Methodology note to accompany 'An Economy for the 1%: How privilege and power in the economy drive extreme inequality and how this can be stopped'

Oxfam's report 'An Economy For the 1%' analyses global income and wealth data and finds that the global inequality crisis is reaching new extremes. This methodology note provides the background to some of the key statistics in the report. The underlying data is also available on Oxfam's website.[1]

1 GLOBAL INCOME SHARES

Analyses of the growth of global income between 1988 and 2011, and the share of this growth going to different deciles

Data source

Data from national consumption and income surveys from the Lakner-Milanovic (2013) World Panel Income Distribution (LM-WPID) database for years 1988–2011[2] were used to derive global income distributions. While this database is based on national household surveys, all members of a household are assigned the same (average) income or consumption resulting in a population of individuals versus households. Survey data is aggregated into benchmark years, adjusting income or consumption by inflating or deflating between the actual survey year and the benchmark year using a country's Consumer Price Index (CPI).[3] Between 1988 and 2011 the countries included in the LM-WPID database cover 90 percent of the world's population, on average, and 95 percent of world GDP, on average. Coverage of sub-Saharan Africa and Russia/Central Asia/SE Europe in the LM-WPID is lower in earlier years. The dataset provides country-deciles in common currency and prices (2005 prices and 2005 purchasing power parity (PPP) international dollars) and we retain this data in its original pricing.[4]

Modeling the global income distribution

In order to create global deciles, we employ an equivalent methodology to C. Lakner and B. Milanovic. in their 2013 paper, 'Global Income Distribution: From the Fall of the Berlin Wall to the Great Recession'. We begin by ranking country deciles by PPP incomes weighted by the population for each year. Then we use linear interpolation to determine an exact cumulative total income value at the ten decile break points (which we get by referencing the corresponding cumulative population size). When a global decile break point is straddled by a country decile, this method allocates the income of the country decile between the two global deciles based on the proportion of the population belonging to each global decile. We then use the interpolated cumulative income values to compute the total income for each decile. Urban and rural China, India and Indonesia are treated as separate countries where disaggregated data is available (China all years, India and Indonesia all years except 2011).

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Figure 1 shows the regional composition of the global income distribution in 2011.[5] South Asia and East Asia Pacific dominate the chart due to the large population sizes of China and India. Since 1988, the bottom deciles have shifted, with Asia Pacific moving up the global distribution, driven by growth in incomes in China, and sub-Saharan Africa moving down. In 2011, the bottom decile, with country decile incomes well below the extreme poverty line, was primarily made up of people from South Asia (44 percent), sub-Saharan Africa (36 percent) and East Asia Pacific (18 percent), with a small number in Central Asia. Of the countries included in the dataset, several had more than 50 percent of their population in the global bottom decile in 2011; including Guinea-Bissau, Lesotho and Malawi at 50 percent, Laos and Nigeria at 60 percent, Zambia at 70 percent, Rwanda at 80 percent and, highest of all, Madagascar at 90 percent.

