Free Trade, Poverty, and Inequality

1. Introduction

Everyone knows there is a lot of poverty and inequality in the world. About half of the world's population lives on the equivalent of what two dollars a day would purchase in the US.[1] The world's 358 richest people have more money than the combined annual incomes of countries with 45% of the world's population.[2] (Many argue that those who believe massive poverty and inequality are morally unacceptable have reason to support free trade.[3] Often these people believe that 1) poverty is decreasing, 2) inequality is decreasing or at least not increasing and 3) free trade is contributing to these trends.[4] In part, this is why the international financial institutions (like the World Trade Organization, World Bank, and International Monetary Fund) promote free trade. The World Bank cites correlations between free trade and growth and finds evidence that the rising tide lifts all boats.[5] The International Monetary Fund holds that "economic growth

1 S. Chen and M. Ravallion, 'How Have the World's Poorest Fared since the Early 1980s?' *World Bank Research Observer* 19 (2004), pp. 141-169.

2 United Nations Development Program, Human Development Report 1996 (New York: Oxford University Press, 1996).

3 See, for instance: F. Teson and J. Klick, 'Global Justice and Trade: A Puzzling Omission', FSU College of Law, Public Law Research Paper No. 285 (2007). M. Kurjanska and M. Risse, 'Fairness in Trade II: Export Subsidies and the Fair Trade Movement', *Philosophy, Politics, and Economics* 7 (2008), pp. 29-56. Some philosophers also argue that there are reasons to restrict free trade, partly on the basis of empirical evidence. See, for instance: N. Hassoun, 'Free Trade and the Environment', *Environmental Ethics* 31 (2009a). D. Moellendorf, 'World Trade Organization and Egalitarian Justice,' Metaphilosophy 36, (2005), pp. 145-162. N. Hassoun 'Making Free Trade Fair', Carnegie Mellon University Working Paper (2009c). Available at: <http://www.hss.cmu.edu/philosophy/hassoun/papers.php>.

4 See: Teson and Klick, 'Global Justice and Trade: A Puzzling Omission.' Also see: R. Adams Jr, 'Economic Growth, Inequality, and Poverty: Estimating the Growth Elasticity of Poverty', *World Development* 32 (2004), pp. 1989–2014. Finally, see: D. Dollar and A. Kraay, 'Growth is Good for the Poor', Policy Research Working Paper Number 2587 (2000). Subsequently published as: D. Dollar and A. Kraay, 'Growth is Good for the Poor', *Journal of Economic Growth* 7 (2001), pp. 195–225.

5 World Bank, *Globalization, Growth, and Poverty* (Washington D.C.: The World Bank, 2001).

is the most significant single factor that contributes to poverty reduction" although "some poor and vulnerable groups can be adversely affected in the short-run".[6]

This paper considers the International Financial Institutions' (IFI's) case for free trade.[7] Section 2 starts by considering trends in poverty and inequality since the late 1970's when free trade reforms began to be implemented widely. It argues that we cannot use the poverty statistics to figure out how poverty rates have changed in recent decades – they are too poor for this purpose. Section 3 then uses some of the insights arrived at in section 2 in considering inequality. The purchasing power parity indexes that cause problems with some poverty estimates systematically bias estimates of inequality downward. This allows section 3 to conclude that inequality, under almost all (including the most relevant) measures, has probably been increasing. Section 4 uses the conclusions arrived at in sections 2 and 3 to argue that IFIs' case for free trade is not substantiated. Finally, section 5 considers what we can say drawing on lessons learned in the previous sections. It suggests that good studies must do three things. First, they must be clear about what kind of free trade, poverty, and inequality are at issue. Second, they must use good measures of the relevant sorts of free trade, poverty, and inequality. Finally, good studies must rule out alternative explanations of any observed correlations between free trade, poverty, and inequality. Because this last task is difficult, the bulk of the final section considers different ways of ruling out spurious correlations between free trade, poverty, and inequality. It argues that experimental studies usually provide the best evidence about

6 International Monetary Fund, 'Social Policy Issues in IMF-Supported Programs: Follow-Up on the 1995 World Summit for Social Development', Prepared by the Fiscal Affairs and Policy Development and Review Departments (Washington D.C.: International Monetary Fund, 2000). para. 17-18. Available at: <http://www.imf.org/external/np/fad/wldsum/index.htm>.

7 Although this paper is unabashedly methodological, its conclusions bear on many ethical debates. Getting clear on these matters of empirical fact may not settle ethical debates about poverty, inequality, and free trade, but it may help resolve them.

causation. So, this paper concludes with a call for further research into the prospects for ethically acceptable experimental testing of free trade's impact on poverty and inequality.

2. Poverty

In order to figure out how the poor are faring, we need a way to measure poverty. There are two options. First, we might use an assortment of indicators such as education and caloric intake.[8] Alternately, we might use a unitary measure of poverty. Unitary measures either specify a single formula for combining many disparate indicators of poverty or specify a single indicator (like income).

There are advantages to a unitary measure. A unitary measure allows us to get a sense of how well people are doing *overall.* If different indicators (like average health and education levels) are used, they can exhibit opposite trajectories. Without a unitary measure, we may not even be able to get a sense of whether things are getting better or worse. It may also be impossible to tell how much things are getting better or worse if these indicators change by different amounts.

The most popular unitary measures are the Human Poverty Indexes (HPIs) and the World Bank's poverty lines. The World Bank uses income-based measures of poverty. There are two versions of the HPI. Both look at literacy and survival rates (although the HPI-1 looks at survival to age 40 and the HPI-2 looks at survival to age 60). The HPI-1, however, also considers measures of access to safe water, health services, and adequate nutrition while the HPI-2 looks at the percentage of a population falling below an income poverty line and unemployment rates. Unfortunately, the HPIs have not been around long enough to provide long term trends in poverty so they are not useful in the

8 The Human Development Index (HDI) is an attempt to capture the insight in Nussbaum and Sen's capability theories. Nussbaum, 'Human Rights and Human Capabilities.' A. Sen, *Development as Freedom* (New York: Anchor Books, 1999). It is, however, one of the most commonly used measures of poverty. Reddy and Pogge, 'How Not to Count the Poor.'

current context. We cannot see how free trade has impacted poverty since the 1970's when free trade reforms were first widely implemented. An alternative is the Human Development Index (HDI). The HDI combines (the logarithm of) Gross Domestic Product (GDP) per capita purchasing power parity (PPP), literacy, (primary, secondary and tertiary) school enrollment rates, and life expectancy at birth into a single indicator. Since some use the HDI to get a handle on changes in poverty rates,[9] and the HPIs have many of the same problems as the HDI, it is worth considering whether the HDI or the World Bank measures of poverty are better.

The HDI includes more than just a monetary measure of poverty. One might count this as a mark in its favor. Unfortunately, the HDI has many of the problems of monetary measures of poverty and others besides. One problem is that it is not clear that a combined index of GDP per capita PPP, literacy, (primary, secondary and tertiary) school enrollment rates, and life expectancy at birth provides a *measure* of poverty even though some use the HDI in this way.[10] A philosophical account of poverty might make this contention plausible. The HDI is a measure of basic capabilities as opposed to purely economic indicators of development.[11] But neither the United Nations Development Program nor Amaryta Sen, who helped develop the measure, has specified what set of basic capabilities people need to be able to secure to avoid poverty.[12]

Perhaps, one might suggest, the relevant account of basic capabilities can be found in Martha Nussbaum's work as she is the other great capability theorist.

9 See, for instance: A. Deaton, 'Counting The World's Poor: Problems And Possible Solutions', Research Program in Development Studies Working Paper (Princeton: Princeton University, 2000).

10 A. Deaton, 'Counting The World's Poor: Problems And Possible Solutions', Research Program in Development Studies Working Paper (Princeton: Princeton University, 2000).

11 United Nations Development Program, 'How is the HDI Used?' Human Development Reports (New York: UNDP, 2008). Available at: <http://hdr.undp.org/en/statistics/indices/hdi/question,69,en.html>.

12 Although Sen has written a lot about capabilities and uses examples throughout his work, he refuses to provide a comprehensive list of basic capabilities.

Nussbaum's list of what people need to live a minimally good human life is, roughly, this: People must be able to avoid premature death, secure adequate health, nourishment, and shelter. They must have bodily integrity, the opportunity for sexual satisfaction, and reproductive choice. People must be able to use their senses, imagination, and reason, which requires adequate education and freedom of expression. They must have the ability to experience pleasure and avoid non-beneficial pain. People must be able to form attachments, experience emotions, form a conception of the good life, affiliate with others, and secure the social bases of self respect. People must be able to care for and live in relation to other parts of the natural world, play, participate effectively in politics, and have equal rights to employment and property.[13] There are at least two problems with the thought that this could form the basis for the HDI. First, it is not plausible to believe that GDP per capita PPP, literacy, (primary, secondary and tertiary) school enrollment rates, and life expectancy at birth can capture a country's ability to provide all of these things for its citizens. Second, people do not need everything on Nussbaum's list to avoid poverty. Not everyone who is unable to play, or exercise their imagination, or have sexual satisfaction is poor, though these people may all be deprived of important capabilities. Furthermore, a country can contain a great deal of poverty even if has a high HDI. People might still lack adequate shelter and clothing or other things necessary for avoiding poverty.

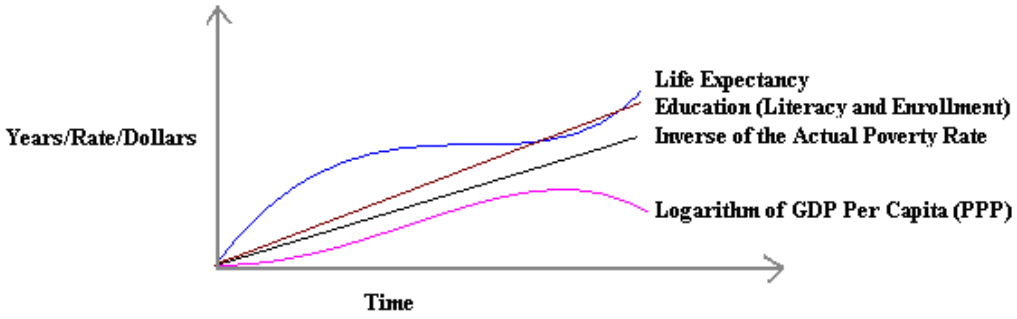
Perhaps the above critique will not apply to the HDI if the HDI is only a proxy for poverty.[14] After all, one could not reasonably claim that monetary measures of poverty

13 M. Nussbaum, 'Human Rights and Human Capabilities', *Harvard Human Rights Journal* 20 (2007), pp. 2-24.

14 Poverty is a multidimensional problem and people need different kinds of things to avoid poverty. Women, who make up most of the world's poor, need different kinds of health care to avoid poverty, for instance. M. Buvinic, 'Women in Poverty: A New Global Underclass', *Foreign Policy* 108 (1997), pp. 38-53.

are more than proxies.[15] And, we do not need a philosophical account of poverty to see that poverty may be correlated with GDP per capita PPP, literacy, (primary, secondary and tertiary) school enrollment rates, and life expectancy at birth.

Even if we agree that the HDI provides a reasonable proxy for poverty, however, we have little reason to think that it is a better proxy than other alternatives. The HDI gives equal weight to life expectancy, education -- calculated by giving twice as much weigh to the adult literacy rate as to (primary, secondary, and tertiary) school enrollment rates -- and the logarithm of GDP. A country's actual poverty rate may be correlated in a different way with its GDP, life expectancy at birth, and literacy and enrollment rates. Consider the following graph:



Graph 1: The HDI's Components as Proxies for Poverty

It is not clear that it is better to use the HDI's composite proxy to measure poverty than to use one of its components alone (e.g. education rate in the graph above). It might also be better to use a different proxy altogether.

