Why might the rich be indifferent to income growth of their own countries?

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HIGHLIGHTS

- The shares of bottom/top income groups vary by country more than the shares of the middle.
- Middle groups are more concerned with overall growth of national income.
- For top 1% or 5% gain from pro-inequality redistribution often greater than realistic gain from growth.

ABSTRACT

The paper shows using empirical evidence from more than 100 countries' household surveys, that income gains that the rich can realize through a more unequal distribution are often much larger than the realistic gains from a distribution-neutral growth. The rich are thus more likely to support policies that increase inequality than be concerned about income growth of their countries.

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It is often said that in very unequal societies the rich compose a group apart. Not only are their social mores and consumption patterns different, but their fortunes seem dissociated with those of the middle class or the poor. More recently, there has been an argument that the rich (the top 1%) from different nations form a group apart, a global "superclass" (Rothkopf, 2008; Freeland, 2012; van der Weide and Milanovic, 2014). The objective of this note is to consider whether there is empirical substance to the claim that in high inequality societies income of the rich is in some sense decoupled from the income of the rest of society. I do not mean it in an obvious sense that the rich simply have higher income than the others. What I mean is to look at the income gains that the rich can make from an overall increase in national income (while keeping the distribution unchanged) versus the gains that they can make from a further widening of income distribution (while keeping mean income the same). I will show that this particular trade-off varies in function of income class, and that especially for the top income classes, the gains from greater inequality tend to be

disproportionately high compared to the gains from an increased overall income without a change in the distribution.

Income distributions in the nations of the world differ a lot. Table 1 shows, using the data from 116 countries around the year 2008, the average ventile shares and their standard deviations. (All ventile shares are calculated from micro data provided by nationally-representative household surveys. The data are available at https://thedata.harvard.edu/dvn/dv/restat/faces/study/StudyPage.xhtml?studyId=114484&versionNumber=1 More information about the database in available in Milanovic, 2015). Consider the first ventile (the poorest 5% of population ranked by income per capita). On average, across countries, the poorest ventile receives just slightly above 1% of total national income (1.064%). In more equal counties, the share of the bottom is greater (almost 2%), in less equal, it is under ¹/₂ of 1%. The standard deviation of the bottom ventile share is 0.45 percentage point (column 2). Thus the gain that an average person placed in the bottom ventile would make from moving from a distribution that "allocated" to him the average worldwide share of the bottom ventile to a distribution that would be more favorable to the bottom ventile (by one standard deviation of that ventile share), would be 42%

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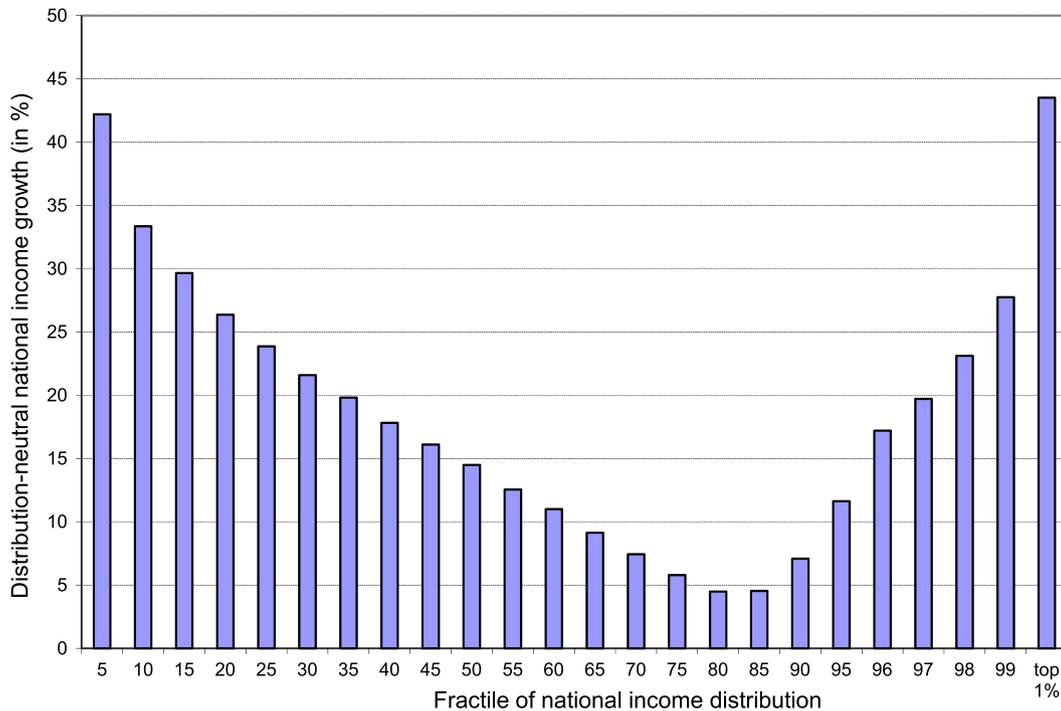
Explanation: The first ventile (composed of percentiles 1 to 5) is denoted by 5, the second by 10, and thus up to 95. Numbers 96-99 refer to the 96th etc. percentiles. The last bar refers to the top 1%. Source: Household surveys from 116 countries around year 2008. Unweighted data. World Income Distribution (WYD) database. Note: "Conceivable" distributional change is defined as an increase in the fractile income share equal to 1 standard deviation of that fractile's internationally observed income share.

