

Inequality and Globalization: A Review Essay

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As normally measured, “global inequality” is the relative inequality of incomes found among all people in the world no matter where they live. Francois Bourguignon and Branko Milanovic have written insightful and timely books on global inequality, emphasizing the role of globalization. The books are complementary; Milanovic provides an ambitious broad-brush picture, with some intriguing hypotheses on the processes at work; Bourguignon provides a deep and suitably qualified, economic analysis. The paper questions the thesis of both books that globalization has been a major driving force of inequality between or within countries. The paper also questions the robustness of the evidence for declining global inequality, and notes some conceptual limitations of standard measures in capturing the concerns of many observers in the ongoing debates about globalization and the policy responses.

1. **Introduction**

Income inequality is in the news, and a policy concern in many countries. Two new volumes by two leading scholars on inequality, Francois Bourguignon (2016) and Branko Milanovic (2016), are thus welcome. While both authors are economists who have contributed at the frontiers of knowledge, each has written for a broad audience. Non-economists will have little trouble following the arguments. Economists will also appreciate the many subtleties of the subject that the authors manage to convey in accessible terms. The books are timely—even more so now than when they were written.

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The Bourguignon volume provides a concise introduction to the economics of inequality. The book's strengths are its clear exposition of the economic forces impacting the global distribution of income and its policy analysis. The strengths of the Milanovic volume are its descriptions of how distribution has changed and its thought-provoking interpretations of the political and economic forces at work.

The books provide measures of global income inequality (hereafter “global inequality”), often drawing on the authors' own data work. But the bulk of their effort is in trying to explain what they see in the data. They bring perspectives from both macroeconomics (notably on sources of growth within countries) and microeconomics (why some households are better able to participate in that growth), as well as from history and the history of thought. Both knowledgably span the world, from poor to rich countries—as is appropriate for books on global inequality. Bourguignon draws more completely on the theories and evidence found in modern economic writings on the subject. Milanovic takes a somewhat more idiosyncratic approach, grounded in his own interpretations of the evidence he assembles. (I expect that Milanovic's style sells more copies.) They broadly agree on the evidence. Bourguignon probes more deeply in trying to understand that evidence as an economist. Both authors sprinkle their text with their own opinions, though Bourguignon provides a clearer idea of what they are based on.

The essay begins with an overview of what these books tell us about the trends in global inequality. It then critically examines what they say about the causative factors and policy responses. Finally, comments are offered on some broader concerns, applicable to much of the literature on global inequality.

2. *The evidence on global inequality*

The historical patterns identified in both books can be summarized as follows. Looking back over 200 years, one finds that global inequality—defined as the relative inequality of incomes among all peoples of the world ignoring where they live—was on a rising trend from

1820 to about 1990.² This long period of rising inequality was driven in the main by the divergent growth processes, with today's rich world taking off economically from the early C19th (though with some late starters such as Japan). Average inequality within countries was stagnant or even falling over much of this period, most notably over the middle half century of the C20th—known as the Great Levelling in the rich world.

This pattern changed dramatically toward the end of the C20th with an overall pattern of falling inequality between countries alongside rising average inequality within countries. This new pattern in the evolution of global inequality is the main focus of both books. Figure 1 shows the series of global inequality measures provided by Bourguignon, using a Theil index.³ We see the fall in global inequality, markedly so in the new Millennium. This has been driven by a decline in inequality between countries, which accounts for the bulk of total inequality. Average inequality within countries (population-weighted) has edged upwards since 2000.⁴

There are numerous data issues underlying Figure 1, related to household surveys, price indices, census data and the role played by national accounts. Neither book goes into much detail on these issues, though Chapter 1 of each book provides a brief summary of how their estimates for global inequality were derived.⁵ Nor will this essay focus on data issues. But I flag only one issue that should be kept in mind. Along with both authors, I suspect that the within-country component in Figure 1 is being underestimated. There are a number of reasons. Selective compliance in surveys is a concern almost everywhere; in particular, it is plausible that the rich

² The series on inequality back to 1820 draws on an important paper by Bourguignon and Morrisson (2002), which combined Maddison's (1995) estimates of national income with historical distributional data. Naturally, the reliability of all these data sources becomes more questionable the further back one goes. The Bourguignon and Morrisson series ended in 1992, prior to the recent change in the trajectory for global inequality (discussed below).

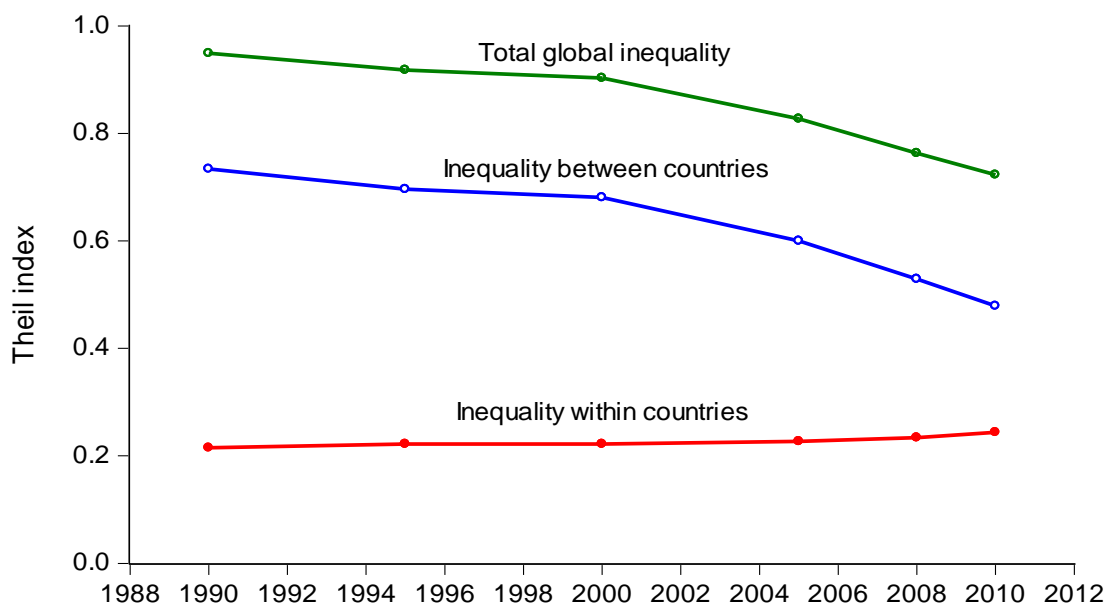
³ The country data underlying these aggregate statistics come from national household surveys that included income or consumption. The data for developing countries come mainly from the World Bank's *PovcalNet* site. The data for developed countries come from the OECD and the Luxembourg Income Study. Anand and Segal (2008) provide a good overview of the data and measurement issues and of the (often inconsistent) estimates of global inequality in past literature, mostly prior to the work presented in the two books under review here. Other evidence on the new pattern of changes in global inequality can be found in Nino-Zarazay et al. (2014) and Ravallion (2014, 2016a, Chapter 5). All the sources I know are consistent with the trends discussed here.

⁴ For the Theil index, unlike the more popular Gini index, the two add up exactly to total inequality.

