Competing Concepts of Inequality in the Globalization Debate

Martin Ravallion*

World Bank
1818 H Street NW, Washington DC, 20433, USA

Differences in the value judgments made in measuring inequality underlie the conflicting factual claims often heard about how much poor people have shared in the economic gains from globalization. Opponents in the debate differ in the extent to which they care about relative inequality versus absolute inequality, vertical inequalities versus horizontal inequalities and whether or not they are consistently individualistic in assessing the extent of inequality. The value judgments on these issues made by both sides need greater scrutiny if the globalization debate is to move forward.

Keywords: Globalization, inequality, poverty, value judgments

JEL: D63, F02, O15

World Bank Policy Research Working Paper 3243, March 2004

* Martin Ravallion is with the World Bank's Research Group. For comments the author is grateful to Francisco Ferreira, Emanuela Galasso, Ravi Kanbur, Peter Lambert, Branko Milanovic, Berk Ozler, Dominique van de Walle, and Adam Wagstaff. Email address: mravallion@worldbank.org .

Introduction

How much are the world's poor sharing in the gains from the economic growth fueled by greater economic integration? There are seemingly conflicting answers from the two sides of the ongoing debate on globalization and inequality. On one side, the website of a prominent NGO in the anti-globalization movement, the International Forum on Globalization, confidently claims that "globalization policies have … increased inequality between and within nations."[1] This stands in marked contrast to the claims made by those more favorable to globalization; for example, an article in *The Economist* magazine states with equal confidence that: "Globalization raises incomes, and the poor participate fully" (*The Economist*, May 27, 2000, p.94).

How do such different views persist? Surely the evidence would be conclusive one way or the other? The available data on poverty and inequality are far from ideal, though neither side has paid much attention to the data problems.[2] There are differences in the types of data used. The "pro-globalization" side has tended to prefer "hard" quantitative data while the other side has drawn more eclectically on various types of evidence, both systematic and anecdotal. Differences in the data used account in part for the differing positions taken. However, in the main, the substantive differences in the claims made about what is happening to income inequality in the world do not rest on differences in the data used. Both sides draw on essentially the same sources for their quantitative data (generally coming from the World Bank).

One reason why such different views persist is that it is difficult to separate out the effects of globalization from the many other factors impinging on how inequality is evolving in the world. The processes of global economic integration are so pervasive that it is hard to say

[1] See http://www.ifg.org/store.htm . Similarly, the Policy Director of Oxfam writes that: "There is plenty of evidence that current patterns of growth and globalization are widening income disparities" (Letter to *The Economist*, June 20, 2000, p.6).

[2] For a fuller discussion of the data and measurement issues underlying the globalization debate see Ravallion (2003).

what the world would be like without them.[3] These difficulties of attribution provide ample fuel for debate, though they also leave one suspicious of the confident claims made by both sides.

Conflicting assessments can also stem from hidden contextual factors. Diverse impacts of the same growth-promoting policies on inequality can be expected given the differences between countries in initial conditions. Policy reforms shift the distribution of income in different directions in different countries. Yet both sides make generalizations about distributional impacts without specifying the context. In the same country setting, there may well be much less to disagree about.

This paper looks into another possible reason: the two sides in this debate do not share the same values about what constitutes a just distribution of the gains from globalization. It can hardly be surprising that different people hold different normative views about this matter. And it is well understood in economics that those views carry weight for how one defines and measures inequality, though recognizing that it is ethics not economics that determines what trade-offs one accepts between the welfare of different people. An important class of "ethical measures" of inequality are built on this realization; a seminal early contribution was Atkinson (1970).[4] What is more notable in the present context is that important differences in values have become embedded in the methodological details underlying statements about what is happening to inequality in the world.[5] The differences are rarely brought to the surface and argued out properly in this debate.[6]

---

[3] Basu (2003, p.898) put is nicely: "In reality, globalization is a bit like gravity. We may discuss endlessly whether it is good or bad but the question of not having it does not seriously arise."

[4] For an excellent survey of approaches to the measurement of inequality see Cowell (2000).

[5] This is not an isolated instance of the blurring of facts and values; for further discussion see Putnam (2002).

[6] More generally, economists have been reticent to debate values, preferring to focus on "facts." This has led some observers to argue that modern economics has become divorced from ethics, though that is a questionable characterization, as Dasgupta (2003) argues forcefully.

The paper points to three important differences in the value judgments about distributive justice that underlie current debates about globalization.[7] The first concerns the distinction between two very different concepts of inequality, one of which depends solely on proportionate differences in incomes while the other depends on the absolute differences. To my knowledge, all the research by economists on world inequality has used the former concept, which has then become embedded in more popular writings supporting globalization. By contrast, critics of globalization appear often to be more concerned with absolute inequality — the "income gap between rich and poor."

The second difference relates to whether one can focus solely on how the average gains from growth, or policy reform, vary with income. The pro-globalization side has tended to focus on such aggregates, while the anti-globalization side has emphasized losers among the poor and other forms of horizontal inequality, thought often to the point of ignoring the aggregate outcomes.

The third issue concerns one of the favorite empirical claims of the critics of globalization, namely that inequality between countries has been rising in the period of globalization — suggesting that the gains have been unfairly distributed. The pro-globalization side disputes this claim, arguing instead that inequality between countries has been falling over the last 20 years or so. The value judgment here relates to whether one should weight countries equally or people equally (at a given income level) when assessing distributional outcomes.

---

[7] These three issues do not exhaust the value-based issues in the measurement of inequality or poverty. Two classic issues are not discussed here. The first is the trade-off one postulates between the welfare of people at different incomes (essentially the weighting of one income against another). The second is a classic issue in poverty measurement, namely whether the poverty line is fixed in real terms (giving a measure of absolute poverty) or whether it varies positively with mean income (relative poverty).

