

RULES OF REDISTRIBUTION AND FOREIGN AID:

A proposal for change in rules governing eligibility for foreign aid

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ABSTRACT

When income is redistributed at national level, the minimum requirement is that the transfers should be progressive, that is flow from richer to poorer individuals. The same rule should hold at the global level: it is not sufficient that transfers be from a richer to a poorer country. But normally we do not know who are the taxpayers who finance international aid nor who are the beneficiaries. We can nevertheless establish the rules such that the likelihood of a globally regressive transfer is minimized. This implies taking into account countries' national income distributions, that is penalizing countries with highly unequal distributions since there exists a non-trivial probability that the transfers may be received by people richer than rich countries' taxpayers who finance such transfers. Some rules for changing eligibility criteria for aid are proposed.

Keywords: Aid, redistribution, global income distribution

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1. The rules of redistribution at the global level

At the national level, social transfers have two functions: one is social insurance and income smoothing as is the case with insurance for the old age (pensions) or unemployment insurance. Another function is purely redistributive: to help, without any direct quid pro quo, the poorest members of the society. These are social assistance or welfare transfers. For welfare transfers, a general and minimum requirement is that they be pro-poor or progressive. This means that they should transfer money from richer to poorer households. For clearly the whole function of poverty alleviation would be negated if the poor were to transfer money to those who are better off than themselves.

When we move to the global level, the first function of social transfers, insurance, cannot exist because it requires the existence of a government that collects taxes and social security contributions and then disburses them later to those who have contributed. Thus in order to have social insurance, we need to have a government with a taxation authority, a thing which does not exist at the global level. However, the second function—social assistance, that is, transfer of funds according to need only—does exist even if its size is modest. These transfers take two forms: bilateral grants or aid given by the governments of the rich countries (mostly OECD) to the governments or private entities in poor countries; and soft loans disbursed by international financial institutions. These loans, like e.g. those of the World Bank-affiliated IDA carry minimal interest rates and long maturities. Hence the subsidy element is substantial and the “appellation” of aid is appropriate.²

Now, it is not unreasonable to require that international social assistance should follow the same rules as national social assistance: transfers need to flow from the rich to the poor, i.e. to be progressive. It is often thought that the very fact that they flow from a rich to a poor country is sufficient for this. But this is not the case, for it does not take

² This is not the case with (say) IMF loans which carry an almost market rate of interest and have a very small element of concessionality.

into account income distributions in the two countries.³ The transfers are in reality taxes paid by the residents of rich countries and received by the residents of poor countries. But we cannot be sure that the average tax payer in a rich country is richer than the average beneficiary in a poor country. And indeed it is often argued in popular press that some of the international transfers end up lining up the pockets of the rich people in poor countries. Then the questions can legitimately be asked: why should relatively poor people in rich countries transfer money to the rich people in poor countries? And indeed such a transfer would be globally regressive.

But international transfers have also domestic implications. Consider the following situation. Let the taxpayer in the rich country be relatively poor (within that country) while still richer than the beneficiary in the poor country. Then, while the transfer will be globally progressive, it will, on the other hand, increase inequality in the rich country (the poor in the rich country will now be worse off compared to the rich). Moreover, to continue with the same example, let the recipient in the poor country be relatively rich—compared to other people in his/her country. Then the transfer would worsen the national income distribution even in the poor country. Graphically, this is the situation depicted in Figure 1 where the taxpayer's income is denoted by T, and the beneficiary's income by B. This type of transfers is also shown in Table 1 in the first column.

³ "Income distribution" here and in the rest of the text means either distribution of income or distribution of welfare as proxied by the distribution of consumption.

Figure 1. Progressive transfer at the world level and worsening national income distributions

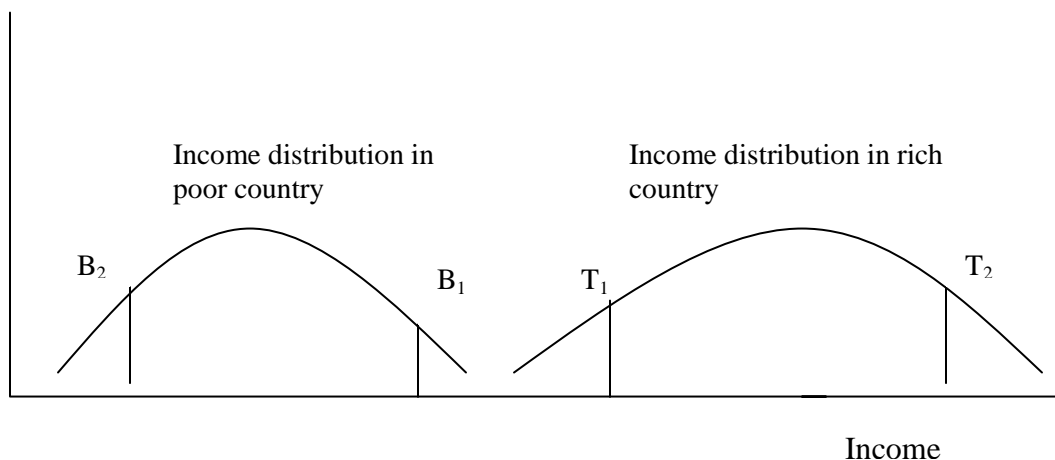


Table 1 shows different possibilities which exist depending on the relative position of rich countries' tax payers and poor countries' beneficiaries. There are eight of them. Note first that in all cases, aid will reduce the difference between the *mean* incomes of the two countries. This can be called Progressivity 1, in keeping with the idea of Concept 1 international inequality which looks at inequality between countries' mean incomes. But only when the taxpayer T is better off than the beneficiary B will there be global progressivity: the transfer will reduce global income inequality.⁴ Therefore all transfer types 5 through 8 are "eliminated" as undesirable since they would worsen global income distribution.

But even if we satisfy these two progressivities (global and Progressivity 1), it does not follow that transfers will be as desirable and efficient as they should be. Moreover, they may not be politically sustainable if they lead to increased inequality in both countries, or in either of them. This is the case for transfer types 1 through 3. Only transfer No. 4 will satisfy all the desiderata. It will reduce mean income differences between the countries, and improve global as well as national income distributions. This is

⁴ We assume throughout, as is standard, that the transfer is not so large that it reverses relative positions of the two individuals involved. Thus, if $T > B$ before the transfer, it remains so after the transfer.

the transfer which goes from a rich individual (taxpayer) in the rich country to a poor individual (beneficiary) in a poor country.

