

The Elephant Curve of Global Inequality and Growth

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WORLDWIDE INCOME INEQUALITY

Income inequality is growing within most countries

But large emerging countries (China, India) are catching up with advanced economies

Is global income inequality increasing or decreasing?

Hard question to answer due

a) lack of comparable data across countries

b) difficulty of measuring top incomes in surveys

In this paper, we use new consistent data from World Income and Wealth Database (WID) to generate world inequality estimates since 1980

WORLD INCOME AND WEALTH DATABASE

WID.world is the most extensive database on the historical evolution of income and wealth distribution (100+ researchers)

100% transparent, open source, reproducible

Website started in 2011 with historical top income share series using tax data

New WID.world website launched 1/2017.

WORLD

BY COUNTRY ▾

DATA

WORLD
WEALTH & INCOME
DATABASE

METHODOLOGY ▾

ABOUT US ▾

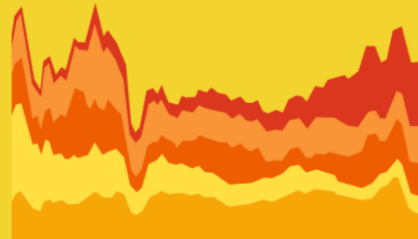
NEWS ▾

WORLD VIEW



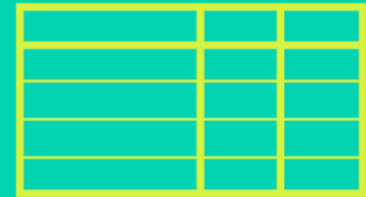
Compare inequality between countries on an interactive world map

COUNTRY GRAPHS



Follow the evolution of inequality within countries with user-friendly graphs

DATA TABLES



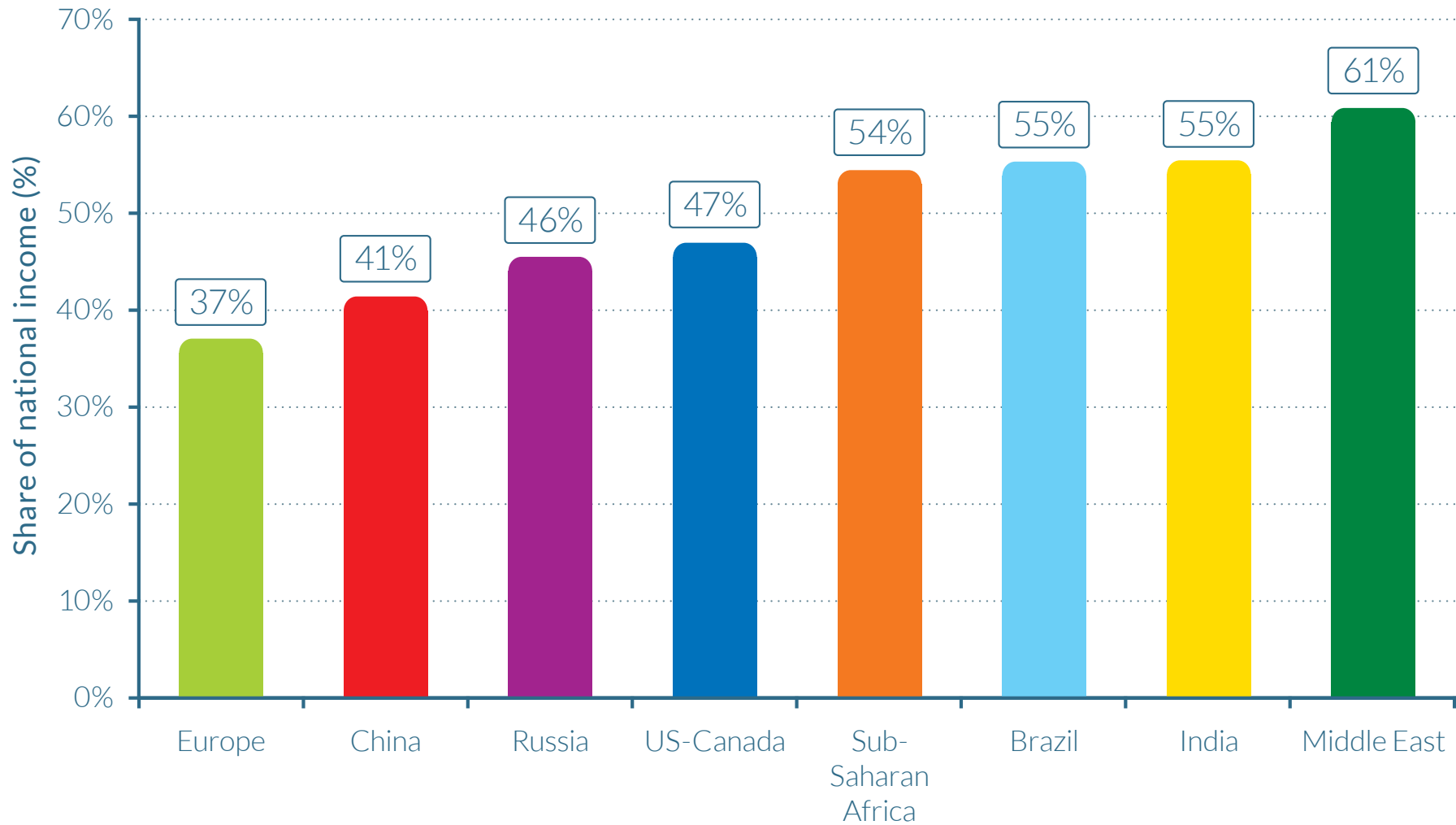
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Download our open-access datasets

WID.WORLD KEY NOVELTIES

- (a) We cover full distribution (not just the top), we use individual adult unit (with equal split of income among couples)
- (b) We distribute total National Income (not just fiscal income) ⇒ Brings together analysis of growth and inequality
- (c) Emerging countries added (China, India, Brazil, Russia)
- (d) Constantly expanding database on the historical evolution of income and wealth with global coverage goal
- (e) Open access, multi-lingual website and visualization tools
- (f) Stata and R packages: access our data from Stata command “wid”

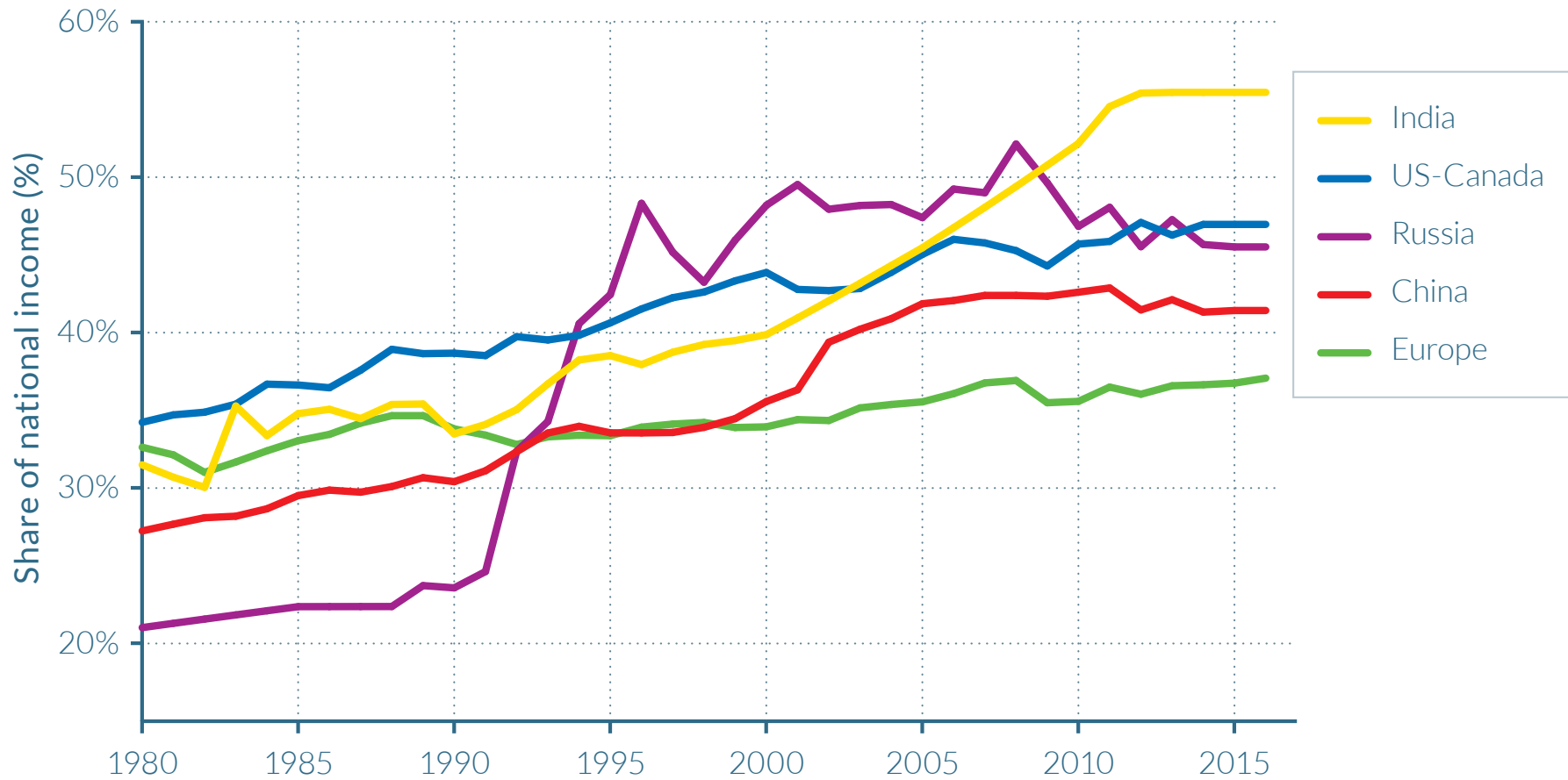
Top 10% income shares across the world, 2016



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

In 2016, 37% of national income was received by the Top 10% in Europe against 61% in the Middle-East.