⁵ Fuller discussions of these issues can be found in Anand and Segal (2008) and Ravallion (2016a, Chapters 3-5).

are less likely to participate in household surveys. The bias could well be large: Korinek et al. (2006) estimate that correcting for such selective compliance adds about five percentage points to the Gini index for the U.S. There are also concerns about under-reporting of incomes, especially income from capital. Estimates using income tax records have indicated larger “high-end” incomes than found in surveys (Atkinson et al., 2011). It is likely that the true level of within-country inequality is higher than currently measured. It is less clear how much these measurement errors matter to the trend, but my own expectation is that inequality within countries is rising more than the data in Figure 1 suggest, on the presumption that many newly affluent respondents are reticent to fully reveal their gains or even to participate in surveys.

Figure 1: Global inequality and its between- and within-country components

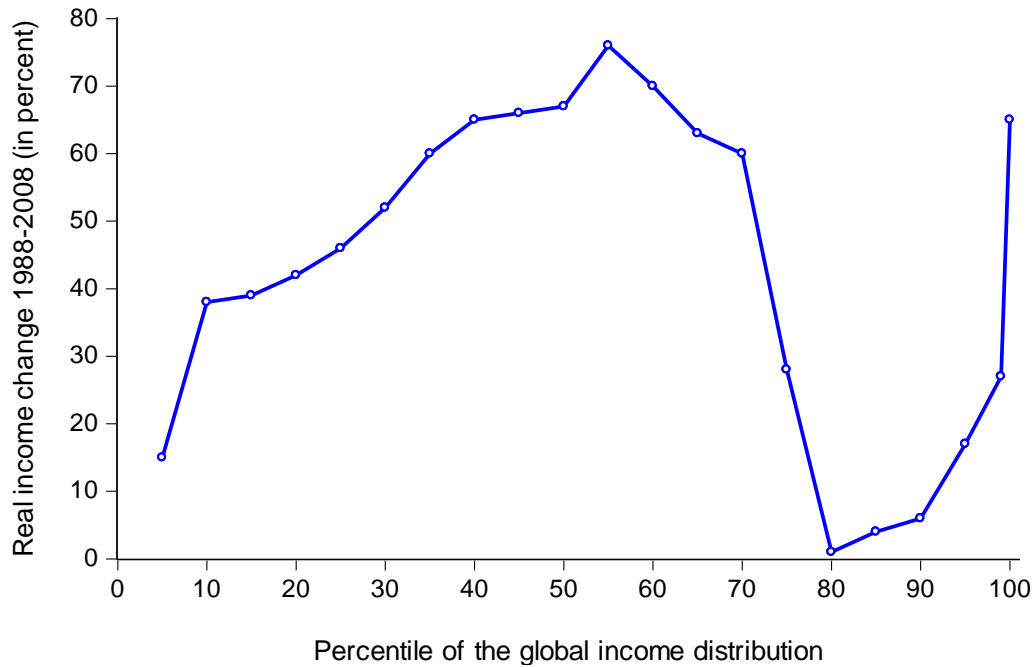


Source: Bourguignon (2016, Table 1).

The aggregate summary statistics in Figure 1 do not reveal much about how income changes were distributed across the population. Milanovic starts out with a more informative tool for describing the evolution of income distribution in the world, using a graph from Lakner and Milanovic (2016a) which plots the proportionate gain in income over 1988-2008 against fractiles of the income distribution, as reproduced in Figure 2. This is a version of a “growth incidence curve” (GIC), as defined in formal terms for continuous distributions by Ravallion and Chen

(2003) who discuss the curve’s properties.⁶ The methodology used to construct the GIC in Figure 2 is explained in Lakner and Milanovic (2016a).

Figure 2: The elephant graph of Lakner and Milanovic



Source: Milanovic (2016, Figure 1.1), drawing on Lakner and Milanovic (2016a).

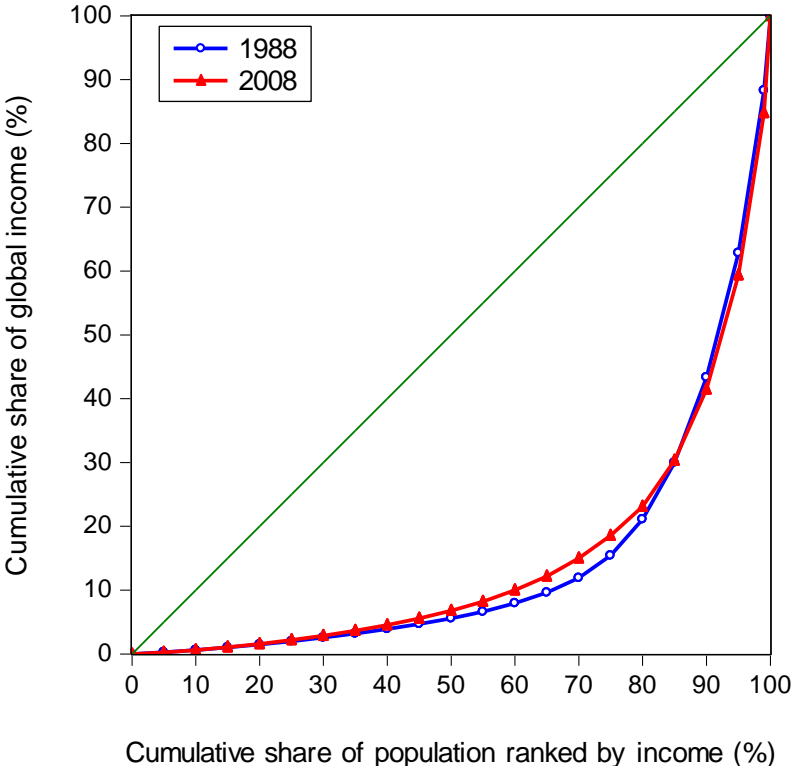
The Lakner-Milanovic graph has been dubbed the “elephant chart” since it traces the shape of an elephant’s head with its trunk held high. Readers who are used to hearing about rising inequality in the rich world will see that feature in the graph; strikingly, between the 80th percentile (from the bottom) and the top 1% globally we see a steeply positive curve (the elephant’s raised trunk), rising from near zero growth to over a 60% gain for the top percentile. But readers also see something as striking—the marked proportionate rise in incomes for those

⁶ Note that the version of the GIC in Lakner and Milanovic gives growth rates for ventiles (with the top 1% separated out) rather than percentiles. This smooths their curve. The percentile version can be found in Corlett (2016). This shows negative growth rates among the poorest and in a neighborhood of the 80th percentile. These have been averaged out in the Lakner and Milanovic version, as also used in Milanovic (2016). The negative values at the bottom probably reflect compositional effects, given that the set of countries is not held fixed. This is consistent with the fact that the “quasi-non-anonymous” GIC in Lakner and Milanovic (2016, Figure 5) does not show any negative growth rates.

near the middle of the global distribution (the elephant’s massive and expanding head). This came with considerably slower growth for the poorest.

As Lakner and Milanovic note, the Lorenz curves intersect internally, as can be seen in Figure 3. While the overall Gini index fell (from 72% to 71%) this came with a marked inward shift of the Lorenz curve between the 30th and 80th percentiles but an outward shift among the top decile and a declining share for the poorest 5%.

Figure 3: Lorenz curves for global income 1988 and 2008



Source: Based on estimates in Lakner and Milanovic (2016a).

