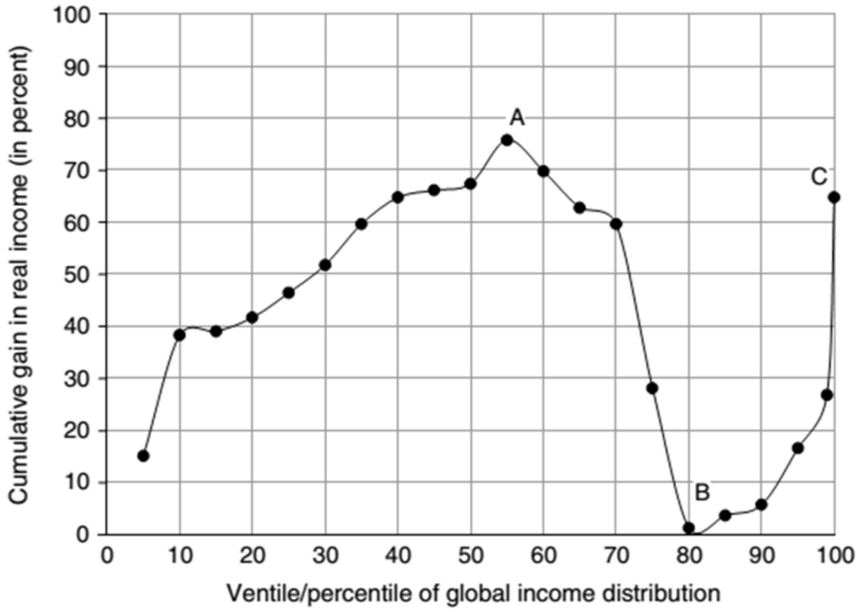
On inequality

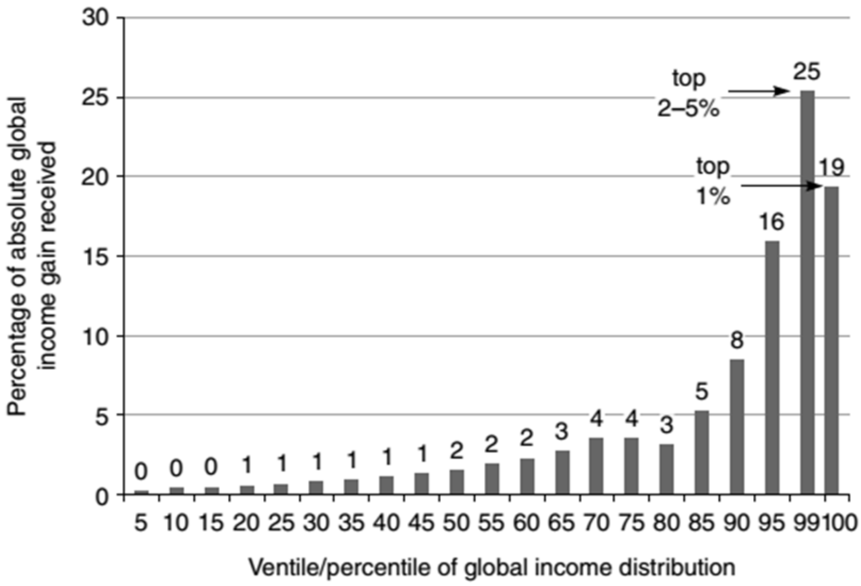
1. **The gains from globalization are not evenly distributed: relative gains.** The *elephant curve* on the right shows the percentual gain in real per capita income between 1988 and 2008 (the high globalization period). The horizontal axis ranks people in the world from the poorest (extreme left) to the richest (extreme right). The maximum gain (point A) is near the median (people slightly above the 50th percentile of the global income distribution) and for the richest (the top 1%, point C). The minimum gain (point B) corresponds to the global 80th percentile (most of it in the lower middle class of the rich countries).



2. **Beneficiaries of globalization (1988-2008).** (1) People between the 40th and the 60th percentile (1/5 of the world population). Most members in this group belong to Asian economies (China, India, Thailand, Vietnam, and Indonesia): the emerging global middle class. Hence, the Asian poor and middle classes define the great winners of globalization. (2) The global very rich (the global plutocrats).

3. **The least benefited from globalization (1988-2008).** (1) The global poor (located in the countries that are not rich). (2) The global lower middle classes (most of whom live in the rich countries). Thus, the great losers of globalization are the lower middle classes and the poorer segments of the rich world.

4. **The gains from globalization are not evenly distributed: absolute gains.** The chart on the right shows how the total increment in income between 1988 and 2008 has been distributed by global income level. It indicates that around the 44% of all the gains have been received by the richest 5% of the world population.



