

# Global income inequality

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Branko Milanovic looks at changing patterns of global inequality, and different ways of measuring it.

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What do we mean by global inequality? How large is it? Is it increasing? Why does it matter? What can be done about it? These are some questions addressed here.

## The three ways to look at global inequality

There are three main concepts of global inequality that need to be clearly distinguished, but are often confounded: inequality among countries' per capita incomes - either unweighted (Concept 1) or weighted by countries' populations (Concept 2) - and inequality between world individuals (Concept 3).

Concept 1 deals with convergence and divergence of countries' average incomes, but not with income inequality among all people in the world. Economic growth in a small country will not have the same effect on global welfare as growth in a populous country. Concept 2 takes this into account by weighing each country by its population. However, this implicitly assumes that each individual within a country receives the per capita income of that country. Thus, it does not take into account within-country inequalities. Only Concept 3 includes inequalities both between and within countries.

The reason why Concepts 1 and 2 (the latter often used as a proxy for 'true' inequality between world individuals) have been calculated more frequently is simply that the data requirements are much less onerous. To calculate Concepts 1 or 2 we need to have data only for per capita incomes (often GDP per capita) and population. Thus annual calculations of Concept 1 and Concept 2 inequality across most countries in the world are relatively simple matters. For Concept 3, however, we need to have information on national income distributions. We also need, of course, to convert all the incomes expressed in local currencies into a common yardstick generally represented by international (PPP) dollars. National

## Global income equality

income distribution figures are obtainable only from household surveys, and surveys often differ in their design, definition, coverage, etc - between years for the same country, even more so between countries - and are not available for all countries annually. In addition, national income distribution data for China, USSR, and most of Africa were unavailable until the mid-1980s. This is the reason why the first detailed and relatively comprehensive (representing more than 90 per cent of the world population) Concept 3 calculations could be done only for the period after around 1985. This is also the reason why such a calculation cannot be executed annually, but only for more or less evenly spaced four or five year intervals.

But once we have these methodological issues straightened out, we enter into what is popularly called 'the tyranny of numbers'. As Figure 1 shows, the evolutions of Concept 1 and Concept 2 inequality have, particularly over the last quarter a century, taken different paths. (All three concepts are measured using the Gini coefficient, a standard measure of inequality that ranges from the theoretical value of 0 - everybody has the same income - to the equally theoretical value of 100 - all income is appropriated by one country or one person.) Since the late 1970s, Concept 1 inequality has been on the rise, and this has finally slowed down only in the last couple of years. The reasons are clear: stagnation and decline of middle-income countries in Latin America, Eastern Europe and the former USSR, and almost relentless declines of mean incomes in most of Africa. At the same time, Western countries have notched up respectable growth rates, just over 2 per cent per capita annually. Consequently, while middle and bottom countries have deteriorated in relative, and often absolute, terms, the top has grown richer. But exactly the opposite evolution is charted by Concept 2 inequality. China and India, since around 1978 and the mid-1990s respectively, have dramatically increased their growth rates; but whereas in Concept 1 calculations they do not count for more than any other two countries, in Concept 2 calculations they account for almost 40 per cent of world population. Since both China and India were very poor when their faster growth began, they have exerted a significant downward pressure on Concept 2 inequality. Yet the removal of China alone is sufficient to convert a steady downward-sloping Concept 2 inequality into a broadly stable one. This simple fact cautions us that the equalizing trend in Concept 2 inequality crucially depends on economic policy and economic growth in ... one country.

Some people latch on to Concept 1 inequality as a reflection of inequities brought about by globalisation. And in some ways it is, because, though one of the standard predictions of neoclassical models was that, under conditions of free movement of goods, services, capital and technology, poor countries would grow faster than the rich, thus engendering 'income convergence', nothing like this has actually happened. On the contrary, income divergence was the story of the 1980s and 1990s. Other people look at Concept 2 only - which indeed is closer to the idea of how individual welfare is distributed (though omitting crucial information about national inequalities) - and cheer the marvels of 'the globalisation as we know it'. Had inequalities within nations been stable over the last twenty-five years, Concept 2 could have given us an acceptable approximation to global (interpersonal) inequality. But, unfortunately, they were not. Inequality rose in practically all-important countries during this