Other problems arise with the components of the HDI. There are many problems with measures of GDP, for instance.[16] GDP is just a measure of all the final goods and

15 Deaton, 'Counting The World's Poor: Problems And Possible Solutions.'

16 Income is discounted at all levels but at an increasing rate. Rich countries appear less developed than they would if this scaling was not done. As the average income level rises, poverty appears to be less and less affected by increases in average income. But, because the HDI does not take into account distribution within countries, the HDI cannot tell us whether or not this is really the case in any given country.

services produced in a country. A country's GDP may rise because people sell their farms and move to the city to work for wages where they will be more vulnerable to fluctuating prices. Even goods produced by multinationals merely for export add to GDP.[17] And, as we will note below, different measures of GDP also yield very different results. Finally, because GDP is an aggregate measure of "income," we cannot tell how many poor people there are within a country using the HDI. A country where half of the people are well off, and half are very poorly off, can have the same HDI as a country where everyone is doing equally, and moderately, well.[18] Hong Kong has a HDI of .916.[19] Germany has a HDI of .930.[20] Hong Kong's HDI is only slightly lower than Germany's though Hong Kong has a much higher level of inequality. [21] Germany has the 14th most equal income distribution. Hong Kong ranks 84th.[22] So, we cannot use the HDI for our purposes. Of course, the HDI is still interesting and important. We can learn a lot about a country's level of development by looking at maps of HDI levels of its provinces or regions, for instance. But we cannot see how free trade is impacting poverty just by looking at how free trade impacts countries' HDIs.[23]

Analogous problems arise for the HPIs. Even if the HPIs are only proxies for poverty and we do not need a philosophical account of poverty to see that poverty may be correlated with the HPIs' components, it is not clear that the HPI's provide good proxies. It may be better to use one of composites' proxies to measure poverty or a different proxy

17 Gross National Income (GNI) might give a better, though still imprecise, measure of what people can purchase.

18 Due to changes in the methodology, HDI figures cannot be compared between years – we will argue below that this is also the case for the World Bank's poverty lines.

19 United Nations Development Program, *Human Development Report* (New York, Oxford University Press, 2005). Available at: <http://hdr.undp.org/reports/global/2005/pdf/hdr05_HDI.pdf>.

20 Ibid.

21 Ibid.

22 Ibid.

23 For discussion of other problems with the Human Development Index, see: K. Raworth and D. Stewart, 'Critiques of the Human Development Index', in *Readings in Human Development: Concepts, Measures and Policies for a Development Paradigm*. S. Parr and A. Kumar eds. (New Delhi: Oxford University Press, 2003).

altogether. There are also some problems that arise with the components of the HPIs. But, since the World Bank's income poverty lines share some of these problems, let us turn to the World Bank's measures of poverty now.

In 2002, World Bank president James Wolfensohn asserted that:

> …the proportion of people worldwide living in absolute poverty has dropped steadily in recent decades, from 29% in 1990 to a record low of 23% in 1998. After increasing steadily over the past two centuries, since 1980 the total number of people living in poverty worldwide has fallen by an estimated 200 million — even as the world's population grew by 1.6 billion.[24]

In 2005, the World Bank claimed that poverty had fallen further. The Bank asserted that "the number of people living on less than US$1 a day declined from 1.5 billion (40 percent of the population) in 1981, to 1.2 billion (28 percent) in 1990, and 1.1 billion (21 percent) in 2001."[25] Others associated with the World Bank have made similar claims.[26] In "How Have the World's Poorest Fared since the Early 1980s?", for instance, Shaohua Chen and Martin Ravallion state that the number of poor people has declined by "almost 400 million" between 1981 and 2001.[27]

Today the World Bank poverty database tells us that, on the US$1 a day poverty line, the number of people in poverty fell by more than 22% (from 40.36% of the world's population in 1981 to 17.72% of the world's population in 2004).[28] According to the World Bank's US$2 a day poverty line, the database reports that the number of people in

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24 World Bank, *Global Economic Prospects and the Developing Countries 2002: Making Trade Work for the World's Poor* (Washington D.C.: The World Bank, 2002), p. 30.

25 World Bank, '2004 Annual Review of Development Effectiveness: The World Bank's Contributions to Poverty Reduction' (Washington D.C.: World Bank, 2005a). Available at: <http://lnweb18.worldbank.org/oed/oeddoclib.nsf/24cc3bb1f94ae11c85256808006a0046/efbce22c91b5796685256ff10057bb6c/$FILE/2004_ARDE.pdf#page=19.

26 Dollar and Kraay, 'Growth is Good for the Poor.'

27 See: Chen and Ravallion, 'How Have the World's Poorest Fared since the Early 1980s?', p. 141. Development experts not associated with the Bank have said similar things. See, for instance: J. Sachs, *The End of Poverty: Economic Possibilities of Our Time* (New York: Penguin Press, 2005).

poverty fell by about 20% (from 67.13% of the world's population in 1981 to 47.27% of the world's population in 2004).[29]

Unfortunately, the Bank's new method of calculating poverty lines cannot support such comparisons. The World Bank's method of measuring poverty changed in the late 1990's.[30] To see the effect of this change, consider the 1993 poverty rates using the new and old methodologies:

Percent in Poverty	Old Poverty Rate	New Poverty Rate
Subsaharan Africa	39.1	49.7
Latin America	23.5	15.3
Middle East/N. Africa	4.1	1.9

Table 1. Poverty estimates in 1993 as determined by new and old World Bank methodology[31]

We need not arbitrate between these different ways of measuring poverty here.[32] Both methods of measuring poverty share some common problems.

The Bank relies on PPP measures to convert country estimates of income poverty into a common currency. This is problematic. The main sources of PPP measures are the Penn World Tables (PWT) and the International Comparison Project (ICP). These measures are based on surveys with inadequate coverage. Only 63 countries participated in the 1985 ICP.[33] China did not participate at all in the ICP surveys until 2005 and India

28 World Bank. 2007. Povcalnet. Available at: <http://web.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTPROGRAMS/EXTPOVRES/EXTPOVCALNET/0,,contentMDK:21867101~pagePK:64168427~piPK:64168435~theSitePK:5280443,00.html>.

29 Ibid.

30 R. Wade, 'Is Globalization Reducing Poverty and Inequality?', *World Development* 32 (2004), pp. 567-589.

31 Modified from (Deaton, 2001) cited in Wade, 'Is Globalization Reducing Poverty and Inequality?', p. 573.

32 The quality of the survey data for some countries in these regions is questionable. Sampling variation and error may, thus, account for some of this change. However, others find similar results when consistent household survey data is used (for those countries where good data is available). Reddy and Pogge, 'How Not to Count the Poor.'

33 Other problems include the fact that the household surveys used to measure the number below the poverty line vary greatly in quality and content. Surveys also ignore the provision of public goods. Wade, 'Is Globalization Reducing Poverty and Inequality?'.

did not participate between 1985 and 2005.[34] Since China and India account for about a third of the world's population, the above estimates of world poverty are quite uncertain.[35]

Another problem is that the most common PPP measures make it seem like the poor are doing better than they actually are. So, using these measures to estimate poverty rates makes it seem like there are fewer poor people in the world than there are. To see how the problem arises, consider how PPP is calculated on the most common (Geary-Khamis) method. The Geary-Khamis method essentially averages the international price differentials across all commodities.[36] This method weights "each commodity in proportion to its share in international consumption expenditure," essentially estimating purchasing power over an international "basket" of goods and services.[37] Unfortunately, this "basket" does not represent the "basket" of goods and services the poor purchase. It contains services and other non-tradables that the poor do not buy – the poor primarily purchase food.[38] Services and "nontradables" are relatively cheaper in developing

34 International Comparison Project, 'Global Purchasing Power Parities and Real Expenditures: 2005 International Comparison Program' (Washington D.C.: International Bank for Reconstruction and Development/The World Bank, 2008) Available at: <http://siteresources.worldbank.org/ICPINT/Resources/icp-final.pdf>.

35 S. Reddy and T. Pogge, 'How Not to Count the Poor', in S. Anand and J. Stiglitz eds. *Measuring Global Poverty* (Oxford: Oxford University Press, 2006), p. 25. Available at: <www.socialanalysis.org>.

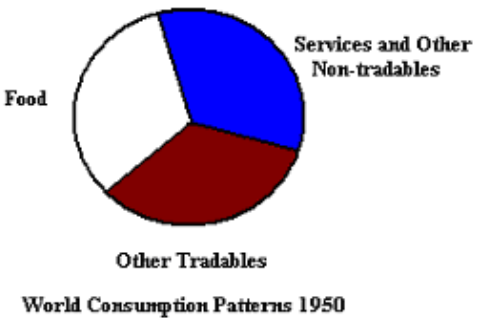
The methodology used in the ICP surveys differ which gives us another reason to worry about some authors' estimates of changing poverty rates. The recently released 2005 survey is the first to include China. International Comparison Project, 'Global Purchasing Power Parities and Real Expenditures: 2005 International Comparison Program.' Because this survey only came out after the penultimate draft of this paper was complete, this paper does not discuss the survey at length. For an interesting informal discussion, however, see: The Economist, 'World Economy: Rich get Richer, Poor Get Poorer–New Global PPP Data', February 4th, 2008. Available at: <http://taraqee.wordpress.com/2008/02/12/world-economy-rich-get-richer-poor-get-poorer-new-global-ppp-data/>.

36 Deaton, 'Counting The World's Poor: Problems And Possible Solutions.'

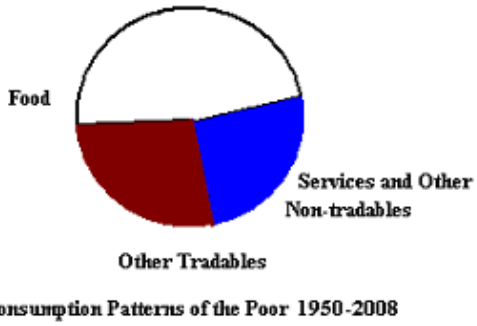
37 T. Pogge and S. Reddy, 'Unknown: The Extent, Distribution, and Trend of Global Income Poverty', Working Paper Version 3.4 (2003), p. 1. Available at: <http://www.etikk.no/globaljustice/papers/GJ2003_Thomas_Pogge_with%20Sanjay_Reddy._Unknown_-_The_Extent,_Distribution_and_Trend_of_Global_Income_Poverty.pdf>.This terminology is slightly misleading as there is no single basket that is used. The details are a bit too complicated to go into here, however. For a technical discussion see: Reddy and Pogge, 'How Not to Count the Poor'.

38 Deaton, 'Counting The World's Poor: Problems And Possible Solutions.'

countries.[39] This implicitly inflates the assessed purchasing power of the poor in developing country currencies. Consider the following illustrative graph:[40]



World Consumption Patterns 1950



Consumption Patterns of the Poor 1950-2008

Graphs 2 and 3: World Consumption 1950 and the Poor's Consumption 1950-2008

Suppose the first graph represents the world's consumption "basket" on the basis of which the PPP estimates are made. The second graph represents the "basket" of commodities actually purchased by the poor. Services make up more of the "basket" on the basis of which PPP estimates are made. Since services are relatively cheaper in poor countries this makes it seem like the poor's currency will go further than it does for purchasing the things the poor purchase. Food makes up less of the world's consumption "basket" than it does of the poor's consumption "basket."[41] Food is cheaper in developing countries but it is not as cheap as PPP suggest. To see this, we can compare prices in some of the poorest countries included in the 1985 ICP survey with world prices. Doing so, we find that prices for basic food stuffs "Breads and Cereals" averaged 111 percent higher than consumer prices generally.[42] This means it is relatively more expensive to buy a "basket" of food than it is to buy the world's consumption "basket" in developing

39 J. Bhagwati, 'Why Are Services Cheaper in the Poor Countries?', *The Economic Journal* 94 (1984), pp. 279-286.

40 Recent estimates suggest that the poor spend 47% of their income on food while middle income countries spend 29% of their income on food and rich countries spend 13% of their income on food. A. Regmi, M. Deepak, J. Seale Jr., and J. Bernstein, 'Cross-Country Analysis of Food Consumption Patterns', *Changing Structure of Global Food Consumption and Trade*, A. Regmi ed. (Washington D.C.: United States Department of Agriculture Economic Research Service, 2001).