Fig. 1. Distribution-neutral growth rate needed to make people from a given income fractile indifferent between growth and "conceivable" favorable distributional change.

Table 1
Share of total income received by each ventile of national income distribution.
Source: Household surveys from 116 countries around year 2008. Unweighted data. World Income Distribution (WYD) database.

Ventile	Mean ventile share in total income (in %)	Standard deviation of ventile share (in %)	Income gain from 1 standard deviation increased share (in % of own income)
First	1.06	0.45	42.2
Second	1.59	0.53	33.3
Third	1.90	0.56	29.6
Fourth	2.17	0.57	26.4
Fifth	2.42	0.58	23.9
Sixth	2.67	0.58	21.6
Seventh	2.90	0.57	19.8
Eighth	3.15	0.56	17.8
Ninth	3.40	0.55	16.1
Tenth	3.68	0.53	14.5
Eleventh	3.98	0.50	12.6
Twelfth	4.30	0.47	11.0
13th	4.67	0.43	9.1
14th	5.09	0.38	7.4
15th	5.60	0.32	5.8
16th	6.22	0.28	4.5
17th	7.04	0.32	4.5
18th	8.22	0.58	7.1
19th	8.00	0.93	11.6
Twentieth (top)	19.51	5.65	29.0
Total	100		

(0.45/1.064). We call such a move, that is, a gain equal to one standard deviation of the ventile share, a "conceivable" distributional change because the change represents something that is not far-fetched but observable in the empirical reality of national income distributions. The same interpretation applies to all other ventiles shown in Table 1.

It can be readily seen that the gain from the "conceivable" distributional change, expressed in terms of own income, is very high for the bottom and top ventiles. For the bottom three ventiles and for the highest ventile it amounts to about 30% of their income. The gain is much more modest for the middle ventiles; for the ventiles 13–18, it is under 10%. The result is driven by the well-known observation (see Palma, 2011; Milanovic, 2008, p. 29) that middle fractiles tend to get the same share of national income regardless of whether they are in unequal or equal countries. Consequently, if a person belongs to these middle fractiles, his absolute income will not depend on whether his country is equal or unequal, but almost fully on whether his country is rich or poor. In other words, for such a person a way toward higher own income passes through an increase in country's mean income.