Figure 1: Regional composition of 2011 global income distribution
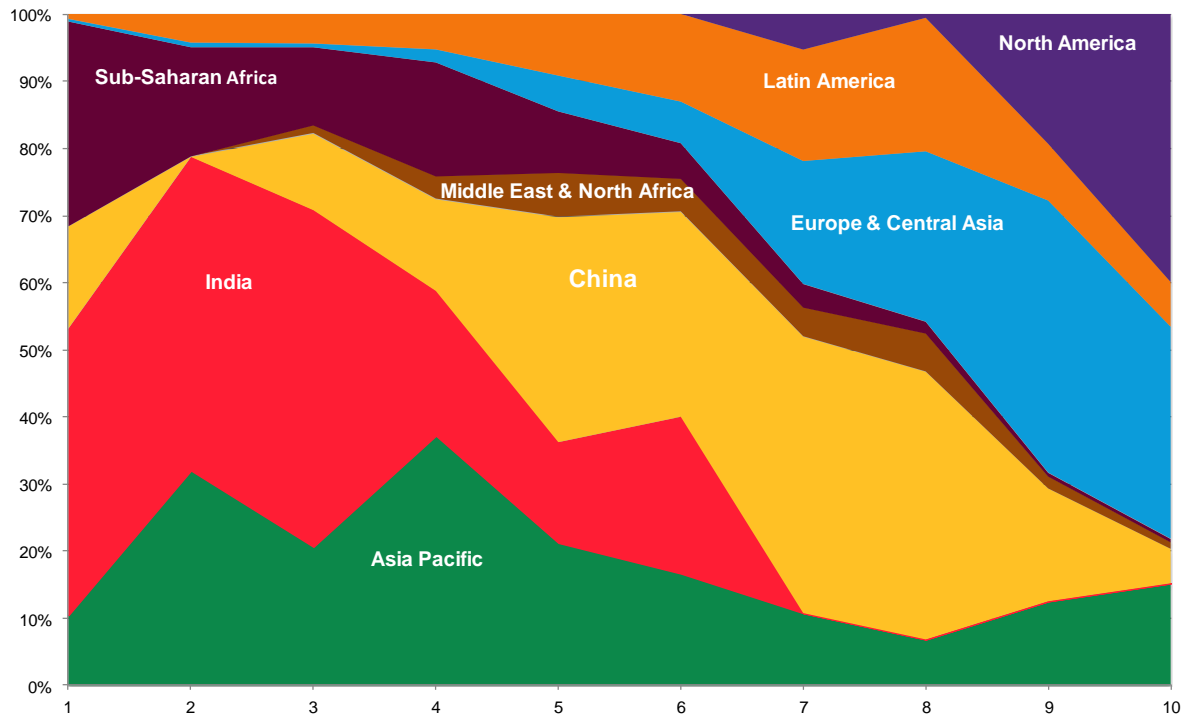
Source: Data for 2011 provided through personal correspondence with B. Milanovic. September, 2015. Lakner-Milanovic (2013) World Panel Income Distribution (LM-WPID) database: https://www.gc.cuny.edu/Page-Elements/Academics-Research-Centers-Initiatives/Centers-and-Institutes/Luxembourg-Income-Study-Center/Branko-Milanovic,-Senior-Scholar/Datasets

In 2011, the top decile was dominated by Europe & Central Asia (35 percent), North America (34 percent) and the East Asia Pacific region (20 percent). The wealthy in Latin America also made up 8.5 percent, with the remaining 2.5 percent divided between the Middle East & North Africa and sub-Saharan Africa. In addition to countries like the US, Canada and Western European countries, several emerging economies have also begun to be represented in the top decile since 1988, including the wealthiest in China, Taiwan, South Africa, Iran, Turkey and several former Soviet Union countries. Canada, the US and many Western European countries had more than 50 percent of their total population represented in the top global decile in 2011. In Luxembourg and Norway this number was 70 percent. The population of the top 1 percent of the global distribution is made up of people from a select group of countries in North America, Europe and, increasingly, wealthy countries in Asia, including Japan, Hong Kong and Singapore. Over the 23-year period from 1988 to 2011, the US is the most heavily represented in the top 1 percent, with high earners in the US figuring at the very top of the global distribution in all years but one.

Results

The global economy increased from an income of $14 trillion in 1988 to $26 trillion in 2011 (2005 PPP). The total income of the bottom 10 percent increased from $81bn to $161bn; this is less than 1 percent of the total increase (growth) of the global economy. We use population data to calculate the average income per capita of each decile in each year, taking into account population growth between 1988 and 2011. We find that the average income per capita of the bottom 10 percent increase from $196 per year (2005 PPP) to $261 per year, or an average of $2.81 every year. All these people remain well below the extreme poverty line (approx $465 per year). The total income of the top 10 percent increased from $7,728bn to $13,513bn; this is 46 percent of the total increase (growth) of the global economy.

Table 1: Global income 1988–2011, by decile

Global Income (survey population) $bil 2005 PPP							Increase in income 1988-2011 $bil	Share of growth going to each group 1988-2011
deciles	1988	1993	1998	2003	2008	2011		
1	81	101	119	133	151	161	79	0.6%
2	117	157	186	211	248	260	142	1.1%
3	147	199	241	275	330	358	210	1.7%
4	181	246	302	347	430	500	319	2.5%
5	228	315	388	452	563	730	502	4.0%
6	322	446	532	615	825	1,142	820	6.5%
7	542	691	837	959	1,249	1,707	1,166	9.2%
8	1,261	1,322	1,431	1,565	2,069	2,784	1,523	12.0%
9	3,049	3,655	3,919	4,190	4,703	5,161	2,112	16.7%
10	7,728	9,706	11,050	12,827	14,428	13,513	5,786	45.7%
							4,292	
top 1%	1,577	1,993	2,469	3,001	3,581	3,071	1,494	11.8%
bottom 50%	755	1,017	1,236	1,418	1,722	2,009	1,254	9.9%
TOTAL INCOME	13,656	16,838	19,005	21,574	24,995	26,316	12,660	

