal and external uncertainties during the 1990s. For example, although inflation has remained under control in India for most of the period since independence, it has been particularly benign in recent years. Further, the country's financial markets have withstood the Gulf crisis of 1991–92, the Asian crisis of 1997, and more recently September 11.

1. They were the dismantling of industrial licensing, the opening of publicly owned and managed industries to private sector participation, and the abolition of the *Monopolies and Restrictive Trade Practices Act.*
2. They were the switch from a fixed exchange rate to a flexible exchange rate, the removal of quantitative restrictions on imports, the reduction of the peak custom tariff, and market orientation in the management of the external sector.

Fourth, the stability of India's currency was relatively unaffected by the Asian crisis. Indeed there was a view that the country withstood the shock of the Asian crisis because it remained a relatively closed economy. Thus, the interesting question is – what was of most benefit to the economy, its relatively closed nature, or its improved openness in combination with prudent macroeconomic policies?

Fifth, I agree with the paper that India's balance of payments has been very strong since the economy opened up. This outcome was attributed by the paper to current account convertibility, the cautious liberalisation of the capital account, an emphasis on non-debt creating flows, accretion to reserves, and the maintenance of a flexible exchange rate while simultaneously avoiding excess volatility of the exchange rate.

In my view, the strength of the balance of payments can be explained in several other ways. For example, the accretion to reserves can be explained by increased workers' remittances, growing software exports, and a current account deficit of around 1 per cent of GDP. The increase in workers' remittances reflects the lowering of migration barriers in some countries, while the low current account deficit reflects the increased absorptive capacity of the economy. Thus, in the Indian case, the question that needs to be asked is: is the strength of the external sector due to prudent external sector and exchange rate management, or the outward orientation of the economy?

Sixth, with regard to the labour market, the paper noted that there was a marginal increase in employment in the organised sector, but the evidence is mixed on whether globalisation has affected employment growth in the unorganised sector. Further, interstate disparities in employment growth have widened.

Seventh, evidence in the paper clearly points to reductions in poverty during the 1990s, although evidence suggests that poverty also fell in the 1980s. There is, therefore, a need to determine whether the gains of the 1990s represent a new trend, or an acceleration of the trend over the 1980s when the Indian economy had barely opened up. Such an analysis would require more disaggregated poverty data.

Eighth, the paper demonstrates that it is not clear whether globalisation has accentuated inequality across states. Indeed, the paper argues that a state's coastal location and its development policies may be more important.

Ninth, as Vito Tazi, a noted economist has observed, the capacity of the government to raise taxes at a time when the country is in the process of opening up is reduced. This is alluded to in the paper when India's persistent fiscal deficit is mentioned. Indeed, the central government has alone run a deficit of over 5 per cent of GDP over the last 10 years. This is in addition to the rising provincial government fiscal deficits. So, although the government needs more resources for public good provision during the globalisation process, its capacity to raise taxes, both direct and indirect, has been reduced. The issue, therefore, is whether globalisation, which on one hand provides the opportunity for developing countries to grow faster, may on the other reduce the capacity of governments in developing countries to equip their citizens with the skills necessary to compete in the global economy.

Tenth, flexible product *and factor markets* are critical for globalisation to have a positive effect on the economy. While capital can move or be withheld, labour can neither move easily across borders, nor can a worker withhold his labour, since an income is necessary for survival. Hence, a flexible labour market cannot be assumed in a country where there is no social security because there are limits to retrenchment. The world order, as it exists today, does little to strengthen national governments in terms of raising revenue, nor does it provide protection for workers or the poor in times of crisis. Because national governments continue to be responsible for looking after their country's poor, they become, in the absence of mechanisms to cope with the shocks associated with globalisation, averse to opening the economy too much. Thus, the international community needs to assist national governments to cope with external shocks so that globalisation continues to be embraced by developing countries.

Finally, as Dr Kishore observed, although poverty fell significantly in both China and India during the 1990s, poverty reduction was far less impressive in many other developing countries, despite even more far reaching reforms being implemented in many of them. This raises the question as to whether India and China's success can be attributed to their reforms associated with globalisation, or to non-globalisation-related domestic reforms. Answering this question is important because it will shape the optimal policy choices of other developing countries in the globalisation era.

4. General Discussion

The papers by Shang-Jin Wei and Adarsh Kishore, on the Chinese and Indian experiences with globalisation, generated discussion on three main topics. First, why did some countries not attract foreign direct investment (FDI), despite appearing to get their policy settings right? Second, the importance of microeconomic, as well as macroeconomic, policy for generating growth. And third, why the benefits of globalisation were often unevenly distributed across regions within developing countries, and how policy-makers should respond to this development.

The discussion began with the observation that a number of developing countries have failed to attract significant FDI over the last 10 years, despite often having sound institutions, relative macroeconomic stability and open trading regimes. One participant noted that there were a number of non-policy factors that could influence whether a country was a favourable destination for FDI. The two factors discussed in most detail were the size of a country's domestic markets, and its proximity to foreign markets or trade routes. For example, both China and India may have become popular destinations for FDI because of the size of their domestic markets and their potential to expand significantly. The Mexican experience was also discussed to highlight the benefits of proximity to a large market. For firms wanting to sell into the US market, regions in Mexico bordering the US were an ideal location for

investment because they combined access to a pool of relatively cheap labour with low transport costs. One participant was, however, keen to bring the subject of openness back into the discussion, arguing that although economic geography did influence investment flows, imposing barriers to trade with the rest of the world could only exacerbate geographic constraints. Drawing on the results in Shang-Jin Wei's paper, this participant likened the imposition of barriers to trade to artificially increasing a region's distance from world markets, with similar economic effects.

Although a number of participants acknowledged the constraints that economic geography placed on countries' growth potential, there was also discussion of the failure to focus enough attention on microeconomic policy. Inefficient ports, a lack of internal infrastructure, excessive government intervention in markets for non-public goods, delays and expenses for firms to set up, etc, all created an environment that was not conducive to either private domestic or foreign investment. It was pointed out that the importance of microeconomic reform to productivity growth had long been recognised in developed countries, and that such reform processes were also important in developing countries. It was, however, recognised that the human resources required to carry out such policy reforms were often lacking in developing countries, and there was therefore a large role for aid agencies and institutions such as the World Bank to provide technical assistance.

Finally, there was some discussion of why the integration of a country into the global market-place, and hence the benefits of globalisation, was often unevenly distributed across regions within a county. For example, coastal China benefited more than western inland China, and the regions of Mexico bordering the US were much more integrated with that economy than regions such as Chiapas in the south. For many, this was further evidence that economic geography, which could influence relative growth rates across countries, was also important in explaining growth differentials across regions within countries. One participant thought that the distribution of benefits across regions within a country was like a zero-sum game. Specialisation and localisation meant that only a subset of regions within a country could become integrated with the global economy, and hence some regions were bound to prosper more than others. Because of this concentration of the benefits of globalisation within a small number of regions within a country, it was argued that a national system of transfers might be desirable to ensure that the benefits were more evenly distributed.

Globalisation, Inequality and the Rich Countries of the G-20: Evidence from the Luxembourg Income Study (LIS)

Timothy M Smeeding[1]

Abstract

The purpose of this study is to summarise and comment upon what we know about the determinants of both the level and trend in economic inequality over the past two decades, and to relate these findings to the progress of globalisation in these nations. While the fruits of economic progress in rich nations have not been equally spread, we argue that most citizens in rich OECD nations have benefited from the trend toward global economic progress. We begin with a summary of the differences in overall economic inequality within the G-20 nations based on Luxembourg Income Study (LIS) data and recent work by others. Here we find that social policies, wage distributions, time worked, social and labour market institutions, and demographic differences all have some influence on why there are large differences in inequality among rich nations at any point in time. In contrast, trade policy has not been shown to have any major impact on economic inequality.

Next, we turn to trends in inequality. We find modest and sometimes dissimilar changes in the distribution of income have taken place within most advanced nations, with most finding a higher level of inequality in the mid to late 1990s than in the 1980s. Inequality, however, has not risen markedly in some nations (e.g., Denmark, Germany, France and Canada) over this period, while its rise has slowed in several other nations during the late 1990s. The explanations for rising inequality in rich countries are many, and no one single set of explanations is ultimately convincing. In particular, there is no evidence that we know of that trade and globalisation is bad for rich countries.

This suggests that rising economic inequality is not inevitable, or that it necessarily hurts 'low-skill'/'low-income' families. Rather it suggests that globalisation does not force any single outcome on any country. Domestic policies and institutions still have large effects on the level and trend of inequality within rich and middle-income nations, even in a globalising world economy.

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1. Introduction: Cross-national Studies of Income Distribution

Increasingly, the rich and poor nations of the world face a common set of social and economic trends and policy issues: the cost of population aging; changing family structures (including a growing number of single parent families in many nations); the growing majority of two-earner families; and increasing numbers of immigrants from poorer nations. In particular, most rich and middle-income nations are experiencing rising economic inequality generated by skill-biased technological change (marked by rising returns to higher labour market skills), international trade, and other factors related to the globalisation of the world economy. While increasing economic inequality is not inevitable, and while public policy and labour market institutions can help prevent many of the downside effects of these trends, the facts of the matter are that income inequality has continued to increase in the large majority of the world's rich nations over the past decade (Gottschalk, Gustafsson and Palmer 1997; Atkinson 1999; Friedman 2000; Smeeding and Grodner 2000). All of these rich nations have also designed systems of social protection to shield their citizens against the risk of a fall in economic status due to unemployment, divorce, disability, retirement, and death of a spouse. The interaction of economic and demographic forces and social programs generates the distribution of net disposable income in each of these nations.

The recent evidence on the level and trend in economic and social inequality in rich and middle-income nations is the major topic of this brief paper. The emergence and availability of cross-nationally comparable databases has put us in a position to directly compare the experiences of rich nations in coping with the growth of market income inequality, and to begin to add middle-income nations as well. Additional comparable data of the type called for by the Canberra Report (Canberra Group 2001) will also allow better studies of this same type in coming years for a wider still range of countries.

The LIS project has pioneered the availability of online data that allows researchers to use microdata to measure inequality and to test their ideas and hypotheses about the sources and causes of that inequality using modern methods. One of the major purposes of this paper is to update the facts and figures in these reports by presenting evidence on the level and trend in income inequality as portrayed by the LIS data, and from other sources. We begin with a brief review of methodology. Then we turn briefly to the results for level of inequality. Trends in inequality come next and they are often more difficult to precisely assess than are levels, whether using LIS or other sources. We also include a brief discussion of recent research on the determinants of these levels and trends.

Comparisons of these experiences may help us to understand how one nation is similar to and different from other nations. It may also help us trace these differences to their economic, demographic, and policy-related sources. The institutions which emerge in nations to help mitigate the forces of market-driven economic inequality are also of interest. Global trade will benefit some groups and hurt (at least temporarily) others, even when the overall benefits exceed the costs for any nation

as a whole (Friedman 2000). Too often we forget that greater trade brings with it wider choices, better products, and better prices which benefit all citizens, regardless of their personal changes in earnings or incomes.

Cross-national research has also taught us that *every* nation must design its own set of social and economic policies tempered by its institutions, values, culture, and politics. And the conclusions of this paper are that these national policies continue to matter greatly.

2. Measuring Economic Inequality: The Basics

Here we briefly review the sources of our evidence and their strengths and weaknesses. There is currently a set of international standards for income distribution that parallel the international standards used for systems of national income accounts, that have been pioneered by the Canberra Group.[2] The LIS, which underlies much of this paper and the initial findings of the Canberra group, offers a place to start with these analyses. In fact the LIS definition of annual disposable income is the starting point from which this paper begins. LIS offers the reader many choices of perspective in terms of country, income measure, accounting unit and time frame. But its relatively short time frame (1979–1997 for most nations, but 1968–1997 for five countries) and limited number of observation periods per country (three to five periods per country at present), currently limits its usefulness for studying longer-term trends in income distribution. The purpose of this section of the paper is to explain the choices we have made in our use of LIS. The choices we, and others, have made to study longer-term trends in income distribution are more fully discussed in Gottschalk and Smeeding (1997, 2000) and Atkinson, Rainwater and Smeeding (1995). It is important to note that these income definitions are also the ones that have been initially used by the Inter-American Development Bank (IDB) in their work on this topic (Székely and Hilgert 1999a, 1999b) and are the starting point for the Canberra Group (2001) work on cross-nationally comparable income data.

Our attention is focused here on the distribution of *disposable money income*, that is, cash and near-cash money income, including earnings of all household members, after direct taxes and including transfer payments. Several points should be noted about this choice:

- income rather than consumption is taken as the indicator of economic well-being. Wealth is ignored except to the extent that it is represented by cash interest, rent and dividends. While for developing countries, consumption is liable to be a better definition and also very close to disposable income, we use income here;
- the LIS definition of income falls considerably short of a comprehensive definition, typically excluding much of capital gains, imputed rents, and most income in kind

2. The 'Canberra Group' of National Statistical Offices and Organisations (including LIS, the World Bank, the United Nations and others) produced its final report on international standards for income distributions last year. See Canberra Group (2001) or <http://www.lisproject.org> for a summary of all of the Canberra meetings and the final report.

(with the exception of near-cash benefits and the measurement of home production in Mexico and Russian LIS surveys (Canberra Group (2001), chapter 8). But it is also much wider than the distribution of wages or earnings per worker used in much of the globalisation literature;

- no account is taken of indirect taxes or of the benefits from public spending (other than cash and near-cash transfers) such as those from health care, education, or most housing subsidies; and
- the period of income measurement is in general the calendar year, with income measured on an annual basis.[3]

Thus, variables measured may be less than ideal and results may not be fully comparable across countries. For example, it might be that one country may help low-income families through money benefits (included in cash income), whereas another provides subsidised housing, childcare, or education (which is not taken into account). And some types of benefits, e.g., education, may have quite different effects on longer-term national well-being. While one study (Smeeding *et al* 1993) finds that the distribution of housing, education, and health care benefits reinforces the general differences in income distribution for a subset of the western nations examined there, there is no guarantee that these relationships hold for alternative countries or methods of accounting (Gardiner *et al* 1995), nor that they are stable over a longer time frame. In fact, most studies show that countries which spend more on cash benefits tend to also spend more on non-cash benefits. Because non-cash benefits are more equally distributed than are cash benefits, levels of inequality within high non-cash spending countries are lessened, but the same rank ordering of these countries, with respect to inequality levels that are found here using cash alone, persists when non-cash benefits are added in. And while we use income, not consumption, as the basis for our comparisons, due to the relative ease of measurement and comparability of the former, there is evidence that consumption inequalities are similar to income inequalities in major European nations and in the US (Johnson and Smeeding 1997; Hagenaars, deVos and Zaidi 1998).

The distribution of disposable income requires answers to both the 'what' and the 'among whom' questions. Regarding the former, earned income from wages, salaries, self-employment, cash property income (but not capital gains or losses), and other private cash income transfers (occupational pensions, alimony, and child support) or 'market income', is the primary source of disposable income for most families. To reach the disposable income concept used in this paper, we add public transfer payments (social retirement, family allowances, unemployment compensation, income support benefits) and deduct personal income tax and social security contributions from market income. Near-cash benefits – those that are virtually equivalent to cash (food stamps in the US and housing allowances in the UK and Sweden) – are also included in the disposable income measure used here.

3. The UK data is the only exception to this rule as their Family Expenditure Survey (FES) uses a bi-weekly accounting period with rules for aggregating up to annual totals. In Germany, LIS has aggregated the monthly and quarterly data into annual income amounts.

The question of distribution 'among whom' is answered 'among individuals'. When assessing disposable income inequality, however, the unit of aggregation is the household; the incomes of all household members are aggregated and then divided by an equivalence scale to arrive at individual equivalent income. The equivalence scale used is the square root of household size. All LIS-based income measures in this paper use this equivalence scale and the 'adjusted disposable income' concept, which is produced by dividing (unadjusted) disposable income by family size raised to the power of 0.5 (square root of family size). This is the same scale used in Atkinson *et al* (1995) (see also Buhmann *et al* (1988)).

For the most part, the household – all persons sharing the same housing unit regardless of familial relationship – is the common unit of analysis.[4] Complete intra-household income sharing is assumed, despite the fact that members of the same household probably do not equally share in all household resources. To assume that unrelated individuals living with others do not at all share in common household incomes or household 'public goods' (heat, durables, etc) is a worse assumption in our judgment. Thus, our unit of account is the household.

The approach adopted here, based in large part on data from the LIS, overcomes some, but not all, of the problems of making comparisons across countries and across time that plagued earlier studies. Some problems, for example, the use of data from different types of sources, still remain. But all of the data used in the analysis of levels of inequality are drawn from household income surveys, or their equivalent, and in no case are synthetic data used. One major advantage of LIS is the availability of microdata. The aim of the LIS project has been to assemble a single database containing survey data from many countries that is as consistent as possible. Access to the microdata means that it is possible to produce results on the same basis, starting from individual household records, and to test their sensitivity to alternative choices of units, definition, and other concepts. It is therefore possible to make any desired adjustment for household size. Aggregate adjustments, such as that from pre-tax (market income) to post-tax (disposable) income are not necessary, although in some cases imputations are necessary at the household level. The data all cover, at least in principle, the whole non-institutionalised population, though the treatment of immigrants may differ across nations. These data are supplemented here by data provided by one major nation not yet a member of LIS (Japan), where a national expert calculated income inequality measures with the consultation of the LIS staff (Ishikawa 1996), and by a recent LIS paper which adds Latin America estimates of similarly defined disposable income (Székely and Hilgert 1999a, 1999b). The rest of the calculations were made by the author and the LIS project team. Many of the results cited here are directly available from the LIS home page's key figures section (at <http://www.lisproject.org/keyfigures/ineqtable.htm>).

4. However, for Sweden and Canada more restrictive nuclear family (Sweden) and economic family (Canada) definitions of the accounting unit are necessary (see Atkinson *et al* (1995), chapter 2, for additional details).

While the aim of the LIS project is to increase the degree of cross-national comparability, complete cross-national comparability is not possible, even if we were to administer our own surveys in each nation. Comparability is a matter of degree, and all that one can hope for is to reach an acceptably high level. In economic and statistical terms, the data are noisy, but the ratio of signal to noise is reduced by LIS. Ultimately, the reader must decide the acceptability of the evidence before them. To skeptics, we can offer that most of the cross-national results provided here have been reviewed by a team of national experts – statisticians, social scientists and policy analysts – prior to their publication by the United Nations, OECD and in other forums, and they have appeared in refereed journals. And, because the LIS data are ultimately available to the research community at zero economic cost, researchers are free to repeat these calculations themselves. Moreover, recent attempts to mimic the LIS definitions by the IDB are used to demonstrate the value of these techniques for a wider range of nations, such as the G-20.

3. Comparing Levels of Inequality at a Point in Time

The LIS data sets are used here to compare the distribution of disposable income in 26 or more nations during the 1990s. We focus here on relative (Figure 1) income differences, not absolute income differences.[5] The relative inequality patterns found here correspond roughly to the results found in Atkinson *et al* (1995), which use earlier years' LIS data in most cases. Our choices of inequality measures are four: the income of the person at the bottom and top 10th percentiles (P_{10} and P_{90} respectively) as a ratio of median income (P_{50}); the ratio of the income of the person at the 90th percentile to the person at the 10th percentile – the decile ratio – (a measure of 'social distance'); and the Gini coefficient.

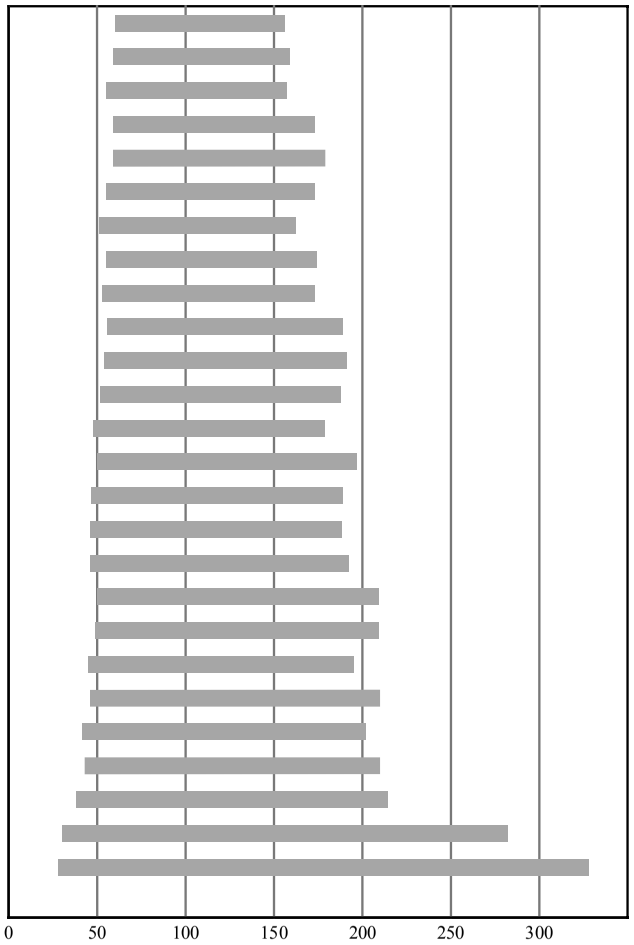
3.1 Relative differences in inequality across nations

We begin with a figure containing all four measures of inequality, with the LIS nations ordered by the decile ratio from lowest to highest. At the bottom of Figure 1 we find Mexico, with a low-income person at the 10th percentile in 1998 (P_{10}) having an income that is 28 per cent of the median, followed by Russia at 30 per cent and the US at 38 per cent. A high-income person at the 90th percentile (P_{90}), in contrast, has 328 per cent of the median in Mexico, 282 per cent in Russia and 214 per cent in the US. The Mexican, Russian, and US decile ratios are 11.55, 9.39 and 5.57 respectively, meaning the income of the typical high-income person is more than 11.5, 9.3 or 5.5 times the income of the typical low-income person, even after we have adjusted for taxes, transfers and family size. In contrast, the average low-income person has 49 per cent of the income of the middle person in the average country; the average rich person has 195 per cent as much, and the decile ratio shows an average 'economic distance' between rich and poor of 4.2 times P_{10}.

5. For more on absolute or 'real' income differences, see Gottschalk and Smeeding (2000) and Rainwater and Smeeding (1999).

Figure 1: Decile Ratios and Gini Coefficient for Adjusted Disposable Income in 26 Nations

P10 – P90 expressed as per cent of median in each nation; G-20 countries italicised



	P10 Low income	P90 High income	P90/P10 Decile ratio	Gini coefficient[a]
Sweden 1995	60	156	2.61	0.221
Finland 1995	59	159	2.68	0.226
Norway 1995	55	157	2.83	0.238
Luxembourg 1994	59	173	2.92	0.235
Czech Republic 1996	59	179	3.01	0.259
Netherlands 1994	55	173	3.15	0.253
Denmark 1997	51	162	3.15	0.257
Germany 1994	55	174	3.18	0.261
Belgium 1997	53	173	3.26	0.255
Taiwan 1995	56	189	3.38	0.277
France 1994	54	191	3.54	0.288
Switzerland 1992	52	188	3.62	0.307
Austria 1995	48	179	3.73	0.277
Spain 1990	50	197	3.96	0.303
Poland 1995	47	189	4.04	0.318
Canada 1998	46	188	4.13	0.305
Japan 1992[b]	46	192	4.17	0.305
Hungary 1994	50	209	4.19	0.323
Ireland 1987	49	209	4.23	0.328
Australia 1994	45	195	4.33	0.311
UK 1995	46	210	4.57	0.344
Italy 1995	42	202	4.77	0.342
Israel 1997	43	210	4.86	0.336
US 1997	38	214	5.57	0.372
Russia 1995	30	282	9.39	0.447
Mexico 1998	28	328	11.55	0.494
Simple average	**49**	**195**	**4.26**	**0.304**

(a) Gini coefficients are based on incomes which are bottom coded at 1 per cent of disposable income and top coded at 10 times the median.

(b) Japanese Gini coefficient as calculated in Smeeding (1998) from the 1993 Japanese Survey of Income Redistribution.

Source: Author's calculations from the LIS

At the other end of the chart, a Swedish citizen at P_{10} has 60 per cent of the Swedish median income, at P_{90} has 156 per cent of the median, and the decile ratio is 2.61, less than one-half as large as the US value, and one-quarter or less of the Russian or Mexican values. This evidence suggests that the range of inequality and of social distance between rich and poor in the rich and medium-income nations of the world is rather large in the mid 1990s. It also begs for comparable information for additional middle-income and developing nations of the world.

Countries in Figure 1 fall into clusters, with inequality the least in Scandinavia (Sweden, Finland, Norway) and Northern Europe (Denmark, Netherlands, and Luxembourg). Here P_{10}'s average 58 per cent of median income, and decile ratios are about 3.0 or less. The Czech Republic comes in about average here (though inequality has risen since this date by most accounts). We also note that there are no G-20 nations represented here.

Central Europe comes next (Germany, Belgium, Austria and France) with decile ratios from 3.18 to 3.54, and Ginis from 0.255 to 0.288. The figures for Germany include East Germany as well as West Germany. And the first two G-20 nations – Germany and France – first appear (Figure 1).