Relative inequality vs. absolute inequality

A common empirical finding in the literature in development economics is that changes in inequality at country level are uncorrelated with rates of economic growth. For evidence on this point see, for example, Ravallion and Chen (1997) and Dollar and Kraay (2002). Among growing economies, inequality sometimes rises, and sometimes falls. This also holds for growing poor countries. The Kuznets Hypothesis — that with growth in a low-income country, inequality first increases then starts to fall after a certain point — has generally not been borne out by experience in growing developing countries (Bruno et al., 1998; Fields, 2001).

However, the finding that growth tends not to be associated with rising inequality rests on a specific concept of "inequality," known as relative inequality in the literature on inequality measurement. Relative inequality depends on the ratios of individual incomes to the mean. If all incomes rise by the same proportion then relative inequality is unchanged. This contrasts with the concept of absolute inequality, which depends on the absolute differences in levels of living, rather than relative differences, following Kolm (1976).[8] A measure of absolute inequality is unchanged if all incomes increase by the same amount. Consider an economy with just two households with incomes: $1,000 and $10,000. If both incomes double in size then relative inequality will remain the same; the richer household is still 10 times richer. But the absolute difference in their incomes has doubled, from $9,000 to $18,000. Relative inequality is unchanged but absolute inequality has risen sharply.

While relative inequality has been the preferred concept in empirical work in development economics, perceptions that "inequality is rising" appear often to relate to absolute inequality rather than relative inequality. That is presumably what people mean when they talk

[8] There are also intermediate measures, which contain the concepts of absolute and relative inequality as extreme cases; see, for example, Bossert and Pfingsten (1990).

about the "gap between the rich and the poor," and when the International Forum on Globalization writes about the "widening economic divide" (International Forum on Globalization, 2002). Observers such as NGO's working in developing countries can easily see the rising absolute gap in living standards. The fact that the proportionate gap may well be unchanged is less evident to the naked eye. In fact it appears that many people think about "inequality" in absolute terms. Surveys of university students asked them which of two income distributions was more unequal; 40% of the students were found to base their answers on a concept of absolute inequality, while for 60% it was relative inequality (Amiel and Cowell, 1999).

These value judgments about what inequality means have considerable bearing on the position one takes in the globalization debate. Finding that the share of income going to the poor does not change on average with growth does not mean that "growth raises the incomes (of the poor) by about as much as it raises the incomes of everybody else" (*The Economist*, May 27, 2000, p.94). Given existing inequality, the income gains to the rich from distribution-neutral growth will of course be greater than the gains to the poor. In the above example of two households, the income gain from growth is 10 times greater for the high-income household. To say that this means that the poor "share fully" in the gains from growth is clearly a stretch. And the example is not far fetched. For the richest decile in India, the income gain from distribution-neutral growth will be about four times higher than the gain to the poorest quintile; it will be 15-20 times higher in Brazil or South Africa.

The common empirical finding in the literature that changes in relative inequality have virtually zero correlation with rates of economic growth naturally carries little weight for those who are concerned instead about absolute inequality. Figures 1 and 2 show how differently the two concepts of inequality move with economic growth. Each point in both figures represents two household surveys at different dates for the same country and the figures give about 120 such "spells" spanning the 1990s.[9] The change in inequality between these two surveys is plotted against the growth rate in mean household income (or consumption) per person. In Figure 1, inequality is measured by the usual Gini index. This is a relative inequality measure in which incomes are normalized by the mean. The figure shows that changes in relative inequality are uncorrelated with growth rates in average income, from the above data set. (The simple correlation coefficient is -0.06.) Figure 2 uses instead the absolute version of the Gini index, based on absolute differences in incomes (not normalized by the mean). For this measure, a strong positive correlation emerges (a correlation coefficient of 0.64). The absolute gap between the rich and the poor tends to rise in growing economies, and fall in contracting ones.

If you are a relativist then you might conclude from Figure 1 that there is no aggregate trade-off between economic growth and reducing inequality, though one should note that this is only true on average; there may well be a trade off in specific country circumstances. If one is an absolutist, then an aggregate trade-off is implied: in a typical developing country, someone who values lower absolute inequality must be willing to have less growth and (as we will see below) higher absolute poverty.

Economists specializing on income distribution are well aware of the distinction between absolute and relative inequality, though it is hardly ever mentioned in empirical work on growth and distribution.[10] Contributions to the globalization debate, in both popular and academic forums, have rarely been explicit about which concept is being used. Indeed, critics of

9 This is an updated version of the data set described in Ravallion and Chen (1997).

10 An exception is Fields (2001), who notes that absolute inequality exists as a concept, though he quickly moves on to focus solely on relative inequality.

globalization are often vague about what they mean by "inequality," though what they have in mind appears to be closer to absolute inequality than relative inequality. Defenders of globalization invariably point to evidence on relative inequality without mentioning that it is not the only possible concept of inequality and that the results obtained, and their interpretation for country policy, depend crucially on the choice.

Both sides need to recognize that the position one takes in forming evaluative judgments of the distributional changes associated with globalization will depend crucially on whether one thinks about inequality in absolute terms or relative terms. There is no economic theory that tells us that inequality is relative, not absolute. It is not that one concept is right and one wrong. Nor are they two ways of measuring the same thing. Rather, they are two different concepts. The revealed preferences for one concept over another reflect implicit value judgment about what constitutes a fair division of the gains from growth.[11] Those judgments need to be brought into the open and given critical scrutiny before one can take a well-considered position in this debate.

