We consider the evolution of international income inequality over the period 1975-2000. As data we use population-weighted per capita GDPs of 108 countries. We pay special attention to the question of how sensitive conclusions are with respect to the choice of inequality measure.

Obviously, different inequality measures disagree on how to compare income distributions. First, inequality measures disagree on how to compare distributions with the same mean. For instance, different measures attach different importance to transfers at the bottom of the distribution relative to transfers at the top. Second, inequality measures disagree on how comparisons of distributions with equal means should be extended to comparisons of distributions with different means. Relative measures remain invariant if everyone’s income is increased in the same proportion, whereas absolute measures remain invariant if the same amount is added to everyone’s income. Positions intermediate between the two extremes of absoluteness and relativeness have been considered as well (see, e.g., Bossert and Pfingsten, 1990).

In our analysis, we take serious the fact that inequality can be defined in many different ways. This fact has been largely neglected in studies on the evolution of international inequality (a noteworthy exception is Atkinson and Brandolini, 2004). Many papers on the topic use just a small number of inequality measures, and usually only relative ones (Milanovic, 2005, surveys the literature).

An important characteristic of the data set is that world GDP has increased substantially through time. Independent of the actual distribution, we have the following theoretical implication: roughly speaking, inequality measures that are closer to being absolute tend to indicate an increase in inequality if total income increases, whereas inequality measures that are closer to being
relative tend to indicate a decrease. This makes the question of whether the inequality measures that are used are absolute, intermediate, or relative of utmost importance.

The empirical results are in line with the theoretical discussion. We find that the income distributions of later years in our data are absolute Lorenz dominated by those in earlier years. This means that all absolute inequality measures indicate an increase in international inequality. On the other hand, we do not find relative Lorenz dominance between any two years in our sample—i.e., for any two years, it is possible to find two relative measures that disagree. We also consider how far one can go in the direction of relativeness while still obtaining (intermediate) Lorenz dominance: our conclusion is that one can go rather far. In other words, once one deviates from the relative inequality view, the most obvious conclusion is that international inequality has increased during the considered period. Finally, we also consider results for, among others, the classes of generalized entropy measures and S-Gini measures (for both, absolute, relative, and intermediate cases).

The research is work in progress. One likely addition for the near future is to introduce within-country inequality in the analysis.

References