Table 1. Different types of transfers (1 to 8) and their effect on global and national income distributions

<i>Transfer type</i>	<i>T better off than B</i>				<i>T worse off than B</i>			
	1	2	3	4	5	6	7	8
Taxpayer's (T) position in rich country	Poor	Poor	Rich	Rich	Poor	Poor	Rich	Rich
Beneficiary's (B) position in poor country	Rich	Poor	Rich	Poor	Rich	Poor	Rich	Poor
Distribution in rich country	Worse	Worse	Better	Better	Worse	Worse	Better	Better
Distribution in poor country	Worse	Better	Worse	Better	Worse	Better	Worse	Better
World distribution of income (among persons)	Better	Better	Better	Better	Worse	Worse	Worse	Worse
Difference in mean incomes between rich and poor country (Progressivity 1)	Reduced	Reduced	Reduced	Reduced	Reduced	Reduced	Reduced	Reduced

Note: All improvements in income distribution are shaded.

2. How to formalize the rules?

Now, to get the “best” possible transfer we need to deal with two parts of the problem. We need to “locate” the taxpayer and the beneficiary in their national as well as in the global distribution. We can take the position of the taxpayer as given since that would be determined by national political economy considerations in which the role of foreign assistance is small. The calls to improve the efficiency of aid deal precisely with the second part of our problem: how to avoid the situation where beneficiaries of aid are rich people in poor countries who may be better off than the taxpayers in rich countries who paid for the transfers. An obvious, and much discussed, way is to improve quality of projects which are financed by aid. Hence the recent emphasis on pro-poor growth. Better governance and transparency in recipient countries are supposed to play the same role.

a. The idea illustrated: Single randomness (only beneficiaries are not known)

Yet while improvements in targeting and efficiency of aid are important, their results are slow to materialize and the effects of the projects are often unclear. On an *a priori* basis, however, we do have some tools which we can use to minimize the likelihood of globally regressive transfers. We take the targeting of projects financed by aid as given (i.e., we assume that we are unable to tell *a priori* whether a project in one country is more likely to help the poor than a project in another country), and look at the income distributions in the two countries to see where the probability of “wrong” transfers will be lower.⁵ The idea is simple: if everybody (or almost) everybody in a poor country is poorer than everybody (or almost everybody) in a rich country, then the probability that the transfer will be regressive will tend toward zero, the smaller the overlap between the two distributions. (The overlap means that there are some people from the poor country who are richer than some people from the rich country.) To use a somewhat tired metaphor, the outcome of the two projects is covered by a “veil of ignorance.” In the extreme case, illustrated above in Figure 1, no one in a poor country is

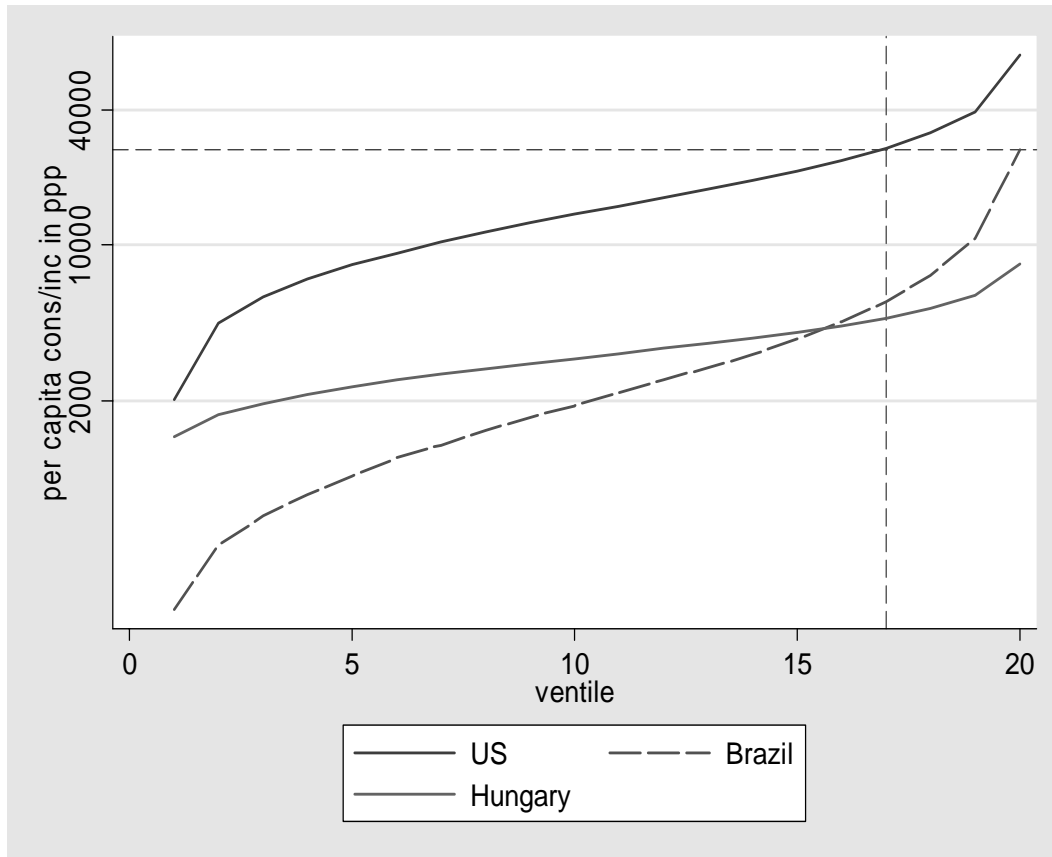
⁵ Equivalently, Bourguignon, Levin and Rosenblatt (2006) in their simulation of the effect of aid on international (not global) distribution of income assume that effects of aid are distributed equally across all fractiles of recipient country distribution.

better off than anyone in the rich country, there is no overlap of the distributions, and all transfers are by definition progressive at the global level. To achieve global progressivity it does not matter who B is.