41 Reddy and Pogge, 'How Not to Count the Poor.'

42 Reddy and Pogge, 'How Not to Count the Poor.' Further evidence for this claim is presented in: Pogge and S. Reddy, 'Unknown: The Extent, Distribution, and Trend of Global Income Poverty.'

countries (when the "baskets" are compared with similar "baskets" in developed countries). Again, since the poor primarily purchase food, but PPP exchange rates are based on the world's consumption "basket," these exchange rates make it seem that the poor are doing better than they are. Estimates of PPP exchange rates using only the ICP 1985 or 1993 data for foods (or "breads and cereals") raise national poverty lines of poor countries 30-40%.[43] This problem makes it particularly hard to get accurate estimates of the number of people who are poor in the real world because many people have incomes close to the poverty lines.[44] "Recent research on China suggests that a 10% increase in the line brings a roughly 20% increase in the poverty headcount."[45] And when China's prices were re-evaluated last year the number of Chinese below the World Bank's poverty line increased by two-thirds.[46]

A related problem stems from the fact that the rich have started to consume more services in recent years. This changes the international "basket" of goods underlying the most common PPP comparisons. The "basket" now contains more services which are relatively cheaper in poor countries.[47] Over time it, thus, seems that the poor have gotten richer simply as a result of a change in the consumption patterns of the rich.[48] Compare these graphs:

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43 Pogge and S. Reddy, 'Unknown: The Extent, Distribution, and Trend of Global Income Poverty', p. 3.

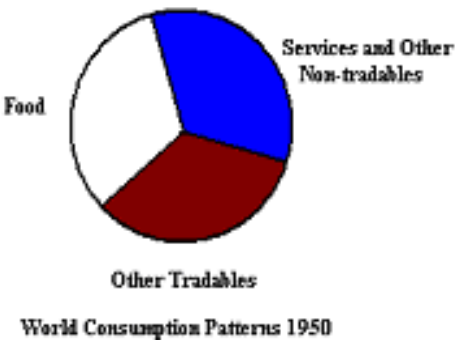
44 Deaton, 'Counting The World's Poor: Problems And Possible Solutions.'

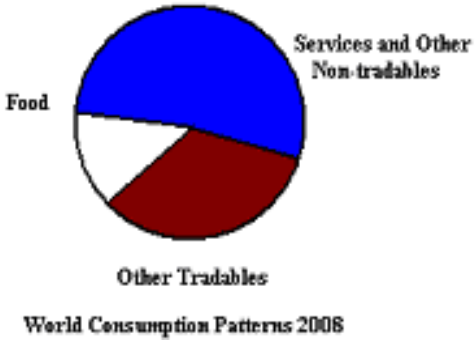
45 Wade, 'Is Globalization Reducing Poverty and Inequality?', p. 572.

46 This will obviously change inequality estimates as well. Some suggest that these rates were manipulated to make it seem that China's economy was doing less well and decrease the chances that the US would push China to devaluate its currency. E. Porter, 'China Shrinks', Editorial Note, December 9, 2007 (New York: New York Times, 2007).

47 Reddy and Pogge, 'How Not to Count the Poor.' M. Boskin, E. Dulberger, R. Gordon, Z. Griliches, D. Jorgenson, 'Consumer Prices, the Consumer Price Index, and the Cost of Living', *The Journal of Economic Perspectives* 12 (1998), pp. 3-26. A. Heston and R. Summers, 'PPPs and Price Parities in Benchmark Studies and the Penn World Table: Uses', CICUP 97-1 (1997), pp. 1-17.

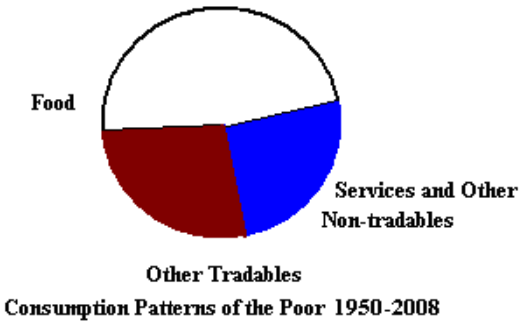
48 One complication is that the survey's methodology has also changed over time, but the basic idea should be clear from this simple illustration. The problems with the PPP measures also affect the accuracy of growth estimates. J. Temple, 'The New Growth Evidence', *Journal of Economic Literature* 37 (1999), pp. 112-156. For discussion of other methodological problems with the World Bank's poverty estimates too. Reddy and Pogge, 'How Not to Count the Poor.'





Graphs 5 and 6: World Consumption 1950 and World Consumption 2008

The poor's consumption has not changed much since 1950 (they still primarily purchase food). So let us suppose that the following graph represents the "basket" of goods the poor purchased in both 1950 and 2008:



Graph 7: The Poor's Consumption 1950-2008

Over time the mismatch between the consumption patterns of the poor and the consumption patterns of the rest of the world has grown because rich people are buying more services.[49] Again, services are relatively cheaper in poor countries.[50] This makes it seem like the poor's currency will go even further in 2008 than it did in 1950 for purchasing the things the poor purchase. So, when poverty estimates rely on these PPP measures they suggest that there are fewer poor people in the world now than there used to be. But they say that poverty is declining just because poor peoples' currencies could

49 Boskin et. al., 'Consumer Prices, the Consumer Price Index, and the Cost of Living.' Heston and Summers, 'PPPs and Price Parities in Benchmark Studies and the Penn World Table: Uses.'

50 Bhagwati, 'Why Are Services Cheaper in the Poor Countries?".

purchase a lot of services relatively cheaply. Poor people, on the other hand, cannot spend much of their money on services. To survive, they have to spend most of their money on food.[51]

To improve monetary measures of poverty, researchers must do better household surveys and resolve the problems with the PPP measures underlying the metrics.[52] Thomas Pogge and Sanjay Reddy have considered ways of avoiding some of the problems with the PPP exchange rates.[53] They recommend a definition of income poverty focused on "what people generally need to achieve a set of elementary capabilities, rather than on arbitrary dollar amounts."[54] They suggest specifying these elementary capabilities and the characteristics of the commodities people usually need to achieve them via a transparent and widely consultative global process. Those involved in the process might specify, for instance, that people need adequate nutrition which requires sufficient calories and essential nutrients. Then contextual factors such as cultural and environmental constraints can be taken into account in specifying the amount of money people need to avoid poverty in particular countries. The standards can be adjusted over time so that they continue to capture the ability of people to achieve basic capabilities as prices change.[55] Another possibility is to maintain the PPP estimates but to compare incomes between countries using a "basket" of basic commodities purchased by the poor around the world. Although neither proposal would solve all of the problems with the PPP measure (there is no single basket bought by all poor people) they should at least

51 The recently released 2005 ICP seems to recognize these problems. It says "PPPs provide a measure of the overall price level of an economy, but they may not reflect the expenditure patterns of the poor…. direct application of these PPPs to the estimation of poverty levels and rates may yield misleading results." International Comparison Project, 'Global Purchasing Power Parities and Real Expenditures: 2005 International Comparison Program.'

52 Deaton, 'Counting The World's Poor: Problems And Possible Solutions.'

53 Pogge and S. Reddy, 'Unknown: The Extent, Distribution, and Trend of Global Income Poverty.'

54 Pogge and S. Reddy, 'Unknown: The Extent, Distribution, and Trend of Global Income Poverty', p. 12.

55 Ibid.

improve the poverty estimates. If neither of these alternatives is feasible, it might be possible to improve poverty estimates by relying on corrected domestic poverty lines without updating them with changes in PPP exchange rates.[56]

In the meantime, however, the available statistics on poverty are so poor it would be unwise to have too much faith in the exact numbers we get using them.[57] We do know, however, that life expectancy and other non-monetary measures of poverty have improved in China and India.[58] So, it is plausible that the proportion of people in desperate poverty has fallen in the last 20 years.[59] But we cannot be sure. Furthermore, given the biases in PPP measures, we can conclude that the Bank's approach to estimating poverty "may have led it to understate the extent of global income poverty and to infer without adequate justification that global income poverty has steeply declined in the recent period."[60]

Some would object that the Bank, if anything, overestimates the extent of world poverty. Xavier Sala-i-Martin, for instance, suggests that there is about half as much poverty as the Bank estimates and that it has declined by at least 50% since 1980.[61]

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56 Deaton, 'Counting The World's Poor: Problems And Possible Solutions.'

57 S. Anand and R. Kanbur, 'International Poverty Projections', World Bank Working Paper 617 (Washington D.C: The World Bank, 1991).

58 "Poverty is multi-dimensional, and not all its aspects are determined by economic performance". World Bank, *Globalization, Growth, and Poverty*, p. 27-28. Even if income poverty is getting worse, other aspects of poverty might be improving. Of course, we have to be careful in evaluating other proposed measures of poverty too. Life expectancy could be increasing only amongst some portions of the world's population.

59 Wade, 'Is Globalization Reducing Poverty and Inequality?', p. 574. It may make sense to care about the proportion of people in poverty as well as the number of people who are poor. One might, for instance, think that proportions matter because one thinks that a world with a smaller proportion of poor people in it is a better world. In combating poverty, however, we are trying to reduce the number of people who are poor against the counter-current of more poor people being born.

60 Reddy and Pogge, 'How Not to Count the Poor', p. 6.

61 X. Sala-i-Martin, 'The World Distribution of Income: Falling Poverty and… Convergence, Period', *The Quarterly Journal of Economics* CXXI (2006), pp. 375. Also see: F. Bourguignon and C. Morrisson, 'The Size Distribution of Income Among World Citizens, 1820-1990', University of California Berkeley Working Paper (Berkeley: University of California 1999). Available at: <http://209.85.165.104/search?q=cache:a3rYPi4WJSEJ:are.berkeley.edu/~harrison/globalpoverty/bourguignon.pdf+%E2%80%9CThe+Size+Distribution+of+Income+Among+World+Citizens,+1820-1990.%E2%80%9D&hl=en&ct=clnk&cd=1&gl=us&client=firefox-

Shaohua Chen and Martain Ravallion argue, however, that Sala-i-Martin's results rely on a different understanding of the poverty line than the World Bank adopts.[62] They guess that the "estimates of the poverty threshold should be doubled to reflect the other income that he has implicitly included in his measure of income."[63] If this adjustment is made then Sala-i-Martin's estimates are in line with the World Bank's estimates.[64] The purchasing power parity and other problems mentioned above remain unresolved, however. So we are still justified in concluding that the Bank has probably underestimated the absolute number of people in poverty.[65]

3. Inequality

There are many ways in which changes in income levels could increase or decrease inequality – consider three. First, changes in income could alter the distribution of goods *within* nations. We can call this *intra-national* inequality. For example, the decreasing size of the middle class in the U.S. contributes to this sort of inequality.[66] Second, changes in income could alter the distribution of goods between nations. We can call this *international inequality.* If, for instance, developed countries are getting richer while developing countries are getting poorer, international inequality is increasing. Third, changes in income could alter the distribution of goods between different segments of the world's population. *World* inequality is inequality between individuals independent

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a>. Subsequently published as: F. Bourguignon and C. Morrisson, 'The Size Distribution of Income Among World Citizens, 1820-1990', *American Economic Review* 22 (2002), pp. 727-744.As noted above, however, Bourguignon & Morrison use the Geary-Khamis PPP measure.

62 Chen and Ravallion, 'How Have the World's Poorest Fared since the Early 1980s?'

63 Ibid cited in: Sala-i-Martin, 'The World Distribution of Income: Falling Poverty and… Convergence, Period', p. 375.

64 Sala-i-Martin, 'The World Distribution of Income: Falling Poverty and… Convergence, Period', p. 375.

65 Wade, 'Is Globalization Reducing Poverty and Inequality?', p. 574. Reddy and Pogge, 'How Not to Count the Poor', p. 6.

66 For a good introduction to different kinds of inequality see: Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000*. As Schultz, 'Inequality in the Distribution of Personal Income in the World: How it is Changing and Why', p. 2 puts it, "the increase in inequality in the distribution of personal income in many high income countries after 1980… is particularly pronounced in the United Kingdom and the United States" citing (Murphy & Welch, 1992), (Karoly, 1993), (Burkhauser et al., 1996) and (Gottschalk & Smeeding, 1997a).

of their country of origin. If the gap between the *global* rich and the *global* poor is widening, then *world* inequality is increasing.

Both intra-national and international inequality contribute to world inequality. International inequality contributes approximately 8/10th of the total.[67] This is because larger differences are usually found in two countries' mean incomes (drawn randomly) from the world than two individuals' incomes (drawn randomly) from one country. Still, increases (or decreases) in intra-national inequality might be compensated for by decreases (or increases) in international inequality. So, it is important to look at the components of world inequality to get the larger picture.[68]

Since most of the available data on inequality is on world and international inequality, however, we will only consider these kinds of inequality here. This will let us get a handle on the composition of world inequality.