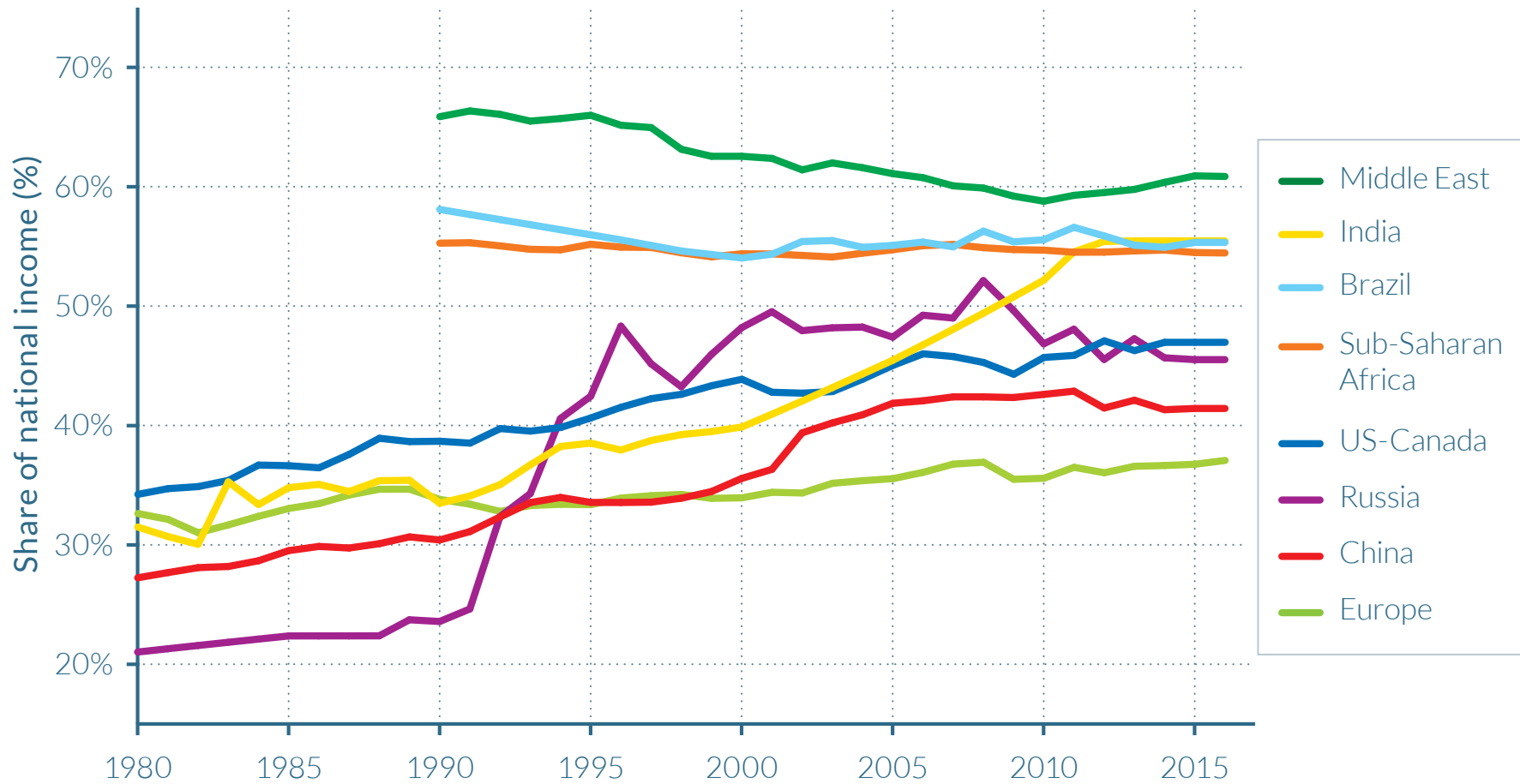
Top 10% income shares across the world, 1980–2016



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

In 2016, 47% of national income was received by the top 10% in US-Canada, compared to 34% in 1980.

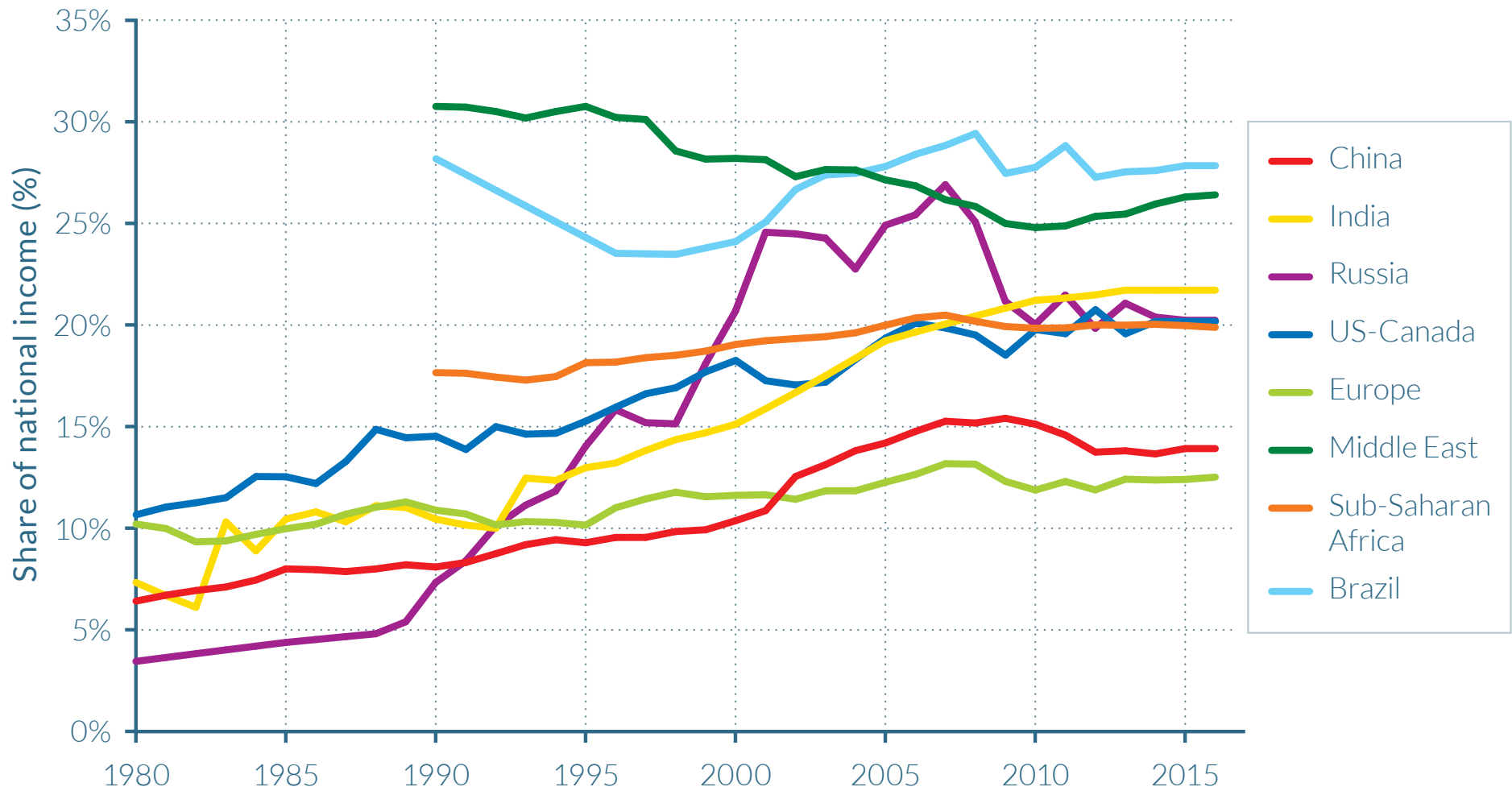
Top 10% income shares across the world, 1980–2016



Source: WID.world (2017). See wir2018.wid.world for data series and notes.

