

# **Econ 133 – Global Inequality and Growth**

## **Global Income Inequality Dynamics**

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## Roadmap

- What is global inequality?
- How high is global inequality
- How is it evolving?

# 1 What is global inequality?

## 1.1 Concepts of global inequality

- Inequality of average income between countries
- Inequality of average income between countries, weighted by population
- Inequality of income between world individuals = world distribution of income = what we will focus on

## 1.2 The world distribution of income in 2018

- Data series on global inequality are scarce; caution is required in interpreting them
- WIR 2018: combines consistent and comparable data (DINAs)
- When measured using market exchange rates, top 10% share = 60% today
- With purchasing power parity (PPP) rates, top 10% share = 53%

## 1.3 PPP vs. market exchange rates

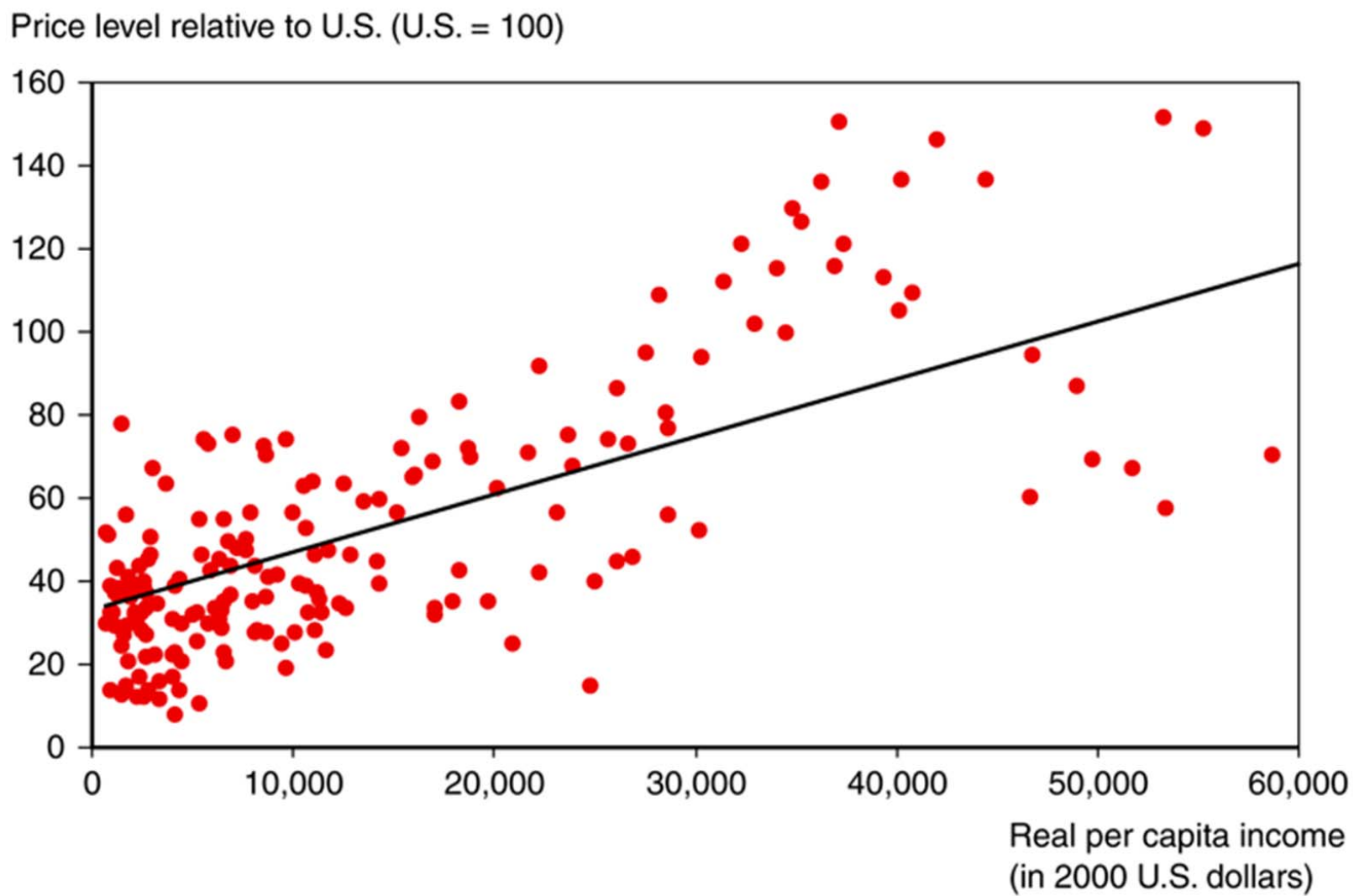
- To compute world distribution of income, need to convert incomes into common currency
- Law of one price: same good should cost the same in different countries once the price is converted into the same currency
- That is:  $p_i = ep_i^*$ , where  $p_i$  is domestic price of good  $i$ ,  $p_i^*$  is foreign price, and  $e$  the exchange rate (domestic/foreign currency)