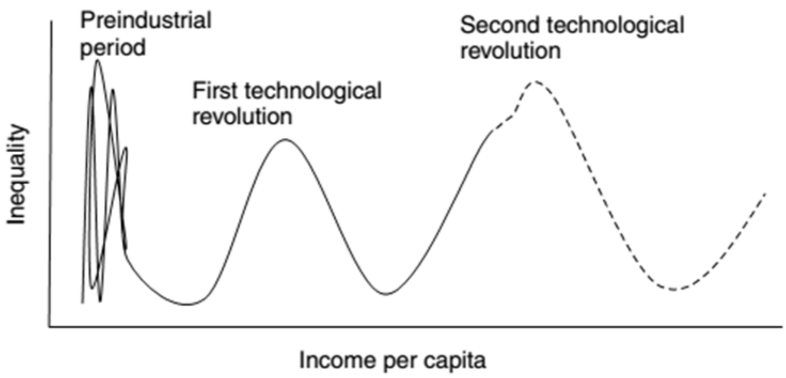
5. **The gains from globalization are not evenly distributed: absolute gains.** The chart on the right shows how the total increment in income between 1988 and 2008 has been distributed, by global income level. It indicates that around the 44% of all the gains has been received by the richest 5% of the world population (the top 1% receiving 19% of the income rise). The other beneficiaries of globalization (the emerging global middle class) pocketed only between 2 and 4%.

6. **Top 1%.** According to Oxfam (16 January 2017), the eight richest men in the world together have the same amount of wealth ($426 billion = 0.16% of the world's wealth) as the poorest 50% of the world population. Spending one dollar per second ($86,400 per day), it would take more than 13,500 years to exhaust $426 billion.

https://www.oxfamamerica.org/static/media/files/170105_bn-economyfor-99-percent-160117_embargo-en.pdf

7. **The Kuznets curve (or Kuznets hypothesis).** It is the conjecture (by Simon Kuznets) relating the level of economic inequality with the level of real income. Graphically, it takes the form an inverted U: for low income levels, inequality is low; as income grows, inequality increases; and, from some sufficiently high income level on, inequality decreases. However, the recent experience of the advanced economies shows that inequality need not decrease with development

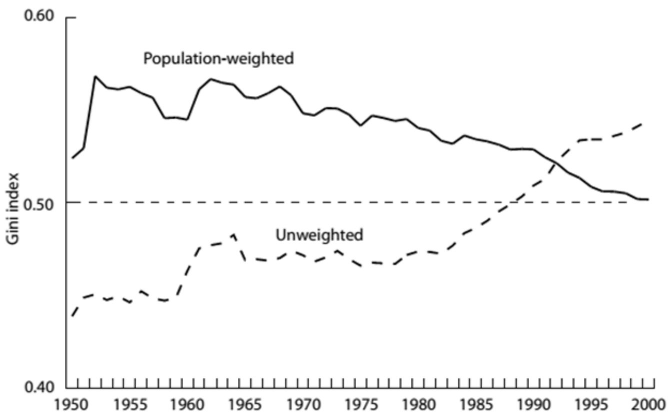
8. **The Kuznets wave (or cycle).** It is the conjecture (by Branko Milanović) that there are waves of alternating increases and decreases in inequality in time (as income increases). (1) Before the Industrial Revolution inequality undulated around a fixed average income level (in a Malthusian cycle the source of the fluctuation in inequality is demographic: an income rise lower inequality and triggers a population increase among the poor; in the presence of a decreasing marginal productivity of labour, a larger population leads to a reduction in productivity and a fall in income, which increases inequality and moderates population growth). (2) The Industrial Revolution made possible a sustained growth of income and also an increase in inequality. First, because higher incomes create the potential for more inequality. Second, because structural changes in the economy (urbanization, rising importance of the industrial sector) drove up inequality. Inequality eventually decreased when the supply of more educated workers increased and economic policies responded to pressures to correct the uneveness of the distribution of income (the welfare state). Military conflicts and political revolutions (themselves often consequences of excessive inequality) also contributed to the reduction in inequality. The 'Great Leveling' refers to the reduction in inequality in the richer countries between 1945 and 1980. (3) A new technological revolution affected the rich countries in the 1980s (digital revolution) by widening income disparities. The new technologies rewarded the more skilled workers, pushed up the return to capital and made the less skilled worker suffer the strong competition from China and India. The service sector increased in importance, with many of the new jobs not requiring much qualification and being badly paid. Moreover, pro-rich economic policies tended to be universally adopted.



9. **Concept 1 of inequality: unweighted international inequality.** Concept 1 associates with each country a representative individual, who is assigned the country's GDP per capita. Concept 1 compares countries, with all of them given the same weight.