In 2016, 55% of national income was received by the Top 10% in India, against 31% in 1980.

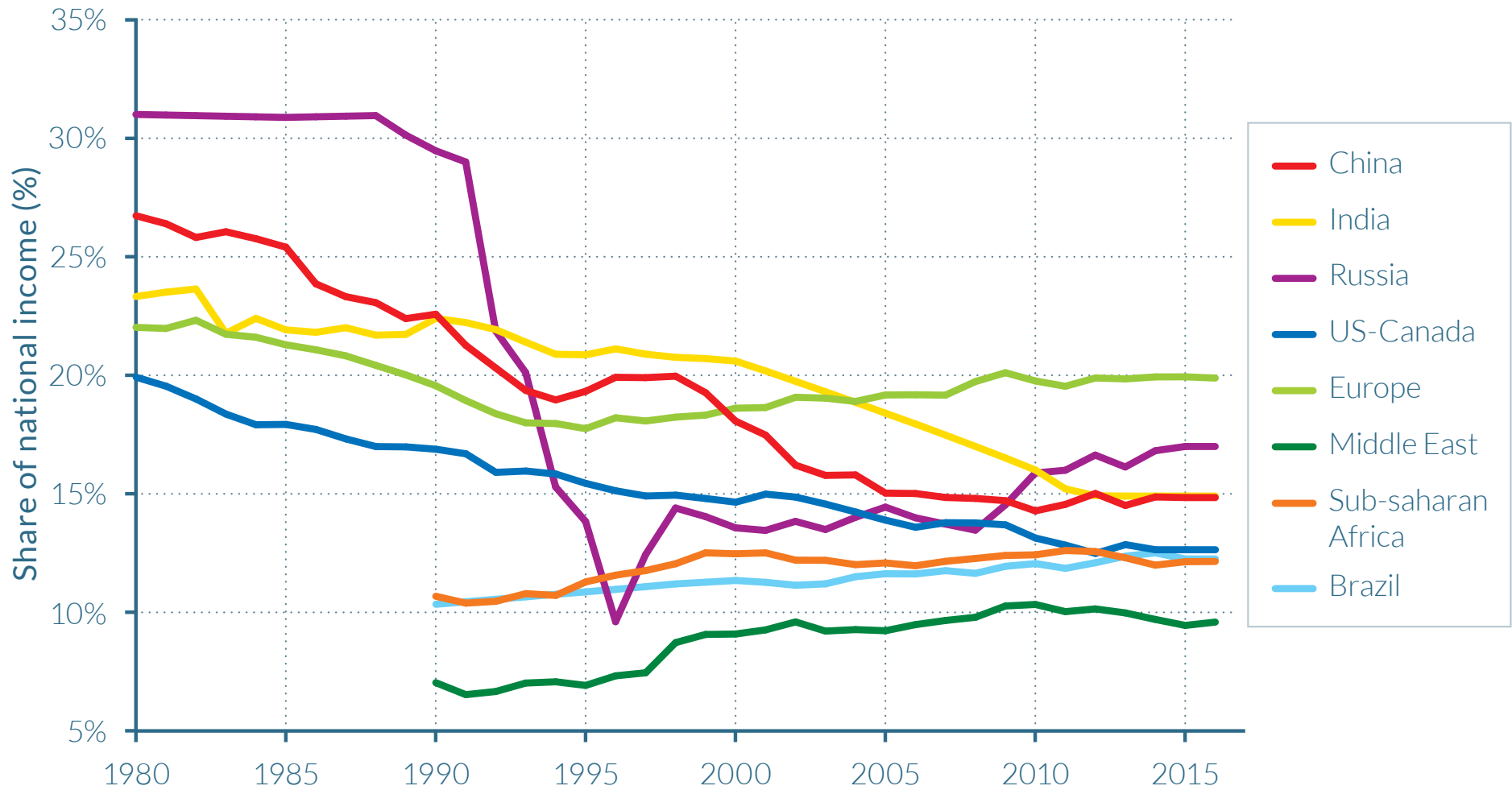
Top 1% income shares across the world, 1980-2016



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

In 2016, 14% of national income was received by the Top 1% in China.

Bottom 50% income shares across the world, 1980–2016



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

In 2016, 12% of national income was received by the Bottom 50% in Sub-Saharan Africa.

Global income growth and inequality, 1980–2016

| | Total cumulative real growth per adult | | | | | |
|------------------------|--|--------|--------|---------|-----------|-------|
| Income group | China | Europe | India | Russia | US-Canada | World |
| Full Population | 831% | 40% | 223% | 34% | 63% | 60% |
| Bottom 50% | 417% | 26% | 107% | -26% | 5% | 94% |
| Middle 40% | 785% | 34% | 112% | 5% | 44% | 43% |
| Top 10% | 1 316% | 58% | 469% | 190% | 123% | 70% |
| Top 1% | 1 920% | 72% | 857% | 686% | 206% | 101% |
| Top 0.1% | 2 421% | 76% | 1 295% | 2 562% | 320% | 133% |
| Top 0.01% | 3 112% | 87% | 2 078% | 8 239% | 452% | 185% |
| Top 0.001% | 3 752% | 120% | 3 083% | 25 269% | 629% | 235% |

Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

From 1980 to 2016, the average income of the Bottom 50% in China grew 417%. Income estimates are calculated using 2016 Purchasing Power Parity (PPP) euros. PPP accounts for differences in the cost of living between countries. Values are net of inflation.

Share of growth captured by income groups, 1980–2016

| Income group | China | Europe | India | Russia | US-Canada | World |
|------------------------|-------|--------|-------|--------|-----------|-------|
| Full Population | 100% | 100% | 100% | 100% | 100% | 100% |
| Bottom 50% | 13% | 14% | 11% | -24% | 2% | 12% |
| Middle 40% | 43% | 38% | 23% | 7% | 32% | 31% |
| Top 10% | 43% | 48% | 66% | 117% | 67% | 57% |
| Top 1% | 15% | 18% | 28% | 69% | 35% | 27% |
| Top 0.1% | 7% | 7% | 12% | 41% | 18% | 13% |
| Top 0.01% | 4% | 3% | 5% | 20% | 9% | 7% |
| Top 0.001% | 2% | 1% | 3% | 10% | 4% | 4% |

Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

From 1980 to 2016, the Middle 40% in Europe captured 38% of total income growth in the region. Income estimates are calculated using 2016 Purchasing Power Parity (PPP) euros. PPP accounts for differences in the cost of living between countries. Values are net of inflation.

KEY RESULTS

Inequality is increasing everywhere but at different speeds

In rich countries, US inequality increases much faster than in Europe (contrast US vs. France)

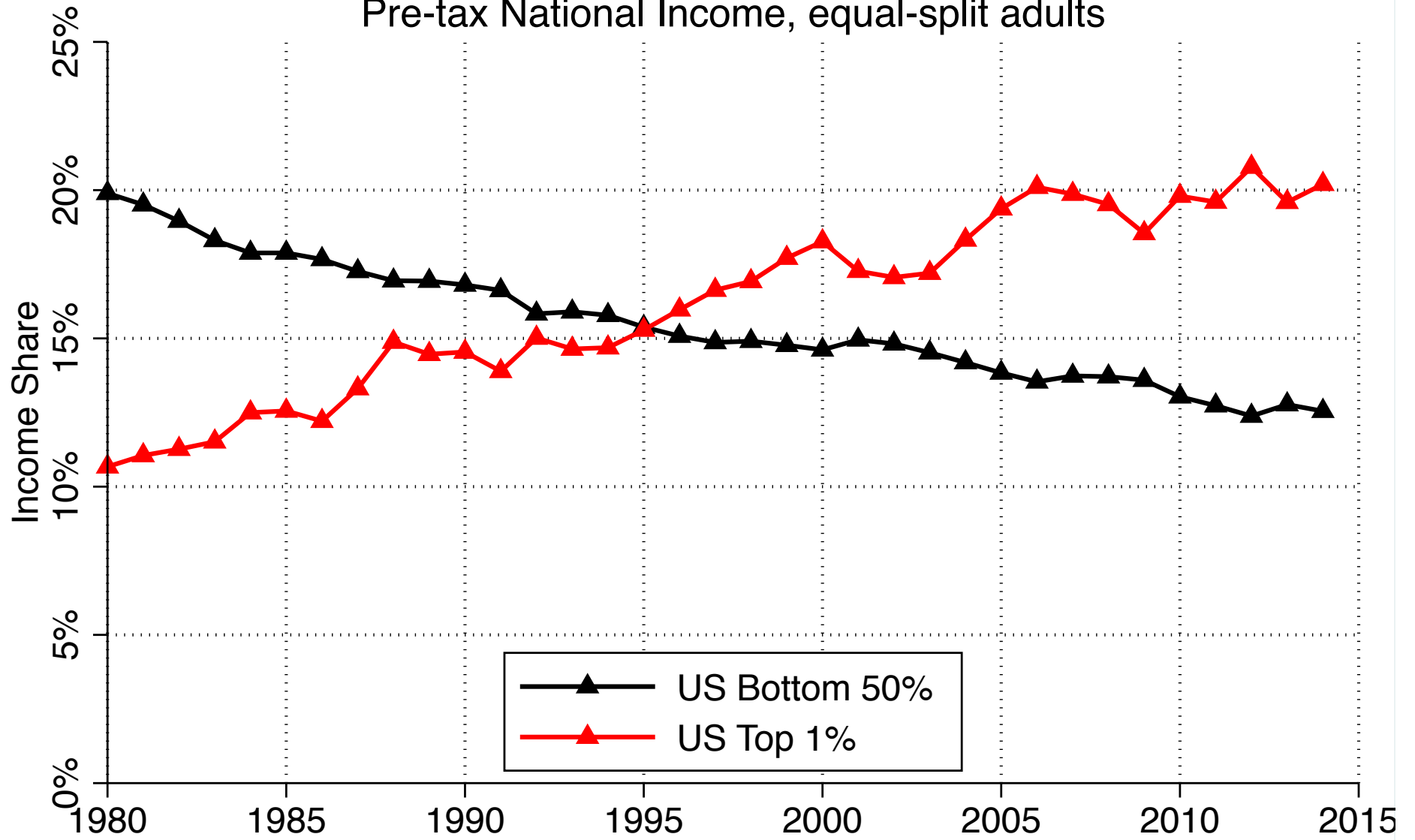
Inequality shifts clearly follow policy changes (Reagan in US, transitions in China/Russia, deregulation in India)