Taiwan is an anomalous entry in the middle of the table, with a Gini (0.277) and decile ratio (3.38) in the middle European range. Spain, Poland, and Switzerland also form a curious group in the middle. Canada appears next with a lower Gini (0.305) and decile ratio (4.13) than any other Anglo-Saxon nation and with less inequality than is found in Hungary, Ireland, Israel or Italy. Japan has more or less the same income distribution characteristics as Canada, though the only estimate we have and trust is now a decade old.

Italy (4.77) and the English-speaking countries of Australia (4.33), the UK (4.57) and the US (5.57) come next with still higher levels of inequality. The highest levels of inequality and social distance that we can measure with good confidence are in Russia and Mexico.

While percentile ratios as measures of social distance have some obvious appeal (e.g., insensitivity to topcoding,[6] ease of understanding), they have the disadvantage of focusing on only a few points in the distribution and lack a normative basis. Figure 1 presents an alternative, more commonly employed, Lorenz-based summary measure of inequality, the Gini coefficient. As we saw above, relying on this measure, country rankings change little. Inequality is still lowest in Scandinavia, then Central Europe, Southern Europe, and Asia, with the English-speaking countries (except for Canada) having the highest inequality, and the US the highest among these, and then followed at last by Russia and Mexico. The other Central European nations show no clear pattern, and both Taiwan and Japan are close to the middle of the ranges displayed here. In sum, there is a wide range of inequality among rich and middle-income nations covered by LIS.

6. Topcoding is the procedure by which a nation places a maximum value on reported incomes in the public release version of a survey. In countries with rapidly growing high incomes, arbitrary topcodes can have serious effects on measured inequality (e.g. Smeeding and Grodner (2000)).

3.2 Just the 12 G-20 nations

We can add two more G-20 nations to the 10 in Figure 1, by including the two Latin American G-20 countries from the IDB data harmonised by Székely and Hilgert (1999a, 1999b) to reach 12. We have grouped them geographically in Table 1, into five groups, with Latin America, European OECD nations, Anglo-Saxon OECD nations, Eastern Europe, and Asia (the latter two being represented by Russia and Japan alone). The range is now widened even further with Brazil and Argentina (albeit the urban areas only) having Ginis of 0.571 and 0.442 respectively, though we suspect that the true level of inequality in Argentina is higher than that shown here due to omission of the rural areas in the Székely and Hilgert database. The same clusters seem to hold, with the lowest inequality in Europe, then Asia (Japan), then the Anglo OECD countries, with Russia and Latin America having the most inequality.

Table 1: Income Distribution in 12 G-20 Nations

Rank	Country	Year	Gini
A. Latin America			
1	Brazil	1996	0.571
2	Mexico	1995	0.494
4	Argentina	1996	0.442
Average			0.502
B. Anglo OECD Countries			
5	US	1997	0.372
6	UK	1995	0.344
9	Australia	1994	0.311
10	Canada	1998	0.305
Average			0.333
C. European OECD Countries			
7	Italy	1995	0.342
11	France	1994	0.288
12	Germany	1994	0.261
Average			0.297
D. Eastern Europe			
3	Russia	1995	0.447
E. Asia			
8	Japan	1992	0.315

Sources: Brazil and Argentina – Székely and Hilgert (1999a, 1999b); Japan – Smeeding (1998); all other data sourced from LIS database

There are no comparable, harmonised estimates for China, India, Indonesia, Korea, South Africa, Saudi Arabia, or Turkey (the other seven countries in the 19-nation G-20!). However, with a little work on the part of these nations and willingness to share their data with LIS and with other similar bodies – e.g., within the G-20 itself – even more comparable measures of overall inequality could be developed, and key nations such as China and India could be added to this table. Moreover, added observations for earlier years' data could also be used to create time series for all of these nations.

That is, there exists a foundation of data sources from these nations and from the World Bank and other data providers, which could be mobilised and harmonised to better illustrate the level and trend in inequality in the entire G-20, and to better understand the policy issues which affect and are affected by globalisation and increased trade within and across these economies.

3.3 Explaining the differences

There have been few attempts to explain the differences we find in economic inequality across the rich nations (Gottschalk and Smeeding 1997, 2000; Gustafsson and Johansson 1997; Jacobs and Gornick 2001; Jencks 2002), so what we have here is a piecemeal, but still instructive explanation of initial explorations of these differences.

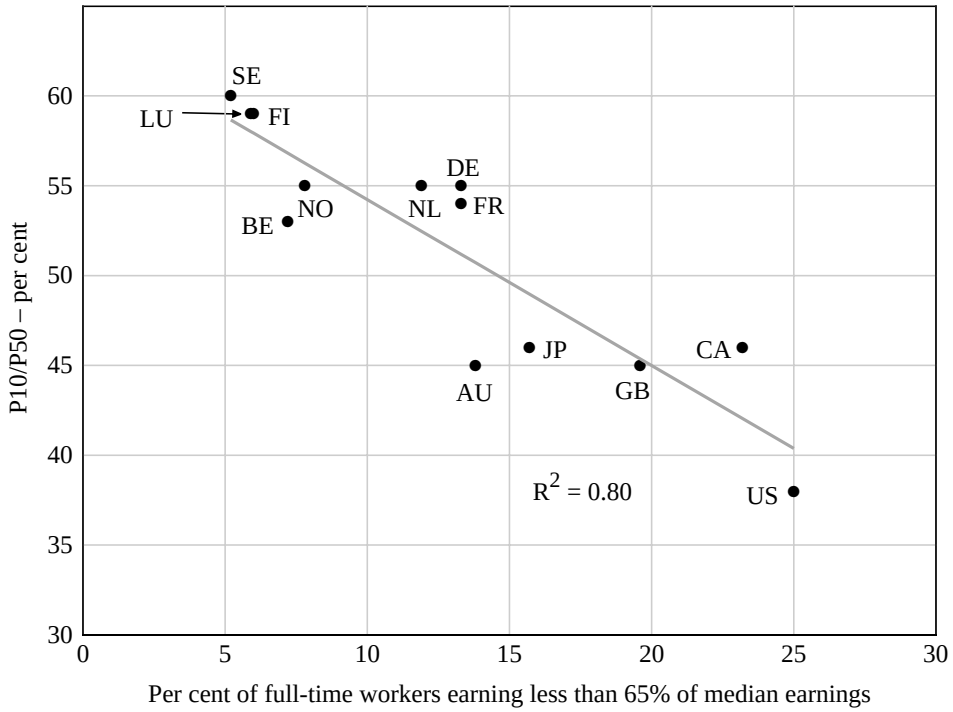
First, it is important to note that explanations of differences in inequality across countries differ according to which end of the income distribution one is addressing. That is, rather than ad-hoc decompositions of aggregate indices, often more can be learned from addressing the explanations of the differences in incomes at each end of the income distribution separately. For instance, low incomes (P_{10}/P_{50} ratios or poverty rates) are quite well correlated with the prevalence of low-wage workers within each nation (Figure 2) and with levels of non-elderly social transfers within each nation (Figure 3). The effects of different policies to raise wages, e.g., by administrative fiat (minimum wages) or by increasing labour productivity, are clearly raised by this relationship.

Countries that have many jobs at low wages, the US, Canada and the UK, tend to have lower P_{10}/P_{50} ratios than do nations with higher wages at the bottom end. Of course, many nations with higher minimum wages also suffer higher rates of unemployment. But unemployment is not highly correlated with P_{10}/P_{50} ratios (or Gini coefficients) across OECD nations, largely because those nations with the lowest fractions of low-wage workers have generous income transfer systems which provide low-income, unemployed workers with high net disposable incomes (see also Gustafsson and Johansson (1997); Gottschalk and Smeeding (1997)).

Similarly, the relationship between cash social transfers to the non-elderly and low incomes as measured by the P_{10}/P_{50} ratio is also strong (Figure 3).[7] Countries that

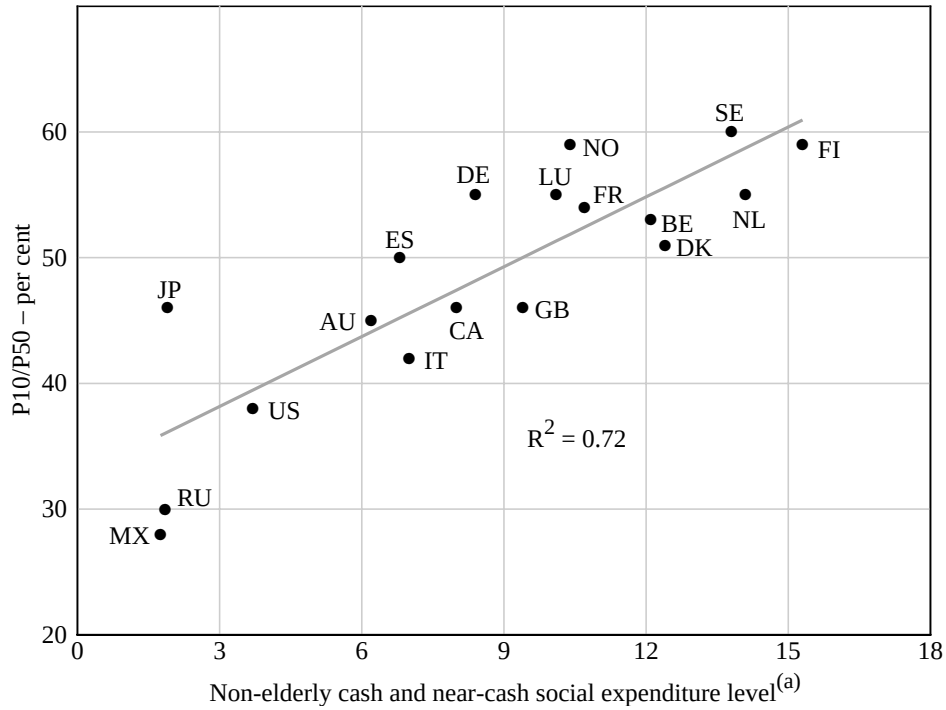
7. Here we have excluded transfers to the elderly, but even when they are included, the same relationship holds (see Smeeding (1998); Smeeding, Rainwater and Burtless (2001)).

Figure 2: Low-Pay Employment and P10/P50 Ratios in Thirteen Industrialised Countries in the 1990s



Notes: See Appendix A for sources and data. See Glossary for a listing of country codes.

Figure 3: Cash Social Expenditures for the Non-elderly and P10/P50 Ratios in Eighteen Countries in the 1990s



(a) See Appendix A for an explanation.

Notes: See Appendix A for sources and data. See Glossary for a listing of country codes.

spend less on their safety nets suffer higher levels of inequality as measured by the P_{10}/P_{50} ratio. Social insurance against falls in consumption due to illness and other factors are not widely available in many middle-income countries (e.g., see Gertler and Gruber (2002) on Indonesia). Social benefits also have fallen drastically in both value and frequency in most transition economies of Central Europe. Thus, Mexico and Russia are just two examples of what one would find were we able to extend this chart to other middle-income nations.

Other explanations for differences in incomes and inequality across nations are many and complex, especially as they affect incomes at the top of the distribution. First, consider the arguments that the US is richer than other nations because it is more efficient. Jencks (2002) recently addressed this question using LIS data and OECD data, summarised in Table 2. He concludes that one major reason the US is richer is because it employs more people who work longer hours than do their counterparts in, say, Germany or France. When he corrects gross domestic product (GDP) per capita for hours worked, and labour force participation, GDP per hour is actually about the same in the US as in Germany or France. Correcting for

Table 2: Economic Inequality, Output, Effort, and Efficiency in Six Rich G-20 Democracies in the Late 1990s

	US	UK	Australia	Canada	France	Germany
Inequality (1994–97)						
90/10 ratio (Figure 1)	5.6	4.6	4.3	4.1	3.5	3.2
Output (1998, US$)						
OECD: GDP per capita	32 184	21 673	24 192	25 179	21 132	23 010
Effort (1998)						
Per cent of population employed	49	46	46	47	38	44
Hours per worker per year (No)	1 864	1 731	1 860	1 779	1 567	1 510
Efficiency (1998, US$)						
GDP per worker	60 106	44 280	47 558	49 007	55 714	50 616
GDP per hour	32.25	25.58	25.57	27.55	35.55	33.52
GDP per ‘available’ hour	30.81	23.65	23.51	25.26	31.38	30.38

Note: GDP converted to US$ using purchasing power parity, not exchange rate.

Sources: Jencks (2002); LIS; OECD

unemployment, by adding the total number of hours unemployed workers in these countries want to work – even if unemployed (GDP per available hour) – does not change this result.

While these data say nothing about inequality *per se*, the number of hours worked is clearly an important ingredient for measured inequality (just as the distribution of wage rates is important). But other studies of Germany and the US (Devroye and Freeman 2001), and a set of countries including Canada and Germany (Jacobs and Gornick 2001), indicate that not only do US workers work more hours overall, but high-income US workers work many more hours per year than do their counterparts in other nations. Moreover, high-income US workers are more likely to be married to spouses who also work multiple hours than in other nations (Jacobs and Gornick 2001). While the effects of these differences are yet to be completely and systematically worked out, the amount of work effort at each end of the distribution, as well as the reward for that work, are both clearly important. And it appears that both the rich and the poor in the US work more hours than do their counterparts in other rich nations (Osberg 2002).

Closely tied to the number of hours worked and earnings are demographic differences in household composition across nations. In general, nations with relatively higher levels of immigrants and relatively more single parents will have greater inequalities, especially at the lower end of the income distribution, than nations which have fewer single parents and lower levels of immigration, all else equal. But the fraction of elderly households in a nation does not affect income distribution comparisons across countries, largely because the elderly have levels of inequality that are similar to those of the non-elderly (Osberg 2000). Casual comparisons of the high-immigrant, high single-parent, Anglo-Saxon countries (e.g., Canada, Australia, the UK and the US) with Central and Northern Europe tend to bear out this finding well.

Other factors are less easily accounted for. Many authors find that labour market institutions, especially collective bargaining, wage setting, levels and penetration of minimum wages, are important for determining the level of inequality in wages and earnings across nations (Gottschalk and Smeeding 1997; Gustafsson and Johansson 1997). Differences in educational attainment are also important as the better educated earn more than the less well-educated, all else equal, in every country (see Smeeding and Sullivan (1998); Rehme (2002a, 2002b)). But recent evidence suggests that it is the former (institutions) rather than the latter (skills *per se*) that is more important in explaining differences in the cross-section. Blau and Kahn (2001) find that workers within single categories of education and adult test scores in the US (e.g., high school graduates with median-level skills as measured by the OECD individual adult cognitive literacy survey) have distributions of wages and earnings which differ amongst themselves by more than does the entire distribution of wages (across all skill and education groupings) in Germany, the Netherlands and Sweden. The differences in wage-setting institutions across countries therefore account for many of the differences in pay that we find at any point in time.

Finally, consider the arguments of Frank and Cook's (1996) book, *The Winner-Take-All-Society*. In an increasingly global economy, where markets are ever widening, where pay is tied to output and productivity – not only for chief executives and business men, but for professionals (like lawyers, physicians and scientists) as well, and where labour and firms can migrate to the highest profit areas, we expect that the wage distribution at the top of the market will continue to widen. This has been observed in some nations, notably the US and the UK, but now also in Sweden, Germany, France and Canada.

3.4 Summary

There exists a wide range of inequalities across the nations of the rich world and the rich nations of the G-20 as well, though the range across the rich G-20 members is narrower because the high-equality nations of Scandinavia and Northern Europe are not represented. And adding the comparable data we have on Russia and Mexico, not to mention fairly comparable data for Argentina and Brazil, suggests that even wider ranges of inequality are found as we move down the development ladder to the 'middle-income' nations.

The explanations of these differences at a point in time are many, and to quote one article on this topic, there is no one 'smoking gun' explanation (Gustafsson and Johansson 1997). Public policies toward the poor and jobless, the multiple institutions of the labour market, levels of education and training, demographic differences and even hours worked, all can play a role in explaining these differences at a point in time.

But, regardless of these differences, economies are not fixed but rather dynamic and ever changing, as this conference attests. Hence, explanations of the trends in inequality across nations may be more important than explaining levels of inequality at any point in time. Certainly, the literature on this topic suggests that trends in inequality of both earnings and income are more readily studied and across a wider range of nations, even if the data used to make these studies are not the best we have available (Atkinson and Brandolini 2001).

4. Trends in Inequality

Do the differences in inequality in OECD countries in the late 1980s and 1990s reflect convergence to a common level of inequality or are the less equal countries (e.g., the US, the UK, Russia and Mexico) becoming even less equal? To answer these questions we compare recent trends in inequality (from 1979 onwards). Because the LIS data cover only two to five data points in each nation, we also rely on published and unpublished data from other sources to assess the trend in income inequality (Atkinson *et al* 1995; Gottschalk and Smeeding 1997, 2000; Gottschalk *et al* 1997; Atkinson 1999; Forster 2000; Atkinson and Brandolini 2001) and to analyse differences across rich nations.

While differences in units, income measures, equivalence adjustments and other factors in different studies make it difficult to compare levels of inequality across

these studies, trends in inequality will be more comparable than are differences, as long as income concepts, surveys (and their methodologies) and inequality measures remain constant within countries over time (Gottschalk and Smeeding 2000). Unfortunately, nations do not always follow this rule. But taking advantage of a series of adjustments when assessing the trend in income inequality within any single nation and across nations, we are able to piece together a rather robust story for the rich nations of the world (Smeeding and Grodner 2000; Atkinson, Brandolini and Smeeding 2001).

As we begin this investigation, one should be warned that we are assessing mainly differences within the rich nations of the G-20, and to a much lesser extent the differences among the middle-income nations (Mexico and Russia) and the lower-income, but much larger nations, e.g., China and India with about one-third of the world's population. The trend in global inequality depends not only on income distribution changes within any set of nations, but also on the growth of average incomes across nations. Hence, rapid economic growth within China and India – even when inequalities are also increasing within these nations, can drastically reduce world income inequality (Quah 2002; Sala-i-Martin 2002). We do not address the question of the rates of growth within poor nations compared to rich nations, as do others (Dowrick and Akmal 2002; Dowrick and DeLong 2001; Sala-i-Martin 2002). Ideally, one would want to use purchasing power parities (PPPs) to convert incomes for a comparable set of national household surveys into one single survey, and then to compare the levels and changes in incomes for all respondents in every sample in all nations. However, that task is not yet accomplished, except for the European Countries (see Beblo and Knaus (2000)). And the development of key data, such as directly measured PPPs for China, is needed to make this exercise even more meaningful.

4.1 Trends in income inequality over time – the evidence from LIS and elsewhere

In general, nations with multiple data series from different sources, and countries that clearly identify survey differences and changes in survey practices over time, provide the best sources of distributional trend comparisons. Nations with very few data points and those without well-identified survey practices or concepts do not always provide accurate sources for trend analysis. Decisions about which nations to include and exclude, based on data quality considerations, should be at the forefront of the user's agenda. Many of these issues have been raised by others (Atkinson *et al* 1995; Gottschalk and Smeeding 2000; Atkinson and Brandolini 2001), so we do not delve deeper into them here. The Canberra Group (2001, chapter 9) offers a convenient summary of pitfalls for those who desire such a technical review.

Given these differences, we should go slowly and carefully when assessing trends in economic inequality across and within nations. For instance, LIS does its best to guarantee differences in inequality measurement *at a point in time*, and is less well suited for measuring changes in inequality over time. For most nations, LIS has few data points. Moreover, in choosing the best data for comparisons at a point in time,

different surveys are used in different nations. For instance, in Germany, three different data sets have been used by LIS, and these three do not lend themselves easily to trend analyses. Even though LIS is careful to note when different data sets, income definitions, or other changes take place in national data sets, the availability of data alone does not guarantee its consistency over time. Over these past 20 years of normalising microdata to a common definition, many of the cautions urged above have been learned from trying to assess inequality trends using LIS. Survey practices and data quality have changed in most of the countries found in Table 1. In some cases, a new survey replaces the old (Australia 1994). In others, panel data sets (Luxembourg and Germany), which provide the LIS cross-sections, have suffered from sample attrition and some have not added new immigrants to their original samples for LIS. Many nations provide income distribution trend data based on national definitions of income that include income items not included in LIS income, such as capital gains (Sweden) and imputed rent (the Netherlands), while several others typically exclude near-cash income, such as food stamps in the US. Finally, the weighted sum of aggregate incomes taken from the surveys in several countries may be substantially below somewhat comparable aggregate national incomes, suggesting that income under-reporting may be a serious issue (e.g., Italy, Spain; see Smeeding *et al* 2001). While the changes found in LIS may be reasonable, they should be compared to those from other sources, which are designed to produce more accurate trend data.

The data on trends in income inequality have grown dramatically in recent years. When the Atkinson *et al* (1995) report was published, there was evidence that among 16–18 countries observed during the 1970s and 1980s, the trend in inequality observed from comparable Gini coefficients could be separated into two eras (Table 3, first and second columns). From the mid 1970s to the mid 1980s, inequality increased in only the UK and the US, falling modestly in seven other nations and having no trend in nine others. These increases in the US and the UK were in marked contrast to the falling inequality in both nations from 1950–1970 (Gottschalk and Smeeding 2000). There were no suitable and accurate data in seven other nations for the 1970s or 1980s (see 'na' in first and second columns of Table 3).

By the time the 1980s were finished (second column, Table 3), inequality was falling significantly only in Italy, but was increasing in nine nations. Eight nations experienced no change, where a change between plus and minus 1 per cent in a given measure is taken as an insignificant change. Inequality in the UK increased by over 15 per cent over this period, while inequality in the US rose by about 12 per cent. Inequality either stopped declining or rose modestly in all of the other nations shown here during the 1980s.

Finally, a combination of results for 25 nations are shown in the last column of Table 3, using LIS, and similar summaries of other national trends based on data collected by the OECD (Forster 2000), by Atkinson (1999) and from recent national reports. Here we see that from the late 1980s to the mid to late 1990s inequality rose in almost every OECD nation, with Denmark being the only possible exception. Large increases were experienced by only two nations, and by the late 1990s inequality increases had become more tempered in the UK, and also in the US. These

Table 3: Overall Trends in Income Distribution
Summary results from national and cross-national studies

	Early/mid 1970s to mid/late 1980s	OECD study 1980s	Mid/late 1980s to mid/late 1990s
Australia	**0**	**+**	**+**
Austria	0	0	+ +
Belgium	0	+	+
Canada	**–**	**0**	**+**
Czech Republic	na	na	+ + +
Denmark	na	na	–
Finland	–	0	+
France	**–**	**0**	**+**
Germany	**–**	**+**	**+**
Hungary	na	na	+ +
Ireland	–	0	+ +
Israel	0	0	+ +
Italy	**– –**	**–**	**+ +**
Japan	**0**	**+**	**+ +**
Mexico	**na**	**na**	**+ +**
Netherlands	0	+	+ +
New Zealand	0	+	+ + +
Norway	0	0	+ +
Poland	na	na	+ +
Russia	**na**	**na**	**+ +**
Sweden	–	+	+
Switzerland	na	na	+
Taiwan	0	0	+
United Kingdom	**+ +**	**+ + +**	**+ +**
United States	**+ +**	**+ +**	**+ +**

+ + +	Significant rise in income inequality (more than 15 per cent increase)
+ +	Rise in income inequality (7 to 15 per cent increase)
+	Modest rise in income inequality (1 to 6 per cent increase)
0	No change (–1 to +1 per cent change)
–	Modest decrease in income inequality (1 to 6 per cent decrease)
– –	Decrease in income inequality (7 to 15 per cent decrease)
– – –	Significant decrease in income inequality (more than 15 per cent decrease)
na	No consistent estimate available
Notes:	The results are based on several income inequality indicators, mainly Gini coefficients, in most countries and reflect the general trends reported in national and comparative studies. However, trends are always sensitive to beginning and ending points as well as to other cautions mentioned in Atkinson *et al* (2001). G-20 countries are indicated in bold.
Sources:	Atkinson *et al* (1995); Gottschalk and Smeeding (1997, 2000); Atkinson (1999); Forster (2000); Atkinson and Brandolini (2001); Fukui (2001); LIS (<http://www.lisproject.org/keyfigures/>); Statistics Canada (2002)

trends may, in time, be shown to have been a result of the strong labour markets and low unemployment in these nations during the latter half of the 1990s.