Limitations

Our estimates of global income distribution are likely to be conservative, as it is well established that the incomes of the top 1 percent are underrepresented in national surveys.[6] As explained in Lakner, Milanovic (2013), this is likely to be due to several factors. First, it is harder to conduct surveys in gated communities than in poorer areas. Second, the top 1 percent are a small group and likely to be missed or left out of standard national samples of several thousand households. Finally, common elements of survey design such top-coding or dropping outliers, may reduce the prevalence of top incomes in national surveys. Unlike, Lakner, Milanovic (2013) we do not make adjustments to account for underreported top incomes, which is likely to result in a more conservative estimate. Finally, as country-level data is only available in deciles, within-decile inequality is ignored, possibly understating within-country and global inequality.[7]

Our data analysis covers the period 1988–2011. We have not been able to analyse global income trends since 2011, as the global economy has begun to recover from the global financial crisis.

2 GLOBAL WEALTH SHARES

Analyses of the distribution of global wealth and the share of the increase in wealth going to different deciles and the top 1%

Data source

Our analysis of global wealth distribution is based on data produced by Credit Suisse for its annual 'Global Wealth Report'.[8] We use data from the 2015 Credit Suisse global wealth report on total net wealth at constant exchange rates and 2015 global decile and top percentile income shares. Global decile and top percentile income shares for other years are sourced from data provided by Credit Suisse for the 2014 'Global Wealth Report'.[9] The 2014 wealth report produced estimates for all previous years on a comparable basis, including adjustments to decile and income shares data from previous reports.

Credit Suisse uses a variety of different techniques to compile global data on personal wealth. First, they establish the average level of wealth for each country using household balance sheet (HBS) data (now provided by 48 countries). Where available, they also use household survey data that allows wealth levels to be calculated. Combined, this covers 66 percent of the global population and 96 percent of total global wealth. Econometric techniques are then used to estimate the level of wealth in 160 countries that lack data for one or more years. Next, data on the distribution of wealth that is available for 31 countries is used to construct wealth holdings patterns within nations. When this data is not available, the authors exploit the relationship between wealth distribution and income distribution to estimate distribution patterns for 135 additional countries that have data on income distribution but not on wealth ownership.

As it is well known that traditional wealth distribution data underestimates the top tail of the distribution for most countries, data from the Forbes Magazine rich lists is also used to adjust wealth distribution patterns for the top end. This methodology leaves out 50 countries, which are mostly small countries (e.g. Andorra, Bermuda, Guatemala, Monaco) or those partially removed from the global economy (e.g. Afghanistan, Cuba, North Korea). For global aggregates, these countries are assigned the average level of their region and income group.

Analyzing the global wealth distribution

Credit Suisse provides data on the total global net wealth and the share of this wealth held by each decile of the global adult population. It identifies the population in each decile and the country they are from. Two-thirds of the people in the poorest decile live in Asia and Africa. There are also people who live in richer countries in North America and Europe, most of whom live in net debt. The net wealth of the bottom 10 percent in 2015 is -$750. Two-thirds of the people in the richest decile live in Europe and North America.