International Inequality

International inequality can, but need not, be weighted by population. Unweighted international inequality should be used to evaluate the impacts of the international institutions' programs (including those that promote free trade) on inequality between countries.[69] The IFIs usually create these programs for individual countries. Ceteris paribus, when evaluating the impacts of *these institutions' programs on inequality*

67 Most of the estimates range from 7/10ths to 9/10ths of the total contribution depending, in part, on what measure of poverty is used. See: Schultz, 'Inequality in the Distribution of Personal Income in the World: How it is Changing and Why.' Also see: Firebaugh, 'Empirics of World Income Inequality.'

68 Cosmopolitan egalitarians who are concerned about inequality between individuals independent of country of origin might be most interested in trends in world inequality. By contrast, statist egalitarians who are concerned about inequality between states should care about international-inequality. Those who care about inequality between groups within a society (e.g. some communitarians) may care about intra-national inequality. Even those who are concerned about how individuals fare, independent of country of origin might, however, be interested in the composition of world inequality which requires looking at either intra-national or international inequality as well. Some are interested in other kinds of inequality, too. Some, for instance, care about inequality between ethnic groups or rural and urban populations. Philosophical reflection is warranted here to make clear the normative basis for different authors' choice of different empirical measures of inequality in this literature.

69 Wade, 'Is Globalization Reducing Poverty and Inequality?'.

between countries in general, the effect of these programs on any one of these countries is not more important than their effect on any one of the others.[70] Weighted international inequality implicitly gives greater weight to the impact of institutional programs on larger countries.[71]

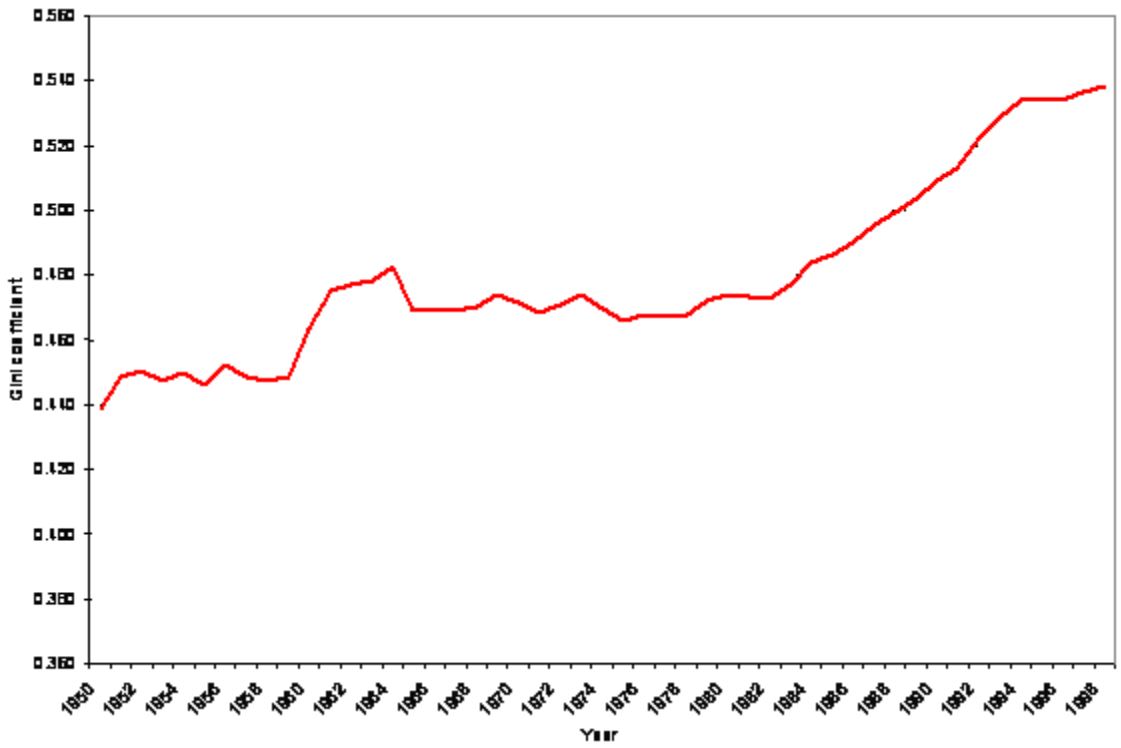
Recently, several papers using the so-called Gini coefficient (see appendix) have found that unweighted international inequality has increased since at least 1980. [72] Branko Milanovic argues, for instance, that inequality went up between 1950 and 1998 and it went up the most in the 1990s.[73] To see this, consider a graph of Milanovic's results (a Gini coefficient of 0 indicates complete equality and a coefficient of 1 indicates that one person receives all of the income):

70 One might object that if we are interested in world poverty we should also be interested in world inequality. We should not be interested in international inequality at all. This, however, is too simplistic. Different kinds of inequality matter for different reasons (we might say the same about poverty). The point here is just that insofar as we are interested in seeing how the international financial institutions programs impact inequality between countries in general, there is reason to consider unweighted international inequality.

71 Giving greater weight to the impact of institutional policies on some (large) countries makes it difficult to evaluate the impacts of free trade reforms in general for several reasons. One is that non-standard policies are standard in large countries. Large countries generally have more bargaining power than smaller countries. They are, thus, more likely to get concessionary loans from the IFIs without having to adopt the (otherwise) standard structural adjustment programs. Because larger countries have generally had better access to financing from a larger number of sources than smaller countries, they have often had more choice in shaping their economies as well. G. Mohan, E. Brown, B. Milward, and A. Zack-Williams, *Structural Adjustment: Theory, Practice, and Impacts* (London: Routledge Press, 2000). As Raul Gonzales as the World Bank reported, "China is so large it can call the shots." It did not take out many loans from the World Bank because the Asian Development Bank and private institutions came with fewer strings attached. "China says give us a check, they give it." R. Gonzales, Interview with Nicole Hassoun at the World Bank, August 6, 2004. Manila, Philippines. The fact that there are only a few large developing countries worsens the bias that results from using weighted international inequality to draw conclusions about the impacts of the policies on international inequality, in general. Non-standard policies in even a single large country might lead us astray.

72 To use the Gini to calculate world inequality one must also take into account the overlap between individuals when combining weighted international and intranational inequality. For details see: B. Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000* (Princeton, Princeton University Press, 2005).

73 B. Milanovic, 'The Two Faces of Globalization: Against Globalization as We Know It', *World Development* 31 (2003b), pp. 667–683. The other common methods used for measuring inequality give results that are quite similar to the Gini. See: Firebaugh, 'Empirics of World Income Inequality', pp. 1623-1624. for details on different ways of measuring inequality. For discussion of the theoretical advantages and disadvantages of inequality metrics see: L. Temkin, *Inequality* (New York: Oxford University Press, 1993).



Graph 8. International Inequality Not Weighted by Population[74]

Other papers provide similar results.[75] In fact, the general consensus seems to be that unweighted international inequality has increased.[76]

Because weighted international inequality is used to calculate world inequality, however, it is important to consider it as well. Most studies find that this kind of inequality has decreased slightly, if it has changed at all. This is primarily a function of recent distributional changes in China.[77] Before the industrial revolution there was much less weighted international inequality. As Western countries industrialized, their average incomes rose while those in Asia and Africa grew more slowly than average. Weighted

74 Modified from: Milanovic, 'The Two Faces of Globalization: Against Globalization as We Know it.'

75 T. Schultz, 'Inequality in the Distribution of Personal Income in the World: How it is Changing and Why', *Journal of Population Economics* 11 (1998), pp. 307–344. G. Firebaugh, 'Empirics of World Income Inequality', *American Journal of Sociology* 104 (1999), pp. 1597-1630.

76 Ibid. Also see: Milanovic, 'The Two Faces of Globalization: Against Globalization as We Know It.' Wade, 'Is Globalization Reducing Poverty and Inequality?'.

77 Schultz, 'Inequality in the Distribution of Personal Income in the World: How it is Changing and Why.'

international inequality increased greatly. Today, India and China where most of the world's population lives, are growing, and weighted international inequality is declining despite increasing inequality in some of the more developed countries.[78]

One worry about these results is that they may be biased because of the currency conversion measures used to estimate international inequality. In order to compare changes in income levels between countries one has to convert the currencies of different countries into a common currency. There are two common ways of doing this. So far we have only discussed studies using purchasing power parity exchange rates. Market exchange rates are another option.

We have already discussed some problems for the most common PPP exchange rates: One problem we mentioned is that the data underlying PPP exchange rates for some countries (most notably China and India) is unreliable. Given the large number of people in these countries this is an extremely large problem. Another problem for inequality estimates stems from the Gershenkron effect, that is, that a country's income appears greater at other countries' prices.[79] The most common PPP exchange rates bias estimates of inequality downward since they make poor countries' incomes look greater than they actually are.[80] The primary reason for this is that "quantities of services and goods consumed in poor countries are estimated at 'international' prices which are much closer to prices that prevail in rich countries."[81] Rich countries have greater weight in determining 'world' prices.[82] The bias has also increased over time. Recall that the poor

78 Firebaugh, 'Empirics of World Income Inequality.' L. Pritchett, 'Divergence, Big Time', *Journal of Economic Perspectives* 11 (1997), pp. 3-17.

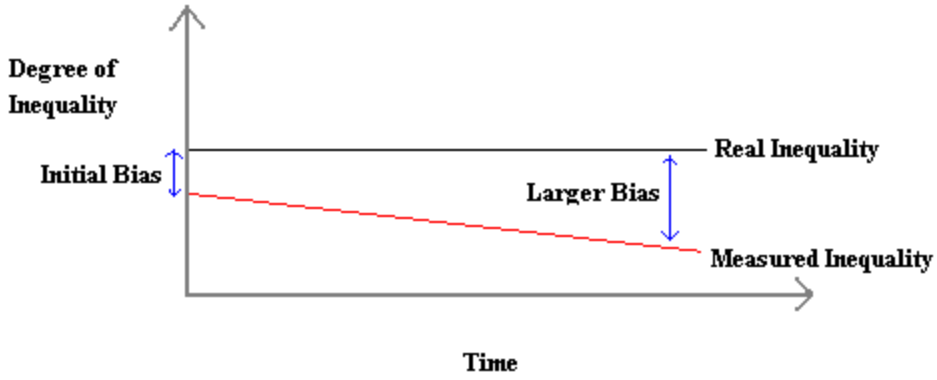
79 S. Dowrick and M. Akmal, 'Explaining Contradictory Trends in Global Income Inequality: A Tale of Two Biases', *Review of Income and Wealth* 51 (2005), pp. 201-229.

80 Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000,* p. 153.

81 Ibid.

82 Ibid.

do not buy many of the services that have come to make up more of the international "basket" of goods on which PPP comparisons are made. Since this makes the poor seem like they are doing better than they are it reduces inequality. Consider the following graph:



Graph 9: PPP Bias Grows Over Time

Unfortunately, market exchange rates may make it even harder to determine how people are faring. They tend to undervalue non-traded goods.[83] It may, thus, be best to try to avoid the problems with PPP conversion by correcting for the biases.

Different PPP exchange rates are available.[84] Steve Dowrick and Muhammad Akmal have calculated population weighted inequality measures using one such index -- the Afriat. They find that the biases in Geary-Khamis PPP exchange rates may more than

83 Deaton, 'Counting The World's Poor: Problems And Possible Solutions.' It s worth mentioning, however, that if exchange rate inequality worsens this does bode poorly for poor countries. Because many debts are denominated in dollars, imports are paid for in dollars, and participation in international affairs must be paid for in foreign currency, the costs of worsening inequality in exchange rates can be high. Though the bias of market exchange rates is to make inequality look worse than it actually is, Dowrick and Akmal argue that population weighted international and world inequality are getting worse even using exchange rate conversion methods once biases in exchange rates are corrected. Dowrick and M. Akmal, 'Explaining Contradictory Trends in Global Income Inequality: A Tale of Two Biases.'