⇒ Globalization and technological progress cannot explain fully pre-tax income inequality: Institutions and policies matter

None of large emerging countries studied meets new Sustainable Development Goal target of bottom 40% growing faster than average

Top 1% and Bottom 50% Income Shares in US

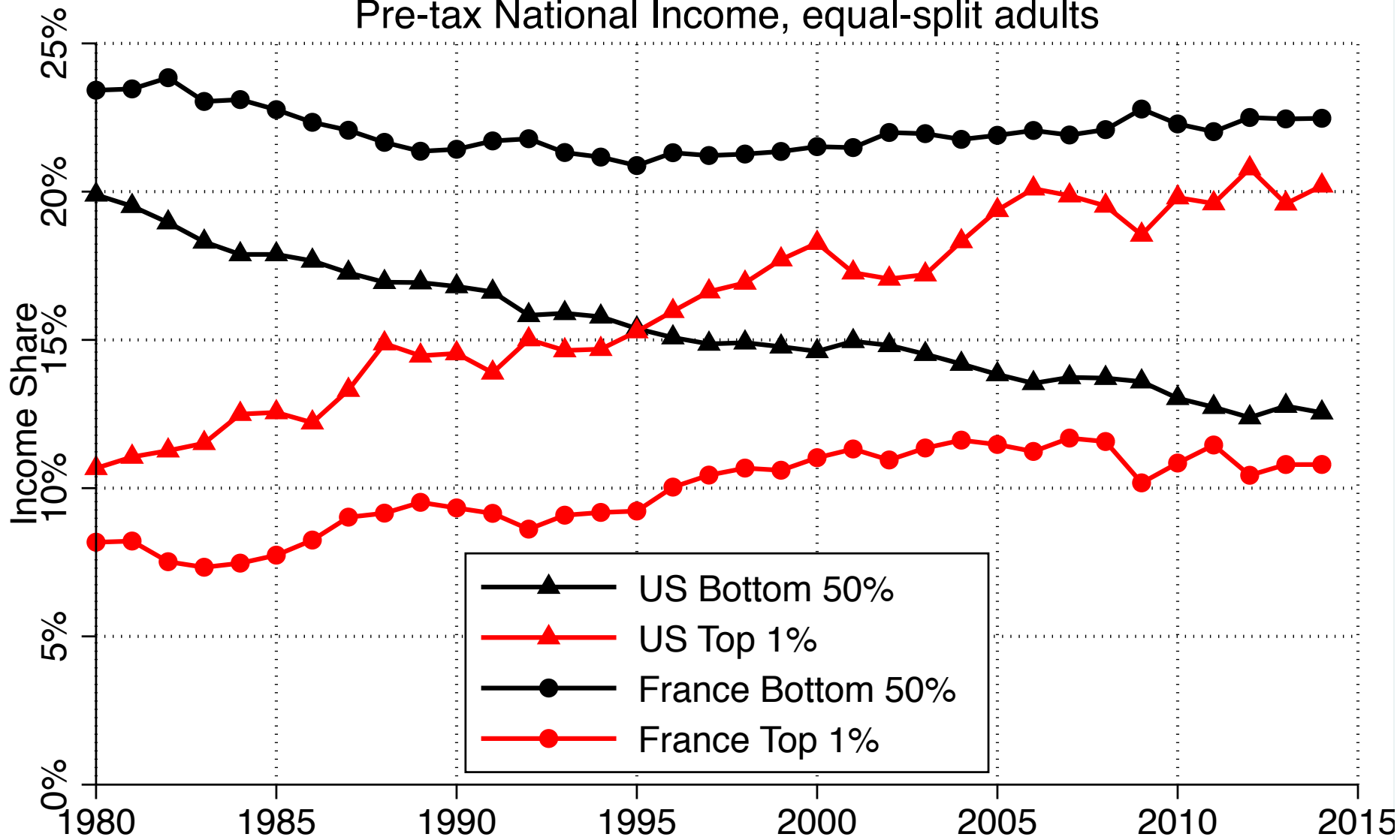
Pre-tax National Income, equal-split adults



Source: WID.world

Top 1% and Bottom 50% Income Shares in US and France

Pre-tax National Income, equal-split adults



Source: WID.world

WORLD INEQUALITY ESTIMATES

We follow a step-by-step approach towards a consistent global distribution of income and wealth

1) We start with countries for which we have Distributional National Income series (2/3 of the world population)

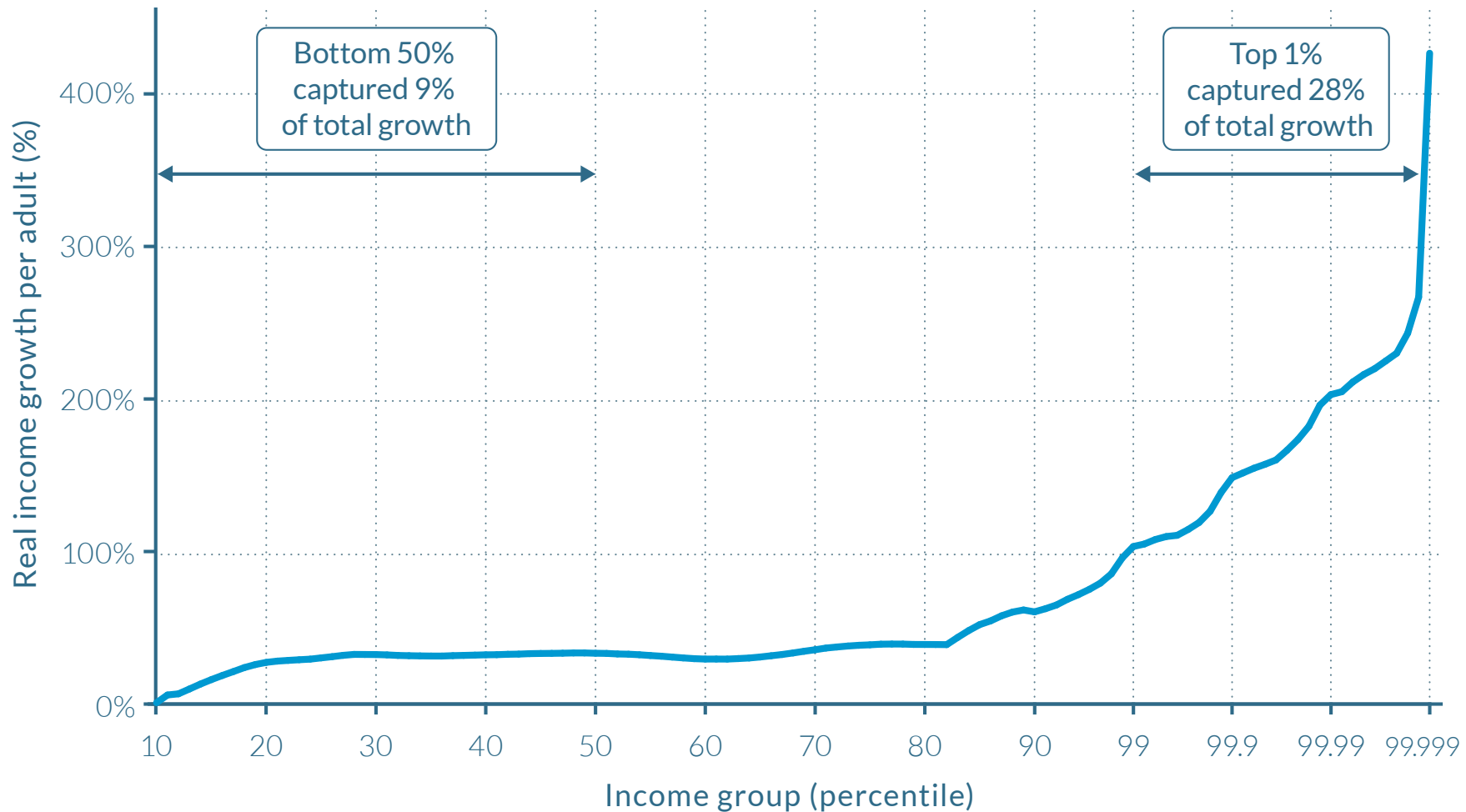
2) For other countries, we use information on average national income per adult and assume distribution within country is the same as other countries in same region