- The reason why the LOP should hold is goods market arbitrage
- Purchasing Power Parity (PPP) is the application of the law of one price to a basket of goods
- PPP postulates that the price of the same basket of goods should be the same once converted into the same currency.
- That is,  $P = eP^*$ , where  $P$  is the domestic price index and  $P^*$  the foreign price index

- One way to rewrite absolute PPP is

$$\frac{eP^*}{P} = 1 \quad (1)$$

- The left hand side of this equation is the real exchange rate (i.e. the nominal exchange rate adjusted by the price levels).
- Absolute PPP therefore requires that the real exchange rate is equal to one.
- In practice there are permanent deviations from absolute PPP



Source: Penn World Table, version 6.3.



- Due to general deviations from PPP it does not make sense to use market exchange rates to compare real income across countries.
- The IMF and various other organizations therefore report “PPP exchange rates” .
- These exchange rates are simply an estimate of what the nominal exchange rate would have to be so that absolute PPP holds.
- But many uncertainties involved in this computation

If the price of the Big Mac in US\$ is the same across countries, then

A — Absolute purchasing power parity holds true

B — The real exchange rate is equal to 1

C — The law of one price holds for the big mac

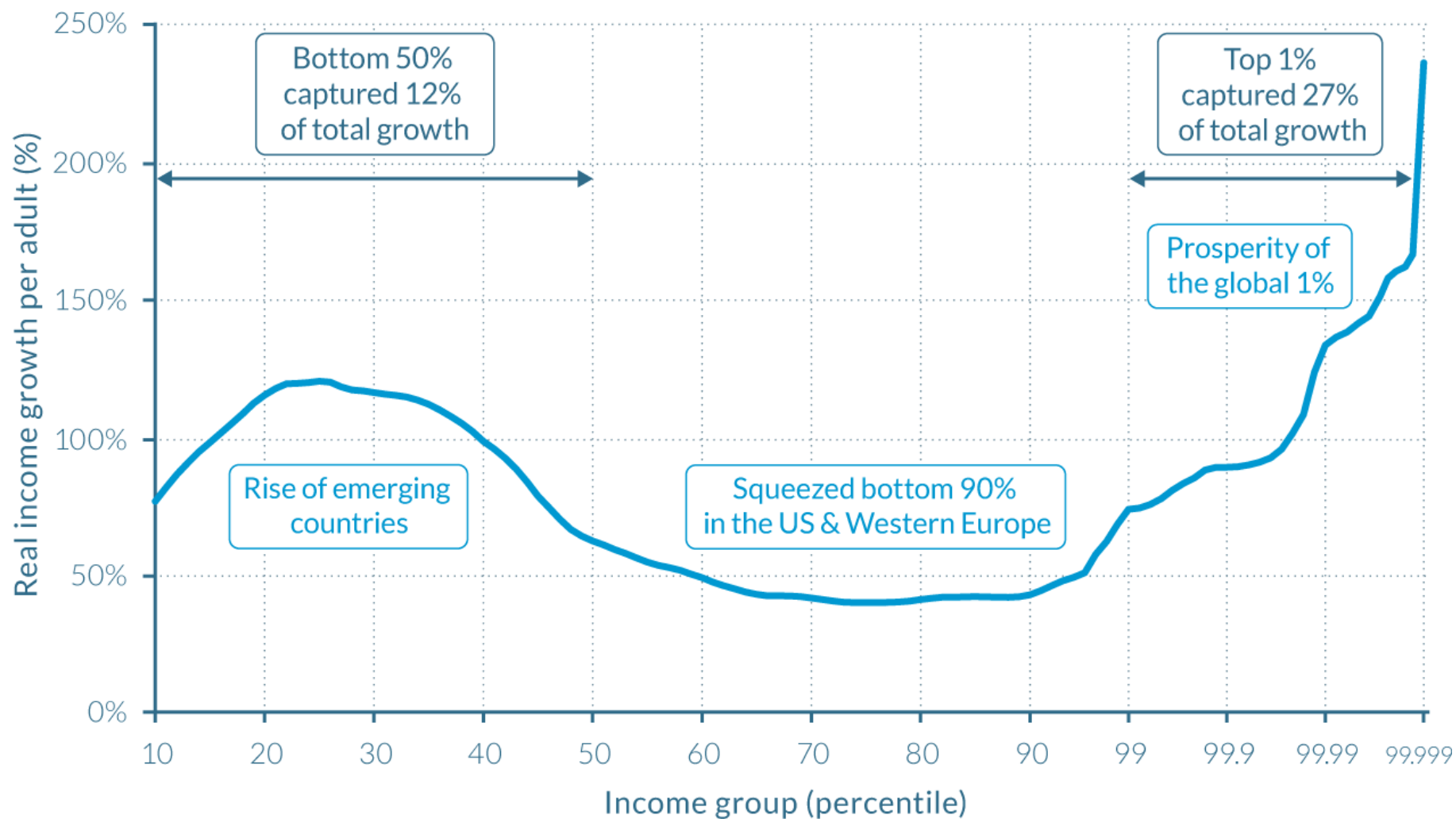
D — Market exchange rates and PPP-adjusted exchange rates are the same

## 2 How is global inequality evolving

- Convergence in average income across countries, but rising inequality within countries
- Over medium run both trends approximately offset each other
- More precisely: from 1980 to 2000 rising global inequality (global top 1% income share ↗ 16% in 1980 to 22% in 2000)
- Then falling slightly 2000-2018 (top 1% share = 20% in 2018).