Vertical vs. horizontal inequalities

The observation that changes in relative inequality tend to be uncorrelated with growth rates has an important implication. Since growth tends to leave income shares unchanged on average, absolute poverty measures (whereby the poverty line has fixed real value) will naturally tend to fall with growth. The same share of a larger pie means of course a higher income.

The expected negative correlation between rates of poverty reduction and rates of growth across countries has been borne out by a large body of empirical research using household-level survey data for many countries. (Recent evidence on this point can be found in World Bank,

---

[11] In the theory of inequality measurement the issue is closely related to whether or not one accepts an axiom variously referred to as "income homogeneity" or "scale independence."

2000; Ravallion and Chen, 1997; Ravallion, 2001; and Fields, 2001). Granted there have been cases in which growth has left the poor behind in absolute terms, but they are the exception rather than the rule. Growth in the world economy over recent decades has come with little change in overall relative inequality and (hence) with falling absolute poverty.[12]

Such empirical findings have often been cited by those on the pro-globalization side of the debate, who argue that pro-globalization policies in developing countries are pro-poor because they generate higher economic growth, which does not come with higher (relative) inequality and so reduces (absolute) poverty. This conclusion does not, however, follow from the cross-country evidence. The fact that growth tends to reduce absolute poverty on average does not imply that every policy that is good for growth will also reduce poverty in any country. Specific growth-promoting policies in specific country contexts can have impacts on distribution that belie such generalizations.[13]

However, there is another reason for caution when interpreting the evidence on the impacts of growth, and growth-promoting policies, on poverty and inequality. Conventional measurement practices may give too little weight to the deviations in impacts found at given income levels — the "horizontal inequalities" in impact.[14] A standard poverty or inequality measure implicitly attaches positive weight to certain horizontal inequalities in the impacts of economic changes or policy reforms. For example, one can decompose the change in a

---

[12] By "absolute poverty" one means that the poverty line has fixed real value. Measures of "relative poverty" in which the poverty line responds positively to the mean naturally show less impact of growth.

[13] For example, Lundberg and Squire (2003) find evidence that trade openness tends to be inequality increasing. There is also evidence of an interaction effect with mean income, such that trade openness increases in inequality in poor countries but decreases it in high-income countries (Barro, 2000; Ravallion, 2001).

[14] There are two usages of the term "horizontal inequality" in the literature. By one usage, it refers to income dispersion among ex-ante equals; this is the sense it which the term is used in this paper. By the other usage it refers to re-ranking of people in the original distribution. For further elaboration see Jenkins and Lambert (1999).

conventional inequality measure into both "vertical" and "horizontal" components, where the vertical component is the contribution of the way in which mean impacts conditional on pre-reform income vary with the latter while the horizontal component is due to the deviations in impacts from their conditional means (Ravallion and Lokshin, 2004). If there are no differences in the proportionate impacts by levels of income then the vertical component is zero. If the impact is predicted perfectly by pre-reform income then the horizontal component is zero.

However, not all observers will accept the implicit weight attached to horizontal inequality in conventional measurement practices. One can be concerned about the differences in how people at a given level of income are affected by a policy, independently of whether or not there is any change in a standard poverty or inequality measure. By conventional approaches, the measure obtained will remain exactly the same if we simply reorder the incomes in a society; this is variously called the "anonymity axiom" or the "symmetry axiom" in the theory of poverty and inequality measurement. Thus if a policy change results in one person loosing and another gaining, such that they swap places in the distribution, this will not be seen to have had any impact whatsoever. Yet this kind of "churning" in the distribution is unlikely to go unnoticed by the people involved. One should not be surprised if the losers in the process are unhappy about the outcome, and that this fuels criticisms of the policies that led to it.

There are a number of reasons to question the view that assessments can be based <u>solely</u> on how impacts are assigned to initial incomes. Three reasons stand out. Firstly, we may deem it to be unfair that people at similar initial incomes are rewarded very differently in the globalization process, though such assessments will presumably also depend on other factors besides their income such as work effort.[15] In the economics of public policy there is precedent for considering horizontal equity, notably in the context of income tax changes — though the point would appear to apply with equal force to other types of policy reform. For example, Pigou (1949, p.50) wrote that horizontal inequality created "..a sense of being unfairly treated…in itself an evil." We would presumably want to balance such concerns against other policy objectives, such as reducing absolute poverty.

Secondly, there are also concerns about the limitations of income as a welfare metric. There are conceptual and practical problem in measuring household "income" or "consumption," and in making cost-of-living comparisons when prices and household characteristics vary (including the choice of the equivalence scales for dealing with differences in family size and demographics).[16] Nor are standard measures (such as household income per person) likely to reflect well the extent of inequality within households. These concerns point to the importance of introducing supplementary indicators of welfare into distributional assessments (Ravallion, 1996).

Finally, extreme horizontal inequalities raise concerns about social and political stability; the protests from the losers can be loud, even when the aggregate net gains are large. Political economy constraints on reform can mean that a value is attached to horizontal inequities in impact independently of conventional measures of welfare aggregates.

Are horizontal inequalities likely to be quantitatively important in the welfare outcomes of growth-promoting policy reforms, including trade reforms? We know from development experience that many of the things that promote growth can have both winners and losers among

---

15 Peoples' subjective assessments of the fairness of the outcomes from economic transactions have been found to depend on a variety of factors including how much effort different people supplied as well as their initial income. For a survey of experimental evidence relevant to this point see Konow (2003).

16 A good overview of the issues and literature on welfare measurement can be found in Slesnick (1998).

the poor, and for other income groups. This arises from the heterogeneity in economic circumstances, such as differences in net trading positions in relevant markets for goods and factors. For example, some of the poor are net suppliers of food while others are net demanders, which means that changes in the relative price of food associated with trade reform benefit some but hurt others, with these diverse impacts found both vertically and horizontally in the distribution of income.[17] There can be heterogeneity in other dimensions of welfare at given incomes, such as associated with differences in access to publicly provided goods and services. Greater openness to external trade often increases the demand for skills that can be quite inequitably distributed in poor countries. Whether the poor gain relatively more than the non-poor from trade openness will depend crucially on antecedent inequalities in other dimensions, notably human capital.