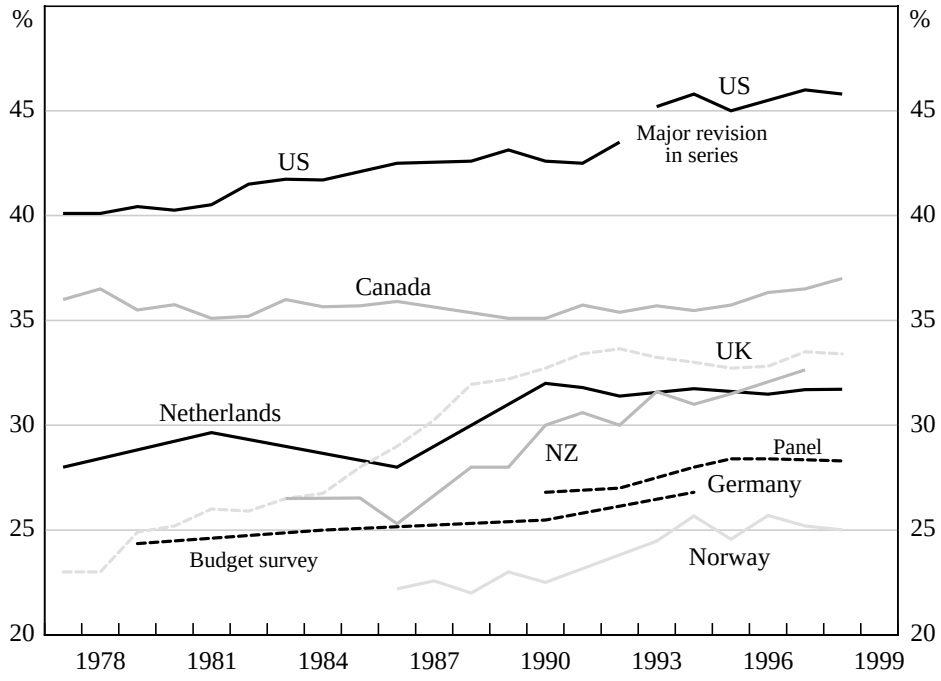
But inequality has begun to increase in Canada, France, and Germany in the 1990s, where before this time it had not risen. Russian and Czech inequality began to rise in the 1990s, as one might expect given the suppression of market earnings distributions under the institutions of the former Soviet regime. However, these changes have been accompanied by very different starting and ending points in these two nations (see Figure 1 where Czech inequality is 0.259 in 1996, and Russian inequality is 0.447 in 1995). New Zealand's inequality continued to rise as well. Thus, the patterns change considerably as we move from period to period.

Because pictures are often easier to fathom than are strings of '++' and '–', Figure 4 provides a snapshot of inequality trends in seven nations. The basic diagram is taken from Atkinson (1999) with later year data adjustments by the present author from the same sources, where available. The data confirm the patterns seen in Table 3, and also suggest a slowing, but not a reversal, of rising inequality in several nations at the end of the 1990s. However, they also show a rise in Canadian inequality as the 1990s draw to a close.

The following summary impressions can be gleaned from Table 3 and Figure 4.

The OECD study (Forster 2000) focused on the 1980s, a period of transition from one period (flat or declining inequality) to another period (rising inequality) in most

Figure 4: Changes in Income Inequality
Gini coefficient, per cent



Sources: Atkinson (1999); Forster (2000); Hauser and Becker (2000); Hauser and Wagner (2002); Canada – Statistics Canada (2002); United States – US Department of Commerce (2002, Tables B-3, B-6)

nations. As Gottschalk and Smeeding (2000) argue, this best describes a 'U'-shaped change in the distributions of income in most nations with inequality falling in the 1960s (few comparable observations) and early 1970s, but then rising from the late 1970s and 1980s into the 1990s. The turning points (bottom of the 'U') differ across nations. Many (e.g., the Scandinavian nations) did not experience a rise in inequality until the 1990s. And in many nations (e.g., Germany, France and Canada) these increases have so far been very modest (see Gottschalk and Smeeding (2000) for more on the 'U' shape).

While inequality rose rapidly in the Uk and the US during the 1980s and early 1990s, the trend seems to have flattened out in both countries by the end of the decade. To the extent that the UK income distribution source (Family Expenditure Survey) and US source (Current Population Survey) do not accurately capture or measure incomes in high-income households (due to topcoding, non-response, etc), this conclusion may be unwarranted (e.g., see CBO (2001) for the US 1979–1997; and Jencks (2002)). However, the rate of increase in inequality has still slowed markedly in these two nations in the late 1990s.

LIS data for Mexico and Russia show much more volatility than do the other data sets. Inequality in Mexico was lower in the late 1980s than in 1990s, but inequality was much higher in both 1994 (Gini of 0.496) and 1998 (0.494) than in 1996 (0.477), perhaps due to cyclical volatility. And several studies (e.g., Hölscher (2001)) based on LIS and other data argue for rapidly rising inequality in Russia in the 1990s.[8] Other world pictures are somewhat more mixed. For instance, Sala-i-Martin (2002)[9] suggests that inequality rose in China and Indonesia, but not in India, Brazil, or Pakistan over the 1970–1997 period. The refinement of these analyses must await better data and methods (e.g., Deininger and Squire (2002)).

4.2 What changed and why?

The estimates in Table 3 and Figure 4 provide an overall picture of changing inequality, but one that needs to be carefully interpreted. For instance, suppose that one weights changes in inequality at the bottom of the distribution more than changes at the top. If so, one would be happy to learn that overall changes in relative poverty (e.g., the per cent with incomes less than 40 or 50 per cent of the adjusted (for family size) median) were far less frequent and of lesser magnitude than were increases in overall inequality in rich OECD nations (Smeeding *et al* 2001). That is, in most of the European countries studied here and in the UK and the US, relative poverty did not increase by much, if at all, during the 1990s. Thus, the phenomenon of increasing inequality is predominately a consequence of changes in the top of the distribution, rather than in the bottom (Forster 2000).

8. However, because the Mexican and Russian surveys are taken over a period of several months when inflation can be rapid, the estimates of annual inequality for each nation may be sensitive to the treatment of changes in domestic prices over this period.

9. Appendix figures, taken from the World Bank data compiled by Deininger and Squire (1996).

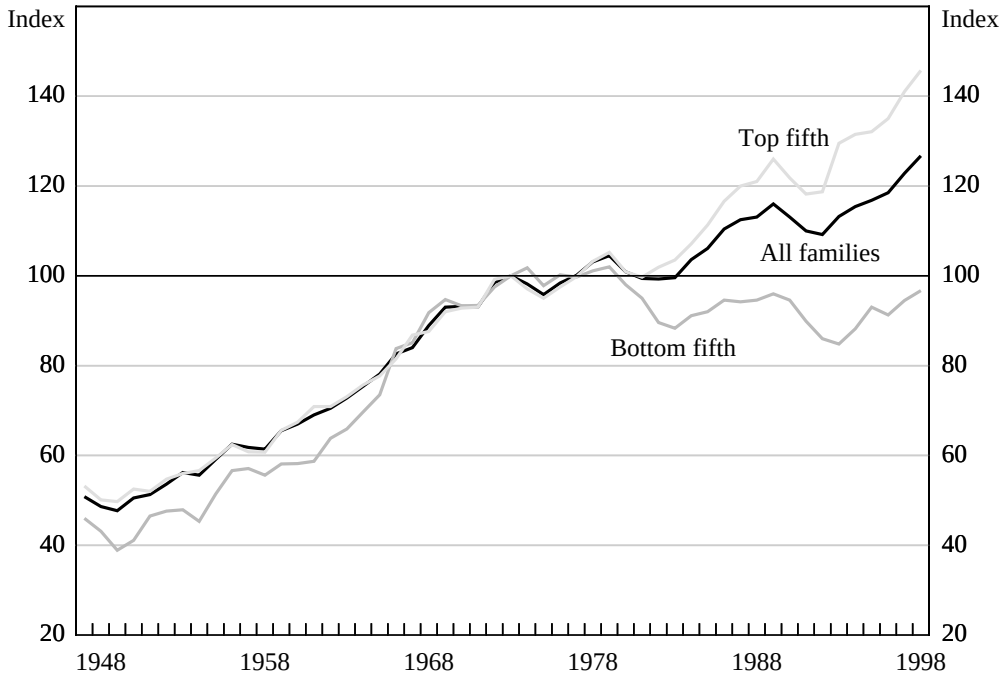
The data say nothing about trade-offs between economic growth and inequality in rich nations. Though much has been written on this topic in recent years, there is no compelling case for one being systematically related to the other in OECD nations (e.g., see Arjona, Pearson and Ladaique (2001) for a concise summary of studies in OECD nations). In fact, in some rapidly growing nations, such as Ireland, a modest increase in inequality can be seen as a small price to pay for rapid economic growth in real incomes and falling poverty at all levels of the income distribution (Nolan 2001). Similarly, modest increases in inequality may be the price that needs to be paid by countries such as Canada, France, Germany and Australia, as they adjust to greater trade and the increased capital and labour mobility that accompanies globalising economies.

Finally, the question is raised whether increases in inequality were accompanied by widespread or selective changes in real economic well-being within each nation. The question of whether all the boats rose or only some, while others sank, is clearly a critical one for most nations. As in Ireland, rising inequalities are much more acceptable when living standards are rising across all segments of the population than when they are concentrated among the rich alone. While we are trying to compile these data for a number of countries, the experience of the US is one which other countries might chose not to emulate in this regard.[10] Figure 5 suggests that the US experienced several distinctly different periods of income inequality change during the past 50 years: first, one of falling inequality and widespread real income gains, largely in concert for all families from roughly 1950s through the mid 1970s; second, one where real income growth was increasingly different depending on where one lies in the income distribution from the 1970s onward. And within this latter period we note two different epochs. While average family incomes grew during the 1980s, and especially the period from 1993 onward (albeit reflecting the cyclical changes of the 1991–1993 recession), higher incomes grew by much more than did lower incomes throughout the period. Lower incomes fell from 1979 until 1993 before rising markedly in the later 1990s. Still, by the end of the 1990s, the average income for families in the bottom-fifth of the distribution had barely reached the real standard of living experienced at the end of the 1970s, despite the real income gains for all during the latter 1990s.

Explanations for why income inequality changed in rich nations are many and, as seen in the data for the US, can be very complicated as well. Many of these comparisons are based on LIS data (Gustafsson and Johansson 1997; Acemoglu 2002; Rehme 2002a, 2002b). Others are based on series of national datasets (Arjona *et al* 2001; Forster 2000). Still others concentrate on earnings changes alone and are not based

10. Figure 5 is based on the US Census Bureau's income series for families of two or more persons (thus omitting unrelated individuals), unadjusted for taxes paid, but gross of transfers received. It is therefore a less complete income concept and population group than the one studied by LIS. However, restricting ourselves to this definition buys a more or less consistent 50-year series of incomes and income inequality. We are currently trying to develop a series that is both consistent with LIS and with national survey practices, measures of price change, etc, for several countries.

Figure 5: Trend in US Real Average Family Income, by Rank in the US Income Distribution
1947–1998, 1973 = 100



Note: Incomes are for families only, before tax, and are deflated by the CPI-UX1 price index.
Source: Burtless and Smeeding (2001)

on changes in overall incomes, after taxes and transfers (Beaudry and Green 2000; Card and DiNardo 2002).

First, it is important to establish what these studies do not show, i.e., that increasing levels of international trade can be tied to growth in inequality. To quote Friedman (2000), patterns of change in wages and earnings are not determined in Beijing, but are a product of a complex set of interactions within and across nations. More likely, the effect of international trade on the economy is proportionate to the size of the trade sector in each nation (Richardson 1995). Studies that have tried to establish this connection using LIS data have concluded that greater levels of trade do not lead to increased poverty or inequality (e.g., Gustafsson and Johansson (1997); Osberg (2000); Osberg and Sharpe (2000)).

There is, however, evidence that both the changing supply and demand for labour of different skills can explain some of the changes in earned incomes across rich nations, and possibly among middle-income ones as well. The rising demand for skills led to higher (lower) wages in countries that had smaller (larger) responses in their education (supply) sectors. Thus, Canada and the Netherlands experienced much smaller increases in high wages than did the US or the UK (Gottschalk and Joyce 1997). Institutional mechanisms have also slowed the rewards to higher skills in many European nations, at least early into the 1990s (Katz and Autor 2000). And there is new evidence that the demand for skills increased faster than the supply in

middle-income nations as well (Berman and Machin 2001), and in Mexico (Legovoni, Bouillon and Lustig 2002), thus exacerbating earned income inequality.

It is more difficult to tie these explanations to 'skill-biased technological change' or to 'demand-side effects', as various sectors of the economy have experienced different levels of technological change in each country as well as across countries. Different practices of management, different national climates and institutions for promoting entrepreneurship, the differential availability of venture capital, and diffusion of technological progress are also apparent throughout the OECD world (e.g., Forster (2000); OECD (2001a)). Better identification of demand-side effects is certainly needed. For instance, an interesting new paper by Acemoglu (2002) argues that wage compression in Europe might have led to a more rapid adoption of technology that benefited low-skill workers than in other countries.

Moreover, no one has yet documented the effects of increased changes in product quality or the effect of falling international prices for traded goods due to greater international competition amongst the rich nations. Our textbooks tell us that trade and comparative advantage bring a better standard of living (more real income) to each nation, but the research that we have so far reviewed has not addressed the size of these gains as of this writing.

4.3 Summary of trend analyses

It appears that the amount of good quality and consistent information on income distribution trends is on the rise. Recent work by Atkinson (1999), Forster (2000), Atkinson and Brandolini (2001) and the Canberra Group (2001) in conjunction with LIS, has made some headway into the issue, but much needs to be done to produce more consistent and comparable measures of income inequality in most of the middle-income countries and in some of the rich ones. To the extent that these data emerge, we will be in a better position to model the determinants of changes in inequality and to understand its evolution on a worldwide scale.

As Atkinson (1999) concludes, rising economic inequality is not inevitable – Denmark seems to present at least one exception to the rule. However, rising income inequality is predominant in most nations, even the most egalitarian, advanced welfare state nations of the world. And while inequality has increased, our reading of the LIS data, and to a lesser extent the international trend data, suggests that there have been different patterns in the timing and extent of the increase in inequality in most nations. Moreover, national changes in inequality may have different welfare implications depending on whose incomes are changing. In Sweden, Germany, Norway and Finland, most of the higher inequality in the 1990s seems to be coming from movements at the top of the distribution (from changes in P_{90}'s), not from changes in the bottom (i.e., from the P_{10}'s; see Gottschalk and Smeeding (2000)). And most rich countries have been able to protect the least skilled from the negative effects of rapidly changing industrial and employment effects brought about by increased trade and technological change. At least in theory, the winners from the globalisation game should be able to compensate the losers to the benefit of all. And

the strong welfare states of Europe and Scandinavia seem to have been able to protect their least-skilled and least-well-off citizens better than many others during this period.

That said, only a few authors have begun to sort out the sources of differences in inequality trends across the rich countries, and even fewer in the middle-income and poorer nations. Much additional work is needed here.

5. Summary and Conclusions

This brief paper has perhaps asked more questions than it has given answers. This is how the paper was meant to be written. Understandings and explanations of changes in the broad structures of economic inequality within and across nations depend heavily on the quality of the data that we have at our disposal. For social scientists interested in this topic, economic inequality data are equivalent to the astronomer's Hubbell telescope or the geneticist's Human Genome project. Without accurate indicators, model building and hypothesis testing cannot adequately proceed. Cross-national data on income distribution will never be perfect. But the ratio of signal to noise in these data can still be improved, as the LIS project has demonstrated. And there is room for the non-LIS G-20 nations to create similar data sets to illustrate changing economic inequality in their nations as well.

The evidence that we do have suggests that globalisation is one force among many which accounts for widening income inequalities in the rich countries of the OECD. The relationship between economic inequality and growth has not been sorted out, even in the rich nations, and we have yet to determine the effect of very high levels of inequality on civic engagement, or on support for policies which enhance opportunity for all citizens. Still, globalisation in rich nations appears to act more by raising incomes at the top of the income distribution than by lowering them at the bottom. Notwithstanding this influence, however, domestic policies – labour market institutions, welfare policies, etc – can act as a powerful countervailing force to market-driven inequality. Even in a globalised world, the overall distribution of income in a country remains very much a consequence of the domestic political, institutional and economic choices made by those individual countries – both rich and middle-income ones.

Appendix A: Data and Sources for Figures 2 and 3

Country	P10/P50 Ratios	Rank	Non-elderly and cash and near-cash social expenditure level[(a)]		Full-time workers earning less than 65 per cent of median earnings	
			% of GDP	Rank	%	Rank
US	38	17	3.7	15	25.0	1
Italy	42	16	7.0	12	na	na
Australia	45	15	6.2	14	13.8	5
Japan	46	12	1.9	16	15.7	4
Canada	46	12	8.0	11	23.2	2
UK	46	12	9.4	9	19.6	3
Spain	50	11	6.8	13	na	na
Netherlands	55	4	14.1	2	11.9	8
Sweden	60	1	13.8	3	5.2	13
Germany	55	4	8.4	10	13.3	6
Switzerland	52	9	na	na	na	na
Denmark	51	10	12.4	4	na	na
France	54	7	10.7	6	13.3	6
Norway	55	4	10.1	8	7.8	9
Finland	59	2	15.3	1	5.9	12
Belgium	53	8	12.1	5	7.2	10
Luxembourg	59	2	10.4	7	6.0	11
Mexico	28	19	1.8	18	na	na
Russia	30	18	1.9	17	na	na
Overall average	**48.6**	**na**	**8.6**	**na**	**12.9**	**na**

(a) Cash and non-cash social expenditures exclude health, education, and social services, but include all forms of cash benefits and near-cash housing subsidies, active labour market program subsidies and other contingent cash and other near-cash benefits.

Sources: OECD, *OECD Economic Outlook*, vol 59 and 60, 1996 (per cent of full-time workers earning less than 65 per cent of median earnings); OECD (2001b) (non-elderly and cash and near-cash social expenditure level); author's tabulations of the LIS data files

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Improving our Knowledge and Analysis of Changes in Poverty and Inequality: The International Statistical Architecture

Peter Harper, Paul McCarthy, Leon Pietsch and Keith Woolford

1. Introduction

Economists and policy-makers are increasingly interested in analysing living standards across countries and changes in their relative rankings over time. The different social and institutional arrangements that exist in countries around the world create difficulties for such international comparisons. Comparisons of economic data are further complicated because economic variables are expressed in different currencies. One method of converting economic data from a national currency to a common currency such as the US dollar is to use exchange rates. However, this simplistic approach is not appropriate for comparisons of standards of living and other similar comparisons and can lead to quite misleading conclusions. For comparisons of this nature a more robust and appropriate method is to use 'purchasing power parities' (PPPs), which directly reflect differences in the prices of goods and services in different countries.

This paper describes the issues associated with using PPPs for making international comparisons. In making international comparisons analysts are also interested in comparing income distributions. The issues associated with these types of comparisons are also discussed in this paper.

2. Making International Comparisons

Much economic analysis concentrates on what is happening within an individual country and, because economic statistics produced by the national statistical agency are expressed in the domestic currency, comparisons can be made easily between different sets of domestic data. However, from time to time, economists are interested in comparing economic data from different countries. In some cases, (e.g., such as comparing the recent growth rate of GDP in Australia with that in the US) it is fairly easy to do so. In this case, the monetary units in which the underlying data are expressed are not important because it is the rate of growth rather than the level of activity that is being compared. Other types of comparisons are less straightforward. For example, there is often interest in the relative levels of activity between countries or in obtaining an overall total measure of activity for a group of countries such as those in the OECD. It is common to see figures quoted for the level of GDP per capita in countries, as a rough measure of relative economic well-being, or an overall growth rate for, say, the whole of the 30 OECD countries. In the former case, the main problem in making the comparison is in adjusting the data expressed

in national currency units to a common currency such as the US dollar. In the latter case, it is necessary to aggregate across different currencies (Australian dollar, euro, British pound, etc).

One method of converting economic data from a national currency to a common currency such as the US dollar is to simply use exchange rates. An exchange rate represents the 'price' of a foreign currency (i.e., the number of units of the domestic currency required to purchase one unit of a foreign currency). As such, it is clear that it is appropriate to use exchange rates for applications such as calculating the amount of goods and services that could be imported with the proceeds of a particular level of exports or calculating the domestic currency costs of purchasing foreign goods and services abroad. However, in assessing relative standards of living, what is required is a means of comparing the volumes of goods and services actually available to residents of different countries in their own countries. Using exchange rates to convert the national currency values can be misleading because exchange rates are influenced by factors other than relative domestic price levels (e.g., financial flows and interest rate differentials can have a significant effect on exchange rates). 'Purchasing power parities' (PPPs) are specifically designed to provide rates of currency conversion that equalise the internal purchasing power of different currencies. Converting national currencies using PPPs eliminates the effects of different price levels between countries.

The simplest example of a PPP is regularly presented by *The Economist* magazine, which shows the relative levels of the prices of Big Mac hamburgers between various countries. This form of presentation provides an indication of which countries are 'expensive' (i.e., those whose PPP for a Big Mac is higher than the equivalent price based on exchange rates) and those that are 'cheap'. More sophisticated PPPs are constructed by reference to the relative prices of a much broader range of goods and services.

To calculate PPPs, it is necessary to identify goods and services that are identical in all the countries involved in the comparison and for which prices can be collected. The goods and services concerned need to be representative of the expenditures in each country as well as being comparable between the countries. Tensions arise in identifying products that meet these two criteria, so compromises have to be made in the process.

Many international comparisons focus on measures of inequality. However, one factor that complicates the assessment of inequality is that, in addition to income distribution between countries, income distribution within countries can also be important in such analyses. This suggests that information on income distributions within countries should be compiled as well as those between countries. Ideally, these measures would take account of differences in prices in different parts of a country (e.g., prices in rural areas may be less than in urban areas) and any differences in pricing patterns experienced by different income groups (e.g., very low income groups may pay higher per unit prices than others because they can afford to buy only in small quantities). These issues may be more relevant to less-developed countries than to developed ones.

3. International Frameworks

The framework underlying the national accounts and which therefore influences standards for most economic statistics (including PPPs) is the *System of National Accounts 1993* (commonly referred to as 'SNA93'). It was produced jointly by the Commission of the European Communities (Eurostat), the IMF, the OECD, the United Nations and the World Bank (see Commission of the European Communities *et al* (1993)). Some changes have been made to SNA93 since its publication nine years ago to take account of changing economic instruments (e.g., the emergence of new types of financial derivatives). The procedures for making such changes are coordinated by the Inter-Secretariat Working Group on National Accounts, which consists of representatives of each of the above organisations plus representatives from some UN regional commissions. Proposed changes have to be ratified by the United Nations Statistical Commission, which is the peak body for international statistical matters.

SNA93 provides an internationally accepted framework for producing national accounts statistics and for making international comparisons of these data, but there is no similar framework available for setting the standards applicable to international comparisons of the distribution of household incomes. While the underlying concepts that should be embodied in household income distribution statistics are the same as the income concepts underpinning the SNA, the priorities and practical issues to be addressed in compiling national accounts and compiling household income distribution statistics differ substantially.

Limited international work has been undertaken on producing guidelines to countries for household income surveys, which are typically the source for household income distribution statistics. In 1973, the Twelfth International Conference of Labour Statisticians adopted a 'Resolution concerning household income and expenditure surveys' which briefly dealt with many of the issues relevant to conducting such surveys.[1] More recently, an International Expert Group on Household Income Statistics (the Canberra Group) was established under the auspices of the United Nations Statistical Commission. The report of the Group is 'a guide…on how to prepare harmonised and comparable statistics on income distribution. It is a synthesis of prevailing ideas which tries to reconcile the dual concerns to be faithful to the conceptual nature of income and its theoretical definition, whilst taking into account the practical difficulties of data collection and compilation…' (Canberra Group 2001, p 1). There is now a fairly broad consensus on standard approaches to be used in household distribution analysis.

1. See International Labour Organization (1973) for details of this Resolution.

4. National Accounts and PPPs

The SNA 'provides a comprehensive accounting framework within which economic data can be compiled and presented in a format that is designed for purposes of economic analysis, decision-taking and policy-making'.[2] The adoption of the SNA by the majority of national statistical agencies means that there already exists an internationally comparable set of economic data with accepted and well-understood aggregates. The task is to enable those aggregates to be compared across countries, typically by converting them into a common currency.

SNA93 strongly recommends using PPPs in international comparisons of real production and consumption. Paragraph 1.38 states:

> ...When the objective is to compare the volumes of goods or services produced or consumed per head, data in national currencies must be converted into a common currency by means of purchasing power parities and not exchange rates. It is well known that, in general, neither market nor fixed exchange rates reflect the relative internal purchasing powers of different currencies. When exchange rates are used to convert GDP, or other statistics, into a common currency the prices at which goods and services in high-income countries are valued tend to be higher than in low-income countries, thus exaggerating the differences in real incomes between them. Exchange rate converted data must not, therefore, be interpreted as measures of the relative volumes of goods and services concerned...

Paragraphs 16.82 to 16.104 of SNA93 provide a detailed description of PPPs and the methods of calculating them.