So rather than suggesting a decline in global inequality, this is actually quite an ambiguous picture of distributional change. Given that there is not Lorenz dominance, the claim that global inequality is falling is not robust to the choice of index; some valid inequality measures (such as the Gini index and the Theil index, as in Figure 1) can show a decrease while

other equally valid measures do not.⁷ With sufficiently strong aversion to inequality one would declare that global inequality has in fact risen. Consider for example the Atkinson (1970) index, which has a parameter ε reflecting the aversion to inequality; a higher value of ε implies that one is willing to incur a greater loss when transferring money from the rich to the poor (i.e., a lower share actually reaching the poor) and yet still judge that social welfare has increased.⁸ I calculate that the Atkinson index of global inequality has fallen over 1988-2008 for $\varepsilon \leq 4$ but that inequality has risen for $\varepsilon = 5$ or 6.⁹ The upshot of these observations is that with sufficiently strong aversion to inequality, one will judge that global inequality has risen over this period.

Nonetheless, the fact that growth is positive for such a large segment of the population is good news from the point of view of absolute poverty. For example, Ravallion and Chen (2013) find that the proportion of the world's population living in absolute poverty fell from 36% in 1990 to 19% in 2008. Over this period, Chen and Ravallion (2013) find first-order dominance up to the U.S. poverty line, implying declining poverty measures for the developing world over all reasonable poverty lines and a broad class of poverty measures.¹⁰ However, there has been much less progress in reducing relative poverty, as judged by poverty lines typical of each country given its average income (Chen and Ravallion, 2013). And there has been much less progress for the world's poorest who can reasonably be said to have been "left behind" (Ravallion, 2016b).

⁷ This statement applies a well-known result from Atkinson (1970); the key property for a valid measure is the Pigou-Dalton transfer principle. Lakner and Milanovic (2015) note that the Lorenz curves for 1988 and 2008 intersect, but they do not note the implication for non-robustness of the ordinal inequality comparison.

⁸ The Atkinson index can be written as $1 - \left(\sum_i w_i \left(\frac{y_i}{\bar{y}} \right)^{1-\varepsilon} \right)^{1/(1-\varepsilon)}$ where y_i is the income of person i with population

weight w_i (summing to unity), while the overall mean is \bar{y} and where $\varepsilon > 1$ is the inequality-aversion parameter.

⁹ Lakner and Milanovic (2016a) provide estimates of the Atkinson index for $\varepsilon \leq 2$, showing falling global inequality, but not higher values of ε ? My calculations used the Lakner-Milanovic estimates of mean incomes for 21 fractiles (allowing for the uneven weights at the top) rather than more disaggregated data. However, the loss of accuracy appears to be small as my estimates of the Atkinson index for $\varepsilon = 2$ are very close to those reported by Lakner and Milanovic (2015).

¹⁰ This uses a result proved in Atkinson (1987). Note that first-order dominance is not implied by the Lakner-Milanovic GIC (Figure 2). However, this reflects the fact that the set of countries is not fixed; when one holds countries constant one obtains positive growth rates at all percentiles in their data set (Lakner and Milanovic, 2016, Figure 5).

3. *Interpreting the evidence*

Two aspects of the evolution of global inequality (as summarized above) attract the bulk of the attention in these books: rising inequality within some countries of the rich world, and the falling between-country component of global inequality. The books differ in how they go about explaining these features. Bourguignon's approach is grounded in neoclassical economics, though with plenty of real-world features such as market failures and poverty traps. This allows him to provide a quite comprehensive accounting of the forces likely to be at work, though often pointing to the uncertainties and ambiguities so familiar in careful economic analysis with limited data. Milanovic uses ideas from a wide range of schools of economic and political thought and he is more opinionated and bold, all of which allows him to put forward some intriguing hypotheses about why we have seen these patterns; we do not always come away confident that he is right, but his views are definitely interesting.

Globalization: In this context "globalization" is primarily about greater economic integration across countries, which mainly means greater openness to external trade and greater mobility of financial capital.¹¹ In both books, the present period of globalization is essentially seen as the joint cause of both falling inequality between countries and rising inequality within countries. The two (opposing) effects are thus linked. So far at least, the inequality-decreasing, between-country, effect of globalization has dominated. Much of the rest of this article will try to assess the case for agreeing with this thesis on the link between globalization and inequality.

In arguing that global economic integration has been the major force in the evolution of inequality between and within countries both authors are in agreement with much popular opinion today, though one hears very different views on whether it is a good thing or not. Rich-world critics of globalization claim that it has destroyed jobs at home and led to stagnant or falling living standards for all except the wealthy, who have the (financial and human) capital to benefit. Supporters point to, among other things, the gains to the developing world's poor, including from the jobs created.

¹¹ The word "globalization" has taken on some other means, including (for example) cultural globalization, such as the global diffusion of American entertainment and cuisine.

The elephant graph suggests that there might be truth on both sides. Milanovic introduces this graph at the beginning of his Chapter 1 to illustrate that “The gains from globalization are not evenly distributed” (p.10).¹² To his eyes the graph shows how the rich world’s lower-middle class has seen little or no gain from globalization—these are the people (he claims) living around the 80th percentile of Figure 2, with near zero gain over the period.¹³ By contrast, the poor and middle-class of the developing world have seen substantial gains. The largest percentage gain in the elephant graph is close to the global median.¹⁴ In Milanovic’s interpretation, the emerging middle class in the developing world have been the big gainers from globalization, while the losers were the (relatively) poor and middle class within the rich world.

The elephant chart attracted considerable popular attention in traditional and social media.¹⁵ It has been seen by some as an explanation for both the Brexit vote in the U.K. and the outcome of the U.S. presidential election in 2016. One observer described it as “the most powerful chart of the last decade.”¹⁶ The link with globalization has seemed obvious, though Kawa (2016) drove the point home by calling Figure 2 the “globalization elephant chart.” In a nutshell, the popular argument is that global economic integration has shifted relatively low-skilled jobs from the rich world (driving up its contribution to the within-country component of global inequality) to labor-abundant low-wage countries (driving down the between-country component of global inequality).

While both authors recognize that other things were changing in the world over this period, both remain confident that globalization has been the main driving force. It is not clear

¹² In response to the critic by Corlett (2016), Lakner and Milanovic (2016b, p.3) say that they do not subscribe to the “monocausal explanation” of their elephant graph as being due to globalization. Lakner and Milanovic (2016a) actually say very little about globalization. However, that is not true of Milanovic (2016) in which the headlines and the bulk of the interpretation of the elephant graph is very close to monocausal.

¹³ With reference to those near the 80th percentile, Milanovic (p.19) claims that “almost all (are) from the rich economies of the OECD.” In his [book talk](#) he goes further to label the low point around the 80th percentile the “U.S. lower middle class.”

¹⁴ This illustrates the limitations of focusing on the median as the key distributional statistic, as advocated by Birdsall and Meyer (2015). The growth rate of the global median is hardly representative of the results in Figure 2; it is especially deceptive about how incomes of the poorest have evolved. The literature on poverty measurement has taken a different approach in measuring economic growth, accounting for distribution (Ravallion and Chen, 2003).

¹⁵ See for example this [article](#) in *The Economist* magazine.