E.g.: we assume that national income in Argentina, Mexico, etc. is distributed as in Brazil

3) For sub-Saharan Africa, we use World Bank surveys with correction at the top using fiscal data and National Accounts

4) We pool country distributions using PPP exchange rates (not market exchange rates)

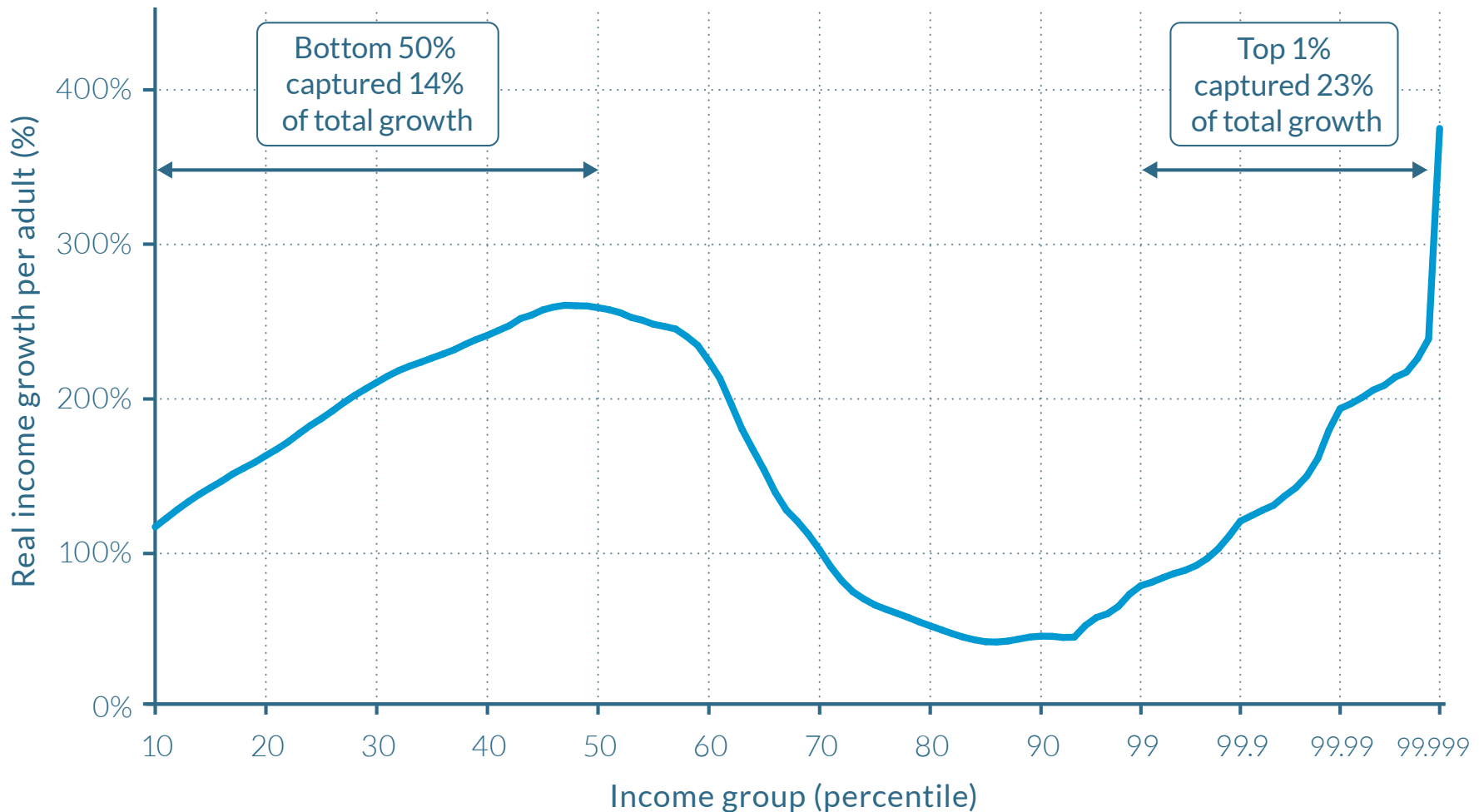
Total income growth by percentile in US-Canada and Western Europe, 1980-2016



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

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 104% between 1980 and 2016. The Top 1% captured 28% of total growth over this period. Income estimates account for differences in the cost of living between countries. Values are net of inflation.

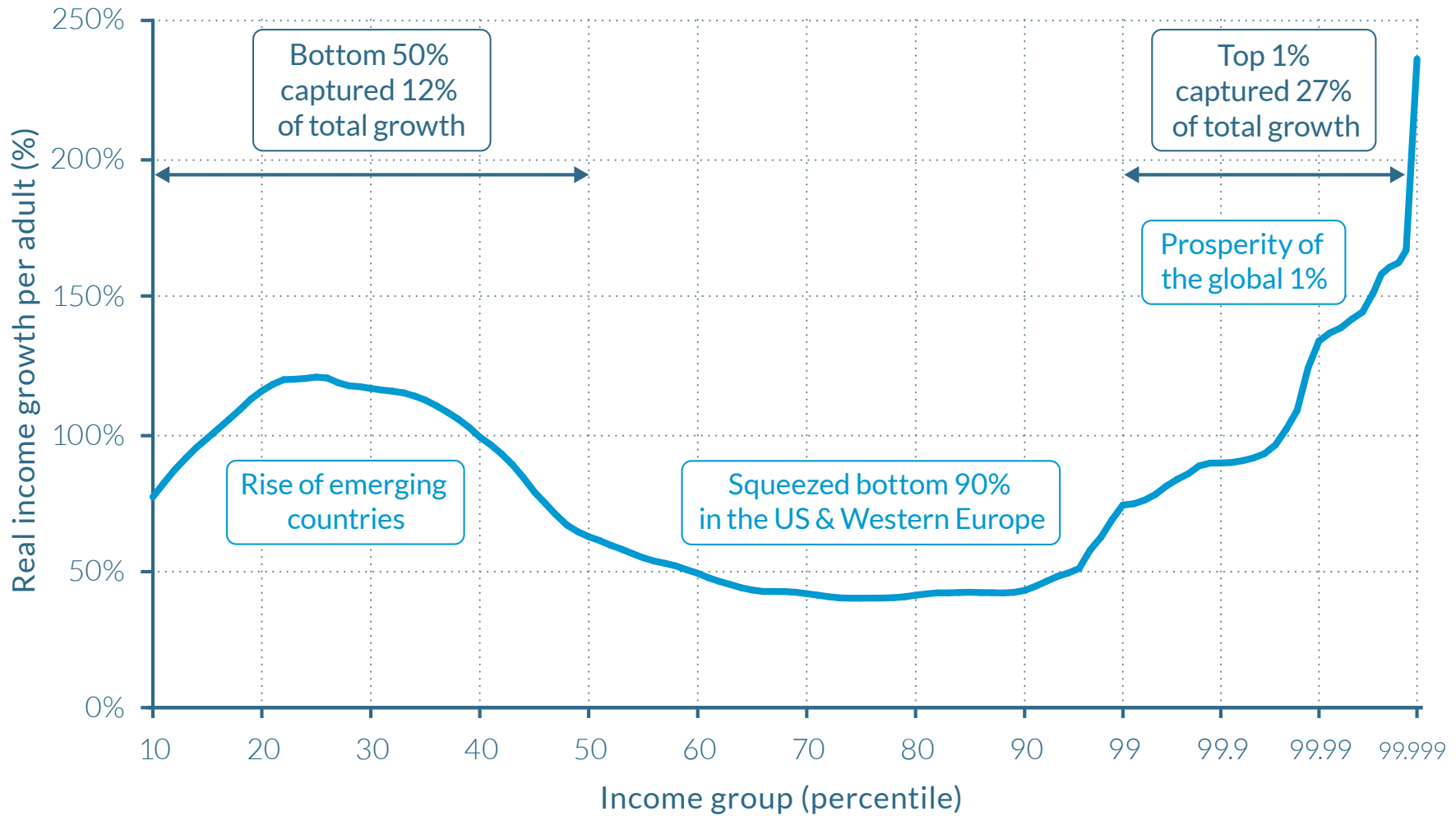
Total income growth by percentile in China, India, US-Canada, and Western Europe



Source: WID.world (2017). See [wir2018.wid.world](#) for data series and notes.