As mentioned above, making international comparisons of levels of activity, income etc, using exchange rates can produce misleading results. In its publication *Purchasing Power Parities and Real Expenditures – 1999 Benchmark Year* (OECD 2002), the OECD showed that PPP-converted GDPs make better economic sense than do exchange rate converted GDPs for tracking trends in real production or living standards. Table 1 is based on data from that publication. It shows the GDP for Japan as a percentage of that for the US in 1985, 1990, 1993, 1996 and 1999

The average annual growth in GDP volumes between 1985 and 1999 was 2.6 per cent in Japan and 3.2 per cent in the US so, in the absence of significant structural change, the Japanese economy would be expected to have become somewhat smaller relative to the US over the whole period shown above. As can be seen from Table 1, this is in fact the case when the comparisons are based on PPPs (a decline in the Japanese economy from 35 per cent of the size of that of the US to 34 per cent) but not with the exchange rate based comparison, which shows the Japanese economy increasing its size relative to the US economy by about 50 per cent (from 33 per cent to 49 per cent). In addition, the PPP-converted data show a fairly plausible relationship between the GDP for the two countries for each benchmark year when the relative rates of GDP volume growth are taken into account. There is a fairly sharp rise between 1985 and 1993 in the size of the Japanese

2. Commission of the European Communities *et al* (1993), p 1, paragraph 1.1.

Table 1: GDP – Japan and the US
Per cent

	Japan/US GDP ratios				
	1985	1990	1993	1996	1999
Converted using:					
Exchange rates	33	52	67	60	49
PPP	35	39	40	40	34
	Average annual growth in GDP volumes				
	1985–1999	1985–1990	1990–1993	1993–1996	1996–1999
Japan	2.6	4.9	1.5	2.0	0.4
US	3.2	3.2	1.7	3.5	4.3

economy relative to the US's when Japan's growth rates were stronger than the US's, followed by a large fall from 1996 to 1999 when Japan's growth rate was substantially lower than that of the US. On the other hand, the exchange rate converted data show changes in the relationship of GDP between the two countries that are economically implausible, with the Japanese economy apparently doubling in size compared with the US in only eight years between 1985 and 1993, followed by a sharp reversal between then and 1999 but still leaving its size compared to the US at an implausible level given the relative growth rates between 1985 and 1999.

Despite the SNA's strong support for using PPPs rather than exchange rates in making international comparisons, in practice there is some variation in their application by international agencies. For example, the IMF, World Bank, and OECD are consistent users of PPPs in the analysis of real production levels or living standards. However, until recently, the United Nations Development Programme (UNDP) used a confused mixture of PPPs and exchange rates in producing its annual *Human Development Report* (HDR). As a result, some significant problems arose in interpreting the HDR and this issue was discussed in depth at the March 2000 meeting of the UN Statistical Commission. Following that meeting, the Chair of the Statistical Commission appointed a small group to review the relative merits of PPPs versus exchange rates in international comparisons of the type included in the HDR. The report of this review[3] was presented to the March 2001 UN Statistical Commission meeting.

The report revealed a consensus that the statistical problems involved in using PPPs when making international comparisons are of a much smaller magnitude than those associated with using exchange rates in such analyses. In particular, the review team reported that:

3. United Nations Statistical Commission (2001).

> …[there are] two important shortcomings of PPP conversion use that require a response. The first is the question of quality of the measurement instruments of the basic data, the data collection and the calculation of PPPs. The second is the question of coverage for the countries of the world. We acknowledge...that these are both important issues but they are not in our view of sufficient weight to justify the use of US dollar exchange rate conversion rather than PPP conversion …the quality issue [of PPP data] cannot justify switching from the PPP estimate to a US dollar exchange rate, which can be more than three times smaller for least developed countries. Given such large differences between the two measures, using the wrong measure because it is more accurate does not satisfy a 'fitness-for-purpose' criterion.

The report also presented an analysis of comparisons using physical measures of output and the use of goods and services. It showed that, despite the data problems so often referred to when PPPs are mentioned, the PPP data at the level of GDP provide a much more plausible comparison between various pairs of countries than does a comparison based on exchange rates. The report reaffirmed SNA93 by recommending that PPPs rather than exchange rates should be used in international comparisons of real production and living standards because exchange rates produce distorted results. This report has been a very important step in gaining broad acceptance by both international institutions and national statistical offices of the need to use PPPs rather than exchange rates in international comparisons. As a result of the report, the UNDP HDR is now more consistent in using PPPs, but the UN's world economic forecasts, which purport to be forecasts of levels of real economic activity, still wrongly use exchange rates where PPPs are appropriate.

5. Calculating PPP Statistics

The calculation of high-quality PPP statistics requires high-quality national accounts and price data for each of the countries for which PPPs are being calculated.[4] Price data are weighted using national accounts data to form PPPs which are then normally divided into national accounts aggregates to convert them to a common currency.

As mentioned previously, most countries prepare national accounts statistics; however the quality varies across countries, with less-developed countries tending to have poorer-quality national accounts than well-developed ones. Most countries collect price information of some sort, typically for the purpose of compiling a consumer price index. Again the quality varies from country to country. However, because the national accounts aggregates for which PPPs are to be constructed are generally broad in coverage, a comprehensive suite of PPPs requires a broader range of prices than those collected for the CPI. Furthermore, in order to make international comparisons of prices, as well as being representative of expenditure the prices collected must be comparable between countries and consistent with the methods of valuation used to compile national accounts. For these reasons, collecting prices for PPP statistics typically involves additional effort for the countries involved.

4. It should be noted that poor quality national accounts data will also adversely impact on the quality of exchange rate based comparisons, in addition to the other concerns with this method of comparison.

PPPs are calculated in two stages. First, at the most detailed level for which weighting data are available (the 'basic heading'), PPPs are derived based on the price ratios for all the items which can be matched between each pair of countries in the comparison. In the International Comparison Program (ICP) the 'country-product-dummy' (CPD) method is used to impute prices below the basic heading level using regression techniques. The outcome is that either observed or imputed prices are available for every item for every country in the comparison and so PPPs can be calculated for each basic heading using a full set of prices. The OECD and Eurostat, though, use a different method in which basic heading PPPs are calculated based on prices for those representative products which can be directly matched between pairs of countries. The second stage is to combine the basic heading PPPs using national accounts data as the weights to provide PPPs for each level of aggregation (e.g., household final consumption expenditure) up to GDP. There are several formulas available for use in this stage of the process. The two most commonly used are the 'Elteto-Köves-Szulc' (EKS) and the 'Geary-Khamis' (GK) methods. The GK method has been used to aggregate the basic heading data in each round of the ICP.[5] On the other hand, the OECD switched to the EKS method for its headline results from the 1990 PPP round on, but some estimates based on the GK formula are also published in OECD (2002).

The disadvantage of the GK method is that it suffers from a bias known as the 'Gerschenkron effect'. Gerschenkron observed that GDP at partner country prices is always higher than when expressed in the prices of the country itself. The bias arises because, in practice, the GK method applies a price vector obtained by averaging the prices at each basic heading level to a matrix of expenditure weights based on each country's national accounts. The OECD observes that 'those countries whose price structures are different from the structure of the average prices used in the aggregation process will be shown as having higher relative volume levels than they would have had if average prices, more characteristic of their own prices, had been used'.[6] The OECD identified the countries most affected by the Gerschenkron effect in the 1999 OECD-Eurostat-ECE round as being the Russian Federation, Latvia, Bulgaria, Ukraine, Turkey, Romania, Macedonia, Estonia and Lithuania, which are all relatively low-income countries. The EKS formula is akin to a 'Fisher Ideal' index in time series and does not suffer from this bias. For this reason, it is favoured by SNA93 as the appropriate formula for compiling PPPs for GDP and the main expenditure aggregates.[7] The main disadvantage of the EKS formula is that the results obtained using it are not additive (i.e., the sum of the components of GDP does not equal the directly derived estimate of GDP).

In contrast to the Gerschenkron effect, which leads to an overstatement of the per capita GDP of low-income countries, exchange rate comparisons systematically understate per capita GDP in less-economically developed countries compared with

5. A more detailed discussion of the issues is contained in Dowrick (this volume).

6. OECD (2002), p 165.

7. Commission of the European Communities *et al* (1993), p 397, paragraph 16.103.

those with relatively high GDP per capita. The reason is based on the productivity differentials between high- and low-income countries and is described as follows by the architects of the ICP:[8]

> International trade tends to drive the prices of traded goods, mainly commodities, towards equality in different countries [based on exchange rates]. With equal or nearly equal prices, wages in the traded goods industries in each country will depend upon productivity. Wages established in the traded goods industries within each country will prevail in the country's nontraded goods industries. In nontraded goods industries, however, international productivity differentials tend to be smaller. Consequently, in a high-productivity country high wages lead to high prices of services and other nontraded goods, whereas in a low-productivity country low wages produce low prices. The lower a country's income, the lower will be the prices of its home goods and the greater will be the tendency for exchange-rate conversions to underestimate its real income relative to that of richer countries.

How the biases associated with the GK methodology and exchange rates translate into assessments of changes in inequality is difficult to establish with precision. It is clear, however, that exchange rates do not provide a suitable starting point for assessing changes over time because they are such a fundamentally flawed means of comparison. Based on exchange rates, the gap in per capita income between the countries with the richest fifth of the world's population and those with the poorest fifth increased from a factor of 30 to 1 in 1960 to 74 to 1 in 1995. Ian Castles (1998) pointed out that, based on PPPs, this ratio was about 12 to 1 in 1960, 18 to 1 in 1990 and 16 to 1 in 1995. The report to the UN Statistical Commission of the team which reviewed the HDR discredited the use of exchange rates for making international comparisons within a year. The differences observed above in the two sets of time series indicate that per capita volumes based on exchange rates are not able to be used as an indicator of changes over time either because they are so (implausibly) different from the PPP-based measures. In other words, not only do exchange rate based comparisons produce extreme and meaningless estimates of relative levels but they also produce meaningless results over time. In addition, Table 1 shows empirically that time series of comparisons based on exchange rates produce results which are economically implausible, even when they are between two high-income countries. In practice, the only certainty with exchange rate based comparisons is that, for any point in time, they will significantly overstate the difference in per capita GDP volumes between high- and low-income countries. It is impossible to provide a definitive answer to the question of the extent of the change in this bias over time because it will depend on the countries being compared, the extent of the differences in the structure of their economies at each point in the time series under consideration and other factors which affect exchange rates (e.g., financial flows or interest rates).

Calculating PPPs is dependent on being able to collect the prices for similar products across all the countries in the comparison. The problem of matching up economies that are significantly different (e.g., Germany and Thailand) is handled by calculating PPPs for groups of like countries and then using a country that could

8. Kravis, Heston and Summers (1978), p 9.

be classified to more than one group as a 'bridge' to link the groups together (e.g., Austria was used to link together eastern and western European countries in the 1996 PPP project). If the GK methodology is used, grouping countries which are economically similar and linking the various groups will reduce the impact of the Gerschenkron effect.

If the quality of a country's national accounts and/or prices information is poor, then the quality of the PPP statistics for that country will also be poor. However, even though that country's data – depending on the choice of formula – can affect comparisons between two other countries, the impact of this is typically insignificant. The exception is if the country is used as a 'bridge' country to link together two sets of independently compiled PPP statistics.

6. Availability of PPPs

PPPs were first calculated on an experimental basis in the 1960s by the University of Pennsylvania, which was working on the International Comparison Program (ICP) jointly with the United Nations Statistics Division. The catalyst for this work was the recognition by a number of economists (including Colin Clark) that using exchange rates in comparisons of incomes systematically biases the results for poor countries downwards when comparisons are made with economically developed countries. The ICP output was benchmark PPPs for various years, with 1970 being the first year of the ongoing, or production, series. The benchmarks were produced for 1975, 1980, 1985 and 1993, with the World Bank assuming the role of global coordinator for non-OECD countries in 1993; 118 countries were covered in the 1993 round, compared with 10 in 1970. In 1980 the OECD, in collaboration with the statistical office of the European Union (Eurostat), commenced a PPP program for its member countries. The OECD-Eurostat PPP Program was integrated within the ICP for those years in which the two overlapped. However, the OECD-Eurostat Program was run more frequently, providing benchmark data for Western European countries and the non-European OECD countries for 1980, 1985, 1990, 1993, 1996 and 1999. (In 1999, eastern European non-OECD countries were also included.)

Because PPPs are not available for all years for all countries, they are often extrapolated (either forwards or backwards) to provide estimates for 'missing' years. The extrapolation process generally used is fairly simple. It uses the ratio of the movement in the GDP deflator for each country and that of the US for the year concerned to move forwards (or backwards, as appropriate) from a benchmark PPP. The PPP estimated for each year using this procedure is divided into the current price GDP for the country to produce a time series of GDP volumes on a PPP basis. Broadly, the assumptions underlying this process are that the relative structure of expenditure on GDP for the US and that for each other country in the comparison is similar (and fixed) for each year compared with the benchmark year that they are estimated from. Even in the short term it can be shown that this assumption falls down if there are abrupt changes in prices, such as those for oil.

The problem is more marked when the countries included in the extrapolation are at different stages of economic development or if one of them is suffering from very

high inflation. Using this procedure to produce a times series in US dollars for a developing country by comparing its volume GDP growth with that of the US could produce quite misleading results, even in the short term. The longer the period between the benchmark and other years in the time series, the more likely that the time series of PPPs will be questionable.

The effects could be reduced by estimating the time series of PPPs using information at a more detailed level than GDP (e.g., for components of household final consumption expenditure, for components of gross fixed capital formation etc). The Penn World Tables (PWT), which present a time series of PPPs for about 170 countries, do project the PPPs at a more detailed level than GDP but only a handful of components are involved. The PWT contain data derived by '…integrating the different benchmark studies and developing methods that satisfy the need for information about countries that have not participated in benchmark studies and for years other than benchmark years. This has been accomplished through interspatial and intertemporal extrapolations of the ICP data to non-benchmark countries and years'.[9] The PWT provide the most comprehensive PPP data set available and are used extensively in different types of international economic analysis. However, they are based on benchmarks which, in the years since 1990, are calculated using different aggregation techniques – the EKS method for countries in the OECD-Eurostat-ECE comparison and the GK method for other countries – and so their usefulness is reduced in some types of comparisons. On the positive side, the PWT are as firmly based as any likely alternative given the problems associated with calculating time series of PPPs.

Other data sets, such as that produced by Maddison (2001) are based on simple extrapolations for many years from a single benchmark. A question that needs to be investigated is the extent to which the noise in time series of PPPs affects the longer-term analytical outcomes based on the estimates. It could be quite significant because of the rate of structural change over the past half century for which detailed country estimates have been presented in the above text, particularly for those countries which had centrally planned economies for much of this time. However, it is impossible to measure the impacts because of the lack of consistent benchmark data with which to compare these long-term time series of PPPs. Results from analysis of such time series should be treated as indicative rather than as precise estimates of changes over time.

7. Current Status of the ICP

The last round of the ICP, conducted in respect of 1993, was dogged by problems. The funding available was insufficient to handle a project of the scope envisaged, the data supplied were often of poor quality, there was little understanding by many countries of the statistical implications of the data they were supplying, quality control of the data was poor, and the results took many years to compile. The

9. Heston and Summers (1997), p 3.

international statistical community did not begin to rejuvenate the ICP until the problems with the HDR re-focused attention on the need for high-quality PPPs to be used consistently for real production and living standard comparisons. Over the past couple of years, the World Bank has been planning to revitalise the ICP, with a new round covering 117 countries being planned for 2003.[10] This planning has taken account of two reports[11] prepared by eminent statisticians into the state of health of PPP statistics.

The World Bank is currently raising the funds required to run a 2003 round designed to avoid the pitfalls of the 1993 round (the necessary funding is estimated to be around US$14 million). It has also been planning how to strengthen the round. Broadly, the overall 2003 ICP will be conducted by a team at the World Bank, and run on a regional basis with coordinators being located in five UN regional commissions (the Economic and Social Commission for Asia and the Pacific (ESCAP) in the case of our region). The OECD and Eurostat will be responsible for about 45 countries which currently participate in their PPP Program. The project will be overseen by a high-level Executive Board which will be responsible for ensuring the project remains on track and that high-quality results are delivered.

Apart from the cost associated with establishing the international team to conduct the ICP, there will also be costs associated with providing technical assistance to countries to enable them to improve the quality of their national accounts and/or prices statistics, as well as the costs of collecting the necessary additional prices, which some less-developed countries cannot afford. The World Bank is preparing software that will assist countries in collecting and editing prices. Therefore, an important spin-off to the 2003 ICP will be an improvement in the underlying statistical infrastructure in many less-developed countries. The World Bank has also initiated a number of research projects to establish the conceptual approaches to be adopted in areas such as the survey framework, the lists of products to be priced, the index number formula to be used in aggregation, the method(s) to be used in linking countries and regions, etc. The United Nations Statistical Commission has given strong support to the 2003 ICP.

8. Measuring and Comparing Income Distribution

The measurement of income distribution usually requires household surveys to show how aggregate income received by the household sector (as might be measured in the national accounts) is shared amongst the population. Making international comparisons of the results of such surveys encounters at least the same problems as those in making comparisons of national accounts, as discussed above, including the need for PPPs to convert consumption, income or poverty lines in national currencies onto a common basis.

10. See the World Bank website at < http://www.worldbank.org/data/>.

11. Castles (1997) and Ryten (1998).

Perhaps most importantly, household surveys of income usually only collect information about cash or near-cash income and this concept of income excludes other elements of material well-being which are captured within the national accounts. The omissions are likely to include own account production in transition economies, compensation to employees not provided in cash, imputed rent for owner-occupied dwellings and the services provided to households by government such as education, health services and subsidised housing. The omissions are particularly problematic when making comparisons over time and between countries because the relationship between cash and non-cash income relativities do vary significantly both between countries and over time.

The focus on cash income in household surveys is a practical issue, as household survey respondents are often not able to provide sufficient information to quantify the value of the non-cash elements of the economic resources available to them. Practical issues also lead to other differences such as in the definition of cash income, the time period to which income concepts apply, and in survey scope.

Even for cash income data items, the data collected in household surveys may not align in aggregate to total household cash income included in national accounting aggregates for a range of reasons, not least because survey respondents do not report accurately. The incomes by source may vary more significantly, even where total cash incomes do broadly align. For example, while the cash component for welfare transfer incomes may be a relatively small component of total cash incomes for the economy, and error in its measurement is not significant in a comparison of total household incomes, it is often a far more significant component of income for those at the bottom of the income distribution. Small errors in measuring aggregate incomes can have very significant impacts on distribution measurement at any point in time, and confound analysis of changes in distribution over time for a single economy. The problems multiply when inter-country comparisons are made over time.

It is also the case that the correspondence with national accounting aggregates changes over time as an economy develops. For example, while the incomes of small unincorporated businesses may be captured in national accounting aggregates for the household sector derived through taxation or business records information, this income can be very difficult to measure accurately in a household survey. Because its significance for those on lower incomes can be great, and its changing significance quite marked in relatively short time spans, household surveys are routinely less than ideal for capturing the impact of these changes on income distribution.

All these considerations make international comparisons at any point in time more difficult, and comparisons of relative change between countries over time very problematic. Putting aside the difficulties of getting appropriate PPPs at the country and intra-country level to try to get the income distribution analysis into the same unit of currency, and assuming that the basic measurement difficulties that differentially affect cash income statistics in different countries can be reconciled, apparent changes in income distribution based on these cash income surveys need not represent changes in consumption levels or their distributional impacts.

Failure to recognise all the difficulties inherent in measuring household income as an indicator of inequality has led some researchers to draw inappropriate conclusions about trends in income distribution within and between countries.

At a practical level, the Luxembourg Income Study (LIS) has attempted to assemble comparable data sets of income distribution microdata from around the world. Established in 1983, LIS is a research database that comprises microdata information from income surveys that has been made available in a confidentialised form. The data sets are harmonised as far as possible by maximising comparability in terms of units of analysis, income concepts, measures of inequality, and so on. The experience gained in this work helps identify the areas of greatest concern in achieving international comparability in household income statistics.

9. Conclusions

International comparisons are crucial for economists and social statisticians in a number of ways, such as identifying what sets apart successful economies from those that are less successful, how income varies around the world, the relative incidence of poverty between countries and to what extent inequality of income in different countries is changing over time. In particular, poverty and inequality are areas of interest where the available statistical data are somewhat imprecise, vary in quality from one country to another and also vary over time, and are open to different interpretations depending on the techniques used in their analysis. However, as a result of the review of the data and methods used in the UNDP HDR, the United Nations Statistical Commission has reaffirmed the SNA93 recommendation that PPPs should be used for standardising data to a common currency for use in comparisons of real production levels or living standards.

In the past, widespread use of PPP data in such analyses has been held back by the lack of timeliness of the PPP benchmark data being released, misunderstandings on the part of many analysts concerning the ways in which PPP data can be used and misgivings (some real but many imagined) about the accuracy of the data which has often (misguidedly) led to exchange rates being used as a substitute in international comparisons. On the policy side, the outcome has been that much of the effort that should have gone into analysing various data sets has instead gone into debating the usefulness of PPPs versus exchange rates.

The 2003 ICP is an ambitious, yet achievable, effort to develop a high-quality set of PPP benchmarks. The G-20 can play an important role in ensuring that the 2003 ICP succeeds in its goal by encouraging countries to participate in the ICP to the best of their ability and by providing financial and technical support where possible. A successful 2003 ICP will remove some of the confusion surrounding the poverty/inequality debate by providing access to a better means of making international comparisons. There will be other benefits in the form of improved national data systems that, in turn, will lead to clearer evidence of the successes or failures of national policies. Australia is strongly committed to the 2003 ICP. The Australian Government's overseas aid agency (AUSAID) has indicated it is prepared to provide financial support and the Australian Bureau of Statistics has offered technical assistance to participating countries in the Asia and Pacific region.

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G-20 Comparisons of Incomes and Prices: What can we Learn from the International Comparison Program?

Steve Dowrick

1. Introduction

The International Comparison Program (ICP) is one of the largest economic and statistical exercises that has ever been carried out. Detailed price surveys have been carried out every five years or so, using standardised methods, enabling the calculation of the real quantities of goods and services that are purchased in each economy. A wealth of information has been generated on the price and quantity structures of the participating countries, enabling international comparisons of the effects of trade policy and other policies on the allocation of resources. A review of the Program was carried out by Kravis and Lipsey (1991). In his paper in this volume, Peter Harper details recent developments and plans.

Probably the best-known feature of the ICP has been the derivation of real output (GDP per capita) measured at purchasing power parity (PPP). This allows comparisons of the real value of production of each country, using a standardised measuring rod. Dividing real production by population yields real GDP per capita, a measure of the level of economic activity and average real domestic income. These PPP-adjusted measures have been used by policy analysts and academic researchers to investigate the efficacy of policies and institutions in promoting economic growth. They are also used by international organisations to compare living standards and to determine the capacity of member countries to benefit from, or contribute to, collective programs such as international aid. The European Community, for example, has used PPP-adjusted income comparisons to determine eligibility for its regional development programs.[1]

In this paper I give examples of the use of ICP data to compare the prices of individual commodities and to compare aggregates such as GDP across the countries that comprise the G-20. I highlight some of the problems that arise with a commonly used method of aggregation, and explain an alternative method. I also demonstrate the value of the ICP in measuring important indicators and predictors of economic development such as the relative prices of investment and consumption goods.

1. EUR213 billion was allocated under the European Regional Development Fund to regions where GDP per capita is less than 75 per cent of the Community average (see <http://www.europa.eu.int/comm/regional_policy/objective1/index_en.htm>).

2. Foreign Exchange and Purchasing Power Parity Comparisons of Living Standards

It is well-known that the use of market exchange rates to translate international incomes into a common currency introduces a 'traded-sector bias' in comparisons of economic living standards. Whilst exchange rates tend to equate purchasing power over traded goods and services, much of economic production is for domestic consumption only. Wide variations across countries in the prices of non-traded goods and services are not reflected in the market for foreign exchange (FX). So exchange rate income conversions do not reflect the relative purchasing power of consumers in their own countries. Indeed, the Balassa-Samuelson argument[2] suggests that FX income comparisons tend to exaggerate international income differentials by ignoring the lower cost of living that is typically observed in poorer economies, due to cheaper labour-intensive services in the non-traded sector.[3]

The International Comparison Program (ICP) has conducted a series of detailed and standardised price surveys across many countries. The surveyed prices are often expressed as purchasing power parities for commodities (ppp) – the notional rates of exchange between the currencies that would equalise the prices in a common currency. I use lower-case 'ppp' to distinguish these commodity-level prices from the aggregate 'PPP' which measures the purchasing power of the currency over all the commodities that constitute gross domestic product.[4] The individual ppp's vary considerably according to which commodity is under consideration.

Take, for example, the local currency prices for domestic services and for passenger cars in a sample of nine countries from the 1980 ICP Survey. These prices are listed in the first two rows of Table 1. Local prices are expressed relative to the US dollar. For example, the number in the top left corner of the table indicates that in order to purchase the quantity of domestic services that cost one dollar in the US, a Brazilian would have to spend 19.2 cruzeiros.[5] In other words, the ppp of the Brazilian cruzeiro over domestic services was 19.2 cruzeiros per dollar. The actual 1980 exchange rate was, however, 52.7 cruzeiros per dollar, implying that domestic services in Brazil were relatively cheap, just over one-third of the US price at the prevailing market exchange rate.

These relative prices, translated into US dollars at the prevailing exchange rate, are listed in the fourth and fifth rows of Table 1.