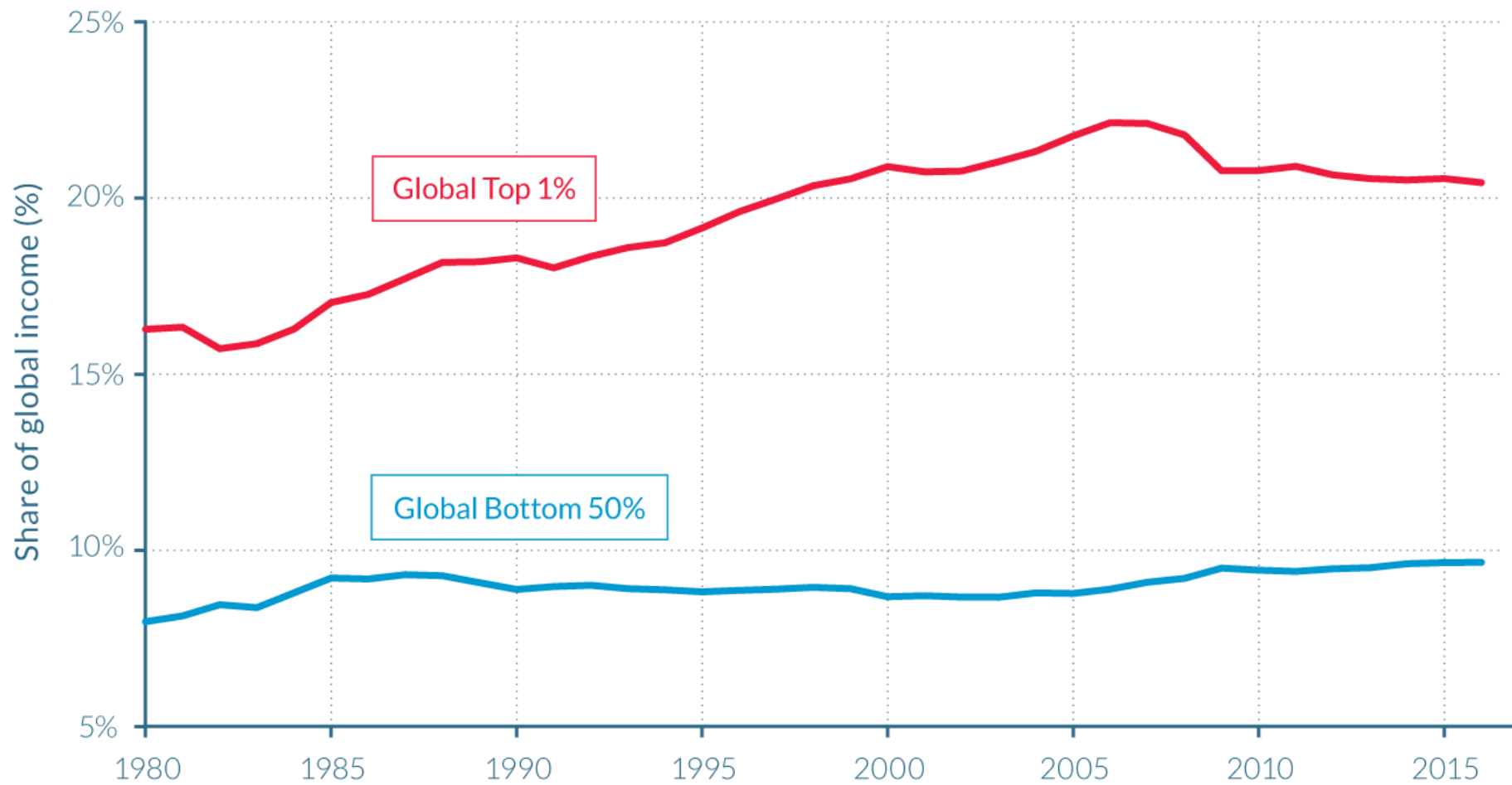
## Distribution of world growth:

- Poorest half of the global population has seen its income grow significantly thanks to high growth in Asia.
- But top 0.1% has captured as much growth as the bottom half since 1980.
- Income growth sluggish or even nil for individuals between the global bottom 50% and top 1% (includes North American and European lower- and middle-income groups)