¹⁶ This was a tweet by Toby Nangle in April 2016.

that their confidence is well founded. Milanovic's interpretation of the elephant graph as reflecting the incidence of the gains from globalization can be questioned. The changes in this period include the collapse of the former Soviet Union, and the long period of stagnation in Japan, neither of which can reasonably be attributed to globalization. Corlett (2016) finds that the dip to near-zero growth around the 80th percentile in Figure 2 vanishes if one takes out Japan and the former Soviet Union.¹⁷ Other changes have been covariate across regions and countries. Technical innovations—interacting with inequalities of education—have brought gains to skilled workers and owners of capital, and this is true in both developed and developing countries. There have also been significant institutional changes, including deregulation (notably, but not only, in the finance sector), labor-market liberalization, less progressive income taxes and less generous welfare benefits in some rich countries.

It might be argued that many of these other factors impacting inequality stem indirectly from globalizing forces, and something like this is suggested in places by both authors. Both see the forces of technology, openness and policy as interdependent. However, I think the scope for independent policy making is being understated. It can be granted that capital mobility constrains the ability of a single country to tax capital, and this includes human capital. And to some degree technical change is induced by global competition through trade. But there still appears to be ample scope for technologies to diffuse without deeper economic integration. And there is also ample scope for countries to help their poor and middle class through education policies and broad-based social protection. The shift away from such domestic policies roughly alongside globalization in some countries may be more plausibly due to common causative political factors with some cross-country covariance in the rich world. One might call this an aspect of “globalization” but that is surely a stretch. Political ideas can flow across borders without economic integration.

If we agree with both authors (and much popular opinion) that globalization has been the main driving force of global inequality then we can expect that a slowing of global trade (as is

¹⁷ Lakner and Milanovic (2016b) reply to Corlett (2016), though they do not take issue with the claims by Corlett referred to here. Also see the comments in Freund (2016), who also questions Milanovic's interpretation of the elephant graph, drawing in large part on Corlett's work.

happening now), and even a retreat, will slow the process of falling inequality between countries, and even reverse it, and slow the rise of inequality in much of the rich world. However, there are reasons to doubt how much the evolution of global inequality has been driven by globalization. Some of the other economic and political forces in play could well assure continuing global convergence, and put continuing upward pressure on inequality in many countries.

To explore this issue further it is useful to un-pack global inequality into its between-country and within-country components. I consider these in turn.

Inequality between countries: Both authors point to the importance of economic growth in initially poor countries to the pattern of falling inequality between countries. The higher growth rates seen in the developing world have clearly been an important driving force in the changes we see in Figures 1-3. China was, of course, a major contributor to the size of the elephant's head in the Lakner-Milanovic graph (Figure 2).¹⁸ But since 2000 all regions of the developing world have seen most of their economies growing at appreciably higher rates. Bourguignon's book will be more helpful to readers keen to learn how this has been achieved and how it might continue, including on the role for external aid, trade restrictions by rich countries and liberalization within poor countries. Looking ahead, Bourguignon sees good prospects for the middle-income countries but sees more uncertainty facing low-income countries, now concentrated in Sub-Saharan Africa, given their dependence on primary commodity exports.

My reading of the literature on the empirical determinants of economic growth at country level does not give me confidence that trade openness has been as an important driving force as the authors suggest. A reasonable summary of the evidence would probably be that trade has helped promote growth and poverty reduction in the developing world as a whole, but that is only one of a number of relevant factors, which include aspects of the initial distribution of income and human development.¹⁹ "Trade openness" (usually measured by exports plus imports

¹⁸ See Rosnick (2016) who removes China from the GIC of Lakner and Milanovic (2016a); the elephant is still there, but with some 30% points knocked off its head!

¹⁹ Contributions include Dollar and Kraay (2004), Lundberg and Squire (2003) and Berg et al. (2012). For overviews of the arguments and evidence, focusing on developing countries, see Ravallion (2006, 2016b, Chapter 9).

as a share of GDP) is often a significant predictor of growth rates in published studies but not always, depending on (amongst other things) what other predictors are included.²⁰ Of course, assessments using cross-country regressions are not typically population-weighted, while that is the case for the within-country component of global inequality (such as plotted in Figure 1). External trade has clearly played an important role in China's growth, though here too there are other factors in play, including many domestic policy reforms in the transition to a market economy including the promotion of internal trade.

Inequality within countries: When we see similar things happening across multiple countries it is very tempting to look for a global answer. But similar things are not happening everywhere, as both authors know. There is heterogeneity across countries and over time in the changes in the aggregate statistics for within-country inequality in Figure 1. Inequality has been rising in a majority of countries in the rich world, but not everywhere. Bourguignon points to the example of France, which has avoided the marked upward trend in inequality seen elsewhere since the 1980s. France is not alone among the OECD countries; depending on the time period (and that can matter a lot), one also finds falling inequality in (for example) Belgium, Greece, Hungary and Spain.²¹ There appears to have been even more heterogeneity within the developing world. Indeed, during periods of economic growth we have seen falling inequality within countries about as often as we have seen rising inequality (Ravallion, 2014). Granted, the developing countries with a trend increase in inequality over the last 20 years or so include the two most populous, China and India, which are clearly putting upward pressure on the (population-weighted) within-country component of global inequality, such as in Figure 1—as well as bringing down the between-country component. But any idea of a common global force of economic integration driving up inequality everywhere can be readily dismissed. Inequality appears to fall in some countries when they are opened to trade and increases in others. And there are clearly many other forces in play. There is more to the story.

²⁰ Trade openness does not emerge as one of the robust predictors of growth in the meta-study of growth regressions by Sala-I-Martin et al. (2004).

²¹ Evidence on the changes over time in inequality in the OECD countries can be found in OECD (2011). Also see Morelli et al. (2014) and Freund (2016). Note that inequality comparisons over time can depend on the measures used and specific time periods.

One possible place to look for clues is the literature on growth and inequality in developing countries. Here much attention has been given to the “inverted U” hypothesis of Kuznets (1955), which has long been influential in thinking about development policy. Kuznets argued that inequality would first increase within poor countries as their economies grew through urbanization, but after some point inequality would fall.²² I continue to be surprised at how much attention the Kuznets hypothesis still gets as it has found rather little support in subsequent empirical work; over time, very few developing countries have followed the predictions of the Kuznets hypothesis, as shown by Bruno et al. (1998) and Fields (2001).

Milanovic introduces the idea of what he calls “Kuznets waves.” This is a bold yet simple idea that allows him to provide (in Chapter 2) a short coherent economic history of the long-run evolution of inequality within countries. In a nutshell, Milanovic assumes that growing capitalist economies tend to (more-or-less) automatically see rising inequality (echoing Piketty, 2014). Once the Industrial Revolution had delivered sustained growth, inequality rose steadily, reaching very high levels by the early C20th. The wave broke with the First World War, which is seen by Milanovic as the outcome of a struggle among capitalists for markets, rather than some exogenous “inequality shock.” By the early C20th, citizens were demanding action against high inequality and their governments were ready to take action, and that happened over much of the C20th. When inequality gets very high, there is pressure on governments to take actions to lower it, but not when it is low. Thus, to Milanovic’s eyes, we see waves in which inequality rises then falls. By implication, the present period of rising inequality in many rich countries will come to an end at some time. Milanovic points to factors that may push the wave to break, though one does not get the impression he thinks it will happen anytime soon.