There are several significant points that this table illustrates. First, that the relative prices of non-traded services vary by a huge amount across countries: from a low of 0.14 in India to a high of 4.45 in Germany. We can see that the price of services is

2. See Balassa (1964) and Samuelson (1964).
3. This argument, and the arguments that follow concerning the bias in the Geary-Khamis method of aggregation, are analysed in a formal economic model by Dowrick and Akmal (2002).
4. Gross domestic product (GDP) is by accounting definition equal to gross domestic income. I use the terms GDP, output and income interchangeably. Gross domestic income differs from national income according to international transfers to non-resident nationals.
5. The Brazilian currency changed from the cruzeiro to the real in 1994.

Table 1: ICP 1980 Purchasing Power of Currency per US Dollar
Selected G-20 countries and two items of consumption

	Brazil	Canada	Germany	India	Indonesia	Italy	Japan	South Korea	UK
Local currency prices (ppp)									
Domestic services	19.2	3.6	8.1	1.1	177	2 103	499	291	1.5
Passenger cars	19.7	0.9	1.8	13.0	597	980	136	546	0.6
Exchange rate[(a)]	52.7	1.2	1.8	7.9	627	857	227	607	0.4
US dollar prices[(b)]									
Domestic services	0.37	3.09	4.45	0.14	0.28	2.46	2.20	0.48	3.46
Passenger cars	0.37	0.76	0.97	1.65	0.95	1.14	0.60	0.90	1.35

(a) The exchange rate is the average for the year, expressed in terms of local currency units per US dollar.

(b) The US dollar price is the local currency price divided by the exchange rate with the US dollar. US prices are all set at unity.

consistently high in the richer industrialised countries, where wage levels are high. On the other hand, the relative price of cars, a traded good, does not vary nearly so much across countries.

Second, we can see how the use of market rates of exchange can give a very misleading picture of relative living standards. According to the 1980 ICP Survey, the average income (or GDP) per Brazilian was 109 000 cruzeiros, whilst the average per American was US$11 500. Using the market exchange rate of 52.7 cruzeiros per dollar implies that the average Brazilian income was equivalent to US$2 068, just 18 per cent of US income. But this ignores the fact that domestic services and cars were much cheaper in Brazil than in the US. Using the average of the two reported ppp's for commodities, 19.5 cruzeiros per dollar, suggests that the purchasing power of the average Brazilian income was in fact equivalent to US$5 590, close to half of the US average income.

A similar argument applies to US income comparisons for Indonesia and Korea. Both domestic services and cars are relatively cheap in these two countries, implying that the exchange rate comparison will understate the purchasing power of their incomes. The case of India is more difficult to evaluate on the basis of the prices reported in the table, because while domestic services are much cheaper than they are in the US, cars are some 65 per cent more expensive. Not knowing how much is spent on cars relative to services, we cannot tell whether the purchasing power of the rupee is above or below the US dollar exchange rate.

The India-US comparison example highlights the problem of aggregation when relative prices vary across countries. The problem is exacerbated when we consider the purchasing power of a currency over the 128 items which make up gross domestic product (GDP) in the ICP classification. We need to find a method of aggregating

all of these ppp's into a single measure that captures the purchasing power of a currency over all items of expenditure. This aggregate measure is usually referred to as the purchasing power parity (PPP) of the currency. The most common method of aggregation, the Geary-Khamis method, forms the basis for the widely used Penn World Tables. In the following section of this paper I advocate the Afriat method for computing 'true indexes'.[6] Each of these methods produces a different value for the PPP of a currency. But it is important to emphasise that all methods rely on the detailed price data provided by the ICP.

3. Aggregation Methods for Purchasing Power Parities and Real Income Comparisons

The authors of the Penn World Tables (PWT) have established a method for valuing aggregates such as real GDP. Instead of using currency market rates of exchange, the PWT values the 128 ICP items of GDP at constant international prices. The calculations of international prices are carried out by application of the Geary-Khamis (GK) method to the price and quantity data from the 1985 ICP Survey. The GK method uses these international prices to value GDP per capita for each of the countries in the survey. The PWT then use a regression to predict real GDP per capita for non-ICP countries, and use national constant price rates of growth to extend their estimates over time – with some adjustment to maximise consistency with ICP surveys from other years.

The PWT, described in Summers and Heston (1991), are the principal source of data for the comparisons of real GDP that have been used in many hundreds, if not thousands, of international studies. The PWT estimates have been updated by the World Bank and have been used in recent studies of global income distribution.[7] These estimates of real GDP per capita are illustrated in Figure 1 for all of the G-20 countries from 1965 to 1998. For convenience of display, the countries are grouped approximately by their level of income in 1965.

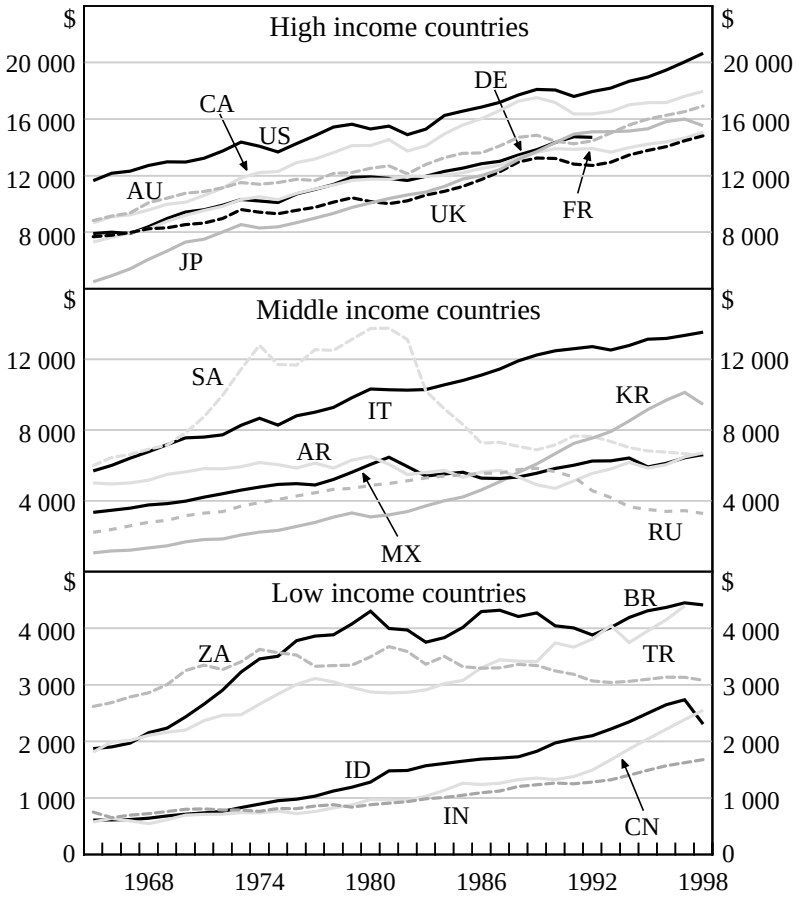
The PWT estimates of real GDP typically result in substantial revisions to exchange rate valuations. Comparing India with the US, for example, the ratio of per capita 1980 GDP is 2.1 per cent at market rates of exchange. The ICP data reveal, however, that non-traded goods and services are much cheaper, relative to traded goods, in India than they are in the US. So the PWT's estimate of real Indian income is much higher, 5.8 per cent of US income.

It is not often appreciated, however, that the PWT approach to comparing inequalities in real income/living standards can be just as problematic as the exchange-rate approach. The problem is that the fixed-price method used for aggregation is subject to substitution bias, as explained by Gerschenkron (1951) and

6 In recent years the OECD have used a different aggregation method, the EKS index. The EKS results are often close to the results of the Afriat method, and since they are easier to compute they may be preferred for practical reasons.

7. The extended PWT data are available at <http://www.worldbank.org/research/growth/GDNdata.htm>, the source used by Melchior, Telle and Wiig (2000).

Figure 1: PWT (5.6) Estimates of Real GDP per Capita
At 1985 GK international prices



Note: See Glossary for a listing of country codes.

Kravis and Lipsey (1991). PWT analysts have themselves recognised that their measure of purchasing power parity may impart a bias:

> The issue arises out of a familiar problem in price and quantity index number construction …Valuation at other than own prices tends to inflate the aggregate value of the bundle of goods because no allowance is made for the substitutions in quantities toward the goods that are relatively cheap…The practical importance of this issue…may loom large in comparisons between countries that have widely divergent price and quantity structures. (Kravis, Heston and Summers 1982, p 7)

The G-20 group includes countries with widely divergent price and quantity structures, so we can expect the problem of substitution bias in the PWT income comparisons to be substantial. The problem is related to the fact that the 'international prices' used in the PWT most closely resemble the price structure of the richer countries[8] and are very different from the price structures that are typically observed

8. It is difficult to be precise on this point, because the 'international prices' are a weighted average that does not correspond exactly to the price structure of any one country. Nuxoll (1994) suggests that the prices correspond most closely to the prices of Hungary. Dowrick and Quiggin (1997) find the closest correspondence is to the prices of Italy.

in poorer economies. This is partly because the 'international prices' are calculated according to a formula that weights the price structure of each ICP country according to its level of GDP – so poorer and less populous countries' economies carry less weight than the large and rich economies of North America and Western Europe. The bias towards developed-economy prices arises also because the countries that have participated in the ICP surveys have not included the world's most populous nation – China.

Given that the GK method measures incomes using the prices of relatively rich countries, we expect that they will *overstate* the real incomes of poorer countries. This substitution bias can be illustrated by considering expenditures on domestic services and passenger cars for Germany and India – taking the price data from Table 1 and adding in the real quantity data from the 1980 ICP Survey. These data are listed in Table 2.

Table 2: Example of Substitution Bias

	Germany	**India**	**India/Germany** Per cent
Local prices (ICP)			
Domestic services	8.1 DM	1.1 Rs	na
Passenger cars	1.8 DM	13.0 Rs	na
Real quantities (ICP)			
Domestic services	6	1.7	28.3
Passenger cars	345	1.3	0.4
Value at German prices (DM)	656	16	2.4
Value at Indian prices (Rs)	4 488	19	0.4

We have already seen that domestic services are relatively cheap in India whilst cars are relatively cheap in Germany. Not surprisingly, per capita consumption of domestic services was relatively high in India, over one-quarter of the German level, whilst their consumption of cars was very low, less than one-half of a per cent of the German level. We can aggregate these expenditures at Indian or German prices to compare national average expenditure on these two items. At German prices, where domestic services are expensive, Indian expenditure looks relatively high – and *vice versa*. The use of the rich-country prices to value real expenditure ignores the fact that Indian consumers choose to spend relatively more on the services that are cheap in India.

Whilst this example considers expenditures on only two items, the principle of substitution bias, which it illustrates, applies to constant price valuations of GDP as a whole.

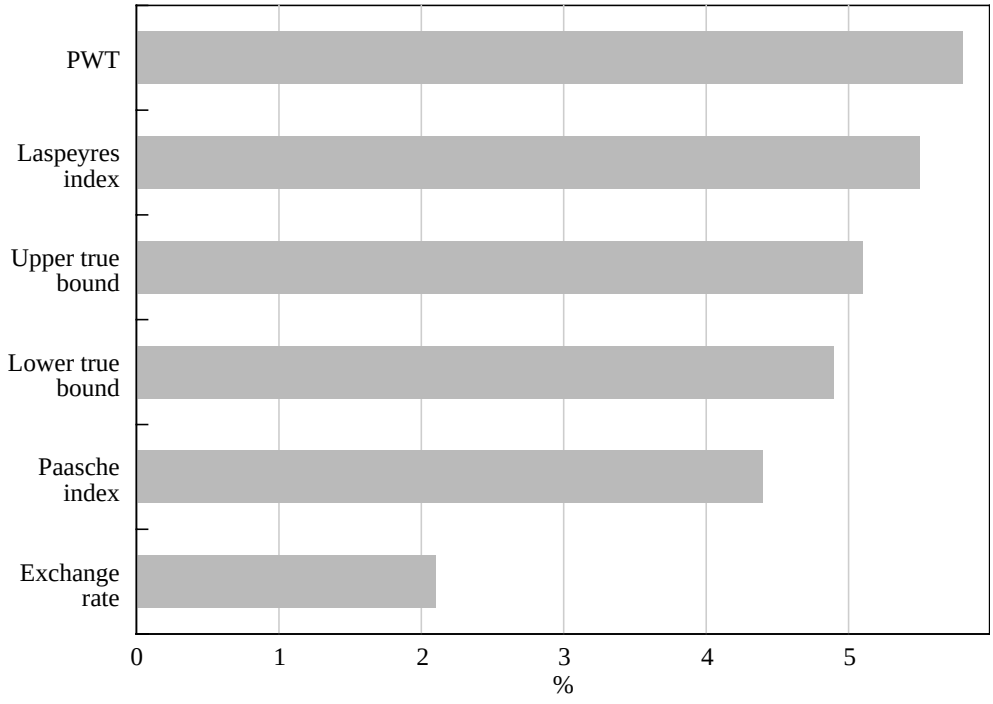
Hill (2000) has addressed the problem of measuring substitution bias, adopting two utility-based approaches to establishing bounds on income comparisons. He

estimates the parameters of the linear expenditure system, which is derived from the Stone-Geary utility function, to derive utility numbers for each country. He notes the sensitivity of the income ratios to the choice of the reference price vector, illustrated by his finding that the Turkey/US ratio could be as low as 14 per cent or as high as 28 per cent. His other approach is to assume homothetic preferences, implying that income comparisons based on expenditure function ratios are invariant to the reference price vector. This enables him to tighten the bounds on the Turkey/US ratio to the interval between 18 and 25 per cent, leading him to show that the GK measure substantially overvalues the relative income of the poorer country.

This latter approach is similar to that used by Dowrick and Quiggin (1997). However, whereas Hill examines only bilateral comparisons, Dowrick and Quiggin develop results on the multilateral properties of true index numbers, building on the pioneering work of Afriat (1981). In order to illustrate their method and to highlight the magnitudes of bias involved it is worth explaining results with respect to a particular problem. Using the ICP data set for 1980, what is the value of real income (GDP per capita) in India compared to real income in the US? Exchange rate comparisons give an answer of 2.1 per cent, whilst the Penn World Tables suggest that Indian average income is 5.8 per cent of US income.

These ratios, for Indian income (GDP per capita) relative to the US, are displayed in Figure 2, along with some alternative measures. The Paasche and Laspeyres indices indicate the income ratios which are obtained by evaluating the GDP bundles at US prices or Indian prices respectively. These are intuitively informative indices since they measure the relative values which consumers in either country would put on the consumption bundle of the other. Substitution bias suggests that the Paasche

Figure 2: Indian GDP per Capita Relative to the US – 1980



index, using the prices of India to compare the two countries, will understate the true ratio, whilst the Laspeyres, using US prices, will overstate it. This is exactly what we observe: the Laspeyres index is 5.5 per cent, whereas the Paasche Index is 4.4 per cent. If we were concerned only with these two countries it might make sense to choose the geometric mean of the Paasche and Laspeyres ratios, the Fisher ideal index, as our best guess for the true income ratio. There is, however, a well-known problem with the Fisher index: it is intransitive in multi-country comparisons. For example, if we include Brazil in our comparisons, the Fisher index for India/US does not equal the product of the indices for India/Brazil and Brazil/US.

Afriat's solution to this problem can be viewed as a generalisation of the Fisher approach. The attractiveness of the Fisher index is that it is a compromise between the Paasche and Laspeyres indices. But it is the specificity of the Fisher compromise – choosing the geometric mid-point – which makes transitivity impossible. Afriat's solution comes from asking the more general question: is there any set of real income numbers for our 3 (or *n*) country problem such that the income ratio for each pair of countries lies between the corresponding Paasche and Laspeyres ratios?

If such a set of numbers does exist, the GDP ratios will necessarily satisfy transitivity: for any set of real numbers (a, b, c), a/c = (a/b)*(b/c). Afriat's requirement that the India/Brazil and the Brazil/US ratios lie *between* rather than *at the mid-point* of the Paasche and Laspeyres ratios makes it feasible that there may exist such a set of numbers – a 'true index' in Afriat's terminology.

The Afriat index is not just a set of convenient numbers. It is a true welfare measure. Afriat (1981) has a remarkable theorem showing that the existence of such a true index, for a given set of observations on prices and quantities, is equivalent to the existence of a common homothetic preference relationship (or utility function) that rationalises the data.[9] That is to say, if there exists a set of Afriat index numbers, then there must also exist some common homothetic utility function such that any country's observed consumption bundle maximises the utility of a representative consumer facing the prices and budget constraint of that country. Moreover, the Afriat index numbers yield bilateral ratios that are the money-metric utility ratios.

In general, if a true index does exist it will not be unique – but we can establish upper and lower bounds to each of the bilateral ratios. These will be tighter than the Paasche-Laspeyres bounds. Using the Afriat method, as described later in this paper, we find that the true utility-consistent India/US income ratio lies between 4.9 per cent and 5.1 per cent.[10] The mid-point of these bounds, a ratio of 5.0 per cent, is the preferred true Afriat income ratio.

Using these true bounds as our benchmark, we can evaluate the degree of bias in different methods of aggregation. Referring to Figure 2 we see that the exchange rate

9. This equivalence is explained further by Varian (1982).

10. We can interpret these numbers as saying that the representative consumer is at least as well off with India's per capita GDP bundle as if they had been offered 4.9 per cent of the US's GDP bundle, whereas the representative consumer is at least as well off with the US bundle as if they had been offered 19.6 times the Indian bundle.

measure lies well below the lower true bound. The exchange rate undervalues India's GDP by more than one-half. We can see that the Penn World Tables correct for the bias inherent in exchange rate valuations of poor countries relative to rich countries; but the substitution bias of the fixed-price method means that the PWT measure has over-valued India's true GDP.

This example illustrates the finding of Dowrick and Quiggin (1997) that neither exchange rate comparisons nor the Penn World Tables comparisons constitute a true index of real incomes. Whilst the exchange rate comparison understates the relative value of incomes in poor countries, the PWT's use of the GK method tends to overstate it.

4. Aggregate PPP Incomes in the G-20 Countries

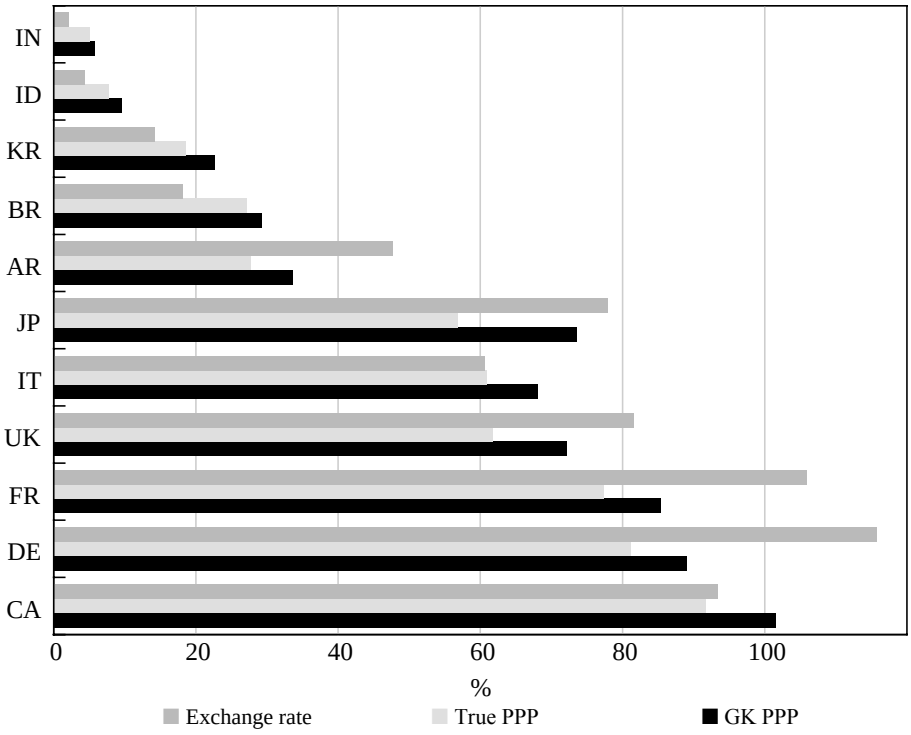
The 1980 ICP data set was analysed using 128 categories of expenditure for 53 countries satisfying the Afriat-Varian test of common homothetic preferences, implying the existence of true quantity and price indices. The ICP survey covered 60 countries, but only 12 of the current G-20 members were included. Table 3 displays for these 12 countries the various measures of real income (GDP per capita) that we have discussed so far, expressing real incomes as a percentage of US income.

Table 3: 1980 GDP per Capita for G-20 Countries as a Per Cent of US
A comparison of aggregate methods

	Aggregation method Per cent			**Ratio to true PPP**	
	Exchange rate	GK PPP	True PPP	Exchange rate	GK
Canada	93.4	101.5	91.7	1.02	1.11
Germany	115.8	89.1	81.2	1.43	1.10
France	105.9	85.4	77.4	1.37	1.10
UK	81.5	72.1	61.7	1.32	1.17
Italy	60.6	68.0	60.9	0.99	1.12
Japan	77.9	73.5	56.8	1.37	1.29
Argentina	47.7	33.6	27.7	1.72	1.21
Brazil	18.1	29.3	27.1	0.67	1.08
South Korea	14.2	22.6	18.6	0.77	1.21
Indonesia	4.3	9.6	7.7	0.56	1.24
India	2.1	5.8	5.0	0.43	1.16

The same data are displayed in Figure 3. A clear pattern is evident for the least-developed economies: Brazil, South Korea, Indonesia and India. Using the exchange rate to compare incomes with the US, these countries appear very poor.

Figure 3: GDP per Capita as a Per Cent of US – 1980



Note: See Glossary for a listing of country codes.

Using the GK method of comparing real incomes, however, has the effect of increasing substantially the relative income estimates. The GK method, taking account of the low prices of non-traded goods and services in these economies, revalues real incomes upwards by more than one-half in the cases of Brazil and South Korea, and more than doubles the estimated real income in the cases of Indonesia and India.

However, the GK method overstates the real income levels of all economies relative to the US. For the poorest economies, the true income measures lie between the foreign exchange and GK estimates.

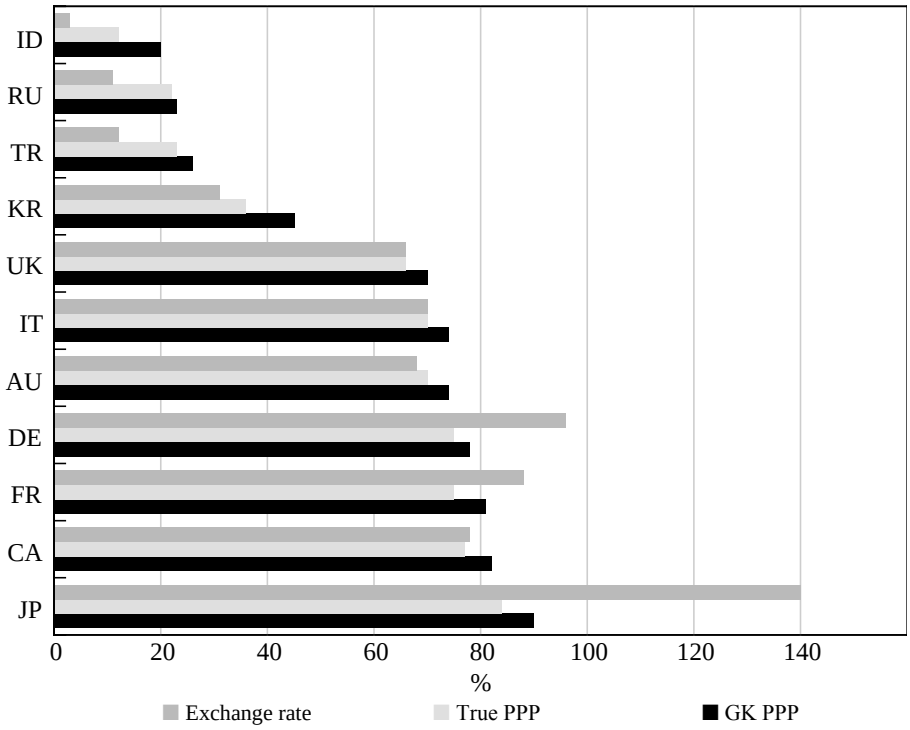
The most recent ICP survey of national prices was conducted in 1993. Based on the regional data that were released by the World Bank, I have been able to construct a global comparison covering 53 countries. Twelve of the current G-20 member countries participated in this ICP survey. The G-20 participants were not exactly the same as those who had participated in the 1980 survey: Argentina, Brazil and India were replaced by Australia, Turkey and Russia. Table 4 presents a summary of the three different methods of comparing real GDP per capita with that of the US and the results are illustrated in Figure 4.

We observe again that the exchange rate comparison understates the relative income level of the poorer economies. Whilst the GK method corrects for the traded-sector bias in the exchange rate comparison, it tends to over-correct – leading to over-valuation of income levels, particularly in the poorest countries.