Two examples illustrate the heterogeneity in impacts of trade reform. The first example relates to China's recent accession to the World Trade Organization (WTO). To provide a detailed picture of the welfare impacts of this trade reform, Chen and Ravallion (2004) use China's national rural and urban household surveys to measure and explain the welfare impacts of goods and factor price changes attributed to accession to the WTO. The price changes were estimated using a general equilibrium model to capture both direct and indirect effects of the initial tariff changes. The welfare impacts were estimated as first-order approximations of a money metric of utility, based on a household model incorporating own-production activities, calibrated to the household-level data imposing minimum aggregation. In the aggregate, Chen and Ravallion find a positive impact of WTO accession on mean household income, but virtually no change in aggregate inequality and slightly lower aggregate poverty in the short term as a

---

[17] See, for example, the results of Ravallion and van de Walle (1991) on the welfare effects of higher rice prices in Indonesia.

result of the reform.[18] (The estimated impact on the Gini index for example was so small as to be almost undetectable.) However, there is still a sizable, and at least partly explicable, variance in impacts across household characteristics at given income. Rural families tend to lose; urban households tend to gain. There are larger impacts in some parts of the country than others. For example, one finds non-negligible welfare losses among agricultural households in the northeast — a region in which rural households are more dependent on feed grain production (for which falling relative prices are expected from WTO accession) than elsewhere in China. Vertical differences in pre-intervention incomes accounted for virtually none of the measured welfare impact of this trade reform.

The second example comes from research on the likely impacts of agricultural trade reform in Morocco. Here the simulated trade reform entailed the de-protection of cereal producers, through substantial reductions in tariffs on imported cereals. As in the China study, the price changes were estimated using a general equilibrium model and the welfare impacts were estimated as first-order approximations of a money metric of utility using a household survey; details can be found in Ravallion and Lokshin (2004). In this case, the results suggested that the trade reform would increase overall consumption inequality in Morocco. However, this was entirely due to the reform's impact on horizontal inequality; indeed, the vertical component — the contribution of the inequality in gains conditional on income — was inequality reducing.

Simply averaging over such horizontal inequalities can miss a great deal of what matters to the debate on globalization, including social protection policies. Credible assessments of the likely welfare impacts (both horizontally and vertically) can clearly hold important implications for social protection (though it is probably little more than wishful thinking to imagine that full compensation is feasible, given the informational and incentive constraints on targeted

[18] The results are documented fully in Chen and Ravallion (2004).

policies.[19]) It is important for policy discussions to recognize that diverse welfare impacts can lie under the surface of average impact calculations.[20] In this light, claims made about the distributional impacts of trade or other reforms using cross-country regressions are of questionable relevance for policy in any specific country; such regressions can hide the heterogeneity in impacts within countries as well as between them.[21]

Like absolute inequality, horizontal inequality is a long-established inequality concept in the literature on inequality measurement, though its is a concept that has received less attention than vertical inequality in theoretical work.[22] Measures of horizontal inequality have typically been applied to studying tax reforms, though the idea can be adapted to a wider range of reforms and economic changes. (In the present context, the relevant horizontal inequalities are not confined to horizontal impacts that can be measured in monetary units.) Like absolute inequality, horizontal inequality has so far taken a back seat in studies by economists related to inequality and globalization.

None of this denies the importance of knowing the implications for aggregate poverty and inequality. That is surely the first-order issue in this context. If one follows the critics of globalization who focus solely on the losers among the poor then one risks derailing the prospects for poverty-reducing policy changes. At the same time, it must be recognized that to ignore the horizontal heterogeneity in impacts can give a seriously incomplete picture, and a narrow basis for policy.

---

19 For a fuller discussion of this point see van de Walle (1998).

20 Kanbur (2001) provides a nice illustration of this point in the context of assessments of Ghana's performance in reducing absolute poverty.

21 For further discussion of the concerns about cross-country regressions in this context see Ravallion (2001).

22 For an overview of the theory and references see Jenkins and Lambert (1999).

Interpersonal vs. inter-country inequality

Critics of globalization have been fond of pointing out that the disparity in average incomes found between rich and poor countries has been rising over time. Looking back over the last 100 years or so, initially poorer countries have tended to experience lower subsequent growth rates (Pritchett, 1997). Poor countries are not catching up with rich ones — indeed, it looks like the opposite has been happening. For example, an often quoted statistic is that the average income of the richest country in the world was about 10 times that of the poorest around the end of the nineteenth century but is closer to 60 times higher today. Furthermore, on top of this long run trend, income inequality between countries appears to have increased sharply since about 1980 (Milanovic, 2004).

Again the attribution problem is severe, and the contribution of globalization *per se* to this apparent increase in inequality between countries can be questioned.[23] But, continuing to put the attribution problem to one side, there is another important but often neglected question about how inequality should be measured. The measures most widely quoted in the globalization debate (including those in the previous paragraph) treat each country as one observation. The implicit value judgment here is that countries, not people, should get equal weight in assessing the fairness of the division of the gains from globalization.

An alternative concept is the between-country component of total interpersonal inequality.[24] Estimates of the decomposition of world inequality into between-country and within-country components have typically used population weights; see, for example, Schultz (1998), Bourguignon and Morrison (2002) and Sala-i-Martin (2002). By this alternative concept, all individuals at a given real income level should get equal weight in assessing between-country

---

[23] For further discussion see Williamson (1998) and O'Rourke (2002).