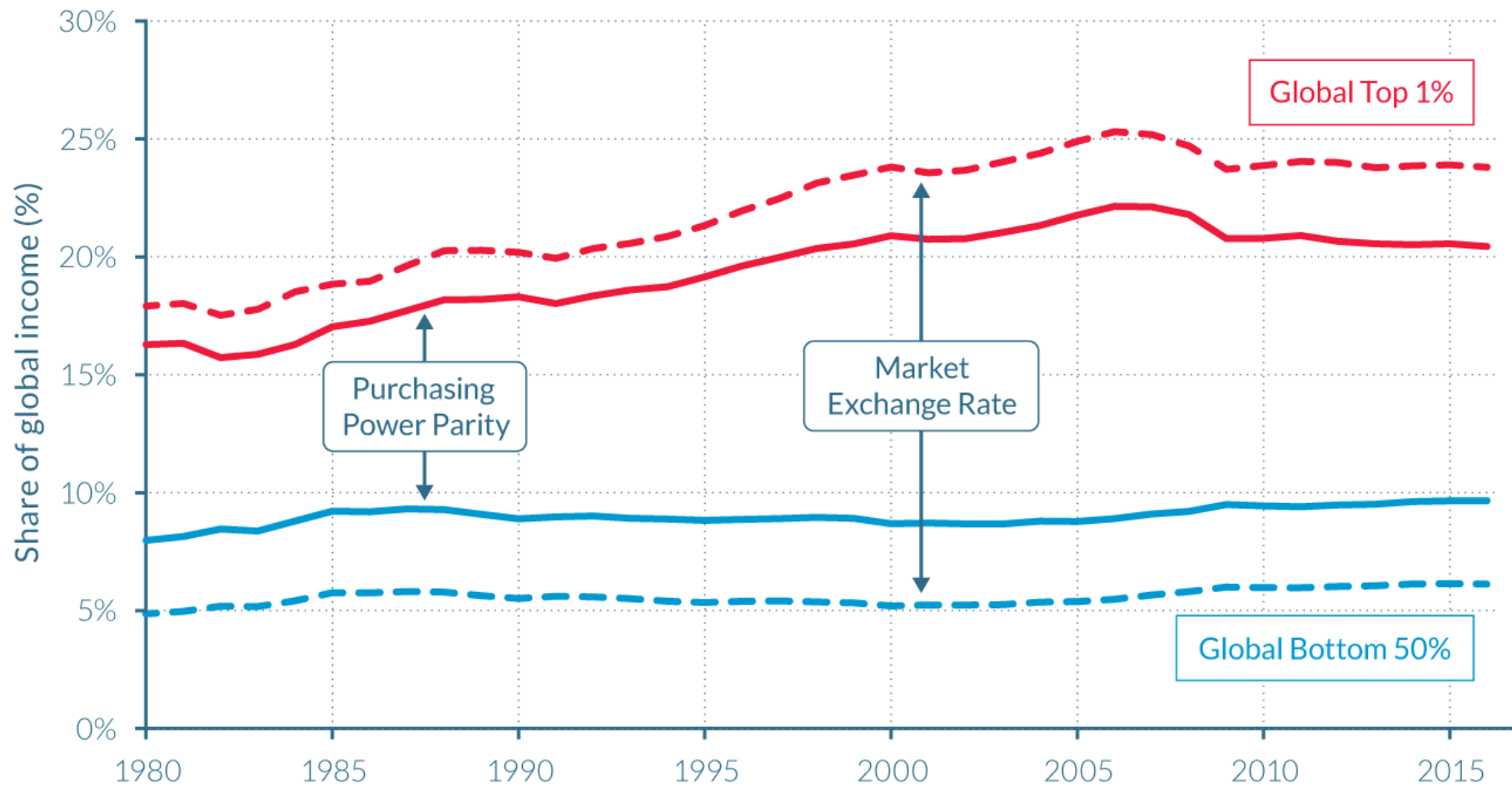
Source: WID.world (2017). See [wir2018.wid.world/methodology.html](http://wir2018.wid.world/methodology.html) for more details.

On the horizontal axis, the world population is divided into a hundred groups of equal population size and sorted in ascending order from left to right, according to each group's income level. The Top 1% group is divided into ten groups, the richest of these groups is also divided into ten groups, and the very top group is again divided into ten groups of equal population size. The vertical axis shows the total income growth of an average individual in each group between 1980 and 2016. For percentile group p99p99.1 (the poorest 10% among the world's richest 1%), growth was 74% between 1980 and 2016. The Top 1% captured 27% of total growth over this period. Income estimates account for differences in the cost of living between countries. Values are net of inflation.