# Soundings

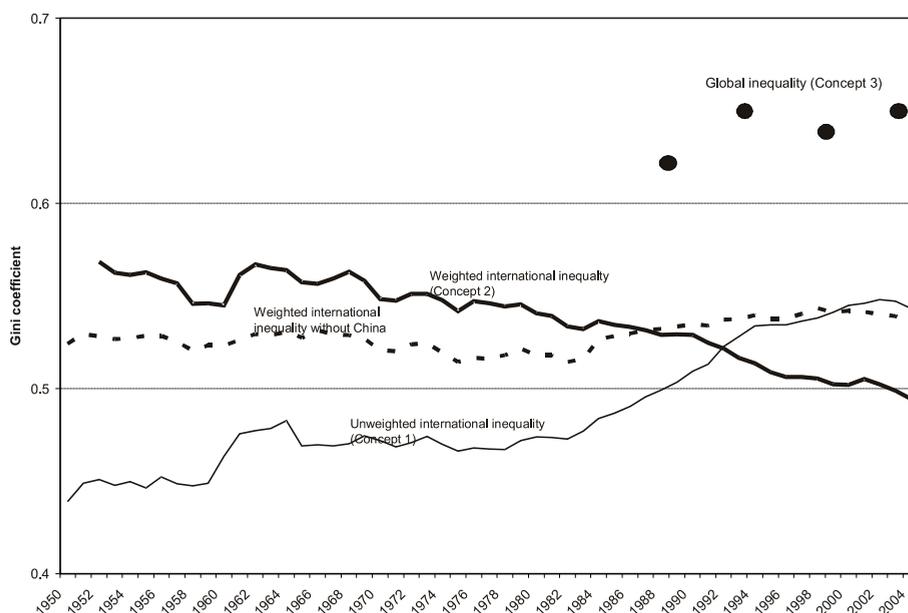
period: in the United States and the UK (from the late 1970s), in Russia (since the transition), in China (since reforms started) and more recently in India. A lot of the increase of within-national inequalities in Asian countries is driven by the rising urban-rural gap so evident in China and India.

This is why Concept 2 inequality gives an inadequate picture of global inequality, and why, while it is the largest determinant of change in Concept 3, it is not a sufficient, and may at times be a misleading, indicator. This is also why the four dots in Figure 1 (for, respectively, the years 1988, 1993, 1998 and 2002) that show Concept 3 inequality values are a less dense (non-annual), but surely more accurate, measure of what is happening to global inequality in personal well-being.

## How large is global inter-personal income inequality?

The four dots show that there was a significant increase in global inequality from around 63 Gini points in 1998 to 65 Gini points in 1993, and that global inequality since has remained stable. This result is not unique to the set of household surveys from the more than one hundred countries (covering a little over 90 per cent of global population, and about 95 per

Figure 1. Three concepts of global inequality, 1950-2004



Note: The Gini coefficient on the vertical axis is shown in fractions, not in percentages (thus, 0.6 is equal to 60). 0 = everyone has the same income; 100 = all income appropriated by one person or country.

## Global income equality

cent of global income) used here. Research using other techniques, and slightly different compositions of countries and surveys, comes to a general agreement about the magnitude of Concept 3 inequality. Gini values for the 1990s, compiled from all these studies, lie within a narrow range between 63 and 68, with the exception of two at greater extremes (61 and 71), and most of these estimates are within one standard error of each other.

How big is a Gini of around 65? It is larger than the inequality found in any single country including South Africa and Brazil, the two most unequal countries in the world with Ginis around 60. The Gini value, however, does not give an intuitive feeling of how large global inequalities are. A better way to look at it is to consider how global income is distributed across different fractiles of the distribution. The top 5 per cent of individuals in the world receive about one-third of total world (PPP-valued) income, and the top 10 per cent one-half. (Thus, the other 90 per cent of people receive the other half of world income.)<sup>1</sup> If we take the bottom 5 and 10 per cent, they receive respectively 0.2 and 0.7 per cent of world total income. This means that the ratio between the average income received by the richest 5 per cent and the poorest 5 per cent of people in the world is 165 to 1. The richest 5 per cent of people thus earn in about 48 hours as much as the poorest 5 per cent earn in a year.