84 Y. Dikhanov and M. Ward 'Evolution of the Global Distribution of Income, 1970-99', Instituto Brasileiro de Geografia e Estatistica Working Paper (Sao Paulo: Instituto Brasileiro de Geografia e Estatistica, 2001), p. 14.
Dowrick and Akmal, 'Explaining Contradictory Trends in Global Income Inequality: A Tale of Two Biases.' Afriat or Elteto-Koves-Szulc (EKS) PPP indexes are not calculated using the (Geary- Khamis) method. For explanation of how the different PPP exchange rates are calculated see: Ackland, Dowrick and Freyens, 'Measuring Global Poverty: Why PPP Methods Matter.'

account for the change in weighted international inequality seen here.[85] Using the Afriat PPP exchange rate instead, Dowrick and Akmal find that weighted international inequality is increasing, if anything.[86]

The keen reader might wonder, then, whether the results reported above for unweighted international inequality can be trusted. The short answer is that there will almost certainly be some inaccuracy in the results. The Elteto-Koves-Szulc (EKS) measure used to generate the results above suffers from similar problem to the problems with the Geary-Khamis PPP exchange rates, though it may be less biased than the Geary-Khamis.[87] We do know, however, that the bias in these PPP exchange rates will probably lower resulting estimates of inequality. After all, we have argued that using PPP in estimating poverty makes it seem like the poor are doing better than they are. The general trend is probably towards increasing unweighted international inequality and stable or increasing weighted-international inequality.

One might object to this conclusion by suggesting that the biases in the PPP indexes could not change the trends in inequality. Though, one might admit, correcting for these biases might change the estimates of its magnitude. Since we are primarily concerned with trends in inequality, this is a serious challenge to our conclusion.[88]

Recall, however, that the PPP biases makes it seem like more people are escaping poverty over time just because the rich consume more services. So it is quite possible that

85 Dowrick and M. Akmal, 'Explaining Contradictory Trends in Global Income Inequality: A Tale of Two Biases.'

86 Unfortunately, all PPP have some undesirable properties. It will not do here to go into all of these complications. The important thing to note is this: We have to make hard choices about measurement and these choices matter.

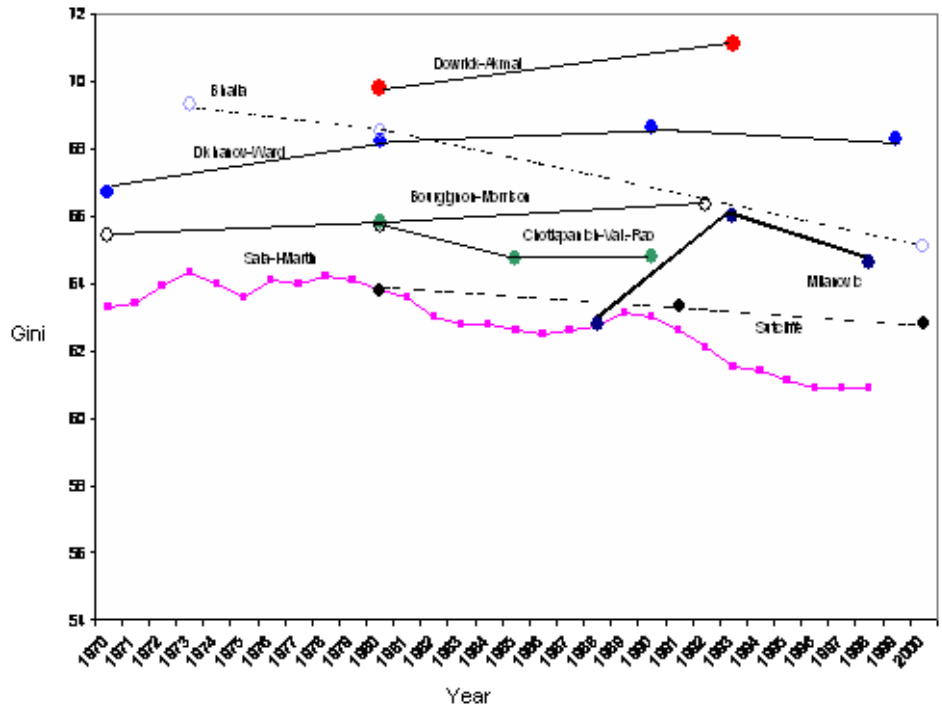
87 R. Ackland, S. Dowrick and B. Freyens, 'Measuring Global Poverty: Why PPP Methods Matter', Australian National University Draft Paper prepared for Seminar at the University of Melbourne, Department of Economics (Canberra, Australian National University, 2007).

88 I owe thanks to Richard Scheines for bringing this potential objection to my attention.

correcting for this bias can change the trends in inequality estimates. And, this is what some researchers have found.[89]

World Inequality

The graph below shows different researcher's estimates of trends in world inequality. There is a great deal of disagreement.



Graph 10. World Inequality[90]

Researchers do not even find similar trends starting from different initial estimates of inequality. One reason different researchers get different results is that, while international inequality is calculated using GDP per capita, world inequality can be calculated in several ways.[91] Some researchers use household survey data. Others use GDP per capita in combination with information about intra-country distribution.

89 Dowrick and M. Akmal, 'Explaining Contradictory Trends in Global Income Inequality: A Tale of Two Biases.'

90 Modified from: Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000.*

91 Milanovic's book *Worlds Apart: International and Global Inequality 1950-2000* provides a more comprehensive and detailed overview of recent results and discussion of methodological issues. Also see Milanovic for details on how the Gini is used to calculate world inequality.

There are many limitations of survey data. One is that it does not exist for many countries before the 1980's. Even when survey data does exist, coverage is not perfect. The degree of consistency also leaves much to be desired. Household expenditure and income surveys have to be combined since many countries only do one kind of survey or another.[92] Another worry is that household surveys underestimate the incomes of the rich by more than they underestimate the incomes of the poor.[93] Finally, most poor countries do not have as many public services as rich countries. These services are excluded from survey data. This method may, thus, bias inequality estimates downward (as compared to using GDP data).[94]

If one uses countries' GDP data, different problems arise. GDP per capita must be combined with (survey based) distributional information to estimate the income of each percentile of each country's population. This approximation requires many questionable assumptions.[95] One standard procedure, for instance, is to assume that incomes are distributed lognormally (i.e. as a logarithmic function with a normal distribution) and that GDP per capita is an accurate estimate of mean income.[96] Another potential problem arises from the fact that there are several sources of GDP per capita data available. This is problematic because the differences between the estimates are quite large: On some estimates, one will find that inequality is decreasing and on some one will find it is increasing.[97]

92 Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000,* p. 124.

93 Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000.* Deaton, 'Counting The World's Poor: Problems And Possible Solutions.'

94 Ibid.

95 Anand and Kanbur, 'International Poverty Projections.'

96 Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000,* p. 122.

97 Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000,* p. 150.

Researchers also use different PPP exchange rates.[98] As we have seen, the most common PPP exchange rates are deeply flawed.[99] So, until we can resolve these methodological problems, it will be hard to be confident that we have arrived at sound conclusions. At least there is little reason to believe that world inequality has decreased in the past few decades.

4. Free Trade

Measurement problems make it difficult to come to any conclusion about recent trends in world poverty or inequality. Inequality is high and (given the direction in the PPP biases underlying the measures) may be increasing in some respects.[100] Nothing we have said, however, shows that increased free trade has had an effect, either positive or negative, on inequality or poverty. What do some of the most influential studies say?

One report worth paying attention to is the World Bank's *Globalization*, *Growth and Poverty.* Although there are many other (and maybe better) ways of making this case, it is worth considering this report as the World Bank's is one of free trade's greatest advocates.[101] What kind of case for free trade does the World Bank rely upon?

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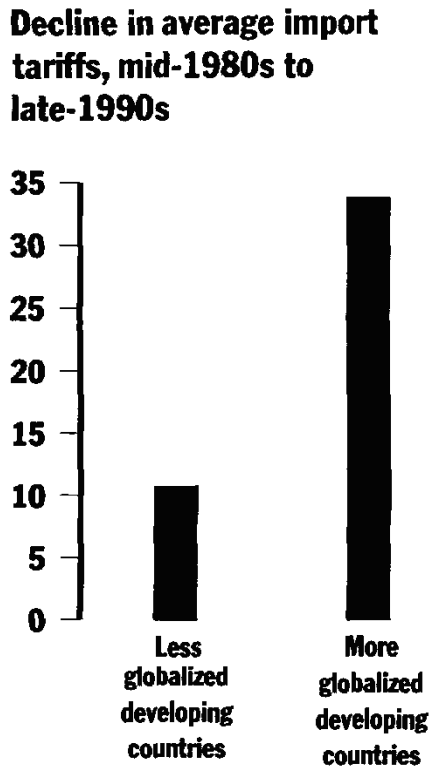
98 The following all use Geary-Khamis PPP measures. Bourguignon and Morrisson, 'The Size Distribution of Income Among World Citizens, 1820-1990.' S. Bhalla, *Imagine There's No Country: Poverty, Inequality, and Growth in the Era of Globalization* (Washington D.C.: Institute for International Economics, 2002). B. Sutcliffe, 'A More or Less Unequal World? World Income Distribution in the 20th Century', Political Economy Research Institute Working Paper Number 54 (Amherst: University of Massachusetts Amherst, 2003). D. Chotikapanich, R. Valenzuela and D.S.P. Rao, 'Global and Regional Inequality in the Distribution of Income: Estimation with Limited and Incomplete Data', *Empirical Economics* 22 (1997), pp. 533-546. Schultz, 'Inequality in the Distribution of Personal Income in the World: How it is Changing and Why.' X. Sala-i-Martin, 'The Disturbing 'Rise' of Global Income Inequality', National Bureau of Economic Research Working Paper No. 8904 (Cambridge: National Bureau of Economic Research, 2002), pp. 1-75. Available at: <http://www.columbia.edu/~xs23/papers/GlobalIncomeInequality.htm>.
The following use the EKS: Milanovic, *Worlds Apart: International and Global Inequality, 1950-2000*. Dikhanov and Ward 'Evolution of the Global Distribution of Income, 1970-99.' The following uses the Afriat: Dowrick and M. Akmal, 'Explaining Contradictory Trends in Global Income Inequality: A Tale of Two Biases.'

99 A final methodological worry worth mention is that researchers often have to approximate missing country and individual income distributions.

100 Dowrick and M. Akmal, 'Explaining Contradictory Trends in Global Income Inequality: A Tale of Two Biases.'

101 International Herald Tribune, 'IMF Names Krueger, a Free-Trade Advocate, to No. 2 Post', June 8, 2001. Available at: <http://www.iht.com/articles/2001/06/08/imf_ed3__0.php>.

Globalization, *Growth and Poverty* claims that free trade reduces poverty and inequality by increasing growth.[102] This section will argue, however, that there are a few reasons to worry about the Bank's report. First, the Bank overlooks the distinction between free trade and opening up markets to trade (or trade liberalization). *Globalization*, *Growth and Poverty* separates the top third of the developing countries with the greatest change in the ratio between trade and GDP from the rest. Weighting countries by population, the Bank then notes that these "more globalized" developing countries have grown more than "less globalized" developing countries, on average.[103]

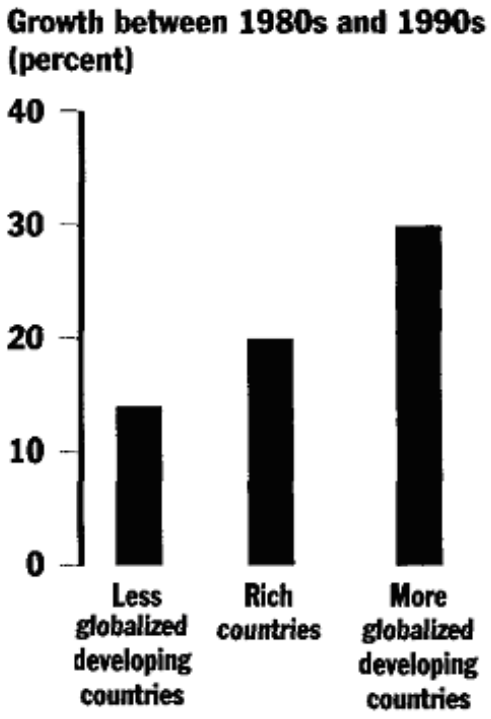


Graph 11. Population Weighted Changes in Trade/GDP (%)[104]

102 World Bank, *Globalization, Growth, and Poverty*, p. 49.

103 Ibid pp. 34-50.

104 Modified from World Bank, *Globalization, Growth, and Poverty*, p. 36.



Graph 12: Real Per Capita GDP Growth Globalizers/ Non-globalizers (%)[105]

Countries with a high trade to GDP ratio are not necessarily more open to trade, however. Rather, measuring changes in trade to GDP ratio captures changes in openness. Some of the globalized countries have smaller trade to GDP ratios than the non-globalized countries. Those countries which were already liberalized before 1977 and have the fewest barriers to trade are grouped with the countries that remain relatively closed to trade. In fact, "many of the globalizing countries initially had very *low* trade/GDP ratios in 1977 and still had relatively low trade/GDP at the *end* of the period in 1997 (reflecting more than just the fact that larger economies tend to have lower ratios of trade/GDP)."[106] For examples, see the tables below.