Figure 2: Regional composition of 2011 global income distribution
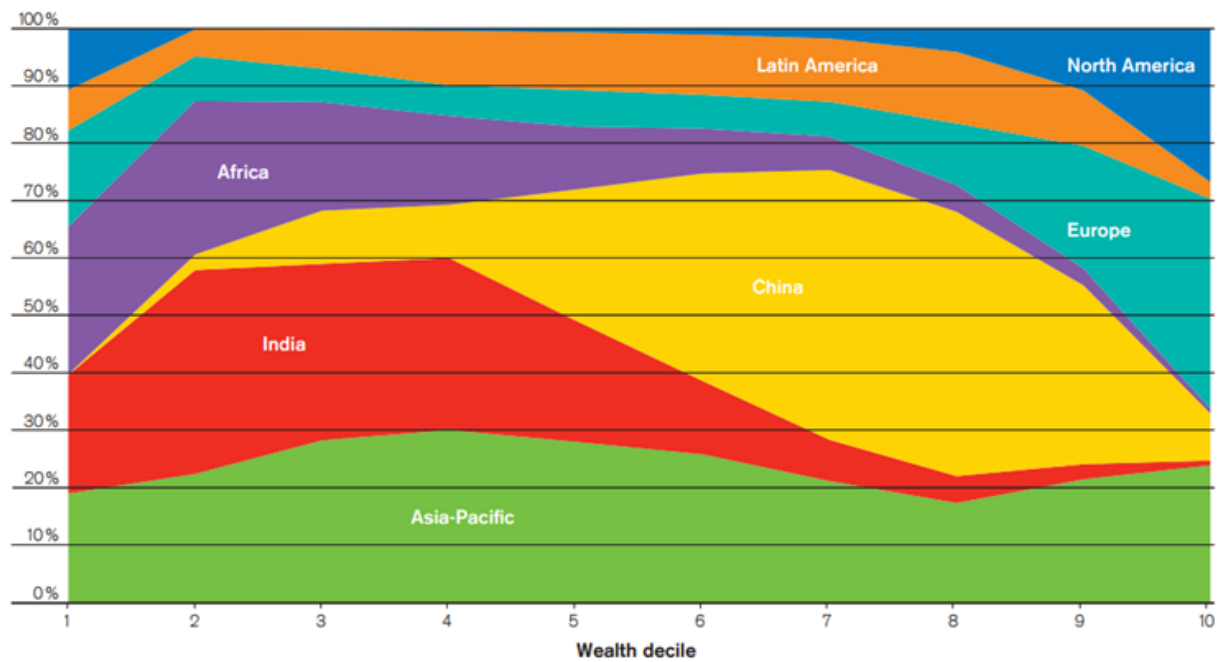
Source: James Davies, Rodrigo Lluberas and Anthony Shorrocks, Credit Suisse Global Wealth Databook 2015

Oxfam compared the wealth owned by each decile over time and how the share of wealth for each group changed. In 2014 our analysis of the wealth of the top 1 percent projected that the wealth of the 1 percent would exceed that of the rest of the world by 2016.[10] Credit Suisse data revealed that this had happened a year earlier: the share of the wealth of the top 1 percent was 50.01 percent in 2015. We also compared this data with Forbes data on the wealth held by the very richest individuals: those listed on the Forbes billionaire rankings in March of every year. We first brought together these two data sources for Oxfam's report in January 2014, which found that 85 of the world's billionaires had the same net wealth as the bottom 50 percent of the global population.[11]

Results

Global wealth stocks have more than doubled since 2000. There has been little change in the wealth share of the bottom 50 percent over this period, which has remained at approximately 1 percent of global wealth. In 2015 the net wealth of the 3.6 billion people living in the bottom 50 percent was $1.75 trillion. This is the same amount of wealth as the richest 62 individuals. The wealth of the bottom 50 percent has fallen by $800bn between 2010 and 2015, or $1 trillion in real terms. At the same time, the wealth of the 62 richest people has increased by half a trillion dollars over this period.

Table 2: Income of the bottom 50% has declined, while the billionaires have got richer

year	Global wealth share of each decile					Bottom 50%	Total Global Wealth ($bil)	Wealth of bottom 50% ($bn)	Wealth of richest 62 people (From Forbes, $bn)
	Bottom 10%	2	3	4	5				
2000	-0.3	0.1	0.1	0.3	0.4	0.6	117225	703.35	
2001	-0.3	0.1	0.1	0.3	0.5	0.7	113390	793.73	
2002	-0.3	0.1	0.1	0.3	0.5	0.7	122757	859.299	690.70
2003	-0.3	0.1	0.1	0.3	0.5	0.7	147566	1032.962	624.70
2004	-0.3	0.1	0.1	0.3	0.5	0.7	166018	1162.126	768.70
2005	-0.3	0.1	0.1	0.3	0.5	0.7	171577	1201.039	824.60
2006	-0.3	0.1	0.2	0.3	0.6	0.9	196345	1767.105	893.20
2007	-0.3	0.1	0.2	0.4	0.6	1	220552	2205.52	1102.80
2008	-0.3	0.1	0.2	0.3	0.6	0.9	190148	1711.332	1338.90
2009	-0.3	0.1	0.2	0.3	0.6	0.9	206152	1855.368	825.80
2010	-0.2	0.1	0.2	0.4	0.7	1.2	216374	2596.488	1118.70
2011	-0.2	0.1	0.2	0.3	0.6	1	224828	2248.28	1313.90
2012	-0.3	0.1	0.2	0.3	0.6	0.9	238486	2146.374	1304.30
2013	-0.3	0.1	0.1	0.3	0.5	0.7	255567	1788.969	1426.60
2014	-0.3	0.1	0.1	0.3	0.5	0.7	262565	1837.955	1642.10
2015	-0.3	0.1	0.1	0.3	0.5	0.7	250145	1751.015	1762.30