But the cases of no overlap are very rare. Consider thus a more realistic case where there is some overlap and where we have a choice between transferring some funds from the US (rich country) to either Brazil or Hungary (poor countries). We choose these two countries because they have about the same mean per capita income (calculated from household surveys and converted in dollars of equal purchasing power): Brazil's mean income is a bit under \$PPP 4000, Hungary's about \$PPP 3500. But their income distributions are quite different. Figure 2 shows mean income for each decile of income distribution in the US, Brazil and Hungary (all the data are from the year 2002 and are expressed in 2002 dollars of equal purchasing power). We can easily see that Brazil's top income decile is richer than more than 80 percent of the US population,⁶ and were people there to capture the benefits of aid, the likelihood of a regressive transfer will be very high. (The likelihood is not 100 percent because the transfer could be financed out of income of the richest 20 percent of Americans.) This is in contrast to the situation of Hungary where the top decile's income is higher than the income of only about a third of Americans. The likelihood of a regressive transfer still exists but is much less. Thus, if we know nothing about the quality of aid-financed programs in the two countries, we should, in principle, prefer that the funds be disbursed to Hungary because of lower likelihood of a globally regressive transfer.

⁶ The income of the top Brazilian decile is \$PPP 26,500 just a bit less than the income of the 17th ventile in the USA.

Figure 2. Income by ventile for the United States, Brazil and Hungary (year 2002; in 2002 dollars of international purchasing parity)



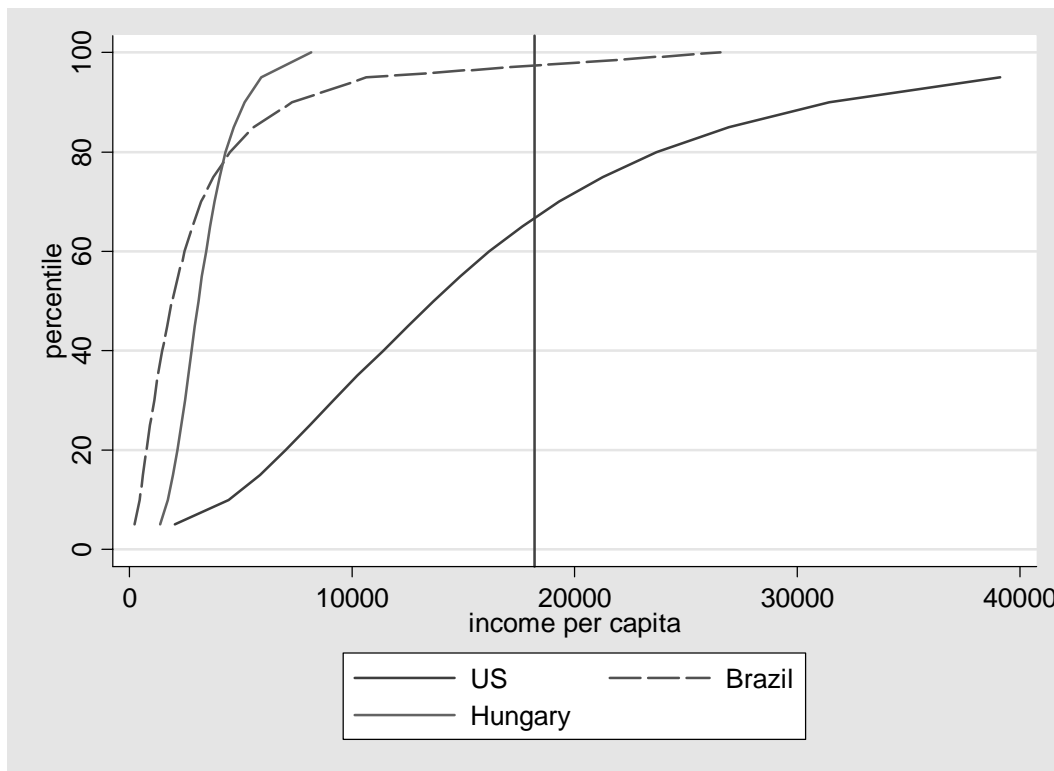
Source: Source: World Income Distribution (WYD) data, available at <http://econ.worldbank.org/projects/inequality>.

This intuition needs to be formalized because looking at the top decile alone is not sufficient. We need to look at the entire income distribution. To see why suppose that Brazil's distribution is so extremely unequal that all nine bottom deciles have income = 0, and the top decile has an income higher than even the American top decile. Then, if the distribution of benefits is random, in 90 percent of cases the transfer could still be globally progressive. Looking at the position of the top decile only would be misleading.

To operationalize this, we shall assume that the rich country's taxpayer is the person with national mean income which is normally a person around the 65th percentile of income distribution (this assumption will be abandoned below). In the US, the mean

income is \$PPP 18,200. Then, we can ask, if the distribution of benefits in Hungary and Brazil is not known, what is the likelihood that the transfers will be globally regressive? The answer to that question is provided by the cumulative distribution functions. They are shown for Brazil and Hungary in Figure 3. Almost no one in Hungary enjoys the level of income equal to the US mean income while some 6 percent of Brazilians have more. Behind the veil of ignorance of project efficiency, then transfers to Hungary dominate transfers to Brazil: they are more likely to be globally progressive.

Figure 3. Cumulative distribution functions for the United States, Brazil and Hungary (year 2002; in 2002 dollars of international purchasing parity)



Source: World Income Distribution (WYD) data, available at <http://econ.worldbank.org/projects/inequality>. The vertical line at \$18,200 denotes US mean disposable income.

b. Introducing complications: Double randomness (neither taxpayers nor beneficiaries are known)