The situation, however, is different for the people placed in the bottom and top of income distribution. The former obviously benefit from more equal and the latter from more unequal distributions. We have seen that for the poorest ventile, moving from a distribution or a country with an "average" distribution to a more *equal* distribution (by 1 standard deviation of that ventile share) results in a substantial real income gain (42%). Similarly, for the rich, moving from an "average" distribution to a more *unequal* distribution produces large income gains. For the top ventile, the "conceivable" income gain is 30%, but when we disaggregate the top ventile into five top percentiles (labeled 96 to *top* 1% in Fig. 1), we can see that the gains steadily rise. For the 96th percentile, the overall income gain from a "conceivable" distributional change is 17% and for the top 1%, the income gain is almost 45%. Thus, for the top 1% to forgo the favorable ("conceivable") distributional change would require a distribution-neutral income growth of almost 45%. The fortunes of both the very poor and the very rich will depend much less on what happens to the mean income of their country and much more on what happens to their country's distribution.
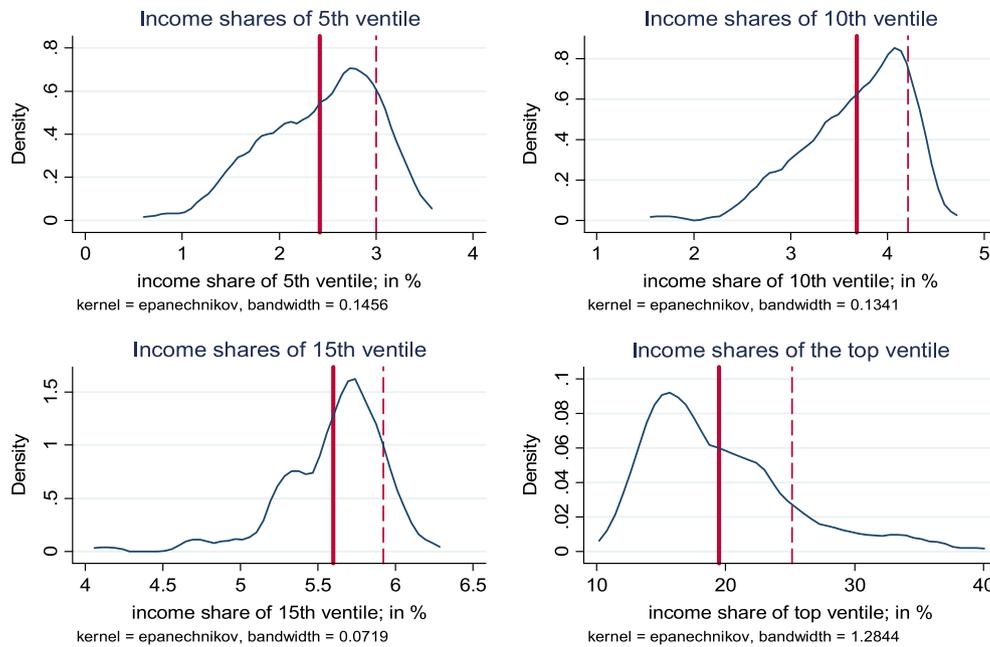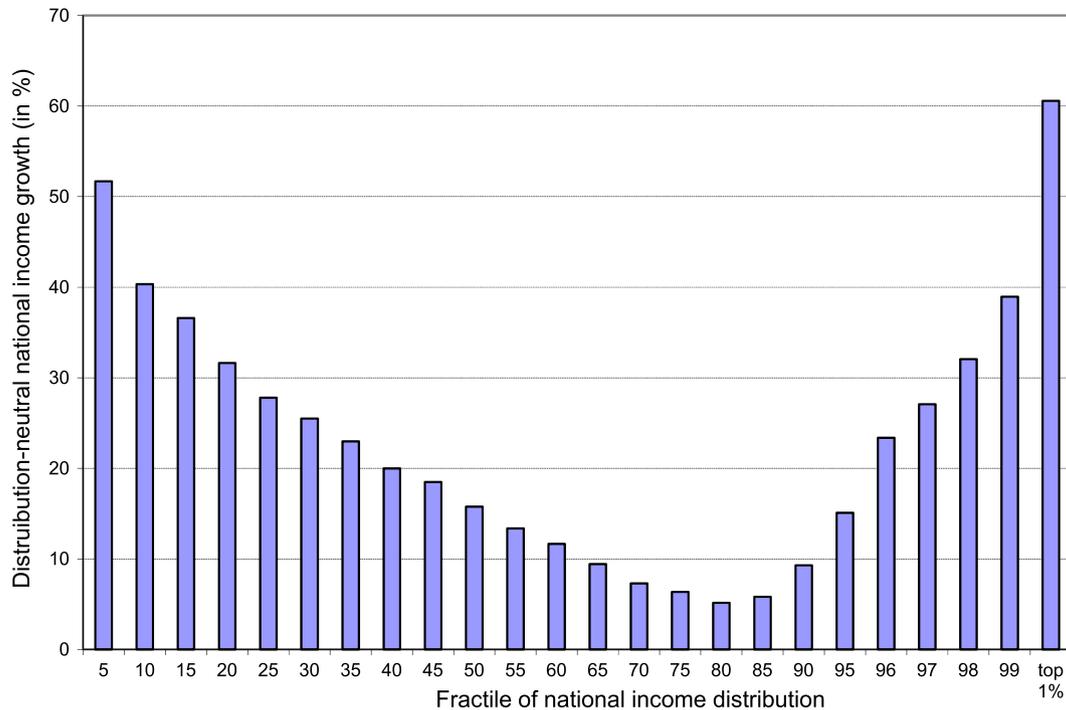
Fig. 2. Worldwide distribution of income shares of the 5th, 10th, 15th and top income ventiles.
Source: Household surveys from 116 countries around year 2008. Unweighted data. World Income Distribution (WYD) database. *x* lines drawn at the position (income share) equal to the world mean (solid line) and world mean +1 standard deviation (dashed line).