105 Modified from Ibid, p. 37.

106 Wade, 'Is Globalization Reducing Poverty and Inequality?', p. 580.

Nonglobalizers	Export/GDP 1990	Export/GDP 1999	%Change
Honduras	36	42	17
Kenya	26	25	-.04

Figure 2. Trade-dependent non-globalizers[107]

Globalizers	Export/GDP 1990	Export/GDP 1999	%Change
India	7	11	57
Bangladesh	6	14	133

Figure 3. Less-trade-dependent globalizers[108]

The results would be very different if the countries had been grouped differently; many countries with high trade/GDP ratios have had abysmal economic performance.[109] Including countries like China and India, which have low trade/GDP ratios, in the group of globalized countries virtually "guarantees that the globalizers, weighted by population, show better performance than the nonglobalizers."[110] It is not clear why the IFIs would consider trade to GDP ratios a good measure of free trade. They are probably just confusing free trade with liberalization although some have accused the Bank of trying to confuse others.[111]

This is worrisome because the kinds of policies pursued by countries like China in achieving growth were a-liberal. China and India began to open up their markets only

107 Modified from (World Bank, World Development Report 2000/01, Tables 1 and 13) cited in ibid.

108 Modified from (World Bank, World Development Report 2000/01, Tables 1 and 13) cited in ibid.

110 Wade, 'Is Globalization Reducing Poverty and Inequality?', p. 580.

111 D. Rodrik, 'Globalization, Growth and Poverty: Is the World Bank Beginning to Get It?', Op Ed (2001). Available at: <http://ksghome.harvard.edu/~drodrik/shortpieces.html>.

after their growth rates increased.[112] The World Bank may have the causality backwards.[113]

Next, consider the Bank's argument for the conclusion that free trade is reducing poverty because it has increased growth rates without increasing inequality in recent decades. Or, as they put it, "the combination of rapid growth with no systematic change in inequality has dramatically reduced absolute poverty in the globalizing countries".[114]

The first problem with this argument is that it does little to show that countries that trade freely grow more than those that do not. Consider the Bank's evidence for a link between free trade and growth. The Bank only establishes a correlation between population weighted trade to GDP ratios and real GDP per capita in developing countries but, even setting aside the distinction between liberalization and free trade, this is not enough to show that free trade increases growth**.** It is quite possible that there is a common cause of an increase in population weighted trade to GDP ratios and real GDP per capita in developing countries. Foreign aid, geographical factors, or foreign investment, for instance, may increase both trade to GDP ratios and real GDP per capita. More generally, the Bank does not test any other hypotheses that could explain the correlation they report between changing population weighted trade to GDP ratios and real GDP per capita in developing countries.[115] So, the study has what economists refer

112 Rodrik, 'Globalization, Growth and Poverty: Is the World Bank Beginning to Get It?'.

113 At least China, Japan, South Korea, Taiwan and others illustrate how it is possible to benefit from trade without making quick and uniform cuts in protection. Wade, 'Is Globalization Reducing Poverty and Inequality?', p. 581. Also see: Sachs, *The End of Poverty: Economic Possibilities of Our Time*, p. 131.

114 The Bank suggests that this conclusion is based on calculations for the report, and it does not cite any other studies in support of this contention. World Bank, *Globalization, Growth, and Poverty*, p. 49.

115 At one point the study says that "whether there is a causal connection from opening up trade to faster growth is not the issue." World Bank, *Globalization, Growth, and Poverty*, p. 36. Unfortunately, it is not consistent on this point or cautious enough in drawing conclusions from the evidence it presents. Right after denying the relevance of causation, for instance, the report draws the conclusion that "in those low-income countries that have broken into global markets, more restricted access to those markets would be damaging to growth". Ibid. The evidence only shows a historical correlation between growth and liberalization in these countries.

to as low *internal validity.* A study has low *internal validity* when there is little reason to believe its estimates reflect the causal relationships between the thing being evaluated (e.g. free trade) and the particular outcome observed (e.g. growth) even holding the study's circumstances fixed. The Bank's study does little to show that the jump from correlation to causation is justified.

Even if we granted without evidence that free trade increases growth rates, however, the Bank does little to show that free trade has not increased inequality. The Bank merely claims that "the long trend of rising global inequality … has been halted and even reversed".[116] The report does not explain how it measures global inequality, however. Since it arrives at this result, it is probably the case that it weights international inequality by population using a biased PPP index. After all, many use this as a proxy for world inequality (though, as we have seen, it is a poor proxy). So, the report's estimate of inequality is probably inaccurate. Biased PPP measures make inequality appear to be lower than it actually is. And, as we argued above, even if the Bank is interested in the impact of the reforms it encourages that promote free trade on countries on average, it should not look at international inequality weighted by population.[117]

Finally, even if we granted for the sake of argument that free trade increases growth rates without increasing inequality that would not show that free trade decreases

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Some argue that the report constitutes a subtle admission of the fact that the data simply does not support the hypothesis that free trade causes growth. Rodrik, 'Globalization, Growth and Poverty: Is the World Bank Beginning to Get It?'.

116 World Bank, *Globalization, Growth, and Poverty*, p. 50.

117 One might argue that the most relevant kind of inequality is intra-national inequality. After all, free trade reforms are made at the country level. If, on average, countries that trade freely have less inequality within them than countries that do not trade freely, we can conclude that free trade is reducing this kind of inequality. One problem with this argument is this: Although implementing country-level policies (usually) impacts those within the implementing countries most directly, others may still be affected. One might want to know how free trade impacts international or world inequality.

poverty.[118] Even if inequality neutral growth generally reduces poverty, the inequality-neutral growth that free trade brings may not reduce poverty. Some causes of inequality-neutral growth reduce poverty, others do not. At least on the Gini index, growth can be inequality neutral if it only increases the income of the middle class. If, for instance, there are an equal number of rich and poor people, the increasing inequality between the middle class and the poor may be offset by the decrease in inequality between the middle class and the rich. The World Bank does not provide convincing evidence that the poor are benefiting from free trade. Rather, they rely on a study by David Dollar and Aart Kraay that purports to show that "there is a one-to-one relationship between the growth rate of income of the poor and the growth rate of average income in society".[119] Others, however, have not been able to replicate this finding and argue that Dollar and Kraay do not take possible endogeneities in their data properly into account; growth rates amongst the poorest segments of the population may influence policies that influence overall growth rates.[120] Again, the Bank ignores alternative explanations. In short, the World Bank's has not done enough to show that free trade is *causing* poverty to fall.

Of course, others also argue that free trade reduces poverty and inequality. Jeffery Sachs and Andrew Warner, for instance, provide a different argument for the conclusion that the effect of free trade on the poorest countries has been good.[121] They create an

118 I owe special thanks to Thomas Pogge for helping me clarify the structure of this argument (and avoid innumerable errors in this paper).

119 World Bank, *Globalization, Growth, and Poverty*, p. 48.

120 M. Lundberg and L. Squire, 'The Simultaneous Evolution of Growth and Inequality', Mimeo (Washington D.C.: World Bank, 2000). Subsequently published as: M. Lundberg and L. Squire, 'The Simultaneous Evolution of Growth and Inequality', *The Economic Journal* 113 (2003), 241-538.

121 Even if a case could be made that free trade decreased poverty in the short term, it is possible that free trade's beneficial impact could be short lived if, for instance, free trade encouraged specialization in environmentally unsustainable monocrop production. Such production methods might bring short term returns to the poor but leave them no better off, or even make them worse off, in the long run. For discussion of these and related issues see: N. Hassoun, 'Free Trade, Poverty, and the Environment', *Public Affairs Quarterly* 22 (2008a), pp. 353-380. N. Hassoun, 'Free Trade and the Environment', *Environmental Ethics* 31 (2009a).

index to measure the effect of free trade on growth. Sachs and Warner assert that most countries that have started trading freely, including open developing countries, have grown while most countries that remain closed to trade have stagnated.[122] Perhaps their argument is better?

Unfortunately, Sachs and Warner's study does not allow us to conclude that free trade is reducing poverty or inequality.[123] The developing countries could be growing because the rich in those countries are gaining more than the poor are losing. Furthermore, this study's measure of free trade is questionable. Several recent studies have decomposed some of the different indices of free trade including the Sachs-Warner index. These studies find that free trade alone does not promote growth.[124] The Sachs-Warner index includes measures of tariff and non-tariff barriers to trade and distortion in the foreign exchange market.[125] But the critics suggest that it primarily captures a

122 J. Sachs and A. Warner, 'Economic Reform and the Process of Global Integration', *Brookings Papers on Economic Activity* 1 (1995), pp. 1–118. Sachs and Warner attempt to capture the effects of free trade using a measure of tariff and non-tariff barriers and distortion in the foreign exchange market. For a paper that looks at price levels adjusted for the amount of resources a country possesses see: D. Dollar, 'Outward Oriented Developing Countries Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-85', *Economic Development and Cultural Change* 40 (1992), pp. 523-544. For a paper that looks at the component of countries' overall trade determined by geography in an attempt to isolate the impact of trade on growth see: J. Frankel and D. Romer, 'Does Trade Cause Growth?', *The American Economic Review* 89 (1999), pp. 379-399. These studies all purport to show a link between openness and growth. Others argue, however, that such measures of openness are inaccurate and really capture the quality of institutions rather than the liberalization of trade. Rodriguez and Rodrik, 'Trade Policy and Economic Growth: A Skeptic's Guide to Cross-National Evidence.' For other criticism of the measures see: Harrison and Hanson, 'Who Gains from Trade Reform? Some Remaining Puzzles.' The authors of *Globalization, Growth, and Poverty* respond that the evidence for a link between openness and growth should be accepted nonetheless because there are few studies showing the positive effects of protectionism and remaining closed to trade. World Bank, *Globalization, Growth, and Poverty*, p. 36. This, however, seems to present a false dichotomy. Few would argue for undifferentiated protectionism as an alternative to complete openness.

123 Liberalizing reforms have been imperfectly implemented, at best. Still we can see what impact the liberalization that has happened has had. One might argue that further liberalization is necessary to secure the benefits from those reforms that have been implemented though it is a bit unclear how one might make this case in general.

124 A. Harrison and Hanson, 'Who Gains from Trade Reform? Some Remaining Puzzles', *Journal of Development Economics* 29 (1999), pp. 125-154. X. Sal-i-Martin 'I Just Ran Two Million Regressions', *American Economic Review* 82 (1997), pp.178–183.

125 Sachs and Warner, 'Economic Reform and the Process of Global Integration.'

correlation between growth and black market exchange rates rather than a correlation between growth and free trade.[126]

Even worse, others using some of the same measures of free trade as the World Bank and Sachs and Warner, but improving upon these studies, have found that free trade is correlated with increasing inequality in the poorest countries. A recent study by Milanovic found that among countries with less than US$5,000 per capita income (PPP), those countries with a high ratio of exports and imports to GDP had more inequality.[127] Similarly, Lundberg and Squire report that growth amongst the poorest 40 percent of households is negatively correlated with greater openness (on the Sachs-Warner index), though openness is strongly and positively correlated with growth amongst the wealthiest 40 percent of households.[128] If these studies are correct, the evidence suggests that free trade is correlated with more inequality in developing countries. The IFI's faith in the ability of free trade to reduce poverty while decreasing or at least not increasing inequality is unsubstantiated.[129]

5. What We Can Say

The evidence we have considered for the conclusion that free trade is reducing poverty and inequality is weak. There are significant measurement problems and the Bank has not done enough to move from correlation to causation. So the IFIs should probably not issue recommendations on the basis of such evidence.

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126 Harrison and Hanson, 'Who Gains from Trade Reform? Some Remaining Puzzles.'

127 B. Milanovic, 'Can we Discern the Effect of Globalization on Income Distribution? Evidence from Household Budget Surveys', World Bank Policy Research Working Paper 2876 (Washington D.C.: World Bank, 2003a). Available at: <http://econ.worldbank.org>.