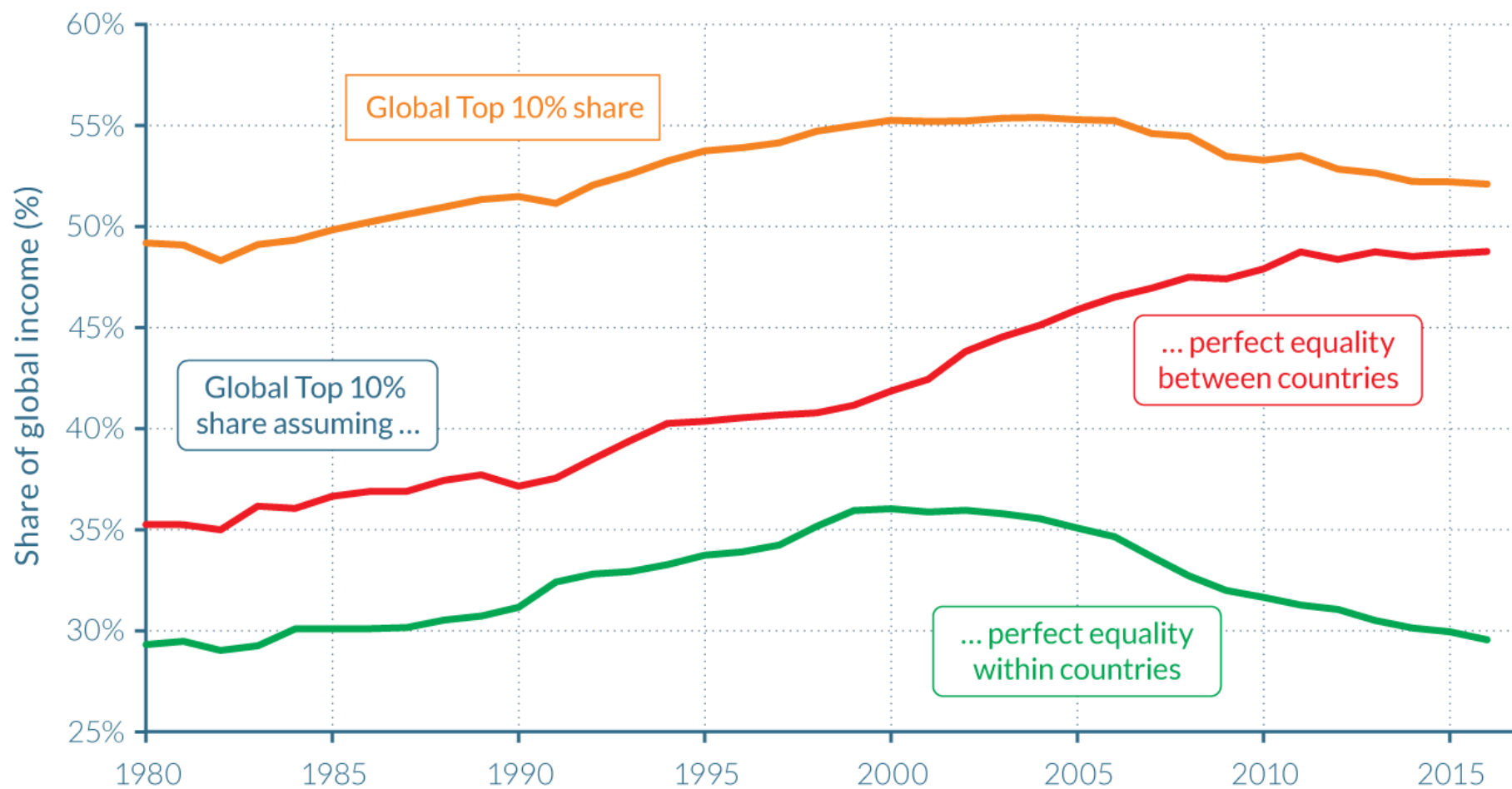
Source: WID.world (2017). See [wir2018.wid.world/methodology.html](http://wir2018.wid.world/methodology.html) for data series and notes.

In 2016, 22% of global income was received by the Top 1% against 10% for the Bottom 50%. In 1980, 16% of global income was received by the Top 1% against 8% for the Bottom 50%.



Source: WID.world (2017). See [wir2018.wid.world/methodology.html](http://wir2018.wid.world/methodology.html) for data series and notes.

In 2010, the Top 1% received 24% of global income when measured using Market Exchange Rates (MER). When measured using Purchasing Power Parity (PPP), their share was 21%. Thick lines are measured at PPP values, dashed lines at MER values. Income estimates account for differences in the cost of living between countries. Values are net of inflation.



Source: WID.world (2017). See [wir2018.wid.world/methodology.html](http://wir2018.wid.world/methodology.html) for data series and notes.