Explanation: The first ventile (composed of percentiles 1 to 5) is denoted by 5, the second by 10, and thus up to 95. Numbers 96-99 refer to the 96th etc. percentile. The last bar refers to the top 1%. Source: Household surveys from 116 countries around year 2008. Unweighted data. Source: World Income Distribution (WYD) database. Note: "Very favorable" distributional change is defined as an increase in the fractile income share such that it brings to being at the 90th percentile of such fractile's internationally observable income share.

Fig. 3. Distribution-neutral growth rate needed to make people from a given income fractile indifferent between growth and very favorable distributional change.

There is a further issue. We have so far defined a "conceivable" distributional change to involve the gain of 1 standard deviation of that ventile's share compared to what is the world average. However, the distribution of ventiles' income shares is not normal. Poor ventiles have income shares that are skewed to the left with a long left tail. This implies that there are quite a few counties with extremely low income shares for the poor ventiles (see Fig. 2; left upper panel). Exactly the opposite is the case for the top ventiles. The distribution of income shares of the twentieth ventile is strongly skewed to the right with a thick right-end tail: there
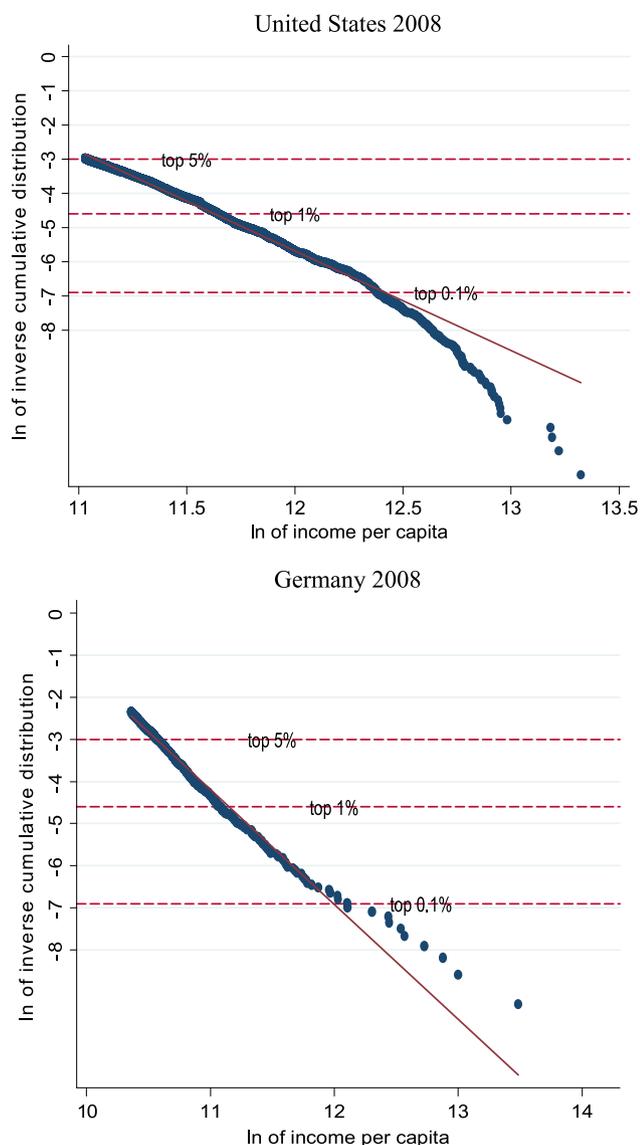
United States 2008