The Kuznets wave idea is more an interpretation of history than an economic model. Nor is it the only way one might interpret the historical data. Rather than being the trough of a repeated wave, maybe the Great Levelling was a unique period historically—a large, sustained, but unusual, “inequality shock” in a rising upward trajectory of inequality under capitalism, as

²² Kuznets did not provide a formal theoretical argument but this was provided in subsequent literature, notably Anand and Kanbur (1993) which identifies the assumptions required for the Kuznets inverted-U in a dualistic developing economy.

argued by Piketty (2014). Of course, given that a standard inequality index is bounded above and below, a pattern of fluctuations around a stationary value is a plausible characterization of the dynamics; inequality cannot either increase (or decrease) indefinitely. The real challenge must then be in explaining why it changes its direction when it does, what long-run value it takes, and why the country-specific waves appear to be synchronized across many countries. Readers will not find much that can help explain any of this in Milanovic's book.

Whether capitalism is inequality increasing or not depends on initial conditions (including the distribution of endowments and how competitive markets are) and policies. At any one time, we see income inequality increasing in some countries and decreasing in others. One clue to the patterns in the data is found in neoclassical growth theory, which implies inequality convergence—that inequality measures tend to fall when it is high and rise when it is low (Bénabou, 1996; Ravallion, 2003). (Essentially all moments of the distribution, when they exist, should converge under the neoclassical growth process, not just the mean.) The signs we have seen over the last 30 years or so of inequality convergence could well stem from the same economic forces that have generated mean convergence. Distinguishing inequality convergence from waves in the steady-state values is likely to be difficult empirically.

Inequality convergence can also be explained by how economic policy convergence in the world has interacted with pre-reform differences in the extent of inequality. To see why, suppose that reforming developing countries fall into two categories. First, there are those countries/dates for which pre-reform controls on the economy benefited the rich, keeping inequality artificially high. Arguably this was the case in much of Latin America up to the 1980s, but we have seen falling inequality in that region since the 1990s.²³ Second, there are countries/periods in which the controls had the opposite effect, keeping inequality low; arguably this was the case in China (prior to the 1980s), Vietnam and the former Soviet Union (prior to the 1990s). Then liberalizing economic policy reforms can entail sizable redistribution between the poor and the rich, but in opposite directions in the two groups of countries.

²³ For recent evidence on the evolution of inequality in this region see Rodríguez-Castelán et al. (2016).

While trade openness has often (though not always) been a significant predictor of growth in the published studies, the picture is less clear for inequality. The cross-country evidence to date makes it hard to generalize. Dollar and Kraay (2004) find that an expanding volume of trade neither increases nor decreases inequality on average, although Lundberg and Squire (2003) find a small inequality increasing effect of trade expansion. The OECD (2011) argues that neither trade openness nor financial integration have been important factors empirically in explaining rising inequality. There is also evidence that trade liberalizations (in Latin America) have been inequality decreasing (Ferreira et al., 2007). Much popular attention in the U.S. has been given to the implications for American workers of import competition with China (in particular), and there is indeed evidence of significant labor market adjustment costs that have been borne especially by low-wage workers (Autor et al., 2014). Growing industrial interdependence across countries due to the offshoring of production appears to have come at a cost to workers in Europe and the U.S., especially those who perform more routine tasks, who tend to be less well educated. However, here too, the effects that have been identified empirically appear to be quite modest (Parteka and Wolszczak-Derlacz, 2016).

There are often subtle and ambiguous ways in which each of the multiple factors involved, including trade openness, impact inequality. A cross-country regression coefficient averages out many things that matter, sometimes going in opposite directions. Among equally poor people, for example, some gain and some lose from trade openness, given their heterogeneity in net trading positions in relevant markets. Thus, while the regression coefficients may be nearly zero, it would be deceptive to conclude that trade does not matter. Similarly, while in a unified labor market, labor market deregulation and declining unionization are likely to increase inequality, in the dual labor markets more typical of developing countries there will also be inequality-decreasing forces in play, as those “locked out” of the formal sector see new opportunities. Similarly, there are ambiguities in the effects of financial-sector deregulation. Yes, as often argued, new financial products and more mobile financial capital have brought large gains to the already well-off elites in much of the rich world. But financial-sector development has also brought gains to (often poor) credit-constrained investors, which can be good for both equity and efficiency. This is just the corollary of the long-standing argument about how inequality can impede economic growth given credit market failures (summarized well by

Bourguignon in his Chapter 4); the appropriate policy response can be either pro-poor redistribution or to make markets work better for poor people.

Policies: In this context, policies can be thought of as falling into two groups, those that alter the distribution of market (primary) incomes and those that alter the distribution of disposable incomes. The former are likely to require a more equal distribution of endowments (including making factor markets work better for poor people) while the latter policies involve redistribution using taxes and transfers.

Both authors come out more supportive of efforts to improve the distribution of primary incomes.²⁴ Reducing the inequality in endowments of human and financial capital is seen as key. Public efforts to equalize opportunities through more equitable education policies are crucial, and here there is wide agreement.²⁵ There is scope for assuring a more equal distribution of endowments through education policies, inheritance taxes, greater worker equity in firms and greater financial inclusion.

While both authors refer often to education, I did not feel that either gave sufficient attention to the role education policies have played in explaining the rise in inequality in some rich countries. Goldin and Katz (2008) argue that rising earnings inequality in the U.S. since 1980 stems in no small measure from the fact that the American education system has not allowed the supply of the types of skilled labor required for the new technologies of the time to keep up with the demand. This is in contrast to the role that equitable, broad-based, education played in the record of relatively equitable and rapid growth in the U.S. during 1940-80. Similarly, it is believed that an increasing supply of relatively well-educated workers in Brazil, relative to the demand, has been an important factor in reducing labor earnings inequality (Barros et al., 2010).

²⁴ Milanovic takes a strong position on this, writing that “Interventions done before taxes and transfers kick in are a much more promising approach for the 21st century” (p.218).

²⁵ Milanovic argues at one point in Chapter 5 that the rich world is close to saturation in the years of education, so generalized expansion is not promising, but later he acknowledges that rich countries still have a long way to go in redressing the inequalities of schooling, including quality.

Labor market policies also have a role. Bourguignon points to the case of France, which (as already noted) has been one of the exceptions to the pattern of increasing inequality in rich countries. He argues that high statutory minimum wages have played an important role, although he also uses France to illustrate the limitations of income-based measures, given the concerns about inequalities of opportunity associated with the country's high unemployment rate. There could well be a serious trade-off here, whereby labor market reforms to reduce unemployment (as one aspect of inequality) can generate higher income inequality and in-work poverty. Minimum wage rates have naturally played less of a role in poor countries, where a high degree of informality limits enforcement. There are exceptions such as Brazil, where rising minimum wage rates appear to have played a role in reducing income inequality (Brito et al., 2016). India's National Rural Employment Guarantee Scheme (NREGS) can be interpreted as a policy instrument for enforcing a minimum wage rate in a setting in which compliance with the statutory minimum is weak, although how well this is achieved in practice can be questioned based on the evidence on program performance (Dutta et al., 2014).