[24] For an overview of the theory of inequality decomposition see Cowell (2000).

inequality, no matter where they live. A person in China does not count less than a person in Chad at the same real income.

The choice between these concepts matters greatly to the message conveyed on how fairly the benefits of aggregate growth are being shared. If instead of weighting countries equally one uses population weights then the tendency for rising inequality between countries vanishes.[25] Indeed, with population weighting, there is instead evidence of a trend decline in the between-country component of inequality since roughly the mid-1970s, as can be seen in Figure 3, based on Milanovic (2004). In marked contrast to the series in which countries are weighted equally, the population-weighted series in Figure 3 suggests that inequality between countries is now the lowest it has been in half a century. The difference in the message conveyed by the two weighting schemes could hardly be less dramatic.

What arguments can be made for choosing between the two series in Figure 3 (aside from the desire of one side of the debate to prove its point)? When assessing how rich countries are doing relative to poor countries it seems natural to take the country as the unit of observation. Knowing that the income per capita of a rich country is 30 times greater (even at purchasing power parity) than a poor country has a salience for our comprehension of the extent of the disparities in the world. But does our assessment of that disparity depend in any obvious way on the population shares of the two counties?

The answer given in one strand of the economics literature is a clear "no." The practice of weighting countries equally is almost universally followed in the large macroeconomic literature on growth and distributional empirics. Weighting countries equally is a close cousin of

[25] There have been a number of recent estimates of the time series of global inequality, including Schultz (1998), Bourguignon and Morrison (2002), Sala-i-Martin (2002) and Milanovic (2004). The latter study is the most comprehensive in terms of the coverage of the underlying distributional data and so the following discussion will draw mainly on that study's results.

the method used to measure “sigma convergence” in the literature on growth empirics. The rise in between-country inequality over the last 20 years that is evident in Figure 3 when countries are weighted equally is indicative of what is called (un-conditional) divergence in the growth literature. Weighting countries equally makes sense in a regression that is being used to test theories about the causes of cross-country differences in growth rates (say). In that case, each country can be thought of as a draw from the universe of all the combinations of country policies, shocks, initial conditions and outcomes. In inferring what policies (say) are good for growth one would naturally weight countries equally. In the relatively rare occasions that the issue is addressed, an argument has been made for weighting countries equally is that policies are typically implemented at the country level, and countries do have borders and people do not move freely across them.[26] By this view, countries are the relevant unit of observation for comparing policies, and for drawing conclusions about what policies work best for reducing inequality between countries.

However, there is something troubling about comparing inequality among countries ignoring the (huge) differences in their populations — thus giving higher weight to people living in smaller countries. For purely descriptive purposes, one may not care about the population shares of the rich and poor countries in the above example. But weighting people unequally in such a seemingly arbitrary way is surely a hard value judgment to defend when, as is often the case, one is attaching normative significance to the evidence on between-country inequality as given in Figure 3. Arguably a person in poor county would care much less about inequality in the world as a whole if the rest of the world had the population of Luxembourg.

The practice of weighting countries equally when talking about inequality between-countries also implies a troubling inconsistencies in methodology. It is not clear why one would

---

[26] Milanovic (2004) makes this argument in favor of weighting countries equally.

be happy to use population weights when measuring inequality <u>within</u> countries, but not <u>between</u> them. Indeed, one would probably never question the need to weight by household size (or the number of adult equivalents) when calculating an inequality measure from a sample survey for a given country, and the same logic surely applies to the between-country component of total inequality. Weighting countries equally rather than people is also inconsistent with the way one would normally calculate the global mean income. A measure of inequality is a summary statistic of the information on how income is found to vary with the quantile (such as percentile) of the population ranked by income. One would probably not even think of using the un-weighted overall mean income, so why would one use un-weighted means at given percentiles of the distribution when measuring inequality?

Nor is it clear that the fact that policies are often implemented at country level is a compelling argument for weighting countries equally when assessing global inequality. For the sake of argument we can agree that policies are largely at country level. But it is surely the impacts of those policies on people that we care about. The lack of policy reform and growth in a small country surely cannot be deemed to cancel out the policy reforms that helped generate so much economic growth in China over the last 20 years or so. Yet that is what un-weighted inequality measures do.

China and India (the two most populous countries by far) naturally play an important role in the striking difference between the two series in Figure 3. The high rates of growth in China and (more recently) India since the mid-1980s have been a major inequality-reducing force between people in the world. Take these countries out of the population-weighted series and the decline in between-country inequality over the last two decades or so largely vanishes; the result is particularly sensitive to just one country, China.[27] At the same time, the last 10-20 years have also seen rising inequality within China and India. The growth processes in the two most populous countries have thus had two opposing effects on overall inequality in the world: a lower between-countries component combined with a higher within-countries component.

By the same token, assessments of how (population-weighted) inequality is changing between countries can be quite sensitive to errors in measuring the growth rates of China and India. While there are worries about the national accounts data in both countries (and many others), there are reasons to suspect biases in the long-run estimates of China's rate of growth, stemming in part from deficiencies in the underlying administrative data sources, particularly at local level. (The practice of setting obligatory growth rate targets for local governments has not helped!) China's National Bureau of Statistics has gone a long way toward correcting these problems, but it still appears likely that the long-run rate of growth in national income per capita has been overestimated by 1-2 percentage points (Maddison, 1998; Wang and Meng, 2001). The rate of decline in inequality evident in Figure 3 when people are weighted equally is almost certainly overstated.

The sensitivity of the population-weighted series to including the most populous countries cannot overturn the *a priori* argument in favor of consistently weighting people equally. However, that sensitivity does speak to the need to test robustness to measurement errors in the underlying data.