128 Lundberg and Squire, 'The Simultaneous Evolution of Growth and Inequality.'

129 Perhaps by paying attention to the other things that impact inequality and growth within countries and regions free trade can be made to work for the poor. For instance, we know that liberalization in land abundant continents like Latin America "with relatively high wages and a history of protection aimed at distributing income from the agricultural sector to the industrial working class… [is likely to] create greater inequality." M. Wolf, W*hy Globalization Works* (New Haven: Yale University Press, 2004). p. 168. Such contextual factors should be taken into account. Similar issues will be discussed below.

One thing they might do is focus on giving country-level recommendations that take into account each country's individual circumstances, history, and so forth in deciding whether or not to recommend free trade reforms. There are many country studies. A recent unclassified OECD study of trade liberalization in Brazil, for instance, summarizes a great deal of research on liberalization's impact there and presents some new analysis. Country studies of free trade's impact on poverty and inequality might provide the basis for IFI recommendations in that country.

But, whether or not the IFIs want to issue *general* recommendations for or against free trade *for all countries*, or restrict themselves to country-level recommendations they must make sure the studies they rely upon avoid the problems we sketched above. First, they must get clear on what kind of free trade, poverty, and inequality are at issue.[130] Second, they must find or create good measures of the relevant sorts of free trade, poverty, and inequality.[131] Finally, they must be careful to rule out alternative explanations of any observed correlations between free trade, poverty, and inequality.

We have already said quite a bit about how researchers can avoid the first pitfall in discussing poverty and inequality. The metrics they use must latch on to things that can reasonably be called *poverty* and *inequality.* Similar points apply regarding free trade. Researchers must give an account of free trade and then make sure that the metrics they are using latch on to this notion. They might argue, for instance, for a conception of free

130 Most country studies focus on intra-national inequality and they are often clearer about what kind of "free trade" or liberalization is at issue. In the country study discussed above, for instance, the claim that Brazil liberalized greatly after 1990 was supported by the following evidence: "The trade reforms after 1990 included major reductions in trade barriers encompassing goods and services, tariff and non-tariff barriers and quantitative restrictions… Tariffs on agricultural and food products fell from a simple average of 26% in 1990 to 10% in 2005. The simple mean tariff on non-agricultural products fell to the same degree from 33% in 1990 to 13% in 2005. The maximum tariff was halved to 55% and the standard deviation on tariffs dropped to around a third of their 1990 levels." EUROSTAT-OECD, 'EUROPSTAT-OECD Methodological Manual on Purchasing Power Parities (PPPs)' (Paris: ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT, 2008). p. 20. Available at: <http://www.oecd.org/document/3/0,3343,fr_2825_495691_37961859_1_1_1_1,00.html>.

131 Country studies have the advantage of not having to use PPP exchange rates.

trade that is appropriately captured by an amended Sachs-Warner measure of tariff and non-tariff barriers to trade. This way of specifying free trade, would help researchers to avoid the problem with the original Sachs-Warner measure; the amended measure would not primarily capture changes in black-market exchange rates. We have also considered some ways of avoiding the second pitfall (though this may be harder). If researchers want to measure income poverty between countries, for instance, we noted that researchers must resolve the problems with the PPP measures underlying the metrics. If researchers only do country-level studies they will not need to resolve this problem, though they will still have to resolve other problems with indexes.

It is probably hardest to see how researchers might avoid the final pitfall - ruling out alternative explanations of any observed correlations between free trade, poverty, and inequality. So, on the supposition that the problems with the Sachs-Warner and income poverty measures can be resolved, we will consider how researchers might rule out alternative explanations of correlations between free trade and poverty internationally by doing controlled experiments. After doing so, it should be clear how one could do this for inequality as well. And it should be clear that it would be easier to do controlled experiments at the country level. (Countries might, for instance, do experimental evaluations of free trade's efficacy similar to those described below by allowing free trade within only some randomly selected regions.)

When one asks how free trade impacts poverty in countries, in general, one is really asking: "How (on average) the poor in countries that trade freely fare *compare* with how (on average) the poor in those countries would fare if they did not trade freely?" But countries cannot at the same time both adopt and refrain from adopting the relevant free trade policies. So researchers cannot compare how their poor fare with free trade to how

their poor would fare without free trade (and then find the average impact of free trade on poverty in the sample). The best researchers can do is to compare how the poor fare in countries with free trade (on average) to how the poor fare in countries without free trade (on average). They need only hold everything else equal.[132]

It can be difficult, however, to hold everything else equal. After all, there are many differences between countries like Malawi and China (besides the ways that they trade) that can affect poverty. One way of trying to hold everything else equal is to do an experiment.[133] Experimental evaluations help test the causal efficacy of an intervention (e.g. reducing trade barriers); they help insure a study's internal validity. In *experimental* studies, units of analysis, countries in this case, are assigned randomly to experimental groups (e.g. those that reduce trade barriers) and comparison groups (e.g. those that do not reduce barriers). Stratified matched random assignment to experimental and comparison groups ensures that, on average, there are no relevant differences between those in the experimental and comparison groups. This helps isolate the policies' impact on countries. There are also many "quasi-experimental" studies where researchers try to ensure that a study has high internal validity without random assignment. With a quasi-experimental designs, however, those in the experimental group are more likely to differ from those in the comparison group in important ways.

An example will help illustrate the advantages and limitations of experimental and quasi-experimental studies for evaluating free trade's impact on poverty in countries. If (say) researchers decide which countries should be part of the experimental group, problems may arise. The countries that are in the experimental group (in this case

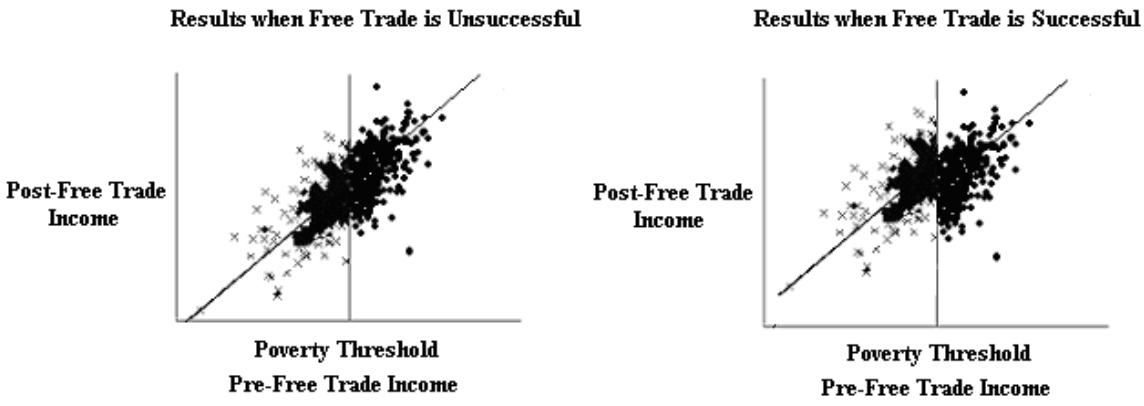
132 R. Schienes, 'Causation, Statistics, and the Law', *Journal of Law and Policy* XVI (2007), pp. 135-176. D. Rubin, 'Estimating Causal Effects of Treatments in Roandomized and Nonrandomized Studies', *Journal of Educational Psychology* 632 (1974), pp. 688-701.

133 Another approach is to use an instrument to control for other possible explanations.

reducing tariff and non-tariff barriers to the level specified in the amended Sachs-Warner index) may, for example, also privatize some of their main industries. Even if the poor in experimental countries do better than the poor in non-experimental countries, researchers will not know if the difference results from freer trade (it could result from privatization).

Using a quasi-experimental method may help. Consider, for example, one such method *regression discontinuity design*. With regression discontinuity design, researchers use explicit selection criteria to select countries to reduce trade barriers. Only the poorest countries may be encouraged to do so, for instance. The comparison group would then be made up of those who are just above this poverty threshold. Next, researchers see if there is a discontinuity in how the poor in countries just above and just below the threshold fare.

Consider a graphical illustration of the results. The x's indicate poverty rates in countries that start out below the poverty threshold and reduce trade barriers; the o's indicate poverty rates in countries that start out above the poverty threshold and do not reduce barriers. In the first graph free trade has no effect. In the second free trade has a good effect. On average, those reducing trade barriers have less poverty than those not implementing the policies *at the threshold* (notice the discontinuity).



Graphs 13 and 14: Unsuccessful Free Trade and Successful Free Trade

Unfortunately, there can be differences between those just above and below the threshold and this can cause problems for this kind of quasi-experimental evaluation. Countries just above the threshold might, for example, implement other reforms. If so, researchers cannot create a good comparison group made up of countries right above the threshold. Contrasting the experimental with the comparison group will not tell researchers whether free trade is successful in reducing poverty; they will not know how the poor would have fared without free trade.

True experiments are better; randomization gives researchers reason to think the experimental group is relevantly similar to the comparison group. It will not matter if countries just above the limit for reducing trade barriers implement other reforms. With proper randomization, the comparison group will be made up of countries that, like those reducing barriers, are below the threshold. So, it should be easier to conclude that a perceived effect is due to free trade.[134]

Consider an example of how such an experiment might be carried out through the WTO. The WTO sets different schedules for countries to reduce their tariffs. It might select two groups of countries at random and require one to reduce tariffs to the level indicated in the emended Sachs-Warner metric. The WTO could exclude countries that do not abide by its dictates from the study but induce participation with the standard enforcement methods (allowing countries that its arbitration board finds do not abide by its dictates to be punished by other countries). Most countries abide by WTO rules. But, even if some countries were excluded, the study would probably have a large enough sample from which to generalize. Assuming the WTO could secure enough participation, it could compare how the poor fare (on average) in the group of countries reducing tariffs

134 Researchers have developed ways of addressing this possibility.

to how the poor fare (on average) in the comparison group. This would allow it to see whether free trade is generally good for the poor.[135] It should be clear from this example that countries may have to refrain from implementing the trade policies that they are inclined to pursue to participate in the experiment. But it should also be clear that, from a purely methodological perspective, it is better to do an experiment than to try to find a representative country in which to test free trade policies. Consider an analogy: It is better to see how a new drug works in a random sample of people than to try to find a representative person on whom to test the drug.

Sometimes researchers cannot perform experimental evaluations. Randomization will not work, for example, if states refuse to participate -- refusing to reduce trade barriers or doing so on their own. Furthermore, experimental evaluations may sometimes be undesirable. Experimental evaluation may require altering the free trade reforms in ways that cannot be replicated. This may reduce what economists refer to as the *external validity* of the evaluation. An evaluation's *external validity* is the degree to which its findings can be generalized to different circumstances. Still, ceteris paribus, if it is possible to acquire experimental evidence, it is better than quasi-experimental evidence. After all, it is hard for researchers to be sure that they have taken into consideration all potential differences between comparison and experimental groups. Randomization helps researchers do so.

One problem for conducting an experiment like this is that even with randomization researchers may have reason to believe countries in the control and experimental groups differ from each other in important ways. This is just because there are many factors that may be important and some of these will likely occur more

135 If it is impossible or undesirable to get the countries reducing their tariffs to reduce tariffs so much, the WTO could just have these countries reduce their barriers a little. Though, this would test the effect of liberalization rather than free trade on countries.

frequently in one randomly selected group than another. It is likely, for instance, that one or another of the groups will contain more small, land-locked, or rich countries and this fact, rather than free trade, may explain differential poverty rates. So it may not be possible to generalize from the experimental group to the entire population. Researchers may do better to try to control for factors they think may explain differential performance. Researchers might, for instance, try to ensure that there are an equal number of large and small countries, land-locked and sea-side, and rich and poor countries in the experimental and control groups.

One might worry that countries differ from each other in so many potentially relevant ways that researchers cannot ever be confident that the experimental and control groups are well matched. But even if this is so, when an experiment is possible, it is better than the alternatives. The possible confounding factors are just as problematic in quasi-experimental designs and regressions, for instance. If researchers include too many variables in regressions, for example, none will show a significant impact.[136] Experiments are not ideal for every question and are sometimes simply impossible. Still they are the gold standard when trying to answer causal questions like "How does free trade impact poverty and inequality in general?". So, there is reason to study free trade's impact on the poverty and inequality experimentally.

One might wonder, then, why no one has even suggested (at least international) economic experiments. This question is especially pressing since free trade reforms (and other economic policies) often have greater impacts on a greater number of individuals' fortunes than new medications or technologies. Countries' fates may even hang in the balance. One explanation is that such testing might be ethically suspect.