So far, globalization has brought more integration in the markets for goods and services, and in capital markets, than for labor markets. Huge inter-country differences in marginal products of labor remain. This suggests that greater integration of global labor markets through migration would reduce global inequality and poverty, and be growth promoting globally. Both authors clearly favor fewer restrictions on international migration.

Critics of efforts to liberalize international migration argue that inequality-increasing forces will emerge within the destination countries. This does not appear to be borne out clearly by the evidence, some of which also points to longer-term gains in average incomes of the destination countries, notably through enhanced productivity.²⁶ Nonetheless, these are average impacts. Here too there will probably be losers (and gainers) at any given income level. Resistance emerges among those bearing the costs, or in fear of doing so. Both authors are sensitive to the likelihood of political resistance, and modify their policy proposals accordingly; for example, Milanovic makes a plea for greater use of temporary work permits. Greater public

²⁶ Recent evidence on this point can be found in Jaumotte et al. (2016).

awareness in rich countries of the overall net benefits of liberalizing migration (including benefits in those countries) would no doubt also help.

Bourguignon gives somewhat more attention than Milanovic to redistributive policies using taxes and transfers. These policies have come to play a significant redistributive role in rich countries, and have helped somewhat in mitigating the rise in the inequality of primary incomes (as discussed by Bourguignon). Numerous micro-simulation and decomposition exercises have suggested that the tax-benefit systems found in many rich countries have helped in attenuating high inequality.²⁷ The Great Leveling in the C20th stemmed in part from such policies (though Communism also played a role in reducing inequality, notably within the Soviet block and China). The differences we see across countries in the inequality of disposable incomes reflect in part the differences in the redistributive efforts of states.

Such policies have been less prominent historically in developing countries, but this too has been changing in the new Millennium, with rapidly expanding coverage of ostensibly redistributive policies and evidence that some developing countries have been successful against inequality using taxes and transfers.²⁸ It appears to be that when the political will is sufficiently strong, and backed up by administrative capacity, any country can make significant inroads against high inequality.

While not a major theme for either author, both note the potential for social policies to help protect workers and their families from down-side risks associated with globalization. Many rich countries now have safety net policies that act as more-or-less automatic income stabilizers. (For example, as has long been recognized, progressive income taxes provide a degree of insurance in the presence of income fluctuations.) However, while systematic evidence does not appear to be available, the experience of many targeted transfer programs in developing

²⁷ The EUROMOD micro-simulation model of the direct tax and transfer systems of European countries has been an important contribution; for an overview see Figari et al. (2015). For an example of the use of such models in studying the impacts on inequality of policy changes using decomposition methods see Bargain and Callan (2010).

²⁸ On the surge in the use of direct interventions in developing countries and their heterogeneity in reaching poor people see Ravallion (2016a, Chapter 10). On the impacts of this class of fiscal policies on inequality in developing countries also see Lustig (2016).

countries does not suggest they typically have the flexibility that is needed in adjusting to (positive or negative) income changes at household level.²⁹

The incentive effects of transfers to poor people have been a concern, as Bourguignon points out, but we need to be careful in properly assessing that concern. There can be little doubt that finely-targeted policies that impose very high marginal tax rates (even close to 100%) on poor people create adverse incentives for work and saving. However, the existing evidence across countries at all stages of development does not suggest that incentive effects are likely to be a major concern in practice, to the point of outweighing the social welfare gains from greater equity, at least as long as very high marginal tax rates are avoided.

Neither book has much to say about the idea of a basic income—an unconditional transfer payment at a common level for all persons, whether living in a poor household or not.³⁰ To many observers this idea has a strong appeal in allowing guaranteed protection from poverty, while retaining the economic advantages of an open and competitive market economy.³¹ The informational requirements of a basic income on its own are minimal, and the incentive effects (mainly reduced labor supply through a positive income effect on demand for leisure) and administrative costs would probably be modest, although a full assessment must also consider the method of financing. (When financed by progressive income taxes, the policy package is formally identical to the negative income tax, as advocated by Friedman, 1965.) A revenue-neutral switch from existing welfare programs to a basic income could well have greater impact on poverty; see, for example, Murgai et al. (2016) on India's NREGS. In 2017 Finland introduced a trial basic income for unemployed workers, replacing the existing unemployment benefits and other allowances. Many people will be watching Finland's basic-income experiment with interest.

Globalization has been seen as a threat to social protection—the welfare state—including by both authors (especially Milanovic). One concern is that the international mobility of capital

²⁹ This point is discussed further in Ravallion (2016a, Chapter 10).

³⁰ In one version of the idea, children can accumulate their transfers and receive a lump-sum payment at say 18 years.

³¹ For example Van Parijs (1992) who argues for “basic income capitalism,” which combines private ownership of the means of production and free markets with a basic income for all.

and of skilled workers erodes the domestic tax base, leading to lower levels of provision for protection in rich countries—a “race-to-the-bottom.” One response has been to call for a universal (global) basic income; see, for example, Van Parijs and Vanderborght (2015). However, moving to a new country will never be costless even when impediments to integration have been removed (which is still a long way off) and there are country-specific non-income factors relevant to welfare and (hence) migration choices. And the ability to move freely across borders can also be an important source of insurance.

Another concern one hears is that (to paraphrase) “globalization drives up inequality which undermines the welfare state since the rich want to opt out.” This too is simplistic. As I have said, it is not clear that globalization is (or has to be) inequality-increasing. Nor is it clear that social protection is undermined by inequality; modern welfare states emerged in today’s rich world when it was as unequal as today, or even more so. Inequality can also generate political pressures for redistribution. The concerns one hears that globalization undermines the scope for social protection are surely exaggerated.

In summary: The two key features of how global inequality has been changing in the last few decades are the falling between-country component alongside a rising within-country component. While there can be little doubt that trade openness and capital mobility have had distributional impacts, both vertical and horizontal, the jury is still out on the thesis of both books (in keeping with widely-held views today) that globalization has been the main force jointly creating both features. There has been considerable variance across countries in both their growth rates and the changes in inequality, and trade openness does not seem to stand out as the major generalizable causative factor that these books, and many other observers, assume. Technological change in unequal settings could well be a much stronger force than expanding trade. Policies have mattered to both growing poor economies and redressing inequality within countries. And these policies can coexist with considerable global integration. Globalization may well be getting too much credit, and being blamed for too much.

4. *Measures of inequality and their limitations*

Stepping back, at the core of the literature on global inequality as a whole (reflected in these two books) one finds a measurement concept of a world without countries; all incomes are pooled as if one is measuring inequality in just one country. This is essentially the same way global poverty is measured (as in Chen and Ravallion, 2010). Of course, there is an important difference in that global poverty (or some more inclusive measure of aggregate social welfare such as mean log income) depends on both the overall mean and the relative distribution (“inequality” roughly speaking). We can debate what trade-off is to be allowed between the mean and inequality, but we clearly value both, implying that we cannot decide the matter looking at only one. My impression is that both authors agree.³² But then their books must be judged rather partial in perspective, though less so for Bourguignon. A partial perspective is possibly easier to excuse given that so many of the books written about economic growth have ignored inequality. But is that how we should restore balance?