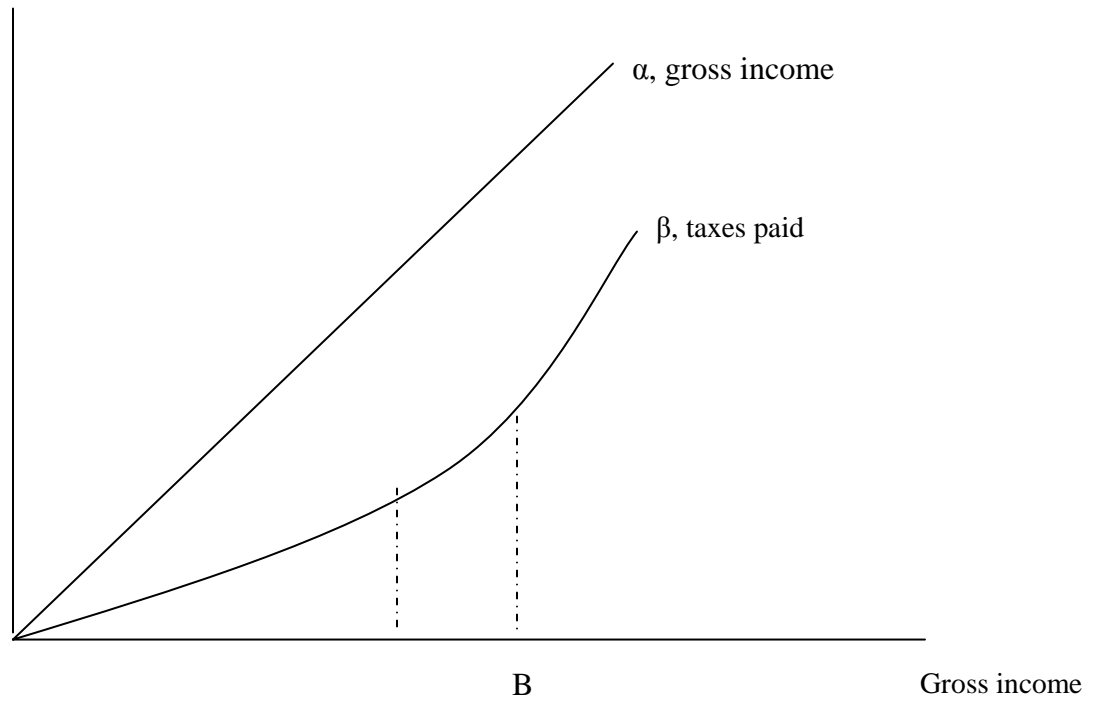
So far we had assumed that the position of the rich country's taxpayer is known, and we have looked at the randomness among recipients only. What do we know about taxpayers's incomes which would help us determine whether a transfer is progressive or not? Consider the following simple example. Line α in Figure 3 shows the distribution of pre-tax income (gross income) amongst the taxpayers in a rich country. Curve β , which is generally steeper because of progressive tax rates, shows the distribution of taxes paid by the taxpayers. The income of the median taxpayer will be A but this is not what we are interested in. We are interested in the income of the person who paid the random dollar that is being transferred to the poor country. In other words, we are interested in where the (random) dollar which financed aid came from. We shall call this person the "relevant taxpayer". To find out this, we look at the distribution of taxes. The random tax dollar is the median dollar among all tax dollars when they are arranged (ranked) according to the income of the taxpayer. This random tax dollar belongs to the taxpayer B (note that the point B divides the distribution of all tax dollars into two equal halves). The taxpayer B is richer than the median taxpayer A.⁷

⁷ See also Annex. Note that there is an alternative way of finding where the random tax dollar comes from: to calculate the expected gross income of tax payers where weights are given by the share of taxes paid.

This can be written as $E(y) = \sum_0^{\max} y_i \frac{t_i}{T}$ where y =gross income, t =taxes paid by i -th tax payers, and

T =total tax intake. Since tax rates are progressive, this alternative definition of the "relevant taxpayer" will yield higher income than the median-based definition. I owe this alternative definition to Thomas Pogge.

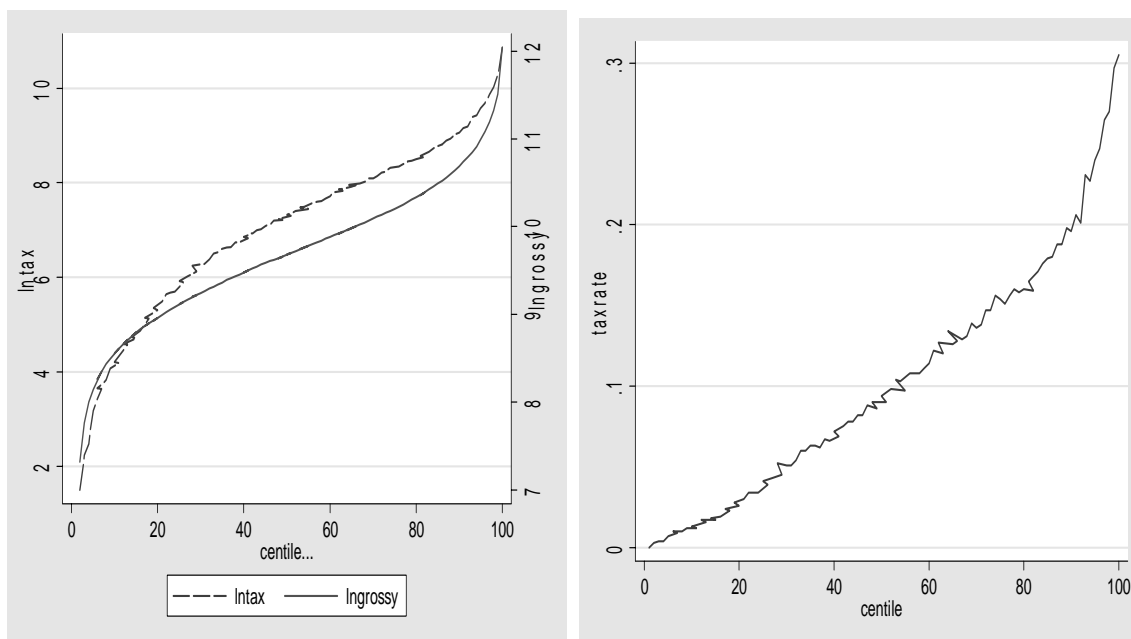
Figure 4. Taxes paid and gross income: an illustration



The richer the relevant taxpayer B, the less is the likelihood of a regressive transfer (for a given random distribution of benefits in the poor country). When will the relevant taxpayer's position move to the right? There are two simple cases. If the tax system in a rich country becomes more progressive and the pre-tax income distribution stays the same, then the relevant taxpayer will be richer. Similarly, if the underlying pre-tax income distribution in the rich country becomes more unequal, and the tax schedule remains the same, the relevant taxpayer will again become richer. In other words, with these two changes in the rich country (more progressive taxation, more unequal pre-tax distribution), the likelihood of globally regressive transfers lessens. And, of course, the reverse.