Table 4: 1993 GDP per capita for G-20 Countries as a Per Cent of US
A comparison of aggregate methods

	Aggregation method Per cent			Ratio to true PPP	
	Exchange rate	GK PPP	True PPP	Exchange rate	GK
Japan	140	90	84	1.65	1.07
Canada	78	82	77	1.01	1.07
France	88	81	75	1.18	1.08
Germany	96	78	75	1.27	1.03
Australia	68	74	70	0.97	1.06
Italy	70	74	70	1.00	1.05
UK	66	70	66	1.01	1.07
South Korea	31	45	36	0.84	1.24
Turkey	12	26	23	0.55	1.13
Russia	11	23	22	0.49	1.04
Indonesia	3	20	12	0.28	1.62

Figure 4: GDP per Capita as a Per Cent of US – 1993



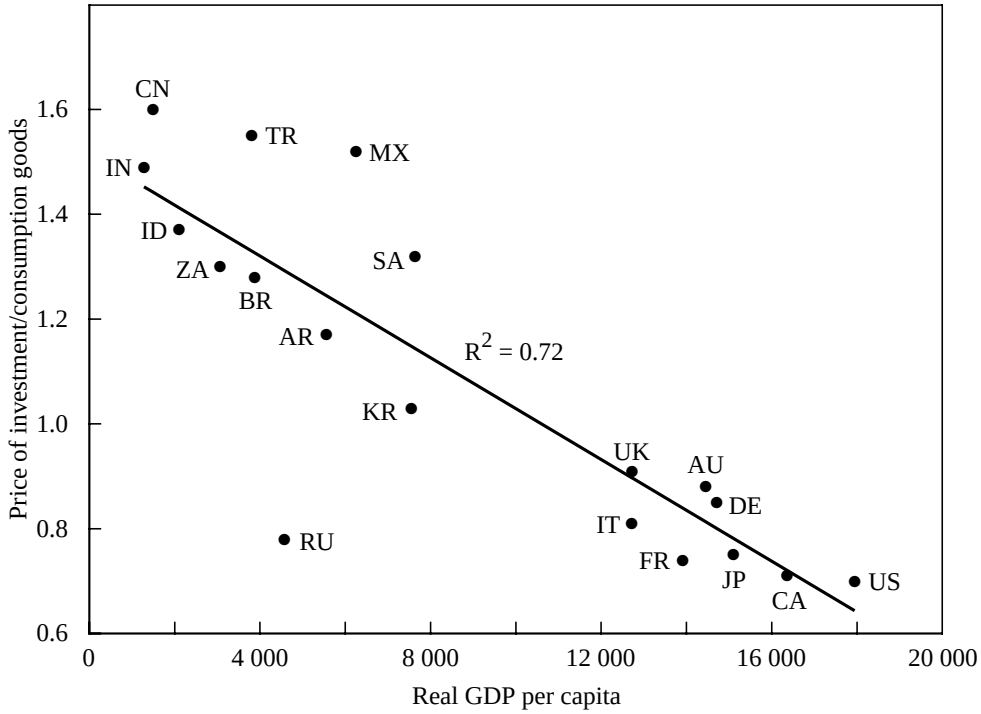
Note: See Glossary for a listing of country codes.

5. Other Uses of the ICP Data: Analysing Investment Rates

Apart from the aggregate measures of GDP, the ICP data have been widely used in their disaggregated form in order to explain trade patterns and sources of economic growth. For example, the price of investment goods, relative to consumption, is expected to be an important factor in determining the rate of economic growth. The higher the opportunity cost of investment in terms of foregone consumption, the less incentive individuals have to save and invest. Furthermore, a higher price for investment goods implies that a given national savings effort translates into less real investment, hence slower growth. A number of econometric studies, using the ICP data, have found that countries where investment goods are relatively cheap do indeed tend to have higher real investment, thus faster growth.[11]

We can use the ICP disaggregated data in the Penn World Tables to calculate the price of investment relative to consumption for most of the G-20 members. The data are mostly for 1992, but the latest available for Saudi Arabia are 1989. Lacking data for Russia and for unified Germany, I have used the latest available figures for the USSR and West Germany. The data are displayed in Figure 5, with the price of

Figure 5: Price of Investment Relative to Consumption by Real GDP per Capita



Notes: See Glossary for a listing of country codes. All data are from the Penn World Tables.

11. See, for instance, DeLong and Summers (1991), who suggest that it is the price of investment equipment, rather than structures, that matters most and also Sala-i-Martin (1997), who reports a very strong relationship between equipment investment and economic growth.

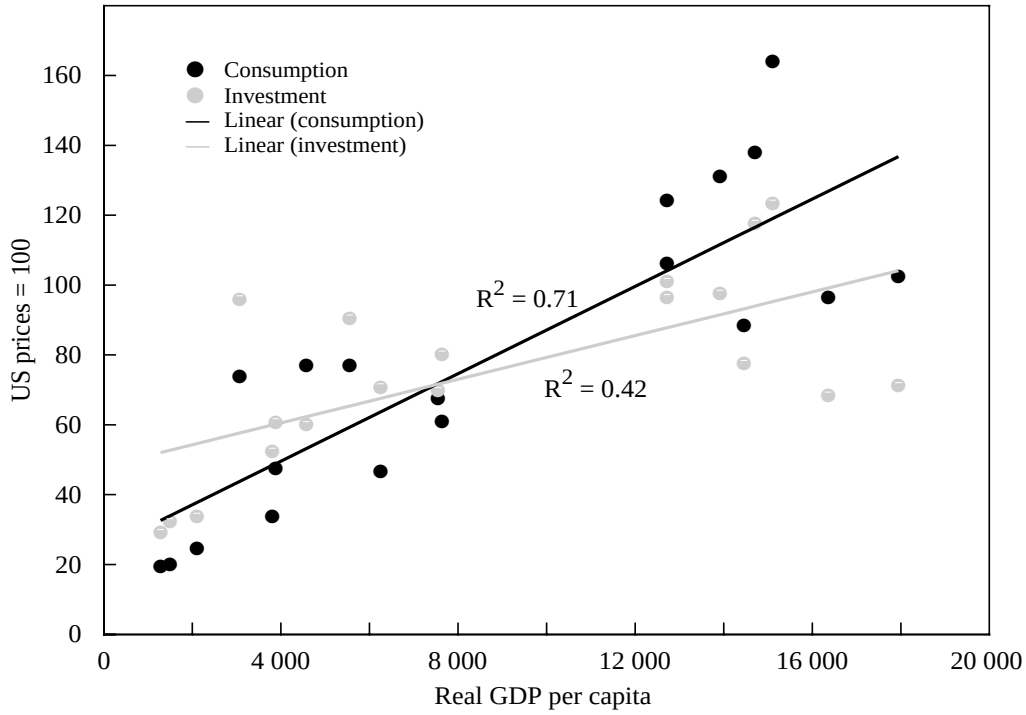
investment/consumption goods on the vertical axis and the level of real GDP per capita on the horizontal axis.

It is apparent that there is a strong negative relationship between the price of investment goods and the level of income – as indicated by the downward-sloping trend line. In the richer OECD countries, many of which are major producers of capital equipment, capital equipment is relatively cheap. On the other hand, in the less-developed economies, the price of capital relative to consumption goods tends to be more than twice as high. In part this reflects the fact that countries without an advanced manufacturing sector have to import much of their capital equipment, incurring transport costs and possibly facing tariff barriers. It also reflects the fact that most consumption goods and services are produced domestically, and that they are relatively cheap in low-wage economies.

These points are illustrated in Figure 6 which again uses PWT data, but this time the price of consumption and the price of investment goods are shown separately. Trend lines for the two series are displayed. It is apparent that although the investment price tends to rise with income, there is a much stronger positive correlation between income and the price of consumption goods. It is this latter relationship which lowers the opportunity cost of investment relative to consumption goods in the richer countries.

The observation that investment goods tend to be relatively expensive in poorer countries highlights one of the handicaps facing the less-developed economies –

Figure 6: Prices of Consumption and Investment Goods by Real GDP per Capita



Note: All data are from the Penn World Tables.

they have to sacrifice more of current consumption to achieve a given amount of real investment. This is partly due to the Balassa-Samuelson effect, whereby domestically produced consumption goods are relatively cheap in low-wage economies. But it is also due to the transport costs and, in some cases, tariffs which raise the price of imported capital equipment. Deviations above the trend line in Figure 5 indicate the magnitude of these transport/tariff effects, suggesting the need for policy intervention. Measures to improve transport and communication infrastructure may be needed to reduce transport costs. Consideration may also need to be given to the reduction of import tariffs on capital equipment.

6. Conclusions

The ICP is of increasing importance as policy-makers need to assess the effects of trade and development policies on the growth of their national economies. Without the detailed and standardised measurement of prices and quantities, the core output of the ICP, it is impossible to accurately identify which types of policies and institutional arrangements are most conducive to rising prosperity.

Much attention is devoted to the aggregate measure of real GDP per capita which can be derived from the disaggregated prices and quantities provided by the ICP. I have spent some time in this paper criticising a commonly used method of aggregation, on the grounds that it exaggerates the relative wealth of the poorer economies, and I have suggested that alternative aggregation procedures, including the OECD-preferred EKS method, are preferable for the purpose of assessing relative living standards. This debate should not, in any way, be interpreted as detracting from the value of the ICP. Without the internationally standardised measurement of prices and quantities at the disaggregated level, it is impossible to construct, by any method, economically meaningful aggregates of real income and output. Moreover, the detailed prices and quantities are themselves valuable in terms of assessing microeconomic policies and the impact of trade and exchange-rate policies.

A major limitation of the ICP has been its limited coverage of countries. Outside the OECD, many countries have never participated in the international surveys, whilst others have participated only occasionally. The non-participants miss out on valuable information concerning the comparative price and quantity structure of their own economy, and the global community misses out on additional observations that would help to analyse the efficacy of varied institutions and policies. Where ICP data have not been collected, the authors of the Penn World Tables and organisations such as the World Bank have had to resort to various methods of estimating real (PPP-adjusted) GDP for the non-participating countries. These estimates for the non-benchmark countries are liable to be inaccurate and misleading.

Many issues facing policy-makers today have an important global dimension. The relationship between global warming and the size and growth of global output is of potentially huge significance. The effects of trade and trade policies on living standards, and the distribution of income, are clearly matters of global as well as national concern. It is particularly worrying for estimates of the growth of global

output, and changes in global inequality, that the world's most populous country has not been included in any of the ICP surveys to date. Until China is included in these surveys, we are reduced to guestimates of the changes in real output and relative living standards of more than one-fifth of the world's population.

Given their geographic size and diversity, and the evidence of rapid but uneven economic development across regions, it would be desirable for any surveys of countries as large as Russia, India and China to be conducted at the regional level. At the same time, expansion of the ICP surveys into some of the relatively small, but extremely poor, nations of sub-Saharan Africa should reveal important information on the extent to which distortions of the price structures of these countries may be inhibiting their economic development. ICP surveys will not of themselves promote successful and equitable development, but they can provide extremely valuable information for the policy-making process.

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Discussion

1. General Discussion

Discussion on improving our knowledge of changes in global poverty and inequality focused on three main questions. First, should international comparisons of living standards across countries use PPP estimates, or market exchange rates to compare the purchasing power of citizens in different countries? Second, if PPP estimates are used, is a single national measure of aggregate PPP adequate to compare poverty across countries? Third, is the (often) high level of income inequality we observe in developed and developing nations bad, in and of itself?

The question of whether to compare living standards across countries using PPP- adjusted, or exchange-rate adjusted data, sparked some disagreement, although the basis for the disagreement appeared to be differences in the *purpose* of the comparison. One participant argued that market exchange-rate comparisons were legitimate for some purposes: for example, to analyse foreign debt repayments, or the purchase of imported investment goods, since these transactions were conducted at market exchange rates. While this point was acknowledged, other participants pointed out that, if the aim was to compare the living standards of people in different countries, then PPP estimates, which were constructed using the prices of representative baskets of goods and services across the whole economy, were the conceptually appropriate estimates to use.

Following this general discussion of the relative merits of PPP and exchange-rate adjusted data, there was a more technical discussion about whether a single measure of prices within an economy was adequate when investigating the incidence of poverty and inequality across countries. One participant argued that in estimating the number of people in poverty in a particular country, it would be preferable to use a cost of living index that included only those goods and services purchased by the poor, rather than an index based on purchases made by everyone in the country. Furthermore, in principle, this index would be different depending on whether the poor lived in rural or urban areas. As an example of the general point, the relative price of a motor vehicle in a developing country should not be included in a PPP index used to determine the incidence of poverty, if the purchase of a motor vehicle is out of reach for the poor in that country. Another participant responded by suggesting that we do indeed know quite a lot about the consumption basket of the poor in developing countries, and that it should therefore be possible to calculate a PPP index for the basket of goods and services relevant to the poor.

Tim Smeeding's paper encouraged further discussion on the nature of income inequality within countries, and in particular, on the difficulty of determining what level of inequality should be looked upon unfavourably. One participant argued that high levels of income inequality might not be a cause for concern if there was a reasonable degree of mobility within the income distribution. Another, however, while agreeing in principle with this point, remarked that mobility had fallen in the

very country (the US) that had experienced one of the largest increases in inequality over the last 20 years. It was also argued that there were circumstances where policies aimed to reduce inequality might be harmful to the poor. For example, raising the wages of the unskilled may narrow the income distribution, but also generate higher levels of unemployment, which is suffered disproportionately by the unskilled.

There was also some discussion about income distribution in Latin America. One participant remarked that Latin America's high level of income inequality was almost entirely the result of extremely high incomes for people in the top decile of the distribution, with the distribution across the other nine deciles much more like those in other countries. It was then argued that such concentrations of income and wealth (particularly in countries with high concentrations of political power) could harm growth by undermining investment in public goods, and generating political conflict over the appropriate extent of income redistribution.

Several participants expressed interest in the programs now underway to improve the quality of PPPs, and the principles for conducting better (and more internationally comparable) household surveys of income or expenditure, which are central to estimating national and international inequality indicators.

Spreading the Benefits of Globalisation: 'Selling' the Compounding Benefits of Reforms

After-dinner address by Ken Henry

Welcome to the official dinner of the G-20 Workshop on Globalisation, Living Standards and Inequality: Recent Progress and Continuing Challenges.

1. Globalisation at Dinner

Some might think that the only appropriate dinner for a globalisation meeting would be a McDonald's with Coke, followed later by a coffee from Starbucks.

Economic globalisation, we are told frequently, means a narrowing of cultural diversity, including culinary diversity. McDonald's, MTV and CNN stand among the pet hates of the anti-globalisation movement.

Illustrative of those worries is the fear that the globalising trends symbolised by McDonald's will enervate or overwhelm local cuisines.

That fear seems to me to underestimate the robust diversity of human tastes, and the potential for rising incomes to enable fuller expression of those tastes. We hope tonight's exposure to an example of 'modern Australian' cuisine provides you with an enjoyable illustration of other possibilities for tomorrow's world.

Contemporary Australian cuisine is often Asian influenced, but usually founded in classical French cuisine. It uses distinctive local produce and is created by chefs who often have either worked abroad and learnt from the world's great cuisines, or are themselves among the almost one in four Australians born overseas, or more than one in ten born in other G-20 countries. In 2000, prominent G-20 sources of emigration to Australia were (in descending order of migrant numbers) the UK, Italy, China, Germany, India, South Africa, Indonesia and the US.

Australians enjoy considerable culinary diversity: we have just over 700 McDonald's outlets, but over 4 000 Chinese restaurants, over 2 000 other Asian restaurants, and over 2 500 Italian restaurants.[1] Surprisingly, only about 600 Australian restaurants identify themselves as French, but I suspect that is simply because so many restaurants with preponderantly French culinary foundations are among the more than 10 600 which today style themselves 'modern Australian'.

Are these culinary examples an economically trivial case of diversity in the face of globalisation? Well, you may be surprised to hear that the accommodation, café

1. These estimates apply a BIS Shrapnel categorisation of restaurants by style of cuisine to an Australian Taxation Office count of the total number of restaurants registered for the purposes of the Goods and Services Tax. See <http://www.restaurantcater.asn.au/facts.asp>. On McDonald's numbers, see <http://www.mcdonalds.com.au>.

and restaurant industries employ more people in Australia than our agriculture, forestry and fishing industries; more than transport and storage; more than finance and insurance; more than government administration and defence; and many, many more than the mining industry (ABS 1999).

Over a broader canvas than just cuisine, I suspect that wealth creation and international integration will support the widening of cultural choices, as Bollywood prospers alongside Hollywood, as Tokyo's fashions turn heads as well as Paris's fashions, as Korean industrial design in whitegoods and electronics begins to rival Japan's and Europe's, and Al-Jazeera is as readily available as CNN.[2] The citizens of all our countries enjoy more options and greater freedom to shape their own cultures as a result.

Dynamic, confident and prosperous people seem more likely to integrate wider choices from all other cultures, than to narrow their choices to a single dominant culture. The contribution good economic policy can make to cultural diversity is to defeat impoverishment, and thereby increase the means, and the self-confidence, by which our peoples can express their diversity of tastes.

2. Welcome to India as G-20 Chair

This workshop is the first G-20 event for 2002, and the first under India's chairmanship of the G-20.

By way of welcoming India to that role, let me say a little about international economic governance, which can be pictured in part as a quest for balance between representativeness, and workable size.

Since the United Nations was founded in 1945, its membership has expanded from 51 to 189 countries. It and all other universal organisations grapple with a total membership far too large for informal discussion or prompt responses to rapid change. But on the other hand, smaller groupings generally lose the representation of the range of global experience as they gain the practicality of smaller size.

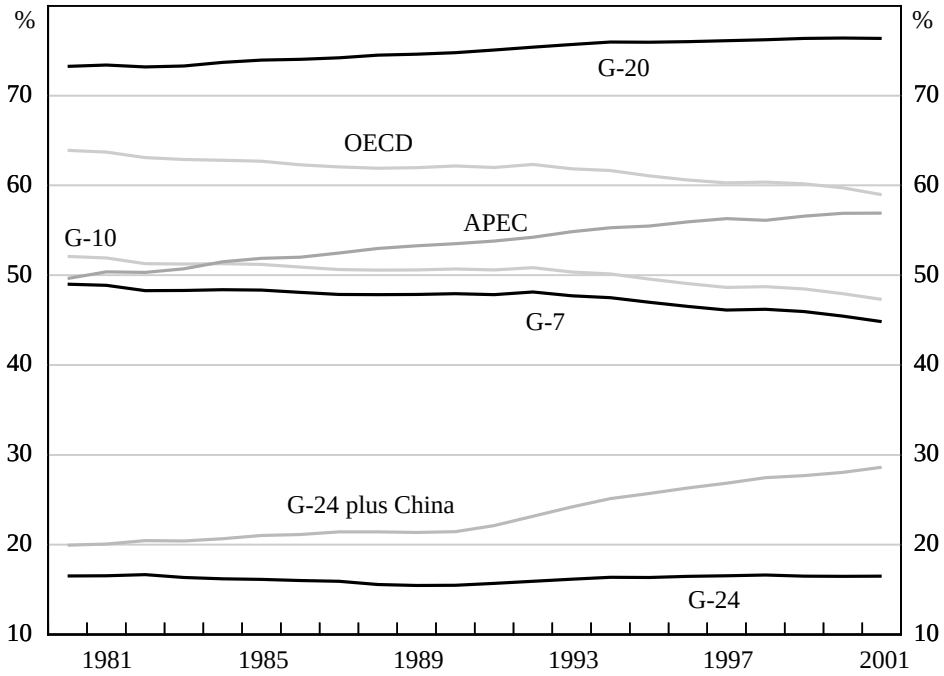
The G-20 arose from a 1999 decision by the G-7 Finance ministers to create a remarkably different and uniquely representative informal economic grouping.

The G-20's members account for almost 65 per cent of the world's population (World Bank 2001), around 70 per cent of the world's poor[3], and over 75 per cent of the world's economy at purchasing power parities (IMF 2002c). But perhaps as interesting as these levels of representativeness are the trends (IMF 2002c):[4]

- From 1980 to 2001, the G-7's share of world GDP fell by about 4 percentage points, to just under 45 per cent (Figure 1).

2. See, for example, Mishra (2002) and McGray (2002). Broadcast details of Al-Jazeera can be found at <http://www.almajaz.com/qatar/aljazeera/>.
3. Poverty headcount of those currently living on less than US$2 per day. See World Bank (2001, 2002b).
4. Data for China do not include Hong Kong SAR.

Figure 1: International Groupings' Shares of World Income
Share of global GDP



Note: Data for China do not include Hong Kong SAR
Source: IMF (2002c)

- In the developing world, the G-24's share of world GDP has been constant over the last 20 years at almost 17 per cent, while adding China's GDP to the G-24's produces a 2001 share of world GDP of around 29 per cent.[5]
- In contrast, the G-20's share of world GDP rose about 3 percentage points from 1980 to over 75 per cent today.

The G-20's close relationships with the IMF and World Bank help inject an influential mix of developed and emerging market experience into the operations of the international financial institutions, and ensure that finance ministers, central bank governors and their senior officials have informal opportunities to reflect on developments between the twice-yearly meetings of the Fund and Bank.

The hand-over from March 2002 of G-20 chairmanship from Canada, the inaugural Chair, to India is a step of great practical and symbolic importance for the G-20, and for the evolution of global economic governance.

5. The Intergovernmental Group of Twenty-Four on International Monetary Affairs is a twice-yearly meeting of finance ministers and central bank governors on the eve of the annual and spring meetings of the IMF and the World Bank. Its members are Algeria, Côte d'Ivoire, Egypt, Ethiopia, Gabon, Ghana, Nigeria, South Africa, Democratic Republic of Congo, Argentina, Brazil, Colombia, Guatemala, Mexico, Peru, Trinidad and Tobago, Venezuela, India, Iran, Lebanon, Pakistan, Philippines, Sri Lanka, and Syrian Arab Republic. China is a special invitee that can address plenary sessions.

For the first time, one of the world's great emerging economies is leading a globally representative grouping of significant economies, transcending traditional 'North-South' boundaries of the developed and developing world, and linking eastern and western hemispheres, and all the continents bar Antarctica.

The Australian Government welcomes India's chairmanship and I am sure I speak for us all tonight when I say that as officials, we look forward to working with India to develop further the role of the G-20.

3. 'Selling' the Poverty-reducing Benefits of Apparently Small Reforms

In the remainder of my time tonight, I would like to examine the changing economic outlines of the world we might be able to achieve with continued policy reforms and closer international economic integration, and explore some of the challenges that we, as policy advisers and researchers, confront in explaining the case for those changes.

Our fundamental challenge is a very simple one, at least in concept – little more than a bit of basic arithmetic. It is to show that economic and policy reforms which lift productivity and income growth by apparently rather small amounts quickly compound to produce significant change in real income levels, and much wider human opportunities.

As the evidence mounts of the last few decades' remarkable progress against poverty, and the associated narrowing of the inter-country and global income distributions, it is interesting to note two qualifying or dissenting observations that I suspect we will hear more of in years to come.

- First, many observe that the progress against poverty has not been uniform. While some formerly poor countries have made great strides, others have not, or have even suffered absolute declines in per capita GDP. In an extreme form, this observation is sometimes expressed as if progress has been essentially confined to China and, more recently, India.
- Second, it is often claimed that inequality is really still widening, because the absolute (dollar) income increases in rich countries (or at the top of a national income distribution, for that matter) are still larger than the increases accruing to the poor. Related to this claim, it is sometimes argued that progress is too slow, even if relative income convergence across many countries is now under way. (By relative income convergence, I mean a situation in which poorer countries have faster GDP per capita growth rates than richer countries.) Incomes in successful developing countries would not converge to rich country levels for over a century (Commonwealth Treasury of Australia 2001, pp 42–44). On this view, growth alone cannot be the answer to poverty, and significant redistribution is required.[6]

6. For one example of this view, see Haynes and Husan (2000).

3.1 Progress against poverty is patchy: the Africanisation of poverty

Clearly, progress has been patchy.

We are witnessing, in effect, the 'Africanisation' of extreme poverty. Xavier Sala-i-Martin (2002b), in some recent work, estimates that while the global numbers living below a US$1-a-day poverty line have fallen by over 200 million between 1970 and 1998, the numbers in Africa have risen by over 175 million. Africa was home to only about one in ten of the world's extremely poor in 1960, but two in three of them in 1998, such has been the progress against poverty outside of Africa, and such the lack of progress in Africa.

Since China is home to about 20 per cent of the world's population, and India another 16 per cent, it is inescapable that the poverty-busting successes of those two countries will statistically dominate the world's progress.[7]

But progress against poverty has been much broader than just China and India. The World Bank has identified 22 other success stories (subsequent to the original globalisation successes of Korea, Taiwan, Hong Kong SAR and the like) that have enjoyed strong real income gains in the post-1980 wave of globalisation, mainly through successfully entering the booming global trade in manufactures.

Unlike China and India, many of them are not sufficiently populous for their success to make a notable statistical impact on the global measures.

Sala-i-Martin (2002b) singles out Indonesia's performance for special mention, noting that in 1970 almost half the population fell below the US$1-a-day poverty line. But by 1998, less than 1 per cent fell below that line, while the income distribution had narrowed as well.