Germany 2008

Fig. 4. Top of the income distributions in the United States and Germany. Micro data from household surveys. Explanation: *y* lines are drawn at the positions corresponding to the top 5%, top 1% and top 0.1% of income distribution. For example, the top 5% is at 0.05 of the inverse cumulative distribution and thus $\ln(0.05) = -3$ where the *y* dashed line is drawn. Corresponding value on the *x* axis shows the threshold income for the top 5%, that is income level needed to be in the top 5%.
Source: US: Current Population Survey 2008; Germany: SILC 2008.

are many countries where the richest 5% of the population have income shares significantly above the worldwide mean income share of the top ventile. This is even more extreme for the top 1% income share. As Fig. 2 (right bottom panel) shows, there are countries where the top ventile's income share attains 40%, which is twice as much as the mean worldwide share of the top ventile, that is, almost 4 standard deviations above it.

Thus, the assumption on which we based our trade-off between income and inequality – namely the advantage of a "conceivable" distributional change of 1 standard deviation – means for the poor ventiles that they move almost to the extreme of what exists in the world, while for the rich ventiles this is not the case because there are many countries where the top ventile share is extremely high, several standard deviations above the mean top ventile share. Vertical lines in Fig. 2 are, for each ventile, drawn at the position equal to the mean (solid line) and "mean +1 standard deviation" (broken line). For the ventiles 5, 10 and 15, the assumption of "con-

ceivable" distributional change brings them to about the 90th percentile of what is observable in real world. But for the top ventile or top percentile (not shown here), the assumption of "mean +1 standard deviation" brings it only to about the 75th–80th percentile of what is observable in the world. By pushing for a yet greater income share (above the gain implied in the "conceivable" change), the rich are therefore not pushing against the wall, to something that has never been seen or does not exist in the world.

This then means that if we consider another trade-off such that the *very favorable* distributional change for each ventile means that it reaches an income share equal to the 90th percentile of what is observable in the world, the gains for the rich ventiles take an even more extreme form. This is shown in Fig. 3. Now the top 1% will require an overall distribution-neutral income growth of 61% in order to forgo the possibility of such very favorable distributional change. To give an idea of how important is this distributional change (but also not out of the bounds of what is observable and thus possible), notice that it is equal to the movement from Turkey (where the top 1% receives 7.1% of national income) to Mexico (where the top 1% receives 11.4%). For other rich ventiles, the distribution-neutral growth needed to forgo the very favorable distributional change will also be high, ranging between 23 and 39%. But for the middle classes, the equivalent distribution-neutral growth will be around 10%.

Finally, it is well known that household surveys tend to underestimate incomes of the top 1%. This is due to the rich people's underestimation of capital incomes, non-participation in surveys (see Mistiaen and Ravallion, 2006), but also to top coding of incomes done by statistical offices. Top coding is a practice introduced by the US Census Bureau to set ceilings to various types of incomes, and thus to total income, in order to avoid sudden fluctuations in income shares and measures of inequality as well to preserve confidentiality of information. In Fig. 4, we compare micro data from US and Germany; the former applies an aggressive top-coding, the latter does not. It is notable that the very top of US income distribution, around the top 0.1%, drops precipitously, not displaying the long right-end tail that we normally associate with income distributions. Such a long tail however is present in the case of German data. The Pareto line fitted on the top 5% makes us expect to see a much fatter income tail in the US than what we actually see in the data. The contrast is even more striking because US income distribution is significantly more unequal than German: there are many more extremely rich people in the US than in Germany. For example, Forbes 2013 wealth list gives 442 US billionaires and only 58 from Germany; billionaires' wealth/GDP ratios are respectively 12.4 and 8.3. Clearly, something is wrong: either there is a much greater underreporting among the wealthy in the United States, or (more likely) the sharp fall-off is due to the Census Bureau's top-coding.

But whatever is the case, it means that the "true" income shares of the top 1% are higher than recorded, the right-skewness of the top 1% share probably greater, and thus the equivalent distribution-neutral income growth required to forego a favorable distributional change even higher than calculated here.

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