As noted already, there is both between-country and within-country components to this concept of global inequality. Both authors make much use of this decomposition; indeed, it defines the very structure of Milanovic’s book. While pedagogically useful, it is a mechanical decomposition. “Countries” only have salience as arbitrary groupings of people. Remarkably, there is no concept of nationality here. Yet, it is clear that people care a lot more about inequality within their country of citizenship or residence (or maybe even their neighborhood, or some other reference group) than globally.³³ Certain between-group inequalities have a salience that is belittled by these mechanical decompositions. Milanovic rightly points to the dangers of focusing solely on between-group inequalities—“existential inequalities” as he calls them (in Chapter 5). But the point here is that the importance of inequality between countries, versus within, need not be weighed properly in this prevailing concept of global inequality.

³² This is obvious for Bourguignon. Tellingly Milanovic (p.5) writes with reference to wars that “wars led to declines in inequality but also, unfortunately and more importantly, to declines in mean incomes” (though one might have expected him to say loss of life).

³³ Kanbur (2006) makes this point on “between-group” inequality, such as based on gender or ethnicity.

There are strongly competing views today on the relevance of national borders to how we think about inequality and what we think should be done about it. Even the intellectual high ground of moral philosophy provides support for both sides on this issue. For example, Rawls (1999) argues that rich countries have no moral obligation to help poor countries as long as the latter are reasonably well governed. Other philosophers, such as Singer (2010), argue instead that national borders, or distance, are not morally relevant to the case for helping disadvantaged people who we can help.

One might respond that, on normative grounds, one should care about everyone, no matter where they live—what Brandolini and Carta (2016) dub the “cosmopolitan view.” This is essentially the ethical position that justifies standard global inequality and poverty measures. But it is not intuitively obvious nor widely held, and it does need a defense. Without that, one worries that the measures being used in this literature do not properly capture the salience that the idea of nationality clearly has to almost everyone.

The issue can be thought about in terms of individual welfare. Inequality and poverty measures are summary statistics of a distribution of money-metrics of welfare. The type of global inequality measure found in this literature implicitly characterizes individual welfare in a rather narrow way, as solely a function of individual consumption or income. The judgements made about how much “inequality” exists are strangely divorced from plausible welfare judgements. Yet it is surely clear that there are real welfare effects at the individual level of social factors such as relative deprivation and social exclusion. How should these figure in thinking about “global inequality?” Neither of these books offers much guidance to the answer. In the context of global poverty measurement, it can be argued that a person is not poor globally if they are neither poor by a common international standard nor poor by the standard of the country in which they live.³⁴ Something similar is needed for global inequality.³⁵

³⁴ Atkinson and Bourguignon (2001) provided such a concept for global poverty measurement and a generalized version with a global empirical implementation has been developed by Ravallion and Chen (2011).

³⁵ Brandolini and Carta (2016) propose one possible approach in which the social welfare function for citizen of a given country depends on the welfare levels on those in other countries, but with a (non-negative) weight that can be less than unity, thus embracing both the “cosmopolitan” and “nationalist” views as limiting cases. Brandolini and

The value judgments made in measuring inequality carry considerable weight for the position one takes in the ongoing debates on globalization (Ravallion, 2004). An important distinction is between relative and absolute inequality. Both books focus more on relative inequality—whereby the measure is unchanged when all incomes are multiplied by a constant. As we have seen, some measures (such as the popular Gini index) show an overall decline in global relative inequality, although it was also noted that there are other measures embodying a strong aversion to inequality that show an increase.

However, relative inequality is not the only valid concept that can be considered here. As both authors note (albeit briefly) there is another concept of inequality, namely “absolute inequality,” which depends instead on the absolute differences.³⁶ This is not a purely academic distinction. Perceptions on the ground that “inequality is rising” appear often to refer to the absolute concept. A number of experiments (all with university students to my knowledge) have found that 40-60% of participants (in the UK, Israel, Germany and the U.S.) think about inequality in absolute rather than relative terms.³⁷

Even if relative inequality does not change, given existing inequality, the absolute income gains to the rich will obviously be greater than the gains to the poor. Figure 4 gives the absolute gains corresponding to Figure 2.³⁸ The elephant’s head has shrunk greatly relative to the trunk. Over this 20 year period, the absolute gain in mean daily income of the poorest 5% was 7 cents per person, while for the richest 1% it was to almost \$70 (and the latter number could well be an under-estimate). In absolute terms, the developing world’s middle class and (especially) its poor

Carta also refer to an unpublished conference paper by Bourguignon that allows the weight on residents of another country to depend (negatively) on the spatial distance from the country of own residence.

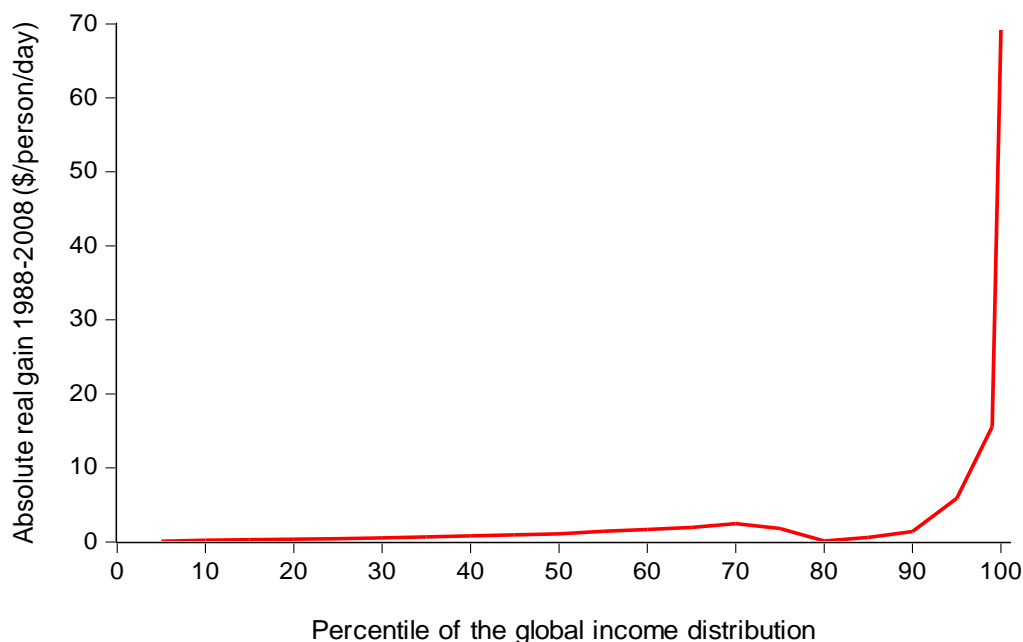
³⁶ While a relative index is invariant to multiplying all incomes by a constant, an absolute index is invariant to adding a constant. Early theoretical writing on inequality measurement noted this distinction, including Dalton (1920) and Kolm (1976), and it was explored further theoretically by Blackorby and Donaldson (1980), but it has dropped off the radar screen in almost all applied work.

³⁷ The literature has closely followed Amiel and Cowell (1999). Ravallion (2014) discusses this further and points to other evidence, including my own surveys of students at Georgetown. Of the 340 students I have surveyed at Georgetown, 60% think about inequality in absolute terms.

³⁸ Milanovic also gives the absolute gains by fractiles, though here I have presented it in a comparable form to the elephant graph.

must surely be judged to have gained rather little; it is only because they started off so poor that the elephant's head is so large in Figure 2.