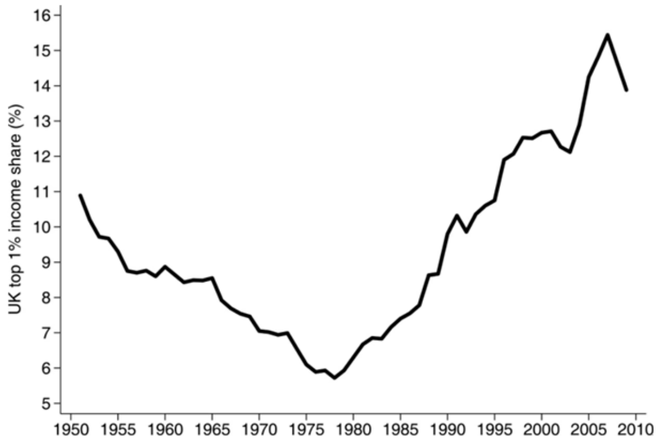
10. **Concept 2 of inequality: population-weighted international inequality.** It is assumed that every person in a country receives the country's GDP per capita, but now the number of representative individuals attributed to each country depends on the country's size. Concept 2 ignores inequality within countries.

11. **Concept 3 of inequality: individual international inequality.** In Concept 3 inequality measures are determined directly on individuals, all individuals in the world, with each individual counting the same.

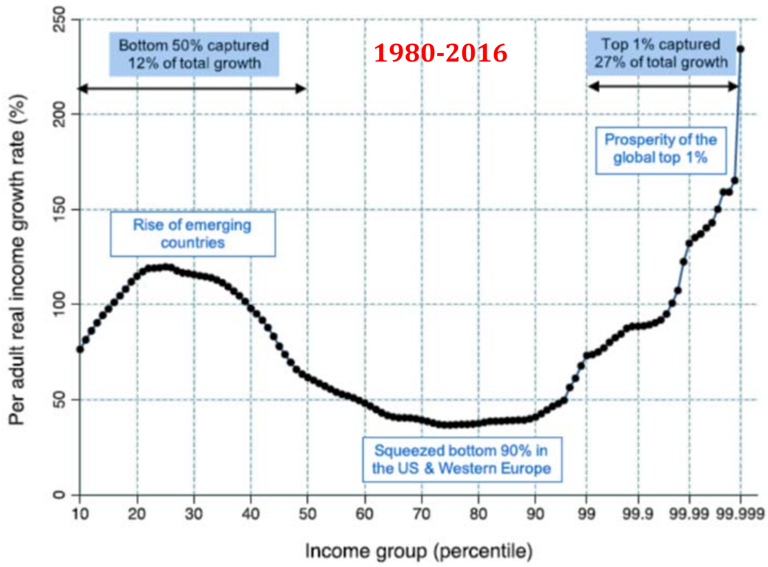


12. **Divergent measures of inequality.** The chart on the right shows two interpretations of the same reality: according to Concept 1, international inequality has increased (upward trend) in the last decades; whereas Concept 2 suggests a fall (downward trend). The difference: the behaviour of China and India (reduction in inequality essentially limited to a few big countries).

Milanović, Branko (2007): *Worlds apart: Measuring international and global inequality*, Princeton University Press, Princeton, NJ.



The rise of the super-rich in the UK (L. McQuaig, N. Brooks (2013): *The trouble with billionaries: How the super-rich hijacked the world*)



https://wid.world/news-article/release-world-inequality-report-2018/

13. Piketty's $r > g$ theory of inequality: the fundamental force of divergence. The symbol r stands for an average rate of return on holdings of wealth over long periods (average return of stocks, corporate bonds, savings accounts, government bonds, real estate, other financial assets…). The symbol g is the GDP growth rate and can be interpreted as the average speed at which incomes in a economy grow. Piketty's theory (the fundamental inequality of capitalism) is that inequality increases when r grows faster than g. With $r > g$, wealth grows more than income; and as wealth is distributed more unequally than income, a faster growth of wealth with respect to the growth of income contributes to an increase in inequality: the rewards to the owners of wealth are larger than the income that, on average, generates the economy.

$$Y = W + P$$

aggregate income = salaries + profits

$$r = \frac{P}{K}$$

rate of return = profits / capital

$$K' = K + I$$

capital tomorrow = capital today + investment

$$I = s \cdot Y$$

investment = savings rate · income

$$Y' = (1 + g) \cdot Y$$

income tomorrow = (1 + income growth rate)· income today

Let $\alpha = \frac{P}{Y}$, $\beta = \frac{K}{Y}$ and $Y = \frac{Y}{L} \cdot L$, where L is population and $\frac{Y}{L}$ is average productivity. Therefore, $g \approx \lambda + n$: income growth is approximately equal to productivity growth plus population growth. As $r = \frac{P}{Y} \cdot \frac{Y}{K}$, it follows that $r = \alpha/\beta$ or, equivalently,

$$\alpha = r \cdot \beta$$

which Piketty calls "the first fundamental law of capitalism". Moreover,

$$\frac{K'}{Y'} = \frac{K + I}{Y'} = \frac{K}{Y'} + \frac{I}{Y'} = \frac{K}{(1 + g) \cdot Y} + \frac{s \cdot Y}{(1 + g) \cdot Y} = \frac{1}{1 + g} \cdot \frac{K}{Y} + \frac{s}{1 + g}.$$