Sala-i-Martin (2002b) also stresses an interesting characteristic of recent and prospective changes in the global income distribution. The narrowing of the inter-country and world income distributions over the last 20 to 30 years is essentially because of 'convergence to the rich' by formerly poor but now rapidly globalising economies – most notably (because of their population size) China and India.

But if those formerly poor countries continue to grow over the next 50 years at recent rates, while African economic growth remains weak, recent 'convergence to the rich' will be followed by future 'divergence from the poor'. Rather than the middle catching up with the top of the income distribution, both middle and top would leave the poor behind, and global income inequality measures would, under these assumptions, start to rise again from about 2010 or 2020 (Sala-i-Martin 2002a).

7. This is especially true for statistical measures such as global Lorenz curves or Gini coefficients, which are moved most by countries with large populations, or initially at the low or high extremes of the distribution. These statistical issues are well treated in Melchior, Telle and Wiig (2000).

3.2 Relative and absolute convergence

Turning now to the second claim, I think we ought to dispute the argument that whatever the statistics say, real inequality is still widening because absolute income increases for the poor remain smaller than the absolute increases for the rich. That claim fails to understand the feasible economic growth paths that link initial relative catch-up to ultimate absolute catch-up from widely diverse starting points.

Since the early 20th century, economists who have studied inequality and devised the analytical tools we now use to measure it, have argued that any desirable measure of inequality should be independent of the scale with which income is measured. For example, if all incomes in a distribution double, the measure of inequality should stay the same, even though the absolute income increase of the rich will have been larger than that of the poor.[8]

In accord with this principle, if poorer people in an income distribution enjoy faster income growth than richer people, standard measures of inequality such as the Gini coefficient, the Atkinson index and the Theil index would all diminish. The income distribution would correctly be shown to be narrowing, even though it is quite conceivable that poorer people enjoying faster (percentage) rates of income growth might initially receive smaller absolute income increases than the rich.

The claim that relative catch-up can only be counted a success if, from the outset, there is also absolute catch-up, implicitly sets a test for narrowing inequality that is practically impossible to meet. Given that the inter-country income distribution has grown so wide over the last 200 years, there is no feasible rate of growth in poor countries that would give them annual absolute (dollar) per capita income increases that were larger from the outset than annual increases in those countries that are already rich.

Consider, for example, the US, with per capita GDP in 1998 of about US$ 27 300 in purchasing power parity (PPP) terms, growing (on average in the decade to 1998) at 2.0 per cent per annum; and China, with per capita GDP in 1998 of US$ 3 117 at PPP, growing (on average in the decade to 1998) at 5.6 per cent per annum.

Chinese growth performance since the late 1970s is unprecedented in history. Never before have so many people been lifted out of poverty so quickly by such sustained high growth.[9]

But using these average numbers for illustration, the increase in Chinese per capita GDP in 1998 would have been only about US$174, while the increase in US per capita GDP in 1998 was US$546. For the Chinese growth rate to generate a

8. That is why researchers do not use the variance of income as a summary indicator of inequality. If all incomes double, the variance of the distribution quadruples.

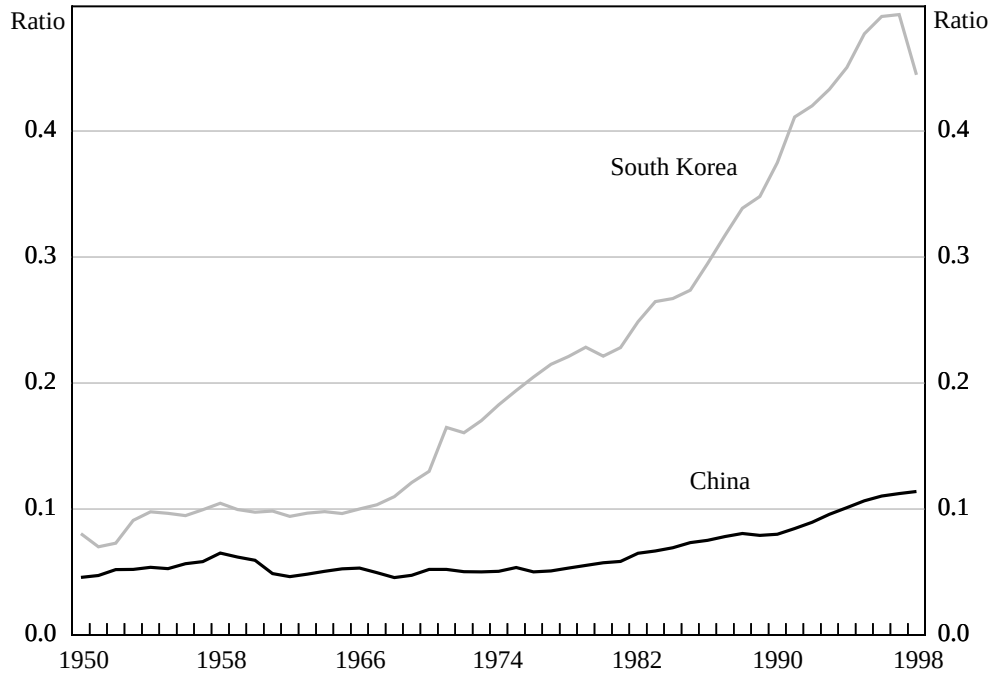
9. These comparisons use real per capita GDP levels at PPP estimated by Maddison (2001). In order to gain the advantage of longer periods of PPP comparisons (back to the dawn of the 20th century and indeed earlier), Maddison uses an approach which produces slightly different PPP estimates over the last 30 years than those compiled by the IMF (2002c), cited earlier in Figure 1.

larger per capita increment than in America, would require an annual growth rate in Chinese per capita GDP of over 17 per cent – eight and a half times the US growth rate!

The practical conclusion is simply that relative catch-up – that is, faster per capita income growth in poor countries than in rich – is the most that will be observed for many years to come. Yet even relative catch-up means striking real improvements in living standards along the way, which quickly compound to phenomenal progress.

For example, South Korea has converged over 50 years from under 10 per cent of US per capita GDP levels at PPP to about 45 per cent, and China has converged from about one-twentieth to about one-tenth US levels (Figure 2).

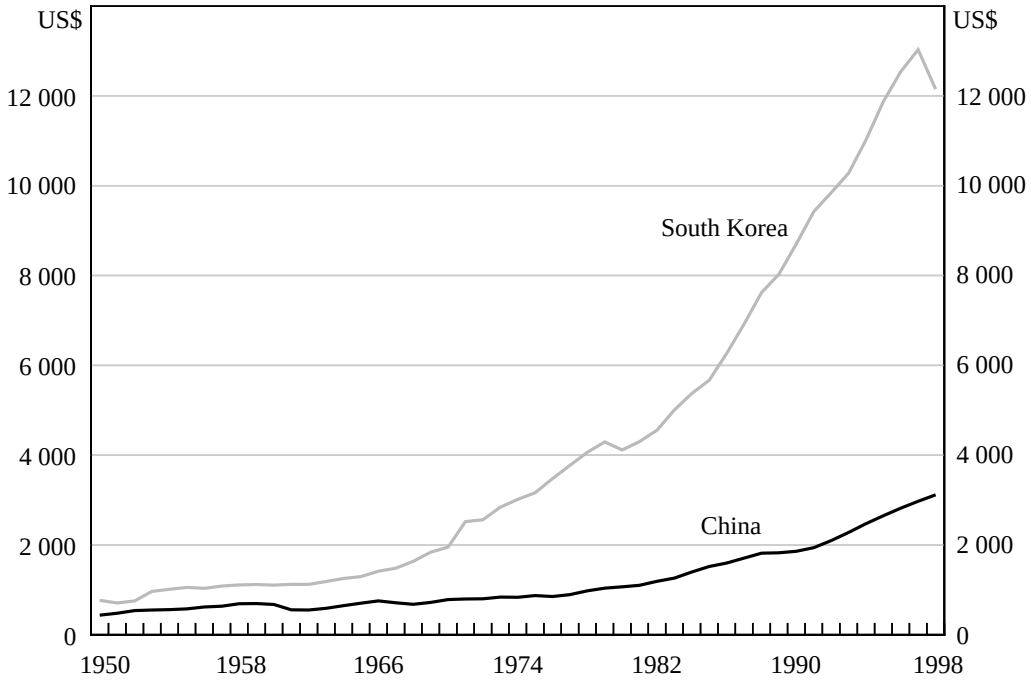
Figure 2: GDP per Capita Relative to the United States
1950–1998, 1990 US$ PPP



Source: Estimates published by Maddison (2001)

But over those 50 years, South Koreans have become over fifteen times richer, and over six times richer than they were in 1970. Chinese are over seven times richer than 50 years ago, and over four times richer than in 1970 (Figure 3).

Figure 3: GDP per Capita
1950–1998, 1990 US$ PPP



Source: Estimates published by Maddison (2001)

4. The Indian Example

The experience of the current chair of the G-20 teaches how powerfully policy reforms can compound to huge advances in living standards from apparently small starting point productivity increases, while along the way making some illustrious critics look very silly.

Just 35 years ago, in an article in *New Scientist*, Stanford University biologist Paul Ehrlich (1967) argued that the United States should '…announce that it will no longer ship food to countries such as India where dispassionate analysis indicates that the unbalance between food and population is hopeless…our insufficient aid should be reserved for those whom it may save.' Ehrlich argued that it was a 'fantasy' to believe India would be able to feed the additional 120 million people that it was then estimated would be born by 1975.

In fact, India's actual population growth over that period turned out to be 104 million rather than 120 million, and India had produced enough additional food for 144 million, so nutrition improved.[10]

10. FAOSTAT database numbers (available at <http://apps.fao.org/>) cited in Lomborg (2001, p 60).

India's formerly highly controlled and closed economy has been progressively opened to the world, in fits and starts, since 1985. Notwithstanding severe fiscal and balance of payments problems in the early 1990s, reforms have broadened and accelerated in the last decade. Trade as a percentage of GDP has risen from under 10 per cent in the 1960s to almost 20 per cent in the 1990s, which I note is still less than half China's exploitation of trade as an engine of specialisation, productivity enhancement and growth.

From 1950 to 1979, India's GDP per capita was growing at about 1.3 per cent. By the 1990s, per capita income growth had risen to about 3.7 per cent – not such a big difference, one might think (Maddison 2001). But that growth has cut the Indian poverty rate from 55 per cent in 1974 to 26 per cent in 2000 (Fischer 2002).

Bradford DeLong (2001) has pointed out that at India's per capita GDP growth rates before the 1980s, today's per capita income would double every 50 years and India would reach current US per capita income levels around 2250. But the increased growth rate achieved in the 1990s through accelerated reforms means per capita income is now doubling every 16 years. If that growth can be sustained, India would reach current US income levels by 2066.[11]

5. Spreading Progress to Africa

Regardless of how we read the evidence of recent progress against poverty, there can be no doubt that governments have much further to go, both in broadening progress to those countries that have not yet benefited from globalisation's opportunities for raising productivity, and deepening progress in countries that are already making headway.

Spreading progress to the 2 billion residents of countries not yet benefiting from closer international economic integration will require sustained peace, the enforcement of property rights, the rule of law, better national economic institutions, and better economic policies. And as the third wave of globalisation has shown, access to global markets in trade and investment is vital to rapid progress in raising productivity. When we better understand the successes of the last 20 years by China, India, Indonesia, Mexico and others, we will be better placed to spread those successes. But I think we can say already that the role of greater economic openness in driving productivity-enhancing structural change is a powerful beneficial force, though of course it also requires other necessary conditions for growth to be put in place.

Initiating progress in Africa will be a particular challenge, but it is clearly feasible with the right institutions and policies, such as articulated in the New Partnership for African Development.

11. Using the 1990s growth rate calculated from the Maddison (2001) data, we calculate that GDP per capita would double in 21 years, with India reaching current US income levels by 2080. These conclusions are sufficiently consistent with DeLong's (2001) statement to further illustrate the point.

Let me offer Burkina Faso as an example, which I choose simply because its circumstances have been so difficult. It is one of the poorest countries on earth, and one of only nine to have been continuously in the ranks of the poorest twenty countries for all the last quarter-century (Commonwealth Treasury of Australia 2001, p 36).

It embodies all the difficulties that are likely to make strong future growth in sub-Saharan Africa more difficult than it has been for the earlier globalisers of the last 50 years.

Burkina Faso is tropical and landlocked;[12] it has a high population density and a 2.7 per cent population growth rate (notwithstanding the recent scourge of AIDS, enumerated below); it is mostly dependent on agriculture, but has fragile soils and has suffered desertification; it endured over 20 years of civil unrest from the late 1960s to the early 1990s, with repeated coups; its neighbours are all similarly poor, and some have also been racked by unrest, further complicating effective transport links to local and world markets; adult male literacy is 28 per cent; adult female literacy only 9 per cent.

From a population of just under 11 million, about 1/4 million had died of HIV/AIDS by mid 2001, and some 1/2 million live with the disease; life expectancy is only 44 years, having fallen by about 10 years because of AIDS. And finally, it is heavily indebted, with a peak net present value of debt-to-exports of over 300 per cent before recent decisions for relief through the Heavily Indebted Poor Countries initiative.

Yet in the face of all these disadvantages, Burkina Faso has enjoyed stable government for over a decade, and macroeconomic policy has been steadily improved over recent years. The Burkinabe Government has defined and implemented a Poverty Reduction Strategy with the World Bank and IMF, and has adhered to the terms of funding under the IMF Poverty Reduction and Growth Facility. It has initiated an anti-corruption strategy, and begun to reform the inefficient state enterprises that dominate much of the economy, including the marketing of cotton which constitutes almost 60 per cent of export receipts and provides income to more than 2 million people. Aided by these reforms and several good seasons, GDP growth has been over 5 per cent in each of the last two years.[13]

But recent international developments have not been helpful. The recent US Farm Bill votes US farmers subsidies of US $180 billion over 10 years. Such subsidies provide about one-third of the annual income of US cotton farmers. The IMF and World Bank estimate that without the depression of world cotton prices from this and similar production-distorting subsides, the numbers of Burkinabe in extreme poverty could be halved in six years.[14]

12. Economic analysis suggests that tropical location carries particular development difficulties because of health and agricultural problems that are more severe than in temperate zones, and less well addressed by the stock of temperate zone technologies (see Sachs (2001)). Moreover, being landlocked raises transport costs of trade, especially if neighbours are poor and politically unstable. Burkina Faso's neighbours are Mali, Niger, Togo, Côte d'Ivoire, Ghana and Benin.

13. Information is from Government of Burkina Faso (2002), IMF (2002a) and IMF & IDA (2002).

14. See IMF (2002b) and reference to a forthcoming World Bank & IMF report, cited in World Bank (2002a).

Unfortunately, the problem is more general than the US Farm Bill. The need to negotiate limits to domestic agricultural support in rich countries was recognised as long ago as the conclusion in 1967 of the Kennedy Round of GATT negotiations, but the Tokyo and Uruguay Rounds made little substantive progress.[15]

Limiting agricultural subsidies remains a central priority for the Doha Round. For Burkina Faso and other small, poor countries, the only international instrument they have for limiting market-corrupting subsidies and lowering other barriers to their exports is the WTO and the Doha Round. The enemies of the WTO are no friends of Burkina Faso.

Developing countries will not enjoy higher productivity, a prerequisite to achieving catch-up, without structural change. That is the point of trade and investment liberalisation – it drives structural change. It is ironic, then, to observe rich countries being so resistant to structural adjustment in their own economies. But it is far more serious than irony: the very policy interventions that are preventing structural adjustment in the rich countries are simultaneously undermining the prospects of much needed structural change in the poor.

If the world's governments were prepared to lower trade barriers and production-distorting subsidies in agriculture, and broaden the application of the economic institutions and policies that have been shown to produce wealth, there is no doubt that we could complete the conquest of food scarcity for the first time in human history, and leave our children a much fairer world than we inherited.

15. See Corbett (2002).

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Discussion[1]

1. Maria Ramos

In my brief comments on how the benefits of globalisation can be spread to non-globalisers, I will touch on three areas which I believe are worth highlighting. First, the challenges for non-globalisers – what needs to be done, and what are some of the difficulties facing these countries. Second, the New Partnership for Africa's Development (NEPAD) as a home-grown model to try and deal with some of these challenges. Third, what is required from developed countries? We had very good discussions in earlier sessions about what needs to be done by developing countries, but to my mind, there is a set of structural reforms that need to take place in developed countries that we should not lose sight of.

Challenges for non-globalisers

Let me begin by highlighting some of the issues and challenges that face the non-globalisers or countries that have been slow to globalise.

The first problem is essentially that of weak states. Sometimes they are not just weak politically but they are weak in their ability to deliver key services to their citizens. If you look at a lot of the budgets for countries that are in programs, for example, if you just look at the absolute numbers, they are spending a large portion of their budgets already on health or education. When you try to understand the efficiency of those delivery mechanisms, they are just not there. That speaks to a weak state and a weak public service and so that's an important constraint. The second relates to the ability to implement and deepen the reform process. One of the things that worries me about a very good instrument like the Poverty Reduction Strategy Papers (PRSPs) is how you translate that from just an exercise of completing a document for the purpose of a World Bank program, to an exercise of deepening the reform process in building up the institutional capacity within these countries.

Third are issues of capacity. These relate to both institutional capacity such as in the areas of the legal framework and the functioning of parliament. But there are also issues around governance, accountability and transparency in reporting. Fourth, and very importantly, is an issue that I think needs a lot more emphasis in discussions on globalisation and development and that is the issue of human capital. Fifth, there is something that we didn't mention yesterday and I thought it would be important to mention, because it consumes so much of the resources in developing countries – particularly in the non-globalising countries and particularly in my own continent – and that is the issue of health. The impact of HIV/AIDS and other communicable diseases, such as malaria and tuberculosis, is enormous, particularly when we

1. This discussion, opened by Maria Ramos and Melih Nemli, summarises the conference session 'Spreading the Benefits of Globalisation to Non-globalisers', rather than focusing specifically on the paper by Ken Henry.

consider the effects on the economically active part of the population. It also raises many questions regarding resource allocation to health and education for example. You cannot consider issues of development and globalisation without dealing with these questions of health. Sixth, it is important to recognise that initial conditions are important. One thing that struck me about the presentations on China and India yesterday was just the fact that there were such big divergences within those economies, and some of those divergences, and performance, can be accounted for by what was happening at the beginning of these processes:

- Was there infrastructure?
- How close are these provinces to transport links?
- How efficient are those links?
- Are the mechanisms there?

So initial conditions are important. Indeed, for a lot of the non-globalisers they are vital. There isn't the infrastructure. A lot of the countries in our continent cannot ignore the significant legacies of colonialisation and exploitation. Lastly on this front I want to make two points about market access. Not just market access for the non-globalisers – of course we need improved market access – but for that market access to be meaningful it needs to be supported by the other reforms that I have been speaking about. In addition, I think that aid is important.

NEPAD

Let me talk very briefly about NEPAD, just for a minute. NEPAD is a home-grown response to many of these challenges. For the first time, African countries and African leaders recognise that the future is in their own hands and that what we need to do for the African continent and all its many countries is to recognise that there are challenges, there are things we need to do as Africans. NEPAD recognises this and its responses range from the very fundamental need for peace and stability, to issues of economic governance, of access and what Africa needs to do in order to get market access, to the strengthening of parliamentary processes and the development of regional bodies.

Changes in developed countries

I want to conclude on the issue of what developed countries ought to do. What NEPAD seeks, for example, is a partnership. A partnership is quite a different mechanism from what has been the case until quite recently. Much of the responses to date start from the premise that developed countries know what developing countries need – i.e., a supply-driven approach rather than a demand-driven approach. Partnership is about building a two-way relationship based on mutual respect and credibility. We, as Africans, recognise that we need to do a lot more work in this area. It also requires reciprocity in a number of key areas, and here issues such as market access become important. I am not sure for how much longer developed countries, and in particular the European Union and the US, are going to be able to defend policies such as farm subsidies and the Common Agricultural Policy (CAP).

These issues are relevant to developing countries generally, not just to the non-globalisers. If these reforms do not take place at the global level, it is going to become more and more difficult for us to pursue programs of economic reform that make sense. In my own country our citizens ask why we are not subsidising agriculture, when there are such significant subsidies in the US and Europe and there is no visible move to open up these sectors to significant competition. The need for a fair and well-targeted reform program by the developed economies has never been more urgent.

The very last point I want to make is about the reform of the multi-laterals. I know no-one likes to talk about this but it's an issue we need to keep on the agenda. The borrowers need to have a voice which is quite different from the voice that they have at the moment. The reform is not just about voice and representation, it's also about reducing the costs of compliance. Luckily South Africa has no program with the World Bank or the IMF, but I have often wondered what would happen in a country like Australia or Canada or another developed European Union country if they had to meet as many of the compliance requirements as very poor developing countries have to meet in order to qualify for resources.

Chair, I wanted to focus the discussion on some challenges on the reform agenda. In doing this it is also important to recognise that reform is hard and its pay-offs often take five to ten years before they have positive or measurable impacts on the quality of life of the poor. It is for this reason that reform requires a large measure of political commitment and political leadership. It is also important to recognise that globalisation, and reform as part of that globalisation process, is an ongoing multi-faceted complex story. It is not about picking one or two things to focus on.

Thank you very much.

2. Melih Nemli

I will take this opportunity first to express our views on some general issues and then to share with you some aspects of the Turkish experience with globalisation that might have direct implications for low-income countries.

We agree with the view that globalisation has contributed to the increase in global prosperity and the reduction in global inequality. It is no secret that the data on which we base our arguments are far from being perfect and should be interpreted with caution. It is also true that one's reply to the question 'What is happening to world poverty and income inequality?' depends on choices among competing methodologies. The most important choices are those between using market exchange rates or purchasing power parity, and treating countries equally or weighting by population. However, we do not believe that all choices are equally reasonable and that we can choose whichever methodology we wish. There are compelling reasons why we should use purchasing power parity and we should give 'each citizen one data point', not 'each country one data point'. Moreover, we cannot regard China and

India as two outlying data points that distort the picture and should therefore be eliminated from the database, because a very large share of the poor people are living in these two countries.

As long as we agree that we should use purchasing power parity, weight countries by population and that it is legitimate to include China and India in the analysis, the empirical evidence, despite all data problems, is overwhelming that poverty rates and the poverty headcount have declined, despite the world population increase, and that world inequality has fallen over the last two decades. Xavier Sala-i-Martin[2] convincingly shows that the seven most popular measures of income inequality support this conclusion.

Professor Wade's concerns about data quality, and his calls to improve the data are legitimate. However, his approach to data and methodological issues are simply paralysing, preventing us from engaging in any sort of meaningful discussion of the issues relevant to globalisation. It is interesting to note that Professor Wade seems less paralysed and less disturbed by the data problems when he refers to the studies that find an increase in world inequality.

Despite these improvements, it is clear that the picture of global poverty and inequality is not free of some serious and disturbing problems. Many poor countries, with a combined population of about 2 billion people, have been left out of the process of globalisation. They often have declining incomes and rising poverty, and are in danger of becoming marginal to the world economy. A particularly disturbing fact is that more than 95 per cent of the people with an income less than US$1 dollar per day live in Africa.

A crucial question then is whether this disturbing picture is a product of too much, or too little globalisation. We are convinced that it is caused by too little globalisation. We believe that, with the exception of a few countries who deliberately refused to integrate into the world economy on ideological grounds, the lack of integration of most low-income countries is not the result of a deliberate policy choice.

Some of these countries were prevented from participating in the process of globalisation by their unfavourable geographic location, some others by poor governance, corruption, weak institutions or civil war.

Most income inequalities in the world are explained by differences across countries, rather than differences within countries. We found it particularly interesting that Dr Wei's very interesting study on China showed that most of the income inequalities in China, similarly, are explained by differences across urban and rural areas, rather than differences within regions.

A direct implication of these facts is that the best strategy to reduce world income inequalities is to induce aggregate economic growth in poor countries and poor regions.

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2. Sala-i-Martin (2002), 'The Disturbing "Rise" of Global Income Inequality', NBER Working Paper No 8904.

I do not want to bore you with a detailed discussion of what is needed to induce economic growth in the poor countries, as the issue was discussed extensively yesterday. We broadly share the views expressed in the *Globalization, Growth, and Poverty* report by Dr Dollar[3] and the speech by Dr Henry during yesterday's dinner. The industrialised countries should reduce trade barriers, provide more aid and debt relief, adopt more neutral migration policies and provide more financing to prevent environmental degradation. The low-income countries should adopt prudent macroeconomic policies, address governance issues, ensure that due importance is attached to education, health and social protection, and develop institutional capacity and human capacity. International organisations should coordinate the aid and debt relief, provide more financing and help in designing and implementing prudent policies, and developing institutional capacity and human capital.

Finally, I would like to share with you some aspects of the Turkish experience with globalisation.

Absolute poverty in Turkey is low by international standards. When we use the internationally comparable 'one-dollar-a-day' line, we find an extremely low incidence of poverty. Only 2.5 per cent of the population have consumption below this level.