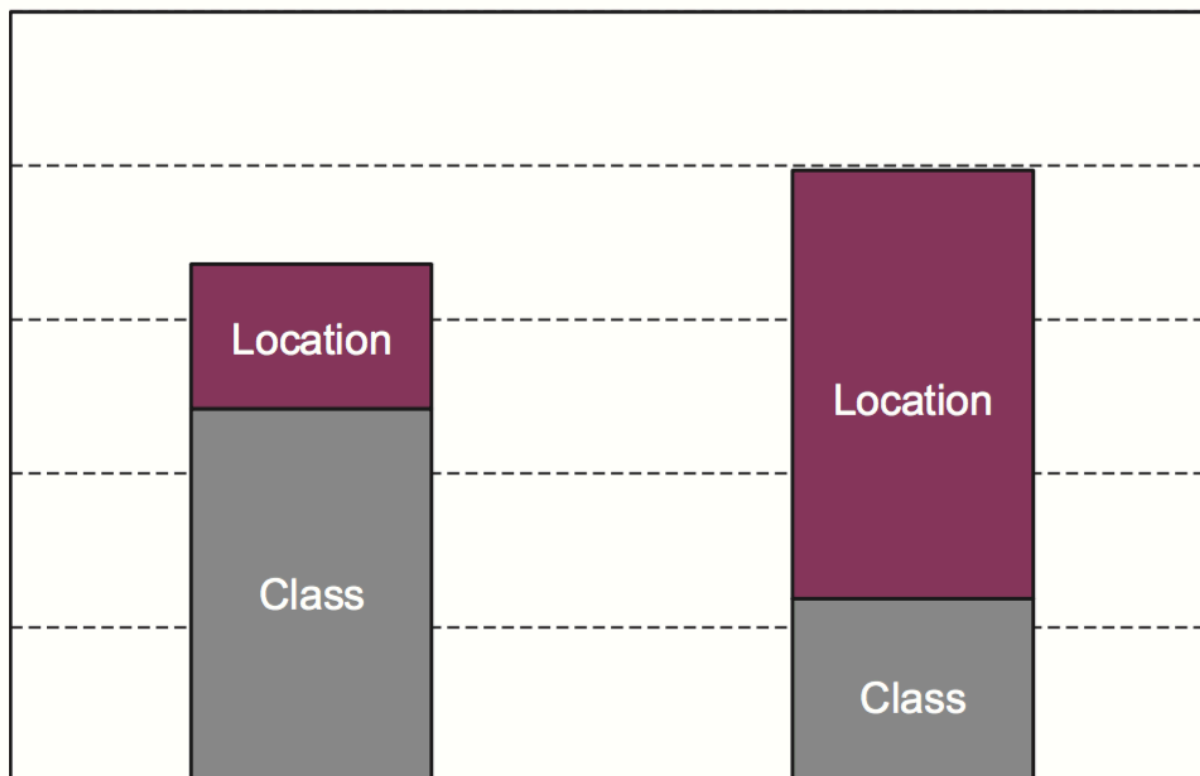
In 2010, 53% of the world's income was received by the Top 10%. Assuming perfect equality in average income between countries, the Top 10% would have received 48% of global income.



## 2.1 Global inequality in the long run

- Estimates by Bourguignon and Morrisson (2002) as far back as early 19th century
- Global inequality increased from beginning of 19th century to World War 2 (class inequality + Industrial Revolution)
- After that: stabilized or at least grew more slowly

**Figure 6.** A non-Marxian world: level and composition of global inequality in the 19<sup>th</sup> century and around 2000 (measured by the Theil index).



Source: Milanovic (2013)

### 3 Summary

- Global inequality is due to both within-country and across-country inequality
- Global inequality, has increased from 1980 to 2000 and slightly fallen since then
- In the past within-country inequalities mattered more than cross-country inequalities; today cross-country inequalities matter more; but the future may look like the past

## References

Milanovic, Branko, "Global inequality in numbers: in History and Now", *Global Policy*, 2013 (web)

Milanovic, Branko, *Global inequality: a new approach for the age of globalization*, Harvard University Press, 2016

World Inequality Report 2018