At a stationary state, $\frac{K\prime}{Y\prime} = \frac{K}{Y} = \beta$. Hence, solving for β, it is obtained Piketty's "second fundamental law of capitalism" or dynamic law of accumulation:

$$\beta = \frac{s}{g} \approx \frac{s}{\lambda + n}$$

A falling share $\frac{W}{Y}$ of wages in income can be interpreted as a rise in inequality: capital gets an increasing larger portion of income. From $Y = W + P$, $1 = \frac{W}{Y} + \frac{P}{Y} = \frac{W}{Y} + \alpha$. As a result,

$$\frac{W}{Y} = 1 - \alpha = 1 - r \cdot \beta = 1 - \frac{s \cdot r}{g} \approx 1 - \frac{s \cdot r}{\lambda + n}.$$

The above equation indicates that the wage share $\frac{W}{Y}$ decreases (inequality goes up) when:

(i) the savings rate s rises;
(ii) the rate of return r rises;
(iii) the rate of growth λ of labour productivity falls;
(iv) the rate of growth n of population falls; or
(v) the rate of growth g of the economy declines (this is a combination of (iii) and (iv)).

14. **Forces of convergence and divergence of market economies.** With a constant s, the dynamics of inequality is explained by the evolution of the private rate of return r on capital and the rate of growth g of income. Having $r > g$ implies that wealth accumulated in the past grows faster than income (and wages). That capital tends to expand itself more rapidly than the economy is the principal force of divergence (inequality). The diffusion of knowledge and skills is a powerful force of convergence (and social stability).

15. **Globalization and country divergence.** Globalization seems to have favoured so far the forces of divergence: the narrowing of income inequality between countries has been relatively small (look at the Earth at night: light = prosperity; darkness = poverty).

16. **Piketty's claims.** (1) The growth (or contraction) of an economy's wealth-to-annual-income ratio ($\beta = K/Y$) is the quotient s/g between the net savings (the accumulation rate) and the economy's growth rate. (2) Wealth is eventually concentrated in the hands of a small group: the larger β, the more unequal the distribution of wealth. (3) An unequal distribution of income is the consequence of an unequal distribution of wealth: the privileged small group will steer political decisions on their behalf, to prevent the rate of profit from falling. (4) The privileges of the small group will be preserved through inheritance. (5) When wealth is inherited, the small privileged group will possess great influence (politically, economically, socioculturally) that will most likely be exercised to the detriment of the majority. "The process by which wealth is accumulated and distributed contains powerful forces pushing toward divergence, or at any rate toward an extremely high level of inequality (...) It is possible to imagine public institutions and policies that would counter the effects of this implacable logic: for instance, a progressive global tax on capital. But establishing such institutions and policies would require a considerable degree of international coordination." (Piketty, 2014, p. 27)

17. **The three recent epochs of capitalism.** (1) The **Belle Epoch** (1880–1914): the first era of global financial capitalism; (2) the **Golden Age** (1945–1975) of capitalism; (3) the **Neoliberal Era** (1980–2017): the second era of global financial capitalism. The Belle Epoch, the product of the cumulative development of capitalism, collapsed: two world wars with a Great Depression in between. By comparing the Belle Epoch with the Neoliberal Era, Piketty anticipates the persistence of a low-growth regime and a traumatic end to the Neoliberal Era (global wars and economic crises), unless there is a global political peaceful reorganization that stops the forces that, through the progressive accumulation of capital in fewer hands, is exacerbating class conflict. As in the Golden Age, an interventionist welfare state (at a global scale) is the needed counterbalancing force, to temper the forces of global financialization, even at the price of sacrificing economic growth.

Piketty, Thomas (2014): *Capital in the twenty-first century*, Belknap Press, Cambridge, MA.

Dickens, Edwin (2015): "Piketty's Capital in the Twenty-First Century: A review essay," Review of Political Economy 27(2), 230– 239

López-Bernardo, Javier; Félix López-Martínez; Engelbert Stockhammer (2016): "A Post-Keynesian response to Piketty's 'Fundamental Contradiction of Capitalism'," Review of Political Economy 28 (2), 190-204.