Some studies find declining values of global inequality from the 1980s, others increasing or stable. My own findings are of zigzag movements, with an increase of almost 3 Gini points between 1988 and 1993 followed by a decline of 1 point by 1998, and then a 1-point increase by 2002. This is explained as follows. Around 1990, the slow growth of rural incomes in India and China, and the economic collapse of Eastern Europe, each contributed to global inequality. When both developments reversed in the next five-year period, global inequality decreased. Between 1998 and 2002, the two extremes of income distribution moved further apart: the rich world continued with strong growth while most of Africa stagnated. But these are zigzags caused by specific economic events in large countries; they are not a trend.

Is there a link between globalisation and global inequality? This is a very contentious issue. There are, in principle, three channels whereby globalisation, for the moment and somewhat conveniently defined as 'openness', affects global income distribution. First, openness affects countries' growth rates. Most economists agree on the association of openness with enhanced growth, but not on whether openness is more 'friendly' to poor or rich countries. Obviously, if it were to the latter, global inequality would tend to go up. Second, openness affects national income distributions, although again not necessarily in the same direction in poor and rich countries. The simplest theory would predict that openness would reduce inequalities in poor countries (unskilled labour there would gain with openness) and increase inequalities in rich countries (for the opposite reason). This is not what we have observed, as inequality (as we have seen) has tended to go up in both types of countries. Third, openness might affect differently populous and small countries (at the same income level). Now, depending on how each of these channels 'behaves' the overall effect will vary. In the best of all possible worlds, globalisation would provide an extra 'growth premium' for poor countries' growth rates, would be neutral (or pro-equality) with respect to national

## Soundings

income distributions, and would help more populous than small countries. In that case, globalisation would necessarily lead to lower global inequality.

But this last conclusion crucially depends on an implicit assumption that we have not discussed so far: on the fact that populous countries are poor. Decouple poor and populous countries - by supposing that populous countries are rich - and the entire conclusion evaporates. Indeed, in that case, the globalisation-induced gains of the rich populous countries might be sufficient to overturn the other effects, and push global inequality up. This example shows that the effect of globalisation on global inequality will depend on the whereabouts, in the income hierarchy, at a given point in time, of populous countries. In other words, even if the three channels work as in the best of all possible worlds, the ultimate effect of globalisation on global inequality may vary. Therefore, the relationship between globalisation and global inequality cannot be generally valid, but is highly time-specific and contingent on past income history.

How much of global inequality is due to differences in mean incomes of countries and how much to income differences within countries? Some 70 per cent of global inequality is due to differences in countries' mean incomes. Being a citizen of a rich country means that one is, independently of one's effort or desert, recipient of a large rent. She may decide not to work at all; she can still expect - barring some extreme cases - to be in the upper half of global income distribution, and very likely to be better off than two-thirds of people in the world. This huge importance of the place where one lives (either as a resident or citizen) is a sharp reversal from a situation which existed around the time of the industrial revolution when more than half of the very rough estimate of global inequality was due to income differences within nations. In other words, the world has moved from a situation where 'class' determined one's position in global income distribution to a situation where 'location' is crucial.

Yet some people from a poor country can be better off than some people from a rich country. The chart in Figure 2 plots the position of each ventile (5 per cent of people) in a given country in the global income distribution. We calculate the mean income (in PPP dollars) of each country from the lowest (first) to the highest (twentieth) ventile - arrayed on the horizontal axis - and then find their positions in global income distribution. Consider the line for Germany. As can be seen, the poorest 5 per cent of Germans have a mean income which places them at the 73rd per centile of world income distribution; the richest 5 per cent have an income which places them in the top per centile of the world. If we compare Brazil or China with Germany, we see that about a third of all Brazilians, or almost a fifth of all Chinese, are richer than the poorest 5 per cent of Germans. Not so in India. For India, the span of income is from the 4th per centile in the world to the 70th per centile. The distributions for Germany and India do not overlap at all. Of course, this does not mean that there are no Indians richer than Germans; it simply says that the top 5 per cent of Indians are less well-off than the poorest 5 per cent of Germans. Were we to proceed to a finer disaggregation (say to use national per centiles rather than ventiles, or eventually and theoretically to use individuals) there would surely be some overlap. But that overlap will be small.