A somewhat deeper defense of the practice of weighting countries equally starts by rejecting the "individualistic" values implicit in population weighting. Individualism is deeply rooted in economics, to the point where some economists view it as a purely technical issue — a

[27] This has been noted by Schultz (1998), Sala-i-Martin (2002) and Milanovic (2004).

matter of what is "right" and "wrong."[28] However, individualism <u>is</u> a value judgment and so it is a matter that intelligent people can disagree on. Population weights can be questioned in all circumstances in which group memberships have welfare significance independently of incomes. This can happen in a variety of ways. For example, the local political jurisdiction of residence can matter to one's access to local public goods. Group membership can also matter to one's ability to insure against income risk or smooth consumption. Social norms of behavior are also formed in groups, and can influence welfare in important ways.[29]

Indeed, there are ample precedents for attaching significance to geographic identity. The constitutions of a number of federations (including Australia and the U.S.) give states political representation in the upper houses of parliament, independently of their population sizes. Those living in smaller states thus get higher weight. Similarly, it is "one country-one-vote" at the United Nations and many other international organizations.

What is not so clear is how persuasive such arguments are for weighting countries equally rather than people in the present context. Yes, one can question the application of income individualism to assessing inequality. However, it would seem hard to imagine that this type of argument would justify weighting countries equally. That surely goes too far in the other direction. Possibly some sort of hybrid weighting scheme is called for, depending on the weight on country identity in individual welfare.

Here again the implicit values in empirical work matter greatly to the assessment one is drawn to make about the distributive justice of current globalization processes. And arguments

---

[28] For example, one economist has argued that weighting countries equally is a "mistake that delivers a very misleading picture and one is led to conclude (wrongly) that there has been 'divergence big time'" (Sala-i-Martin, 2002, p.25-26; in the last phrase he quotes the title of Pritchett, 1997).

[29] For a model of economic behavior incorporating group identities see Akerlof and Kranton (2000). Kanbur (2003) questions individualism in the context of a critique of the policy significance often attached to inequality decompositions.

can be made both ways. Yet the issue of whether one weights countries or people equally is rarely given attention in the debate on globalization and inequality.

Conclusions

Both sides of the globalization debate often use the term "inequality" as though we all agree on exactly what that means. But we almost certainly don't all agree. And that could well be the nub of the matter. This paper has demonstrated that the factual claims one hears about what is happening to inequality in the world depend critically on the position one takes on various methodological issues. The paper has highlighted three such issues: whether one focuses on relative inequality or absolute inequality; what weight one attaches to horizontal inequalities; and whether one weights people equally or countries equally when assessing what is happening to global inequality.

Forming defensible value judgments on each of these issues is hardly straightforward, and the paper has illustrated that arguments can be made both ways. Readers should form their own judgments as to what side they take on each of these issues. But this discussion points to some conclusions. On the first issue, both sides of the globalization debate need to be clearer about whether they mean absolute or relative inequality and to recognize that the other side may not share their concept. Relative inequality will no doubt stay as the main concept used in most empirical work. But greater attention to absolute inequality would help inform important debates about development, including globalization. On the second issue, while knowing what is happening to aggregate inequality and poverty is clearly of first-order importance, horizontal inequalities need to get more attention than they typically do in assessments of the welfare impacts of policy reforms. On the third issue, the still common practice of weighting countries equally runs against the individualism that is favored in much of economics, though there are also reasons for questioning whether weighting people equally (no matter where they live) is the best approach given that country identity can matter to welfare.

Specialists on inequality measurement are aware of the bearing these issues can have on the measures obtained, though one can question whether these issues have received the critical attention they merit from specialists. However, contributions to the globalization debate — including both academic and popular contributions — have rarely acknowledged these issues. Most readers of the popular press and the web sites reporting on this topic do not see the embedded value judgments in the facts presented to them. It is unlikely that most protagonists in this debate are deliberately duping the public; indeed, there appears to be a sizeable common ground of values. Hopefully then the debate can move on to address more directly the competing concepts of inequality that lie at the heart of the matter.