Limitations

The net wealth of individuals as measured by Credit Suisse includes both assets and debt. At the very bottom of the distribution, the bottom 10 percent of the global population have negative wealth. Some of these people live in rich countries and would not be considered poor (think graduates with large debt but large incomes, for example). While this is relevant at the individual level and anecdotally, it is clear that at the aggregate level the negative wealth at the bottom of the distribution is completely dwarfed by the wealth at the top of the distribution, such that our main finding is not in question. As a robustness check, we recalculated the global distribution excluding the negative wealth of the bottom 10 percent. The total negative wealth of the bottom 10 percent is $750bn, or 0.3 percent of total global wealth stocks; the 16 richest billionaires have more net wealth than this. Including the negative wealth of the bottom 10 percent, the top 1 percent have 50.1 percent of global wealth. Excluding negative wealth, their share is 49.8 percent, not a significant difference.[12] Looking at the change in wealth over time, the negative wealth of the bottom 10 percent increased from -$352bn in 2000 to -$750bn in 2014, which continues to represent -0.3 percent of total wealth stocks; therefore the share of negative wealth in unchanged and marginal to the analysis of wealth trends, both at a point in time and over the 2000–2015 year period.

Wealth statistics are measured in Money of the Day at current exchange rates against the US$. Therefore any changes in values year to year in the data are nominal changes and must be analyzed accordingly. Credit Suisse presents data year to year on the effect that exchange rate changes have on the valuation of wealth that is held in different currencies. In 2015 for example, the devaluation of the Euro against the US$ corresponds to a decline in the net wealth held by many European countries.

The wealth of billionaires can fluctuate dramatically by significant amounts, even day to day, as reflected by the update to Forbes billionaire rankings which track wealth in real time. The wealth of the richest 62 billionaires which we analyzed includes different individuals year to year.

NOTES

1 D. Hardoon, R. Fuentes-Nieva and S. Ayele (2016) 'An Economy for the 1%: How privilege and power in the economy drive extreme inequality and how this can be stopped', Oxfam, http://oxf.am/ZniS

2 Created for C. Lakner and B. Milanovic (2013). Global income distribution: From the fall of the Berlin Wall to the Great Recession. World Bank Policy Research Working Paper, (6719). https://openknowledge.worldbank.org/handle/10986/16935 Data for 2011 provided to Oxfam through personal correspondence with B. Milanovic September, 2015. More information about general methodology available at: https://www.gc.cuny.edu/Page-Elements/Academics-Research-Centers-Initiatives/Centers-and-Institutes/Luxembourg-Income-Study-Center/Branko-Milanovic,-Senior-Scholar/Datasets

3 The majority of surveys fall within one year plus or minus the benchmark.

4 While 2011 PPP conversion factors are now available through the 2011 International Comparison Program (ICP), to best of our knowledge, there is no publicly available, curated dataset for currency redenominations. This data is necessary to adjust data not originating in the Povcal dataset to 2011 prices and 2011 purchasing power parity (PPP) international dollars.

5 Regions based on 2015 World Bank regional categories.

6 C. Lakner and B. Milanovic (2013). Global income distribution: From the fall of the Berlin Wall to the Great Recession. Op. cit.

7 S. Anand and P. Segal: 2008, 'What Do We Know about Global Income Inequality?'. *Journal of Economic Literature* 46(1), pp. 57–94. Retrieved 4 November, 2015 from: http://siteresources.worldbank.org/INTDECINEQ/Resources/1149208-1169141694589/What_do_we_knowaboutGlobalIncomeInequality.pdf

8 For more information on Credit Suisse 'Global Wealth Report' methodology see: A. Shorrocks, J. Davies and R. Lluberas (2015) 'Global Wealth Databook'. Zurich: Credit Suisse. Available at: http://publications.credit-suisse.com/tasks/render/file/index.cfm?fileid=C26E3824-E868-56E0-CCA04D4BB9B9ADD5

9 Provided by A. Shorrocks through personal communication, October 2014.

10 http://oxfamblogs.org/mindthegap/2015/02/03/where-is-the-distribution-of-global-wealth-headed-and-why-should-we-worry/

11 http://oxfamblogs.org/fp2p/anatomy-of-a-killer-fact-the-worlds-85-richest-people-own-as-much-as-poorest-3-5-billion/

12 For a fuller response to previous criticisms, see http://oxfamblogs.org/mindthegap/2015/01/26/on-wealth-debt-and-inequality-in-response-to-some-criticism/#more-206

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