## Global income equality

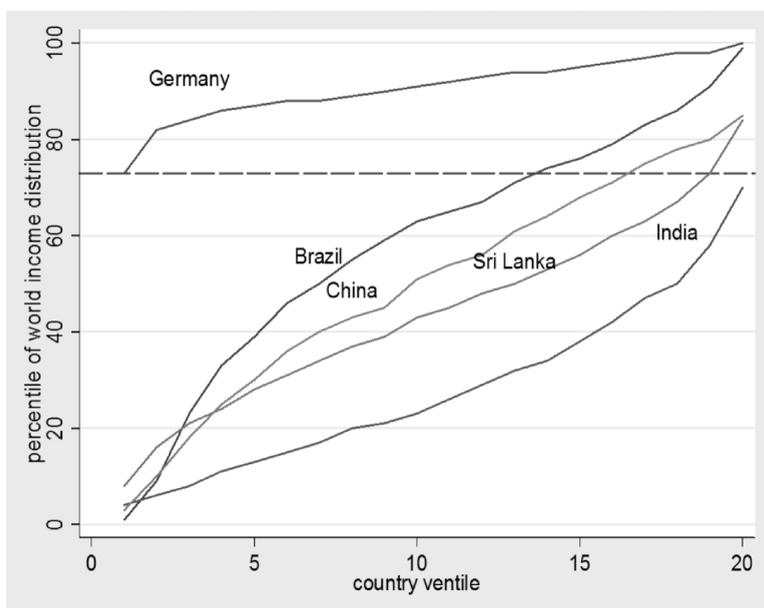


Figure 2. National distributions shown in a global context

The chart illustrates how a focus on mean country incomes alone is too simplistic, and that there is considerable inequality due to within-country distributions. It also carries some practical lessons for global transfers, were they to be introduced. Transfers from mean-income rich (OECD) to mean-income poor countries, when we do not a priori know who the beneficiaries are, need to take recipient countries' income distributions seriously. This is because the risk that money from a German citizen will benefit someone richer than himself is higher if German aid goes to Brazil than if it goes to India.

### Should we do something about global inequality?

Global inequality matters, for various reasons. From an ethical perspective, distributional justice within a nation and in the world as a whole is the same thing. Pragmatically, globalisation increases the awareness of other people's income and thus the perception of inequalities among both the poor and the rich. Even if globalisation were to raise everybody's real income, it could exacerbate, rather than moderate, feelings of despondency and deprivation among the poor. Even if it were to raise everybody's income *and* leave global inequality the same, people might not be happy. Leaving global inequality the same means that absolute benefits from globalisation would be distributed extremely unequally: poor people would gain only a fraction of what the rich would get.<sup>2</sup>

Large income differences in the world are due, as we have seen, mostly to the large

# Soundings

differences in countries' mean incomes. Since the early 1980s, many countries of the world, viz. the poorest ones, have witnessed a systematic growth failure. Thus, to reduce income differences among individuals, increasing the growth rate in poor countries is of paramount importance. Still, this is probably not enough: the rich world may need to do more and to try to reduce income disparities directly through modest global redistribution.

Three basic progressivity rules should guide global income redistribution. Funds should flow: (i) from rich to poor countries (as they do now); (ii) from a tax-payer who is richer than the beneficiary of the transfer (global progressivity); and (iii) from tax payers who are relatively rich within their own countries to people who are relatively poor in the recipient countries, so that national inequality decreases in both donor and recipient countries. This in turn requires consideration of national income distributions, with preference given to poor and egalitarian recipient countries, since transfers to them are unlikely to be globally regressive.

Can we also envisage the creation of a global agency to be financed by taxing rich people in rich countries and transferring funds directly to poor people in poor countries? If empowered to raise its own funds, such an agency should eschew governments that have often wasted foreign aid. Instead, it would deal directly with national NGOs and individual citizens in poor countries, and distribute collected funds in the form of cash grants.

Vesting some modest tax-raising authority for the first time in history into a global agency would be a huge political challenge. However, globalisation is rendering the economic gaps more obvious, and the fairness of the existing global distribution more questionable. Opponents of a more socially conscious globalisation will ultimately realize that their self-interest lies in supporting some form of global action to deal with both global poverty ... and global inequality.

*Note: The opinions expressed in this article are my own, and not those of any organization with which I am associated*

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## Notes

1. Of course, these numbers are even more unequal if we do the calculation in US dollars (converted at market exchange rates).
2. This is because all conventional inequality measures are 'relative': if the ratio between incomes of the rich and the poor does not change, inequality is said to be stable.