We can now combine the two sides: rich and poor countries. Consider again transfers from US to Brazil. Let us determine first the relevant taxpayer in the United States. In Figures 5a and 5b, we show gross per capita income for each percentile in the United States in the year 2000 and both the direct taxes and the average effective tax rate paid. (Individuals are ranked by gross per capita income and the entire US distribution is divided into 100 percentiles.) The left panel shows total per capita taxes paid which, as we expect, rise faster than gross per capita income between the 20th and about 95th percentile of gross income distribution. The right panel shows the effective tax rate which more or less increases steadily from 0 percent to 30 percent.

Figure 5. Gross per capita income and direct taxes paid (left panel), and effective tax rate (right panel), USA 2000



Notes: Left panel. Both direct taxes paid and gross income expressed in dollars per capita, in logs. Left vertical axis refers to taxes, right axis to gross income. Right panel: effective tax rate shown in fractions, 0.2 means 20 percent. Horizontal axis in both figures shows percentiles of distribution according to gross per capita income. Source: LIS database available at <http://www.lisproject.org/>.

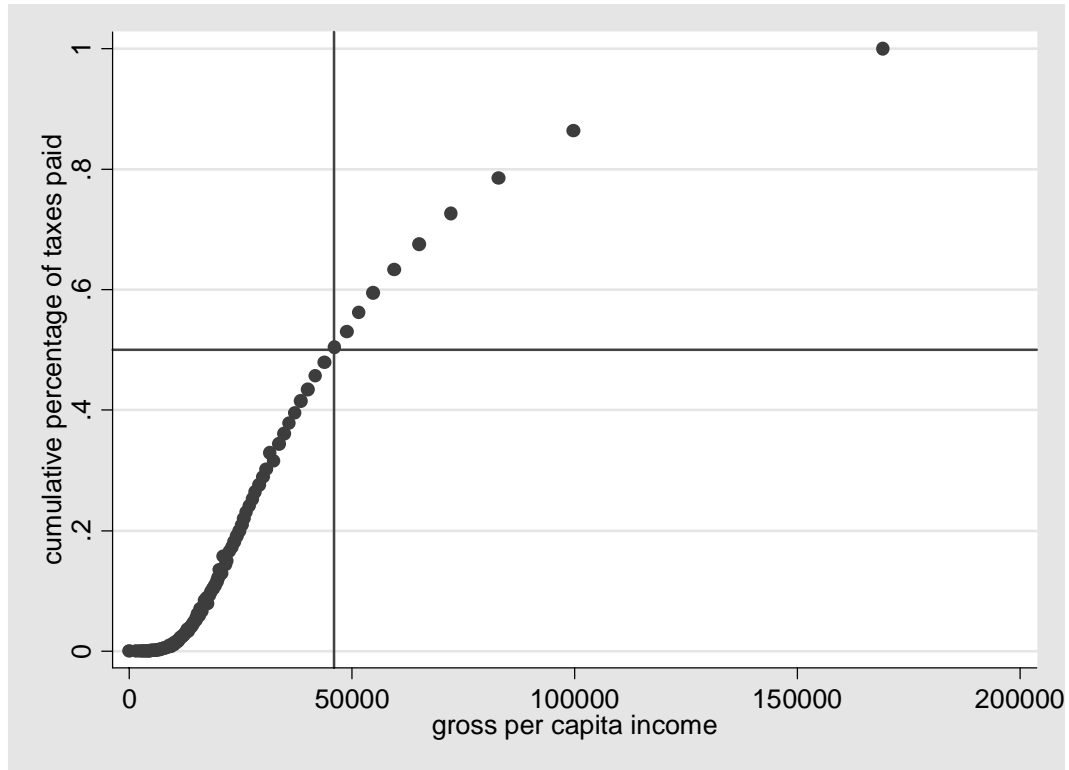
Next, we look at the distribution of taxes paid by gross per capita income (see Figure 6) and find income level such that it divides the distribution of taxes paid into two equal halves. This income is \$46,000 per person (per year). In other words, it means that individuals having gross household per capita income of \$46,000 and less have paid exactly one-half of all direct US taxes. The income level of the relevant taxpayer, \$46,000 per capita, corresponds to the 91st percentile of US income distribution.⁸

But to see whether this individual may be richer or poorer than a random beneficiary of foreign aid, we must look at his/her disposable income (not gross). Disposable per capita income of people with gross per capita income of \$46,000 per

⁸ Using the criterion mentioned in the footnote above (mean weighted per capita gross income where weights are tax shares), the “relevant” taxpayers income is \$63,500. It corresponds to a position between the 95th and 96th percentile of US income distribution. (Note that the two top percentiles in the US pay more than 21 percent of all direct taxes.)

year, is \$33,700. What is then the probability, under the assumption of random distribution of benefits, that the transfer between United States taxpayer and Brazil will be globally regressive? This means finding out what percentage of Brazilians have an income greater than \$33,700 (in PPP terms). The answer is, less than 1 percent.⁹

Figure 6. Cumulative percentage of taxes paid and income per capita, United States, 2000



Source: LIS database available at <http://www.lisproject.org/>.

It may be thought that the United States because of its unequal pre-tax income distribution is likely to have the relevant taxpayers situated relatively high in the income distribution, and that because of its high average level of income, the relevant taxpayer's absolute income is likely to be much higher than in other developed nations. This is partly true. Consider the example of Sweden. The random tax dollar is paid by the taxpayer at the 77th percentile of income distribution. The relevant taxpayer's gross per capita income is just a shade under 200,000 kronen per year which using the 2000 PPP

⁹ Calculated from household micro data for 2001.

exchange rate of 10.09, gives a gross per capita income of about \$PPP 20,000, that is less than one-half of the relevant income for the United States. Relevant taxpayer's disposable income is \$PPP 13,575 per capita per year. Consequently, transfers from Swedish tax payers are more likely to be globally regressive than those financed by US taxpayers. The difference however should not be exaggerated as Table 3 makes clear.