Figure 1: Relative inequality and growth in mean household income per capita

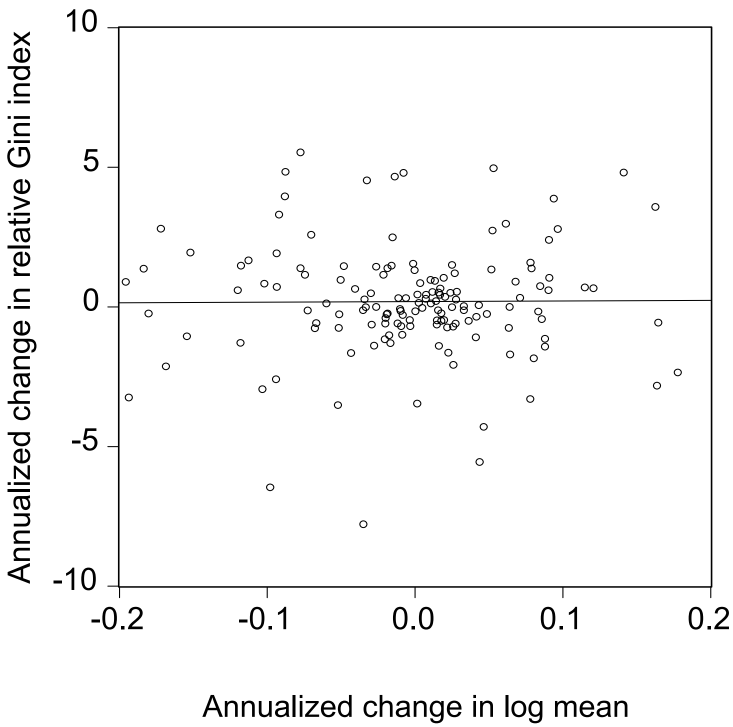
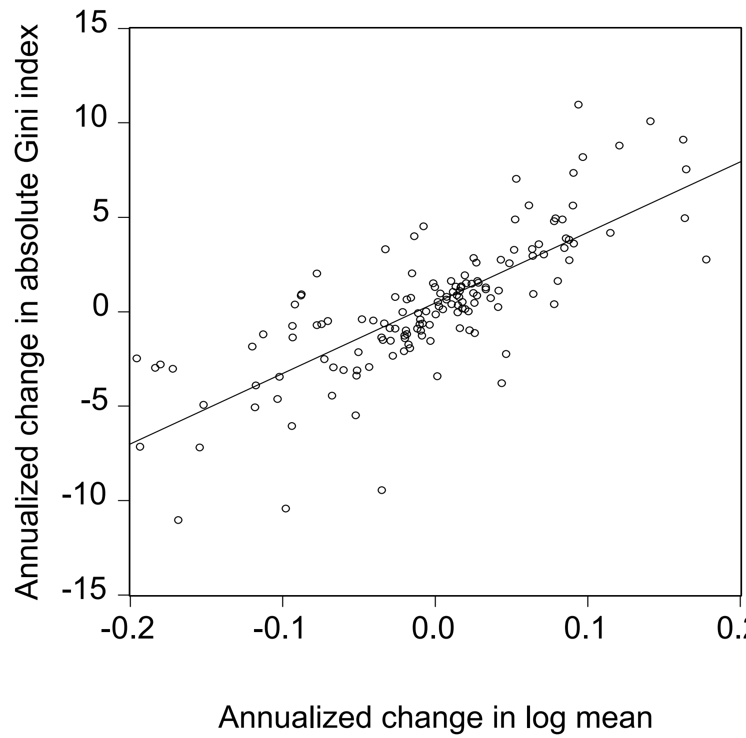
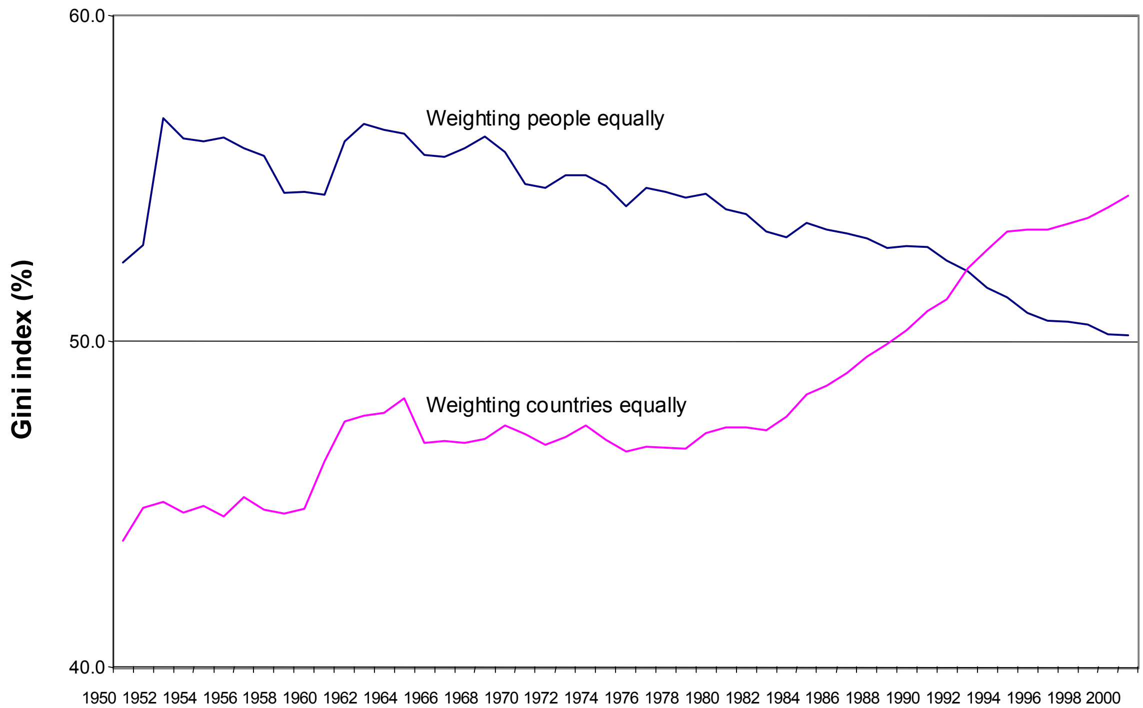


Figure 2: Absolute inequality and growth in mean household income per capita



Source: Author's calculations from the World Bank's Global Poverty Monitoring data base at http://www.worldbank.org/research/povmonitor/

Figure 3: Gini indices of GDP per capita across countries under alternative weighting schemes



Source: Milanovic (2004)

References

Akerlof, George and Rachel Kranton, 2000, "Economics and Identity," *Quarterly Journal of Economics*, Vol. 115(3), pp. 715-53.

Amiel, Yoram and Frank Cowell, 1999, *Thinking about Inequality: Personal Judgment and Income Distributions*, Cambridge: Cambridge University Press.

Atkinson, Anthony B., 1970, "On the Measurement of Inequality," *Journal of Economic Theory*, Vol. 2, pp. 244-263.

Barro, Robert, 2000, "Inequality and Growth in a Panel of Countries," *Journal of Economic Growth* Vo. 5, pp. 5-32.

Basu, Kaushik, 2003, "Globalization and the Politics of International Finance: The Stiglitz Verdict," *Journal of Economic Literature*, Vol. 41, pp. 885-899.