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 77% between 1980 and 2016. The Top 1% captured 23% of total growth over this period. Income estimates account for differences in the cost of living between countries. Values are net of inflation.

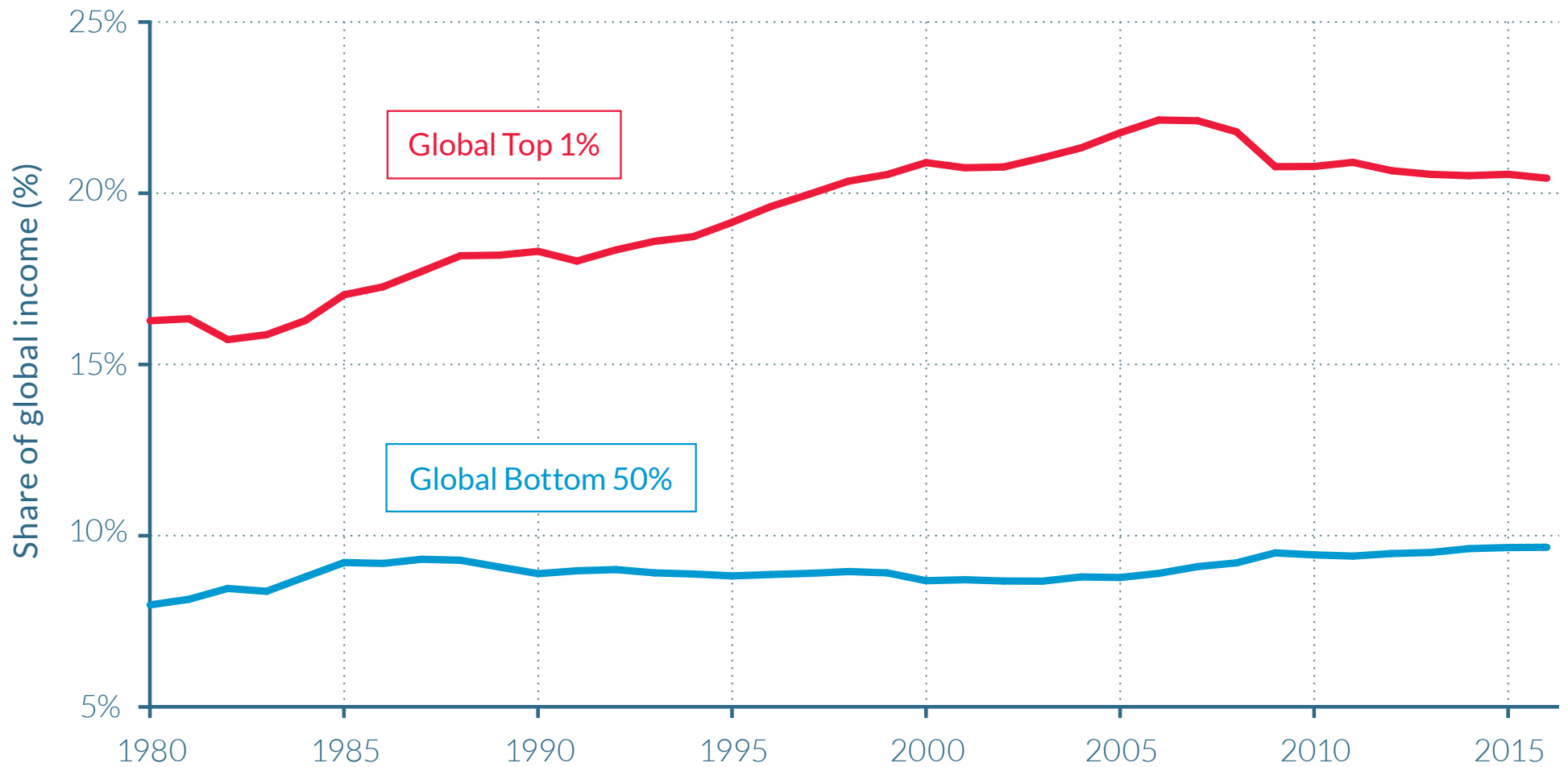
Total income growth by percentile across all world regions, 1980-2016



Source: WID.world (2017). See wir2018.wid.world 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.

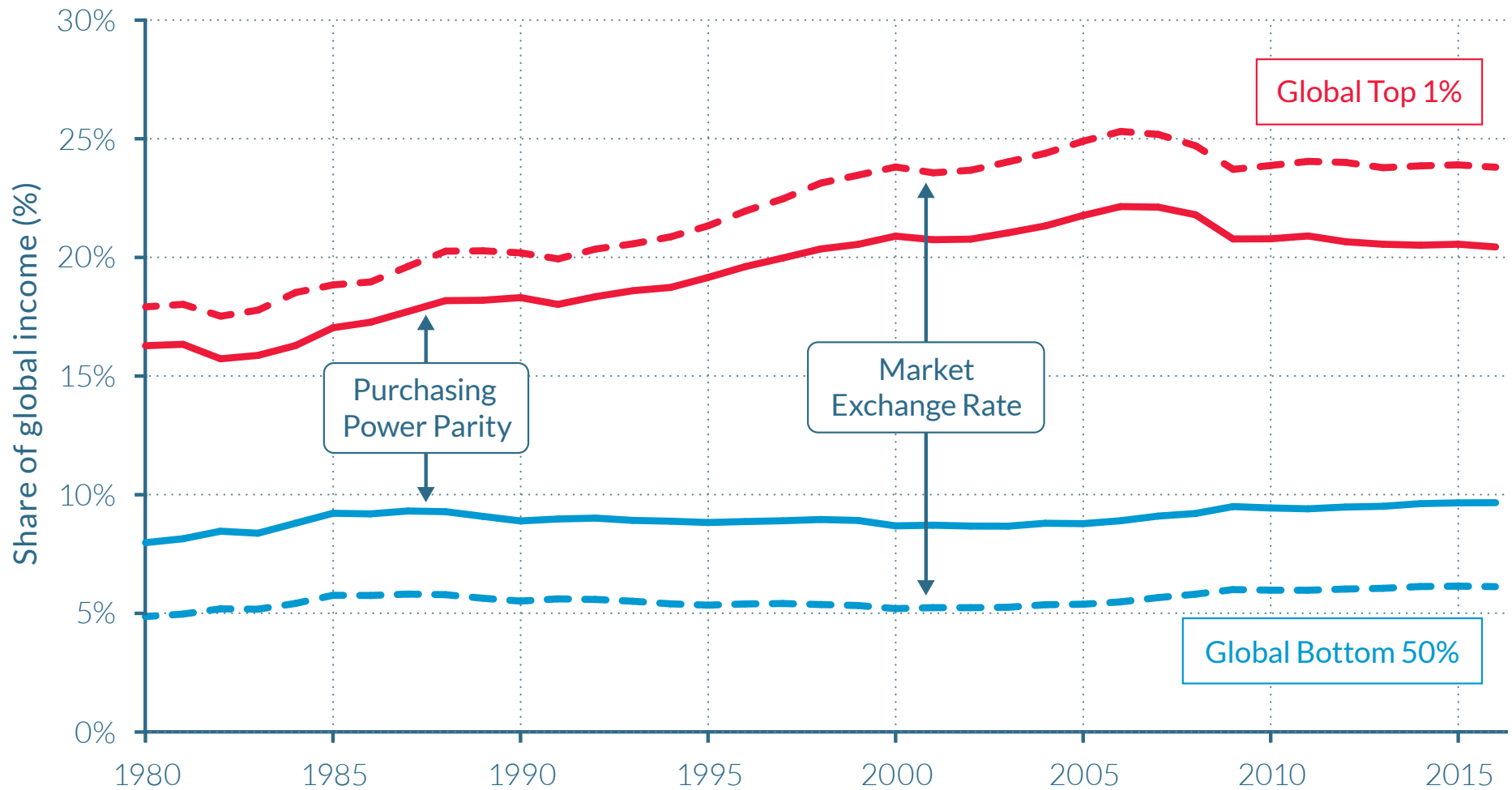
Global top 1% and bottom 50% income shares, 1980–2016



Source: WID.world (2017). See [wir2018.wid.world](#) 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%.