Yet, this picture is marred by large income inequalities. Income differentials across regions and social groups are wide and persistent.

The main factor driving the worsening of the distribution of incomes appears to be the labour market, and specifically the emergence of growing wage differentials by educational attainment.

One of the most striking facts of the 1980s and 1990s in high and middle-income countries alike is the rise in the wage premium for education, usually interpreted as evidence of rising demand for skilled labour, and linked in different degrees to trade, organisational change and technology.

Much of the inequality in Turkey is linked to differences between education groups. The average income for a person with higher education is almost 6 times that of an illiterate adult. These differences alone explain as much as 22 per cent of total income inequality between households, and reveal the existence of entrenched inequalities in access to education in Turkey. In this sense, education is the great equaliser in market economies. And in this regard, Turkey can reflect positively on the experiences of its southern Mediterranean neighbours, Spain and Portugal, where increases in education were clearly associated with a sharp decline in income and wage differentials during the 1960s and 1970s. Turkey and other middle-income countries face a worldwide shift in demand toward skilled labour. Failure to increase the educational attainment of its population will obviously reduce Turkey's competitive advantage.

3. World Bank (2002), *Globalization, Growth, and Poverty: Building an Inclusive World Economy*, The World Bank Group and Oxford University Press, New York.

3. General Discussion

The session on how the benefits of globalisation could be spread to those countries not currently participating actively in the global economy encouraged a wide-ranging discussion. Most comments and questions centred on the steps developed countries could take to facilitate the sort of policy reforms in developing countries that would increase their integration into the global economy. Other issues discussed included the extent to which commodity dependence was a constraint on developing countries' growth, and whether conditions should be attached to developing countries' receipt of aid and loans.

Several participants agreed that it was crucial for developing countries to build solid educational, health, and legal institutions if they wanted to set a platform for strong growth. For example, FDI often required complementary investment in domestic public goods. However, the cost of providing such goods was viewed by many participants as difficult for many developing countries to finance domestically, and consequently their provision had the potential to generate destabilising budget deficits that would themselves act as a disincentive to FDI. In response to this dilemma, some participants suggested that developed countries could play a role assisting developing countries to meet the costs of public investment, and ensuring that the investment occurred in an economical way.

Participants also raised a number of other ways in which developed countries could assist developing countries to share the benefits of globalisation. Some returned to the point, stressed several times during the conference, that increasing developing countries' access to agricultural markets in the developed countries would have large benefits. Others thought that it would be easier for developing countries to become more integrated with the global economy if they had more of a say within multilateral organisations such as the IMF, World Bank, and WTO.

There was also further discussion on the extent to which commodity dependence constrained growth in developing countries. One participant reinforced the view that commodity dependence was less likely to constrain growth if a country had a diversified commodity base. Furthermore, and contrary to the view taken by other participants, commodity dependence might be expected to *increase* the importance of financial liberalisation for developing countries, on the grounds that liberalised access to international capital markets could enable international sharing of some of the risk faced by countries exposed to volatile commodity markets.

Finally, the issue of whether the receipt of loans from the IMF and the World Bank should be conditional on developing countries initiating policy reforms was discussed. One participant thought that conditionality was important because loans would be ineffective in the presence of poor policy settings and inadequate governance. Another agreed that conditionality was important, but also stressed that developed countries also have a responsibility in ensuring that aid and loans are used effectively. Yet another participant remarked that conditionality was appropriate, but it should be offered as a stake in the development process for developing countries, rather than a stick.

Biographies of Contributors

Nancy Birdsall

Nancy Birdsall is President of the Center for Global Development, a policy-oriented research institution that opened its doors in Washington, DC in October 2001.

Prior to launching the Center, Ms Birdsall served for three years as Senior Associate and Director of the Economic Reform Project at the Carnegie Endowment for International Peace. Her work at Carnegie focused on issues of globalisation and inequality, as well as on the reform of the international financial institutions.

From 1993 to 1998, Ms Birdsall was Executive Vice-President of the Inter-American Development Bank, the largest of the regional development banks, where she oversaw a $30 billion public and private loan portfolio. Before joining the Inter-American Development Bank, she spent 14 years in research, policy, and management positions at the World Bank, most recently as Director of the Policy Research Department.

Ms Birdsall is the author, co-author, or editor of more than a dozen books and monographs, including, most recently, *Population Matters: Demographic Change, Economic Growth, and Poverty in the Developing World*; *Washington Contentious: Economic Policies for Social Equity in Latin America*; and *New Markets, New Opportunities? Economic and Social Mobility in a Changing World.* She has also written more than 75 articles for books and scholarly journals published in English and Spanish. Shorter pieces of her writing have appeared in dozens of US and Latin American newspapers and periodicals.

Ms Birdsall has been researching and writing on economic development issues for more than 25 years. Her most recent work focuses on the relationship between income distribution and economic growth.

Ms Birdsall is a member of the Board of Directors of the Population Council. She has chaired the board of the International Center for Research on Women and has also served on the boards of the Social Science Research Council and the Overseas Development Council. She has served on a number of committees and working groups of the National Academy of Sciences.

Ms Birdsall holds a PhD in economics from Yale University and an MA in international relations from the Johns Hopkins School of Advanced International Studies.

Benoît Cœuré

Between September 1997 and June 2002, Benoît Cœuré was chief economic adviser to the director of France's Treasury. Previously, he had served as an economist at INSEE and at the French Treasury. Between 1999 and 2001, he was also head of foreign exchange and economic policy, in charge of European policy

coordination (the stability and growth pact, broad economic policy guidelines and the Eurogroup), foreign exchange markets, and the control of foreign investments and foreign assets.

Benoît Cœuré is a graduate of Ecole Polytechnique and of Ecole Nationale de la Statistique et de l'Administration Economique (ENSAE). He holds a diplôme d'études approfondies in economic policy and a BA in Japanese. He has contributed to various French and international economic journals and books and he is a part-time professor of economic science at Ecole Polytechnique.

Benoît Cœuré was appointed deputy chief executive of the French debt management agency, Agence France Trésor, on 3 June 2002.

David Dollar

David Dollar is head of the macroeconomics and growth group in the Research Department of the World Bank. He co-authored, with Paul Collier, the Bank's report *Globalization, Growth, and Poverty*. He heads up the Bank's effort to more systematically collect data from firms in developing countries in order to examine the effect of the investment climate on market structure, competition, and productivity. He co-authored, with Lant Pritchett, the World Bank study, *Assessing Aid*. Before joining the Research Department, Dr Dollar was the World Bank's policy advisor to Vietnam from 1989 until 1995, a period of intense reform, adjustment, and opening to the international economy. Prior to working at the World Bank, Dr Dollar was an assistant professor of Economics at UCLA and a visiting professor at the Chinese Academy of Social Sciences in Beijing. He has a PhD in economics from New York University and a BA in Chinese history and language from Dartmouth College.

Steve Dowrick

Steve Dowrick was appointed Professor of Economics in the Faculty of Economics and Commerce at the Australian National University in 1996. He currently holds an Australian Research Council Senior Fellowship and is a Fellow of the Australian Academy of Social Sciences. He has published extensively in leading international journals such as *The American Economic Review* and the *Economic Journal.*

Following his PhD from the University of Warwick in the UK, he published a number of papers on the economics of union-employer bargaining, exploring the interaction between product and labour markets. More recently his research has focused on economic growth, examining the factors that promote convergence as well as the factors that explain the failure of global convergence. An offshoot of this research on growth has led to the development, with John Quiggin, of a new multilateral welfare index (the true Afriat index) which avoids the twin problems of exchange rate bias and substitution bias in international comparisons of income and broader social indicators.

Edward M Gramlich

Mr Gramlich took office in November 1997 as a member of the Board of Governors of the Federal Reserve System to fill an unexpired term ending in January 2008.

Mr Gramlich received a BA from Williams College in 1961, an MA in economics (1962) and a PhD in economics in 1965, both from Yale University.

Before becoming a member of the Board, Mr Gramlich served as Dean of the School of Public Policy at the University of Michigan from 1995 to 1997. He also served as Professor of Economics and Public Policy at the University of Michigan (1976–97), Chair of the Economics Department (1983–86; 1989–90), and Director of the Institute of Policy Studies (1979–83; 1991–95).

From 1994 to 1996 he served as Chair of the Quadrennial Advisory Council on Social Security. In 1986–87, Mr Gramlich was both Deputy and Acting Director of the Congressional Budget Office. He also served as Director of the Policy Research Division at the Office of Economic Opportunity (1971–73), Senior Fellow at the Brookings Institution (1973–76), and in the Research Division at the Federal Reserve Board (1965–70).

David Gruen

David Gruen became Head of Economic Research Department at the Reserve Bank of Australia in May 1998. He has been with the Bank for 14 years, working in the Economic Analysis and Economic Research Departments. From August 1991 to June 1993, he was visiting lecturer in the Economics Department and the Woodrow Wilson School at Princeton University. Before joining the Reserve Bank, he worked as a research scientist in the Research School of Physical Sciences at the Australian National University. He holds PhD degrees in physiology from Cambridge University, England and in economics from the Australian National University.

Peter Harper

Peter Harper is currently acting Deputy Australian Statistician for Economic Statistics at the Australian Bureau of Statistics (ABS). His substantive position is Head of the ABS's Economic Accounts Division, which is responsible for Australia's national accounts, balance of payments, prices and government finance statistics among others. He has had extensive experience in macroeconomic statistics, and he was responsible for the implementation of a number of significant recent changes to Australia's national accounts, including the introduction of SNA93. He is actively involved in a range of international statistical issues. Peter spent three years at the International Monetary Fund in the early 1990s where he worked as an expert on balance of payments statistics.

Ken Henry

Ken Henry was born in Taree NSW. He completed a first-class honours degree in economics at the University of NSW in 1979. From February 1980 to September 1984 he was a lecturer in the Economics Department of the University of Canterbury (Christchurch, New Zealand). He completed his PhD in 1982. In September 1984 he returned to Australia, accepting a position in Treasury's Taxation Policy Division. He was a member of the Treasury team that put together the Government's draft *White Paper on Tax Reform* (published in June 1985) and contributed to the development of the Government's tax reform package *(Reform of the Australian Taxation System*, September 1985).

From September 1986 to June 1991, Dr Henry worked as a senior adviser to the Treasurer. He advised the Treasurer on taxation policy and administration, retirement incomes policy, industry policy and microeconomic reform (including telecommunications reform). At the end of June 1991 he returned to the Treasury as head of the Microeconomic Modelling Unit. In July 1992 he took up the position of Minister (Economic and Financial Affairs) in the Australian Delegation to the OECD in Paris.

Dr Henry returned to the Treasury in January 1994 as head of the Taxation Policy Division. In August 1997 he was appointed Chairman of the Government's Taxation Task Force, responsible for providing advice to the Government on tax reform options. In October 1998 he was promoted to the position of Executive Director (Deputy Secretary) of Treasury's Economic Group, and a member of the Treasury Executive Board. In that role he had executive responsibility for domestic macroeconomic policy advice, domestic economic forecasting, and advice on international economic issues (including Australia's relationship with the multilateral international financial institutions).

On 27 April 2001, Dr Henry commenced his appointment as Secretary to the Treasury.

Masahiro Kawai

Mr Masahiro Kawai is the Deputy Vice Minister for International Affairs, Ministry of Finance, Japan.

He joined the Ministry of Finance in July 2001. Before joining the Ministry of Finance, Mr Kawai was a Professor of Economics at the Institute of Social Science, University of Tokyo. Mr Kawai has served as the Chief Economist of the World Bank's east Asia and Pacific Region during 1998–2001. In addition, he has served as a Special Research Advisor for the Institute of Fiscal and Monetary Policy (currently, the Policy Research Institute) in Japan's Ministry of Finance, as well as a Coordinator of the Japan Financial Markets Development Committee for the Pacific Economic Cooperation Council. He has also served as a consultant for the Board of Governors of the Federal Reserve System and for the International Monetary Fund. Before joining the University of Tokyo in 1986, Mr Kawai worked for the Brookings Institution (1977–78) as a Research Fellow and taught at the Johns

Hopkins University (1978–86, 1988) as an Assistant and Associate Professor. He also taught at the University of British Columbia (1991–92) as a Visiting Associate Professor. The articles, essays, and reviews written by Mr Kawai have been published extensively in professional journals and books and cover the fields of international finance, open macroeconomics, Asian money and capital markets, contemporary Japanese economy, international development finance, economics of commodity and futures markets, and housing demand. His recent book is *The New World Fiscal Order: Implications For Industrialized Nations* (co-edited with C Eugene Steuerle), Urban Institute, Washington DC, 1996. Mr Kawai received his BA and MA in Economics from the University of Tokyo, his MS in Statistics and his PhD in Economics from Stanford University.

Adarsh Kishore

Adarsh Kishore is presently Additional Secretary in the Department of Economic Affairs, Ministry of Finance, Government of India. After a short period of research and teaching, he entered the Indian Administrative Service in 1969. He holds a first-class degree in Political Science and PhD in Political Economy. He published a fairly well acclaimed research work entitled *Land, Stage and Poverty* in 1995. He also has to his credit another published book based on his post-doctoral research work on *Economic Reforms: State-Market Synergy* at Queen Elizabeth House, Oxford University, UK, in which he has examined the changing role of the State in the context of stabilisation, structural adjustment, and economic reforms and the role of international financial institutions. He has published several papers in academic journals.

Dr Kishore has contributed significantly towards delineation of economic reforms and structural adjustment process and strategy both as Principal Finance Secretary and as Principal Secretary to the Chief Minister and Principal Secretary to the Government for Policy Planning in the Indian State of Rajasthan. Dr Kishore worked as the Principal Finance Secretary to the Government of Rajasthan from 1993 to 1999. Subsequently, he contributed to policy as senior advisor to the State Government in his capacity as Principal Secretary to the Chief Minister Rajasthan and Policy Planning from October 1999 to September 2000.

Dr Kishore made painstaking efforts in the State Government to initiate the economic reform process. He also rationalised public expenditure and got self-imposed ceilings introduced on borrowings and the guarantees by the State Government in an effort to impose the fiscal discipline. He was instrumental in evolving a Memorandum of Understanding between the State Government and the Ministry of Finance, Government of India, scheduling a reform process in the State in April 1999.

His current responsibilities since October 2000 include the Government of India's interface with the World Bank, International Monetary Fund, Asian Development Bank, International Fund for Agricultural Development (IFAD) and other multilateral financial institutions, interactions with the United Nations organisations, management of India's external debt, economic reforms, matters related to the external finance and policy issues in various sectors of the economy. He represents India on the Board

of Governors of IFAD as Alternate, G-24 and G-77 as Deputy and the International Development Association (IDA) as the borrowers' representative for South Asia.

Melih Nemli

Mr Melih Nemli is Deputy Director General of Foreign Economic Relations of the Undersecretariat of Treasury, Turkey since 2000. Before he was appointed to his current post he was with the International Monetary Fund as Assistant to Executive Director between 1995 and 2000. He also served at the Undersecretariat of Treasury as Department Head in charge of IMF Relations from 1993 to 1995. He is a graduate of Middle East Technical University and has his Bachelor of Arts degree in Public Administration. Mr Nemli also holds a MA degree in Economics from Eastern Michigan University. He was born in 1961 and is married with one daughter.

Terry O'Brien

Terry O'Brien is head of the Australian Treasury's Macrodynamic Unit, after several years as Specialist Adviser in Treasury's international divisions. As part of those responsiblities, he is Australia's finance representative at the officials' meetings of the G-20 grouping of major economies. Since first joining Treasury in late 1972, he has worked in tax policy, fiscal policy, industry policy as well as international economic areas, and from 1984 to 1991, he worked in the Office of National Assessments as Head of its Resources and Finance Branch. From 1995 to 1997, he was Australia's senior Treasury representative at the Organisation for Economic Cooperation and Development (OECD), including a period as a Deputy Chair of the OECD's Economic Development and Review Committee, responsible for the Economic Surveys of member countries. He is an honours graduate in economics from the University of Queensland, and holds a Masters Degree in economics from the Australian National University.

Maria Ramos

Maria Ramos obtained her MSc in Economics in 1992 from the University of London, BCom Honours (Economics) in 1987 (with a first-class pass) from the University of the Witwatersrand, BCom in 1986 from the University of the Witwatersrand and an Institute of Bankers Diploma (CAIB) in 1983 from the Institute of Bankers.

Ms Ramos is currently the Director-General of the National Treasury, SA (since 1 July 1996).

From May 1995 until June 1996 she was appointed as the Deputy Director-General: Financial Planning, Department of Finance. From September 1994 to April 1995, she worked as a Research Officer at the Centre for Research into Economics and Finance, London School of Economics and Political Science (LSE). From 1992 to 1994 she was a Lecturer in Economics at the University of the Witwatersrand, SA. Between 1989 and 1991 she worked as a lecturer in Economics at the University of South Africa. Between 1990 and 1994 she was engaged in the following projects:

Research Associate, Centre for the Study of the South African Economy and International Finance, LSE (1990–94); Project Leader, Macroeconomic Research Group (MERG), Inflation Project, African National Congress (1992–93); and Co-ordinator, Economics Study Commission, Centre for Development Studies (1989–90).

From 1978–88 she held various positions (including managerial) within the First National Bank, SA. Ms Ramos has published and presented a number of papers nationally and internationally.

She was voted the 2001 Business Woman of the Year. She was a recipient of the following awards: British Council Scholarship (Helen Suzman Award), 1991 and 1992; Fullbright Scholarship, 1991 (not taken up); Nedbank/Old Mutual Budget Competition, 1989; Economic Society's Senbank Prize for Honors Dissertation, 1988 – 'Clower's Dual Decision Hypothesis and Keynes' Theory'; Barclays Bank Graduate Scholarship, 1983; Santam Bank Marketing Prize, 1982; and Institute of Bankers Marketing Prize, 1982. She is also a Global Leader for Tomorrow for the World Economic Forum (1998).

Y Venugopal Reddy

Dr Y Venugopal Reddy (born 17 August 1941), assumed charge as Deputy Governor, Reserve Bank of India on 14 September 1996.

As Deputy Governor his responsibilities include monetary policy, credit policy, public debt, exchange rate and also external investments and operations, economic analysis and policy, and government accounts.

Before joining the Reserve Bank of India, he held positions of Secretary (Banking) in the Ministry of Finance and Additional Secretary, Ministry of Commerce in the Government of India.

A career civil servant, he spent most of his career working in the areas of finance and planning both at provincial and central government levels.

He has been associated with several policy-related Committees, more recently as a Member of the National Statistical Commission; Chairman, Standing Committee on International Standards and Codes; and Chairman, Expert Committee to Review the System of Administered Interest Rates and Other Related Issues.

His academic stints include: Visiting Fellow, International Relations Department, London School of Economics and Political Science, London; a full-time UGC Visiting Professor in the Department of Business Management, Osmania University, Hyderabad, India; full-time Visiting Faculty, Administrative Staff College of India and he continues to be Honorary Senior Fellow at the Centre for Economic and Social Studies at Hyderabad, India. He has several publications to his credit, mainly in areas relating to international finance, planning and public enterprises. In 1998, he was conferred a Degree of Doctor of Letters (Honoris Causa) by Sri Venkateswara University, Tirupati.

Moisés J Schwartz

Mr Schwartz worked at Banco de México from 1986 to December 2000. His last position at the central bank was that of Director of Macroeconomic Analysis. Mr Schwartz has also been a Consultant to the International Monetary Fund (IMF) and a Professor of Economics at the Instituto Tecnológico Autónomo de México (ITAM). Mr Schwartz holds an undergraduate degree in economics from the Instituto Tecnológico Autónomo de México and a PhD in economics from the University of California, Los Angeles. He has participated in numerous seminars on monetary policy, exchange rate policy, banking supervision and related subjects.

Timothy M Smeeding

Timothy M Smeeding is the Maxwell Professor of Public Policy, Professor of Economics and Public Administration, and Director of Maxwell's Center for Policy Research. He is also the President of the Luxembourg Income Study (www.lisproject.org), a non-profit research and data organisation which he co-founded in 1983. He is currently a visiting Research Professor at the University of New South Wales Social Policy Research Centre. In 1994–95, he was a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University where he now serves on their special projects Advisory Board. Professor Smeeding's research is focused on national and cross-national aspects of economic inequality, poverty, and public policy toward vulnerable groups such as children, the aged and the disabled.

Robert Hunter Wade

Robert Hunter Wade is Professor of Political Economy at the London School of Economics and Political Science. A New Zealand citizen, he has taught at Victoria, Sussex, Princeton, MIT, and Brown universities; and held Fellowships at the Institute for Advanced Study (Princeton), the Russell Sage Foundation (New York), and the Institute for Advanced Study (Berlin). In the 1980s Robert worked as a staff economist at the World Bank, and later as an analyst at the Office of Technology Assessment, an arm of the US Congress.

Robert's research is about the wealth and poverty of nations. He has explored the connections between institutions and economic performance in sites ranging from villages in Italy and India, to bureaucracies in India, Korea and Taiwan, to the international financial institutions, particularly the World Bank. Robert is also studying world income distribution, the world monetary system, and the role of dominant states in setting world rules that rebound to their benefit and obstruct the development of poorer countries.

Robert's books include *Irrigation and Agricultural Politics in South Korea* (1982); *Village Republics: Economic Conditions of Collective Action in South India* (1988); and *Governing the Market: Economic Theory and the Role of Government*

in East Asian Industrialization (1990). The latter won the American Political Science Association's award for Best Book in Political Economy (for the years 1989–91).

For the two-volume history of the World Bank, called *The World Bank: Its First Half Century* (Brookings Institution, 1997), Robert wrote the history of the World Bank's engagement with environmental issues ('Greening the Bank: the struggle over the environment, 1970–95', vol 2, chapter 13).

More recently, Robert has written extensively about the Asian financial crisis and about the governance of international financial markets. He wrote a 'By Invitation' essay for *The Economist* on world income distribution (28 April 2001). Robert is currently working on a book about the World Bank and the United States, called 'Paved With Good Intentions'.

Shang-Jin Wei

Shang-Jin Wei is an advisor at the International Monetary Fund, and a senior fellow in Economic Studies and the New Century Chair in International Trade and Economics at the Brookings Institution. He is also a research fellow at Harvard University's Center for International Development, and the National Bureau of Economic Research. His areas of expertise include international finance, trade, corruption, transition economies, China, and reform strategies. Currently, Dr Wei is working on a book about corruption and globalisation.

Dr Wei is the author of *Economic Globalization: Finance, Trade, and Policy Reforms* (Beijing University Press, 2000) and co-author (with J Frankel and E Stein) of 'Regional Trading Blocs in the World Economy' (Institute for International Economics, 1997). His work has been published in leading academic journals, including the *Review of Economics and Statistics*, *Quarterly Journal of Economics*, and *Journal of International Economics*, and reported in *The Economist* and *Business Week* magazines, *Financial Times*, *Chicago Tribune*, *The Asian Wall Street Journal* and several other newspapers.

During 1992–2000, Dr Wei was on the faculty of Harvard University's John F. Kennedy School of Government first as an assistant professor and then an associate professor. He has also held consulting and research positions at numerous international organisations, including the World Bank, International Monetary Fund, Organisation for Economic Co-operation and Development (OECD), Asian Development Bank, United Nations Development Program, the Board of Governors of the Federal Reserve System and the Federal Reserve Bank of San Francisco.

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Xie Ping is the Director General of the People's Bank of China's (PBC) Research Department, a position he has held since 1998. He has had a long and distinguished career with the PBC, having held a number of important positions, including Governor of the Hunan Branch and Deputy Director of the Policy Research Department.

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Dr Ping holds a PhD in economics from the Renmin University, and a Master of Economics from the Xinan University of Finance and Economics.

Glossary

Alphabetical List of Selected ISO Country Codes[a]

ISO Code	Country	ISO Code	Country
AR	Argentina[b]	KE	Kenya
AT	Austria	KR	South Korea[b]
AU	Australia[b]	LU	Luxembourg
BD	Bangladesh	MX	Mexico[b]
BE	Belgium	MY	Malaysia
BR	Brazil[b]	NG	Nigeria
CA	Canada[b]	NL	Netherlands
CH	Switzerland	NO	Norway
CN	China[b]	NZ	New Zealand
CZ	Czech Republic	PH	Philippines
DE	Germany[b]	PK	Pakistan
DK	Denmark	PL	Poland
EG	Egypt	RU	Russian Federation[b]
ES	Spain	SA	Saudi Arabia[b]
FI	Finland	SE	Sweden
FR	France[b]	SN	Senegal
GB	United Kingdom[b]	TG	Togo
HN	Honduras	TH	Thailand
HU	Hungary	TR	Turkey[b]
ID	Indonesia[b]	TW	Taiwan
IE	Ireland	UG	Uganda
IL	Israel	US	United States[b]
IN	India[b]	VN	Vietnam
IT	Italy[b]	ZA	South Africa[b]
JP	Japan[b]	ZM	Zambia

(a) ISO is the International Organization for Standardization.

(b) G-20 member country. The G-20 Forum also includes representatives of the IMF, European Union and World Bank.

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