Bossert, W. and A. Pfingsten, 1990, "Intermediate Inequality: Concepts, Indices and Welfare Implications," *Mathematical Social Sciences* Vol. 19, 1990, pp.117-134.

Bourguignon, Francois and Christian Morrison, 2002, "Inequality Among World Citizens: 1820-1992," *American Economic Review*, Vol.92(4), pp. 727-744.

Bruno, Michael, Martin Ravallion and Lyn Squire, 1998, "Equity and Growth in Developing Countries: Old and New Perspectives on the Policy Issues," in Vito Tanzi and Ke-young Chu (eds) *Income Distribution and High-Quality Growth*, Cambridge, Mass: MIT Press.

Chen, Shaohua and Martin Ravallion, 2004, "Household Welfare Impacts of WTO Accession in China", *World Bank Economic Review*, in press.

Cowell, Frank, 2000, "Measurement of Inequality," in A.B. Atkinson and F. Bourguignon (eds) *Handbook of Income Distribution*, Amsterdam: North-Holland.

Dasgupta, Partha, 2003, "What Do Economists Analyze: Values or Facts?," Paper presented at the conference, *The Place of Value in a World of Facts*, London School of Economics.

Dollar, David and Aart Kraay, 2002, "Growth <u>is</u> Good for the Poor," *Journal of Economic Growth*, Vol.7(3), pp. 195-225.

Fields, Gary S., 2001, *Distribution and Development*. New York: Russell Sage.

International Forum on Globalization, 2002, *Alternatives to Economic Globalization: A Better World is Possible*, San Francisco: Berrett-Koehler.

Jenkins, Stephen P., and Peter J. Lambert, 1999, "Horizontal Inequality Measurement: A Basic Reassessment," in Jacques Silber (ed), *Handbook of Income Inequality Measurement*, Boston, Kluwer Academic Publishers.

Kanbur, Ravi, 2001, “Economic Policy, Distribution and Poverty: The Nature of Disagreements,” *World Development*, Vol. 29(6), pp. 1083-1094.

__________, 2003, “The Policy Significance of Inequality Decompositions,” mimeo, Cornell University.

Kolm, Serge, 1976, “Unequal Inequalities I,” *Journal of Economic Theory* Vol. 12, pp. 416-442.

Konow, James, 2003, “Which is the Fairest One of All? A Positive Analysis of Justice Theories,” *Journal of Economic Literature*, Vol. 41, pp. 1188-1239.

Lundberg, Mattias and Lyn Squire, 2003. “The Simultaneous Evolution of Growth and Inequality,” *The Economic Journal*, Vol. 113, pp. 326-344.

Maddison, Angus, 1998, *Chinese Economic Performance in the Long Run*, Paris: OECD.

Milanovic, Branko, 2004, *Worlds Apart: Global and International Inequality 1950-2000*, Princeton University Press, forthcoming.

O’Rourke, Kevin, 2002, “Globalization and Inequality: Historical Trends,” *Aussenwirtschaft,* Vol. 57 (1), pp 65-101.

Pigou, A.C., 1949, *A Study in Public Finance*, Third Edition, London: Macmillan.

Pritchett, Lant, 1997, “Divergence, Big Time,” *Journal of Economic Perspectives*, Vol. 11(3), pp. 3-17.

Putnam, Hilary, 2002, *The Collapse of the Fact/Value Dichotomy*, Cambridge: Harvard University Press.

Ravallion, Martin, 1996, “Issues in Measuring and Modeling Poverty,” *Economic Journal*, Vol. 106, September 1996, pp. 1328-44.

______________, 2001, “Growth, Inequality and Poverty: Looking Beyond Averages,” *World Development* Vol. 29(11), pp. 1803-1815.

______________, 2003, “The Debate on Globalization, Poverty and Inequality: Why Measurement Matters,” *International Affairs*, Vol. 79(4), pp. 739-754.

______________, 2004, “Pro-Poor Growth: A Primer,” Policy Research Working Paper, World Bank.

Ravallion, Martin and Shaohua Chen, 1997, "What Can New Survey Data Tell Us about Recent Changes in Distribution and Poverty?," *World Bank Economic Review*, 11(2): 357-82.

Ravallion, Martin and Michael Lokshin, 2004, "Gainers and Losers from Agricultural Trade Reform in Morocco," Policy Research Working Paper, World Bank.

Ravallion, Martin and Dominique van de Walle, 1991, "The impact on poverty of food pricing reforms: A welfare analysis for Indonesia," *Journal of Policy Modeling* 13:281-299.

Sala-i-Martin, Xavier, 2002, "The Disturbing 'Rise' of Global Income Inequality," NBER Working Paper 8904.

Schultz, T. Paul, 1998, "Inequality in the Distribution of Personal Income in the World: Changing and Why." *Journal of Population Economics*, Vol. 11(3), pp. 307-344.

Slesnick, Daniel T., 1998, "Empirical Approaches to the Measurement of Welfare,' *Journal of Economic Literature*, 36(4), 2108-65.

van de Walle, Dominique, 1998, "Targeting Revisited", *The World Bank Research Observer,* Vol. 13(2), pp. 231–48.

Wang, Xiaolu and Lian Meng, 2001, "A Reevaluation of China's Economic Growth," *China Economic Review*, Vol. 12(4), pp. 338-346.

Williamson, Jeffrey G., 1998, "Globalization and the Labor Market: Using History to Inform Policy," in Philippe Aghion and Jeffrey Williamson (eds) *Growth, Inequality and Globalization*, Cambridge: Cambridge University Press.

World Bank, 2000, *World Development Report: Attacking Poverty*, New York: Oxford University Press.