Table 3. Donors and likelihood of regressive transfers

	United States	Sweden
Mean gross per capita income (PPP dollars)	22,502	15,620
Gross per capita income Gini	44.7	31.0
Concentration coefficient of direct taxes */	67.8	41.7
Tax rate paid by the relevant taxpayer (in percent)	20.6	25.8
Highest effective (average) tax rate paid (in percent of gross income)	30.5	38.8
Position of the relevant taxpayer in gross per capita income distribution (percentile)	91	77
Gross income of the relevant taxpayer (in \$PPP p.a; per capita)	46,061	19,735
Disposable income of the relevant taxpayer (in \$PPP p.a.; per capita)	33,676	13,575
Likelihood of regressive transfer to Brazil (in percent)	1.5	5
Likelihood of regressive transfer to Hungary (in percent)	Quasi nil	2

*/ Concentration coefficient of taxes paid when individuals are ranked by their per capita gross income. Source: Calculated from micro data from Luxembourg Income Study.

The difference between donors is, in its implications, akin to the difference between the recipient countries. Donor countries with (a) higher average income, (b) more unequal underlying (gross) income distributions, and (c) more progressive tax schedules are likely to produce richer relevant tax payers. Hence transfers financed by their taxpayers are less likely to be globally regressive and their contribution to global redistribution ought to be greater. To make it simple: the transfers should flow from rich and unequal societies to poor and equal societies.¹⁰

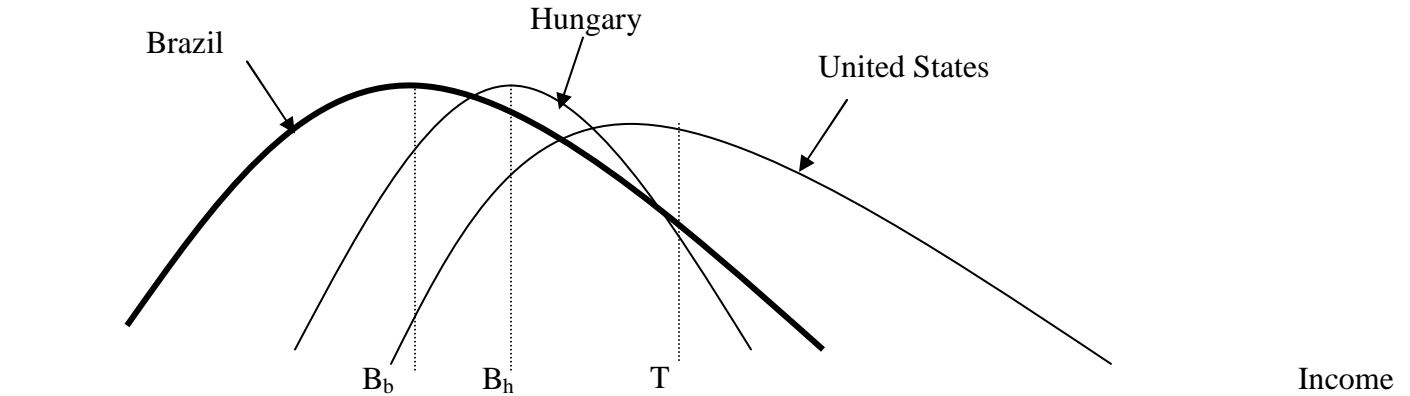
¹⁰ That societies that are, on average, richer and more unequal should finance more transfers accords with our intuition. The same cannot be said for a more progressive (domestic) taxation. However, if two countries have the same mean incomes and distributions of gross income but differ only in the level of tax progressivity, the median tax dollar from a country with a more progressive tax schedule will come from a richer individual, and will be less likely to result in a globally regressive transfer (for a proof, see Annex).

c. Caveats

In order to be clear about our “rules” it is important to note four things however. First, this result does not depend on national targeting of transfers, that is of transfers being more likely to benefit the rich in Brazil than in Hungary. In both cases, the distribution of benefits is not known, and hence we have to assume it the same for both countries.

Second, and very important, we focus on minimizing the likelihood of making a globally regressive transfer, not on maximizing the expected income distance between T and B. To explain. If targeting of transfers in Brazil and Hungary is the same, this means that in terms of national income distributions, the income position of B is random. This in turn implies that, within national distributions, the expected income of B will be equal to the national median. Since Brazil’s median is less than Hungary’s, the expected income distance between the US taxpayer income and (random) beneficiary will be greater in the case of Brazil than Hungary. Yet the likelihood of a globally regressive transfer—a thing which interests us here—may still be greater for Brazil than for Hungary. This is illustrated in Figure 4. Note that the distance $T-B_b$ is greater than the distance $T-B_h$: with the assumption of random distribution of benefits, the expected beneficiary is likely to be poorer in Brazil than in Hungary. But the area of Brazil’s income distribution to the right of T is greater than the area of Hungary’s income distribution to the right of T. In other words, there is a greater percentage of Brazilians who are richer than the typical US taxpayer than there are Hungarians. Thus, the probability of a regressive transfer will be greater in the former case.

Figure 7. Difference between globally regressive transfers and maximization of likely income gain



Note: Area under each country's curve equals 1.

Third, other criteria may be introduced as for example the just mentioned maximization of the income distance between the taxpayer and the expected beneficiary, or maximum reduction of global poverty where only the likelihood of beneficiaries being below some poverty line matters, or maximum reduction of the poverty gap etc. But these are all secondary objectives. We believe that, as in national redistributions, the primary and the *minimum* objective of international aid must be that the transfer be progressive. Other objectives are subsidiary to this one.

Fourth, a really important factor is the percentage of people in the poor country who are better off than the taxpayer in the rich country (that is, the thickness of the tails in Figure 7), not the relative position of the richest Brazilians vis-à-vis richest Hungarians. For suppose that the richest Brazilians are still richer than richest Hungarians, but that both are poorer than the US taxpayer. Then, the likelihood of a globally regressive transfer will be zero in both cases. (And in that case, we might prefer to resort to another objective, e.g., maximize the expected difference between T and B.)