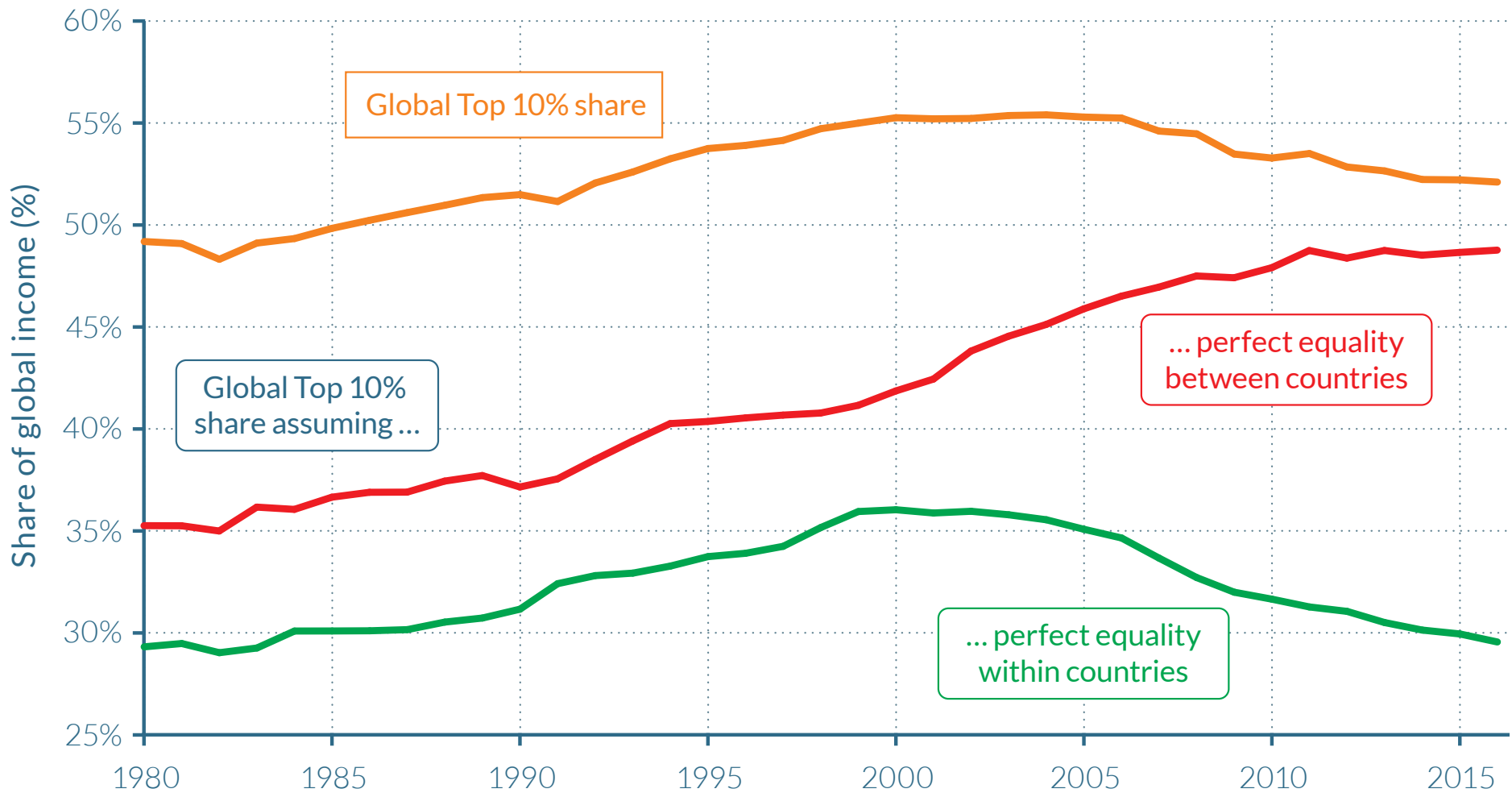
Global top 1% and bottom 50% income shares: PPP versus market exchange rates



Source: WID.world (2017). See [wir2018.wid.world](#) 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.

Global top 10% income share: between versus within-country inequality



Source: WID.world (2017). See [wir2018.wid.world](#) 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.

GLOBAL INEQUALITY PROJECTIONS

(a) Growth: UN and OECD produce long-term population and economic growth forecasts

(b) Distribution: We assume that economic growth per adult from 2015-2050 will be distributed across percentiles as in 1980-2015: “business as usual” scenario (1)

⇒ Can simulate dynamics of global inequality and growth

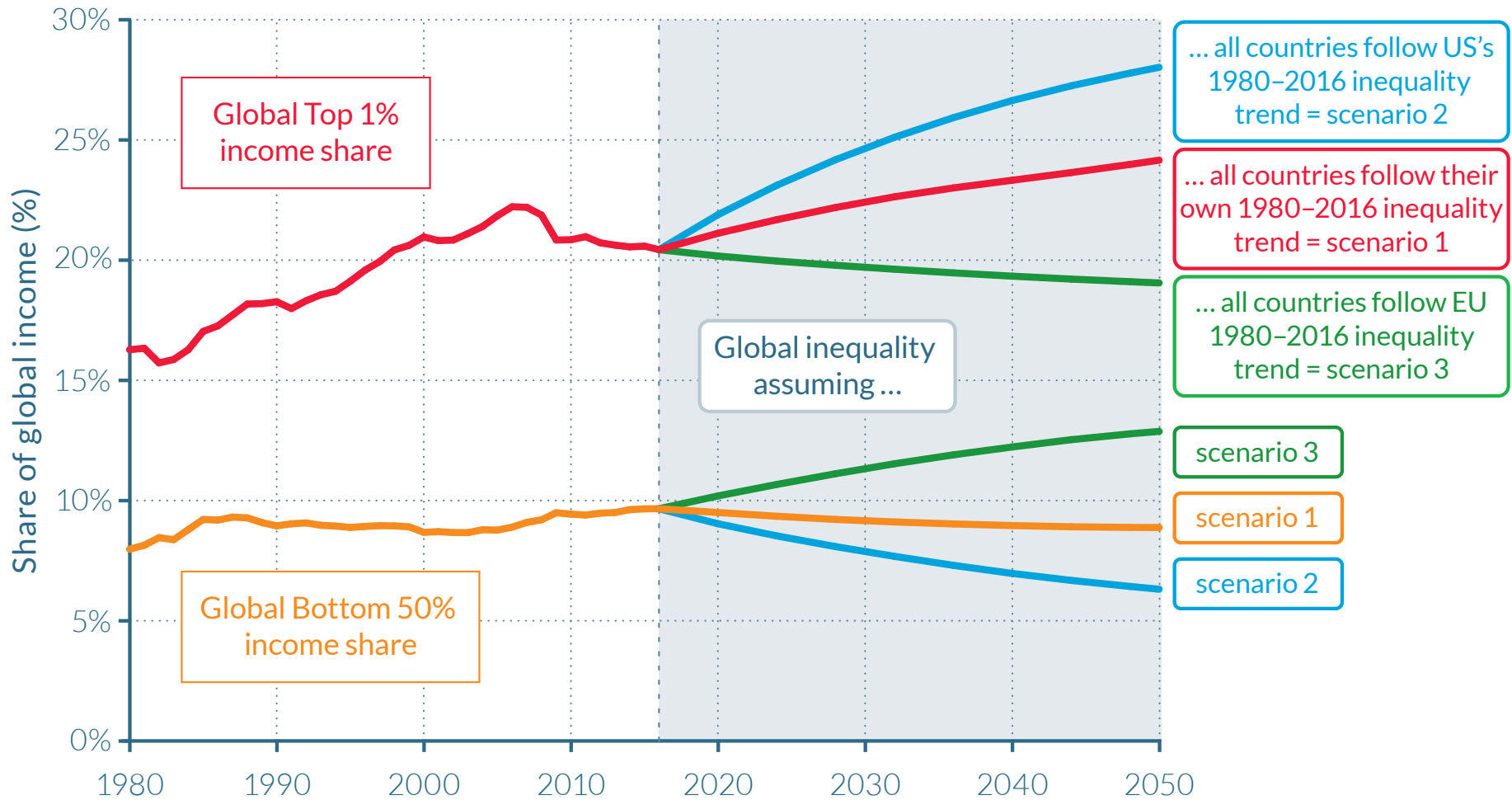
We consider two alternative scenarios:

(2) Very unequal growth in every country as the US 1980-2015

(3) Pretty equal growth in every country as the EU 1980-2015

⇒ Inequality has a huge long-term impact on future incomes of bottom 50%

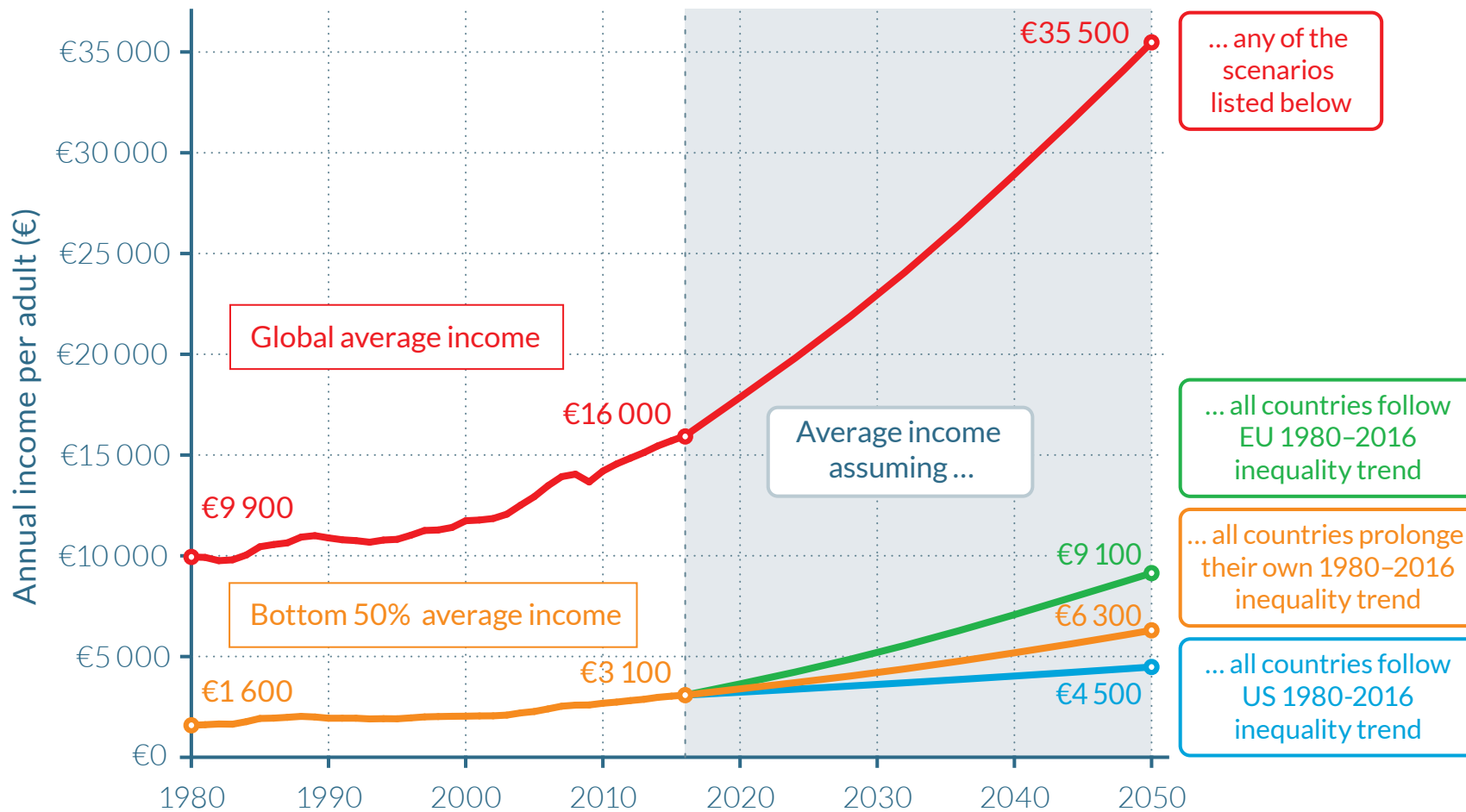
Top 1% and bottom 50% shares of global income, 1980–2050



Source: WID.world (2017). See wir2018.wid.world for data series and notes.

If all countries follow the inequality trajectory of the US between 1980 and 2016 from 2017 to 2050, the income share of the global Top 1% will reach 28% by 2050. Income share estimates are calculated using Purchasing Power Parity (PPP) euros. PPP accounts for differences in the cost of living between countries. Values are net of inflation.

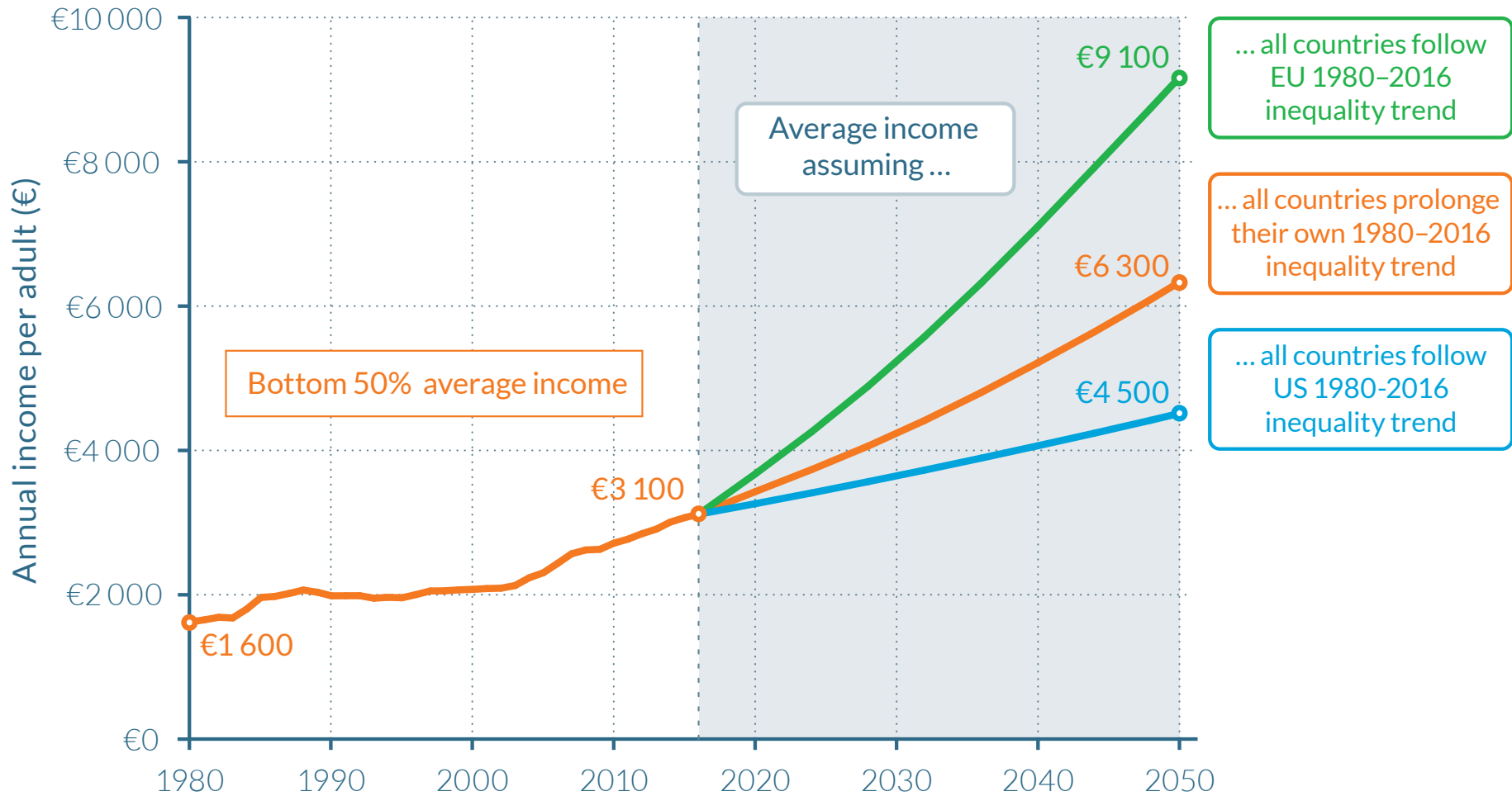
Global average income versus global 50% average, 1980–2050



Source: WID.world (2017). See wir2018.wid.world for data series and notes.

By 2050, the global average income will reach €35 500, compared to €16 000 in 2016. If all countries follow Europe's inequality trajectory between 1980 and 2016, the average income of the Bottom 50% of the world population will be €9 100 by 2050. Income estimates are calculated using Purchasing Power Parity (PPP) euros. For comparison, €1 = \$1.3 = ¥4.4 at PPP. PPP accounts for differences in the cost of living between countries. Values account for inflation.

Global bottom 50% average income, 1980–2050



Source: WID.world (2017). See wir2018.wid.world for data series and notes.

If all countries follow the inequality trajectory of Europe between 1980 and 2016, the average income of the Bottom 50% of the world population will be €9 100 by 2050. Income estimates are calculated using Purchasing Power Parity (PPP) euros. For comparison, €1 = \$1.3 = ¥4.4 at PPP. PPP accounts for differences in the cost of living between countries. Values are net of inflation.

CONCLUSIONS

WID.world aims at constructing systematic series on inequality in all countries for research and policy debate use

Our preliminary estimates show that global top 1% captured twice as much growth as bottom 50% since 1980

Under Business as usual and even with optimistic growth assumptions in the emerging world, global inequality will continue to rise

Rising inequality is not inevitable: policies can promote equitable growth pathways in the coming decades