136 Sala-i-Martin, 'I Just Ran Two Million Regressions.'

There are at least three main views on when it is acceptable to offer the opportunity to participate in experimental research that poses some risk to participants' interests.[137] One is the simple injunction to minimize risks to participants (insofar as possible) while also making sure that the risks to the participants are not out of proportion to the benefits to the aggregate. Another approach suggests that research is only acceptable when (1) the experimenter is uncertain as to whether the treatment is better than the alternative or (2) there is uncertainty or conflict within the community of experts as to the whether the treatment is better than the alternative. Finally, some suggest that the key is treating the basic interests of participants equally with non-participants. Those who take this third approach go on to say we should conjoin the requirement to minimize risks to participants (insofar as possible) with (2) and also ensure that participation does not pose greater risks to participants' welfare than they might otherwise voluntarily assume.[138] Since this last *integrative approach* is the most demanding, we might adopt it here.

This paper has argued that we do not know whether free trade is good for the poor, and there is reasonable disagreement about whether these policies are good for the poor within the development community. So (2) is satisfied At least there seems to be uncertainty or conflict within the community of experts as to the whether the treatment is better than the alternative. So, if (i) experiments about free trade's impact on poverty are conducted so as to minimize risk to participants and (ii) doing so does not pose greater risks to participants than they might otherwise voluntarily assume, (iii) offering the

137 Most of the work on research ethics is in the medical ethics literature so there is plenty of room for fruitful research on how a good research ethic for development policy might differ.

138 A. London, 'Reasonable Risks in Clinical Research: A Critique and a Proposal for the Integrative Approach', *Statistics in Medicine* 25 (2006), pp. 2869-2885.

opportunity to participate in such experiments may be ethically acceptable. So, if (iv) participants freely agree to take part in these experiments, (v) they may be justifiable.[139]

A different reason why no one may have tried (or even suggested) testing free trade's impact on poverty and inequality experimentally is that such testing might be infeasible. Rigorous testing of even small scale aid programs can be very expensive.[140] Carrying out experimental testing internationally would probably be even more expensive. It might take a lot of resources to secure any international cooperation. And, even with a lot of resources, some countries may refuse to participate in experimental tests.

Although this objection is compelling, we should not be too quick to dismiss this idea.[141] There are all kinds of international data gathering programs. And the World Bank and other IFIs frequently play information gathering roles in international affairs. The World Bank, for instance, initiated global data collection for the Internal Comparison Program which produces PPP estimates.[142] To generate these estimates countries must

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139 This conclusion leaves out something essential, however. It is not clear who we should consider to be the "participants" in the experiments – individuals, groups within countries, or the countries themselves. Must we get each individual's consent to such experiments or will countries' consent suffice? It would, presumably, be easier to secure countries' as opposed to individuals' consent. And, perhaps such consent would suffice at least in democratic countries. It might be possible, for instance, for international organizations like the IMF or WB to secure countries' consent. The IMF or WB might offer countries loans or aid if they agree to participate. Though, of course, this raises important questions about IFI conditionality. See: N. Hassoun, 'World Poverty and Individual Freedom', *American Philosophical Quarterly* 45 (2008b), pp. 191-198. N. Hassoun 'Making Free Trade Fair', Carnegie Mellon University Working Paper (2009c). Available at: <http://www.hss.cmu.edu/philosophy/hassoun/papers.php>.

140 E. Duflo and M. Kremer, 'Use of Randomization in the Evaluation of Development Effectiveness.' World Bank Operations Evaluation Department Conference on Evaluation and Development Effectiveness (Washington D.C.: World Bank, 2003).

141 If there are ethically acceptable ways of doing international experiments to gather data on development policy, and doing so is not prohibitively expensive, then it is hard to see how not doing such experiments can be justified. After all, we require those proposing new medical treatments affecting thousands or even just hundreds of peoples' lives to do such experiments. Should not we require similarly good evidence before implementing possibly devastating policies that affect hundreds of thousands if not millions of peoples' lives? After all, these policies can affect peoples' lives just as much as medical interventions and they do not usually get to consent to these policies' implementation.

142 World Bank, 'The 2005 International Comparison Program – Results' (Washington D.C.: World Bank, 2005b). Available at: <http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/ICPEXT/0,,menuPK:1973757~pagePK:62002243~piPK:62002387~theSitePK:270065,00.html>.

provide a wealth of data including a breakdown of prices for representative goods in many different product classes.[143] Other international programs require countries to implement common policies for a variety of purposes (from catching war criminals to protecting the seas). As noted above, the WTO already requires countries to implement the kinds of free trade reforms at issue here so it might require countries to phase in their reductions in ways that allowed some experimental testing of reforms.

If necessary, participants could be induced to participate in experimental studies with side benefits. They might, for instance, be offered soft loans from the World Bank or IMF if they participate. Researchers should be careful, however, in generalizing from the results of such studies to make sure that they have not, inadvertently, introduced a selection bias into their experiments. If, for instance, more poor countries than rich countries are induced to participate, experimental results may not apply as well to rich as to poor countries.

Finally, similar proposals for micro-level evaluation have been taken quite seriously by development economists and institutions.[144] In a World Bank research paper, for instance, Ester Duflo and Michael Kremer advocate creating an international organization for doing and disseminating experimental research on aid programs at the international level.[145] Their rationale for micro-level experimental evaluations applies equally here.

> Credible impact evaluations are international public goods: the benefits of knowing that a program [or, in this case, policy] works or does not work

143 International Comparison Program estimates are integrated with the EUROSTAT-OECD PPP program which itself requires international cooperation from OECD and former-Soviet block countries. EUROSTAT-OECD, 'EUROPSTAT-OECD Methodological Manual on Purchasing Power Parities (PPPs).'

144 Center for Global Development, 'Learning from Development: The Case for an International Council to Catalyze Independent Impact Evaluations of Social Sector Interventions.' (Washington D.C.: Center for Global Development, 2006). Available at: <http://www.cgdev.org/content/publications/detail/7972>.

145 Duflo and Kremer, 'Use of Randomization in the Evaluation of Development Effectiveness.'

> extend well beyond the organization or the country implementing the program... Moreover, by credibly establishing which programs [or policies] work and which do not, the international agencies can counteract skepticism… and build long-term support for development. Just as randomized trials for pharmaceuticals revolutionized medicine in the 20th Century, randomized evaluations have the potential to revolutionize social policy during the 21st.

There is reason to consider whether there are feasible and ethically acceptable ways to carry out such testing. Further research is necessary to formulate such a proposal.

6. Conclusion

Currently available poverty statistics are not adequate measures of whether poverty rates have changed in recent decades. Inequality under some measures has probably been increasing. And, the empirical evidence that free trade is reducing poverty and inequality is not as clear as the IFIs contend. Some studies have even found that free trade is correlated with increasing inequality and decreasing growth rates. The IFI's faith in the ability of free trade to decrease poverty without increasing inequality is unjustified. So the IFIs may do better to focus on giving country-level recommendations that take into account each country's individual circumstances, history, and so forth. But, the best evidence about free trade's efficacy in alleviating poverty and inequality would probably come from experimental studies. So, there is reason to consider international experimental testing if it is practical and morally permissible. [146]

146 The author would like to thank Thomas Pogge, Richard Schienes, Don Ross, Thomas Christiano, Jerry Gaus, Clark Glymour, Michael Gill, Gillian Brock, Larry Temkin, Geoffrey Brennan, Branko Milanovic, Francisco Veloso, Joshua Knobe, Luc Bovens, Clark Wolf, Darrel Moellendorf, Aaron James, Mathias Risse, Christian Barry, Sanjay Reddy, Loren Lomasky, Jan Narveson, the editor of the Journal of Moral Philosophy, and the anonymous referees who kindly gave their critical and incredibly helpful comments. She would also like to thank the audience at the Ethics and Africa Conference in 2006. Finally, she gratefully acknowledges the support of the American Association, the Earhart Foundation and the Falk Foundation for their support during the course of this project. She sincerely apologizes to anyone she has forgotten to mention.

Appendix: Measuring Inequality

Most economists estimate trends in inequality with the Gini coefficient. So, although there are alternatives, we have only considered studies using the Gini here. It is easiest to explain the Gini for unweighted international inequality so let us suppose that that is the kind of inequality we are interested in measuring. It should be fairly clear how the Gini can be modified to measure weighted international inequality. Consider, first, the Gini's algebraic expression:

$$G = \frac{\sum_{i=1}^{n} \sum_{j=1}^{n} |x_i - x_j|}{2\, n^2\, \mu}$$

Here μ is the mean income of countries, x is the income of a country, and n is the number of countries. So, the Gini takes the sum of the absolute value of the income differences between all pairs of countries in a population. It then divides the result by the square of the number of countries in the population and the mean income of the countries. This ensures that each country's income is compared with each other country's income only once. Finally, it rescales the result by two. This ensures that the Gini outputs a value between 0 (where every country is perfectly equal) and 1 (where one country has all of the wealth). Of course, to get sensible results using the Gini it is essential to use measures of income that are comparable between countries.

Consider a simple example. Suppose we want to know how much international inequality there is a world with only two countries: Rich and Poor. Suppose that Rich has an income of PPP US$10 billion while Poor has an income of PPP US$1 billion. Taking the sum of the absolute value of the income differences between each pairing of countries in this population we get |10 billion - 1 billion| + |1 billion - 10 billion| = 18 billion. Dividing the result by the square of the number of countries in the population we get 18

billion / 2^2 = 4.5 billion. Dividing by two and the mean income of the individuals or countries we get a Gini of 4.5 billion / 5.5 billion / 2 = .41.

A good way of illustrating the Gini is with the following diagram of the Lorenz curve:

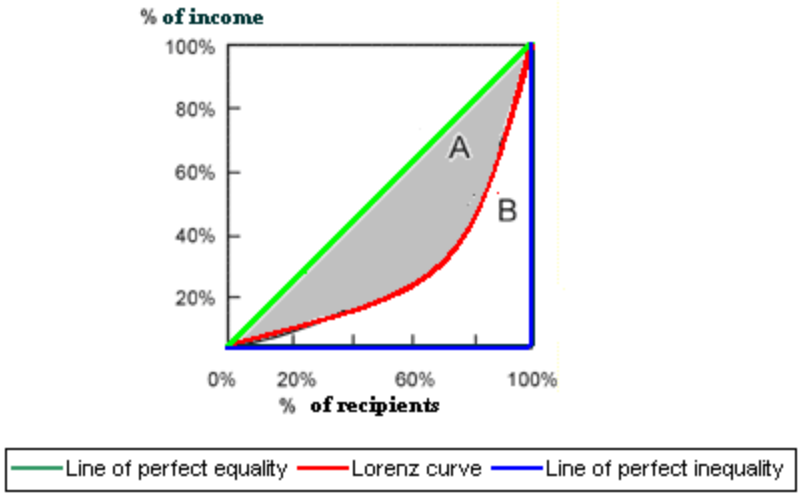

Diagram 1. Lorenz Curve[147]

In this diagram, the percentage of the recipient countries in the world is indicated on the horizontal axis. The percentage of income that recipients could have is indicated on the vertical axis. The *line of perfect equality* indicates where the Lorenz curve would lie if there was no inequality between countries. Ten percent of the countries would have 10% of the income, 20% of the countries would have 20% of the income, and so on. In this diagram, however, the Lorenz curve indicates that 60% of the countries have only 20% of the income. If one country had all of the income then the Lorenz curve would lie completely along the bottom and right hand side of the diagram (the *line of perfect inequality*). The Gini coefficient is just the area between the line of perfect equality and the Lorenz curve divided by the area between the lines of perfect equality and inequality

147 Modified from: W. Wilson, 'The Effect of Right-to-Work Laws on Economic Development', A Mackinac Center Report (Midland, Michigan: Mackinac Center, 2002). Available at: <http://www.mackinac.org/archives/2002/s2002-02.pdf>.

(A / (A + B)). Once again, the Gini can range from 1 to 0. The Gini is 1 when there is perfect inequality. This is because the area between the line of perfect equality and the Lorenz curve just equals the area between the line of perfect equality and the line of perfect inequality when the Lorenz curve lies along the bottom right hand axis. The Gini is 0 when there is perfect equality. This is because the area between the line of perfect equality and the Lorenz curve is 0 when the Lorenz curve lies along the line of perfect equality. Interested readers might refer to Larry Temkin's book *Inequality* for discussion of potential problems with the Gini and alternate measures of inequality.[148]

148 Temkin, *Inequality.*

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