The implication of the analysis so far is that the eligibility criterion, as for example for IDA lending which currently takes into account only the level of country's GDP per capita¹¹, should be complemented with an indicator of inequality. The indicator should be generally available and reasonably easy to calculate. The objective is to adjust eligibility for aid by taking into account countries' domestic levels of inequality, penalizing highly unequal countries and helping those that are not. One possibility would be to do what we have just described: focus on the thickness of the right-end tails of countries' income distributions, for example on the percentage of people with income above \$PPP 5,000 per year (which is about twelve times the world poverty line), and calculate the probability of a regressive transfer. Another, simpler, possibility would be to adjust GDP per capita by the ratio between mean and median income in the country. If income distribution is very unequal, the mean-to-median ratio will be high. Thus, the inequality-corrected GDP per capita will be increased in high inequality countries and they could lose eligibility for interest-free loans. Consider Bangladesh and Nigeria. These two countries have approximately the same level of income, but inequality is much greater in the latter. The mean-to-median ratio is 1.7 in Nigeria and 1.2 in Bangladesh. The introduction of inequality-adjusted income will therefore penalize Nigeria and could possibly disqualify it from receiving soft loans as long as inequality remains high. This is similar to what is already being done through attempts to aid more countries with good governance and lower corruption.

Notice also that the approach suggested here is, in one respect, directly opposite to the approach that is ultimately rejected by Pogge (1994) because of the incentive issues but is presented in a somewhat positive light. Pogge's Global Resource Tax would be funded from the proceeds made exploiting global exhaustible resources and would be targeted to help the poor (regardless of where they live) through the action of a facilitating agency. Now, Pogge says, consider two countries with the same per capita income but one that has more poor people (because its domestic inequality is greater). Then, some people might argue that more aid should be disbursed to that country (because it contains more poor). Pogge is sympathetic to this view but rejects because it

¹¹ The IDA cut-off point above which a country cannot qualify for soft loans was \$865 in 2002.

would provide a perverse incentive to the elites in poor countries not to care about the poor.¹² For this reason, Pogge prefers to stick to the criterion of average income (as is currently done in lending decisions of the World Bank) rather than to introduced issues of domestic income distribution. Our approach would, of course, *penalize* the country with greater income inequality, with the rationale of the penalty being that a transfer to such a country is more likely to result in a globally regressive transfer than an equivalent transfer to a more equal country with the same GDP per capita.

3. Possible objections

There are two possible objections to taking into account distribution of income when making decisions on aid. The first is a technical one: the issue of knowing what different countries' distributions are and operationalizing the idea. The second is a more fundamental one and concerns the principle of sanctions or punishment in international affairs. We shall deal with them in turn.

The technical objection is that the data on income distribution are not as easily and frequently available as GDP data. However, this is an objection whose force is surely weaker today than it was twenty or ten years ago. Major strides in the availability of income distribution data have been made recently. The data are available practically for all countries in the world, at five-yearly intervals at least. More serious is the issue of the possible incentive to temper with such data were they to be used in deciding the eligibility for aid. Although GDP data can also be falsified (and have been), it is arguably true that their deliberate falsification is more difficult since they are related to a number of other observable indicators more than income distribution is. Moreover, slight changes in the definitions of income or expenditures can produce significant changes in inequality results. Thus for example a seemingly innocuous decision as to how to value home production or how to impute rent to owner-occupied housing can result in major upward or downward revisions in inequality. What is major? In this context it means by 2-3 Gini points which for most countries amounts to 5 to 10 percent of total inequality.

¹² Or., Which is the same, thing the elites may be “perceived” not to care sufficiently.

Arguably, it is easier to fiddle with some 10 percent of inequality than 10 percent of GDP. Yet with greater independence of statistical offices and the acceptance of international standards in household surveys (plus the fact that for many poor countries that are eligible for soft loans a lot of household survey work is done by international organizations, including the World Bank), the danger of deliberate manipulation of the data can be almost wholly discounted.¹³ Finally, the last issue of operationalization concerns what measure of inequality to take and how to relate it to the average income (GDP per capita). This needs to be pretty simple. One way to do it is, as we have suggested, to use the mean-to-median ratio. And it should not be forgotten that the measures of income (poverty headcount) and inequality have been combined before as in Sen's poverty measure.

A more fundamental issue is the one of penalization itself. The logic behind making it more difficult for countries with unequal distribution of income to qualify for soft loans is the same as the logic of international economic sanctions. They are undertaken to "punish" an elite which, for example, leads the country in a wrong or dangerous direction, but, in the short-term, the sanctions often end up by punishing the population on whose account they are ostensibly implemented. Sanctions are a very blunt instrument as witnessed in the cases of Cuba, Serbia under Milosevic, Iraq under Saddam Hussein, or Burma under the current junta. Here too, we deprive a country of soft loans in order to put the additional pressure on its elite to improve income distribution—to conduct such wide-ranging measures as land redistribution, or to reform tax system by making it more progressive, or to improve the delivery of social programs, or to make schooling more easily accessible. But many of these programs' effects are long-term and the government that implements them may not be around to reap the benefits. Or the elite may be so entrenched and oblivious of country's interests that it prefers not to have country qualify for subsidized loans if that would reduce its own share of the pie. Surely, North Korea is the extreme example of this attitude. Under almost any conceivable

¹³ One should recall that micro data from household surveys are in principle available and can be independently cross-checked. This cross-check is harder to do with national account statistics like GDP.

change, its population would be better off than under the current regime. But the current leaders are not so sure that *they* would be better off and thus stave off all reform.

There are serious objections inherent, as already said, in every use of sanctions in international affairs. We believe however that in this case the strength of objections is much less than in other cases. This for two reasons. First, these are relatively mild “reprimands” for countries since obviously they would still be part of international community or members of the World Bank, IMF etc. They would be simply treated as “graduated”, richer countries which cannot qualify for soft loans. Second, and important, in no country is unequal distribution of income popular among the bulk of the population. This is almost by definition the case since unequal distribution is always to the benefit of a small minority. The sanctions therefore create a commonality of interest between the bulk of the population and international community which is very different from the politically motivated sanctions where the objectives of the “sanctioners” are often impugned. In these cases even beleaguered and otherwise unpopular regimes may be able to harness popular support as they project themselves as the protectors of national interest. Arguing in favor of the maintenance of very unequal distribution of income cannot, however imaginative the regime, be construed to be in some national interest, particularly not in very poor countries. The popular support in face of this type of international ostracism cannot be marshaled. The power of sanctions is thereby significantly enhanced.