Figure 4: Incidence of the absolute income gains corresponding to Figure 2



Source: Author's calculation using the estimates made by Lakner and Milanovic (2016a).

A specific way in which inequality is rising in the developing world is the rising absolute gap between the poorest and the mean standard of living. As I have tried to demonstrate elsewhere, there has been only modest growth in the lower bound of the distribution of permanent consumption in the world, which is still barely above a survival level (Ravallion, 2016b). At the same time, there has been considerable progress against absolute poverty, using standard measures. In other words, the nature of that progress is that there are fewer people living near the floor, not that the floor has risen. Yet social policy discussions put emphasis on the need to raise the floor—for example, the desire to “leave no one behind” is prominent in the United Nations new development goals.³⁹ In the period from the middle of the C19th to the middle of the C20th during which time today's rich world virtually eliminated extreme absolute

³⁹ See <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>.

poverty, more progress appears to have been made in raising the consumption floor than we are seeing in the developing world today.

The horizontal impacts of trade openness are also notable, but hidden from view in the types of inequality measures used in these books and the literature more broadly. There can be gainers and losers at all levels of living even when a standard measure of inequality or poverty is unchanged. Horizontal inequity has long been recognized as a policy concern in economics; for example, Pigou's (1949, pp.14-15) "principle of equity" in taxation demands horizontal equity on the grounds that anything else created "...a sense of being unfairly treated...in itself an evil." In the context of trade openness, there are many sources of horizontal inequality. Geographic disparities in access to human and physical infrastructure (such as between urban and rural areas) affect prospects for participating in the opportunities created by greater openness to external trade among ex ante equally well-off people. Differences between developing countries in the degree of inequality in cultivatable land holding imply different distributions of the gains from agricultural growth (as might stem from trade openness). Differences in household demographic composition influence consumption behavior and hence the welfare impact of the relative price changes due to trade openness. At any given level of living, people differ in their net-trading positions in the relevant markets such that the changes in relative prices accompanying trade reforms generate horizontal inequality.

In this respect it is also notable that the measures in this literature commonly assume what is called "anonymity," meaning that it does not matter who has which income level. There is no guarantee that we are talking about the same people at the two dates. Indeed, this is unlikely with mobility up and down. Both authors are fully aware of this and it is understandable that they focus on anonymous measures in these books, though even in writing for a lay audience I would have liked a little more care in talking about "winners" and "losers" as people rather than fractiles of a distribution.⁴⁰ There are also a set of policy issues about mobility and horizontal inequalities that are important here.

⁴⁰ Elsewhere, Bourguignon (2011) has provided non-anonymous GICs and studied their properties.

These measurement issues are salient to the debates on globalization and inequality. Different sides in the globalization debate appear often to hold different ideas about what “inequality” means. For example, those who talk about the widening gap between rich and poor appear to have in mind absolute inequality, not relative inequality. Yet one cannot say that one of these concepts is right and the other wrong. The standard definition in terms of relativities can be questioned; if one does not accept the scale independence axiom then one can justifiably reject relative measures in favor of absolute ones (satisfying translation invariance). Similarly, horizontal inequality is also inequality. Changes in an overall inequality index can also be decomposed into vertical and horizontal components.⁴¹ Policy makers naturally care about horizontal impacts. Here and in other respects discussed above, the measurement tools used in this literature appear to be incomplete for informing the public discourse about “inequality.”

Non-income dimensions of inequality do not get much attention in either of these books; the main focus is on income inequality, although (in fairness to the authors) that still leaves a lot to discuss. Bourguignon goes further in noting the existence of these other aspects of inequality. What I found to be largely absent in both cases is the recognition that some of their arguments may not be robust to turning the focus to some important non-income dimensions of inequality, such as health and education. There has been much debate about the weight that development policy making should give to higher incomes (and few now make the mistake of equating “development” with “growth”). A number of observers have argued that the bulk of the progress we have seen in health and education has come directly from policies supporting human development, even in countries with a persistently low average income; Sen (1981) provided an influential early analysis with this implication, using aggregate data across countries and the U.N.’s annual *Human Development Reports* since 1990 have repeatedly emphasized this point. While more evidence is needed, the micro-decomposition analyses to date do not suggest that

⁴¹ See Ravallion and Lokshin (2008) who derive this decomposition and also implement it in the context of studying trade reform in Morocco, and find that the horizontal impacts dominate the vertical impacts for some reforms.

economic growth or income redistribution have been important factors in the gains in aggregate human development in poor countries.⁴² Social policies appear to have played a bigger role.

5. *Should we care, and why?*

There is a fundamental question left begging: why should we care about global inequality, as defined in these two books, in keeping with the literature? I understand why most citizens of the world, no matter where they live, care about global poverty, as a natural implication of human empathy and compassion for deprivations and lost opportunities experienced by others. But the case is less obvious for global inequality. Unlike poverty, less of which is surely always better, inequality can also be too low from the point of view of our valued social objectives. Bourguignon clearly recognizes this point, and makes some references to goals such as poverty reduction and human development. However, neither book provides a convincing case for the intrinsic importance of global inequality as a concern that warrants action in its own right.

“Inequality” is a big word, and in my experience the idea rarely gets serious attention from policy makers until one unpacks it, to identify the specific types of inequality that matter. Unequal opportunities in life—as one aspect of “inequality”—are objectionable to almost anyone if they abstract from their own position. So too are inequalities that reflect material economic deprivations for poor people. By the same token, if rising inequality brings sufficient benefits to the least advantaged then it may be considered justified.⁴³

While a case for supporting greater global equity might be grounded on empathy for the plight of those less fortunate, wherever they happen to have been born, this arguably points to a concern about an appropriate concept of global poverty rather than global inequality. So too does a desire for greater global equity in opportunities; it is surely the lack of opportunities of the less

⁴² A method for addressing this issue and supportive evidence for two countries (Morocco and Vietnam) can be found in Lambert et al. (2010).

⁴³ In moral philosophy, this idea was famously captured in a strong form by the “difference principle” of Rawls (1971). Prioritarianism allows a conceptually similar result—that social welfare can be enhanced by gains to the poor even if overall inequality rises—without requiring that we only care about the least advantaged person; see, for example, Arneson (2000).

advantaged that is the real concern, not the inequality of opportunities *per se*. We can certainly care that high inequality (of outcomes or opportunities) in a country can impede economic growth, poverty reduction and human development, and foster social ills such as crime, political paralysis or excessive political influence of a rich elite. (Both authors point to such costs of high inequality.) But the concerns here are about inequality within countries. And each of these arguments point to other higher goals, not inequality *per se*. There are other, more international, arguments that point to external costs to rich folk from global inequality (such as through pandemics) or point to a case for compensation for actions (or inactions) by rich countries that impose costs on poor ones (such as global warming, trade restrictions or implicit support for money laundering). But we can probe each of these arguments and find that the real concern is not inequality, which is instrumentally relevant and potentially very damaging at high levels, but not intrinsically so. Recognizing this point helps clarify the arguments for public action.

Both books point to how the new growth trajectories seen in poor countries since 2000 have helped bring down global inequality despite the upward pressure coming from within many countries. But surely the truly good news is that these growth processes have also come with massive absolute poverty reduction. Whether that progress can be maintained is another matter.

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