Finally, there are three positive arguments that we can adduce in favor of this proposal. First, it introduced in the international aid arena a finer, more nuanced view on eligibility for aid. It basically attempts to copy to the international scene the well-accepted rules of distribution valid within the nations. And as international redistribution becomes more important, there is no doubt that some rules will have to be evolved. Second, without such rules the idea of international redistribution will be less and less popular in rich countries. People may be willing to pay taxes if they believe that the beneficiaries are people poorer than themselves. They are unlikely to accept to be taxed if that assurance is absent. Third, it represents one of the moves in the direction of a world-

wide awareness of inequality and the treatment of the world as a single whole. But unlike corporate-led globalization, and in direct complement to it, it places social issues of aid to the poor at the center-stage. It thus moves us toward globalization with human face albeit the one with somewhat hard-nosed economic rules.

4. Going further: Mechanism of global redistribution¹⁴

So far we have considered global redistribution rules when transfers take place between rich and poor countries. This is currently the dominant way in which redistribution is conducted. But if we conceive of the world as a single whole, there is a place for a *global* rather than inter-governmental system of redistribution that would be mediated by a global aid agency. Such a global welfare agency would go some way toward answering the point raised by Buchanan and Keohane (2006, p.12) that “it is not possible at present to provide a principled specification of the division of international labor for pursuing global justice.” We believe that this is not the case.

Global Welfare Agency would be financed by a tax raised from the rich in rich countries (that is, a tax on goods or activities with very high income elasticity) and would transfer these funds to poor *individuals* in poor countries. A global redistribution through taxes that would be levied by an international body is an idea that may seem far-fetched today, but which the logic of development we have recently witnessed—away from the nation state—suggests may eventually come to pass. Such a body should not be another inter-governmental organization like the United Nations or the World Bank. Indeed the new agency should take its cues from globalization. If it is empowered to raise its own funds, it should also eschew dealing with governments that have often wasted foreign aid. Instead, in the spirit of global citizenship, it should deal directly with national NGOs and individual citizens in poor countries and distribute collected funds in the form of cash grants. Notice that the Agency introduces a symmetry in its relations with the rich and poor countries. It takes away some of rich countries’ sovereignty (since it dilutes their tax-raising power) but also takes away some of poor countries’ sovereignty since it helps poor citizens in those countries directly and without requiring an authorization from their governments.

¹⁴ This part is based on some ideas in Milanovic (2005), and is practically taken *verbatim* from Milanovic (2006).

One such opportunity which was missed in the early 1990s may illustrate what I have in mind here. When Russia faced its worst crisis, aid, instead of being given to the corrupt Yeltsin regime, should have been disbursed directly in cash to the most needy citizens—for example, pensioners whose earnings plummeted due to inflation and the general chaos. An international organization, like the one we have in mind here, could have simply used the existing infrastructure of the Russian state, pension rolls, and distributed cash grants to some 20 million Russian pensioners. That would be money much better spent than giving the same amount to the government. And citizens would have fondly remembered receiving cash aid from the international community rather than blaming that same international community for transferring funds to corrupt leaders. Today, the same or similar approach could be applied in many countries, from Angola to Zimbabwe. The approach is simple and powerful. It involves three steps: raise money from the globally rich, do not deal with governments of either rich or poor nations, and transfer funds *in cash* to the poor.

While the supporters of an exclusively private-sector driven globalization may resent the idea of vesting tax-raising authority for the first time in history into a global agency, they cannot fail to notice that the very process they support undercuts, in an ironic twist, their own position. It does so by rendering the gap in wealth more obvious, and the fairness of the existing global distribution, more questionable. They will ultimately realize that their self-interest lies in supporting some form of global action to deal with both poverty...and inequality.

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ANNEX

Transfers' objective functions

Let us fix the income of the rich country's taxpayer and denote his/her income by T . Now, if the objective is to minimize the likelihood of a regressive transfer, namely the possibility that the income of the beneficiary denoted B , be greater than income T , then we can write the objective function

$$\min(i) \int_T^{\infty} f_i(y) dy$$

where $f_i(y)$ = income distribution in i -th recipient country.

A different objective would be to maximize the income distance between T and the income of a random beneficiary which is the person with the median income. Then,

$$\max(i) = T - \mu_i$$

where μ = median.

The definition of the relevant tax-payer

Assume that each individual in rich country pays taxes (t) which are equal to

$$t = \tau(y)y$$

And where τ is tax rate increasing in income ($\tau'(y) > 0$) and y = gross income. Then the ranking of individuals according to total taxes paid and according to gross income must be the same. The relevant taxpayer is the taxpayer such that the median tax dollar is paid by him/her. The tax distribution function can be written

$$\int_0^{t \max} g(t) dt = \int_0^{t \max} g[\tau(y)y] dy$$

where $g(t)$ is the tax density function.

The relevant taxpayer is person with gross income $y=y^*$ such that

$$\int_0^{t^*} g[\tau(y)y] dy = \int_0^{\tau^*(y^*)} g[\tau(y)y] dy = \frac{1}{2}$$

In other words, the relevant taxpayer is the person whose tax dollar divides the distribution of all taxdollars (ranked according to gross income of the taxpayers) into two equal halves. It can also be called the median tax dollar.

The relationship between the relevant tax payer and progressivity of the tax system

For the tax system to be progressive, tax rate must increase in income, that is $\tau'(y) > 0$. A more progressive tax system implies a positive and greater $\tau''(y)$. We can prove that a more progressive tax system, under conditions of (i) tax neutrality (no change in the overall tax intake) and (ii) unchanged distribution of gross income, must involve a rightward shift in the position of the relevant tax-payer. This will be shown by negative proof, that is, proving that its opposite is impossible. Let the more progressive system involve at least a higher tax rate for the richest taxpayer. By definition, the requirement for a leftward shift in the position of the relevant tax-payer is that the half of the taxpayers who were originally to the right of the median (“the rich”) now must pay less than $\frac{1}{2}$ of total taxes. Since the richest taxpayer now pays a higher tax rate, this requirement can be satisfied only if others among the rich pay lower tax rates.¹⁵ But if they pay lower tax rates, then “the poor” (the group with incomes less than the median) must also be paying lower tax rates (since otherwise the increased progressivity condition will not hold). So the poor’s total tax payment must also be less than before. But if both the “poor” and the “rich” pay less taxes, total tax intake is less, thus violating the condition (i). Accordingly, with a more progressive tax schedule, the relevant tax payer must be to the right of his original position.

¹⁵ This is still compatible with a more progressive tax schedule: the taxes of some “rich” may go down while the tax on the richest increases. This clearly implies a more progressive taxation.