



WID.WORLD
THE SOURCE FOR
GLOBAL INEQUALITY DATA

Distributional National Accounts

An overview

Lucas Chancel

Co-director, World Inequality Lab
Lecturer, Sciences Po and Associate researcher, IDDRI

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- Continuation of pioneering work of Kuznets in the 1950s and Atkinson in the 1970s combining fiscal and national accounts data

Kuznets, 1953 and Atkinson and Harrison, 1978

- WID.world started with the publication of historical inequality series based on top income shares series using tax data

Piketty 2001, 2003, Piketty-Saez 2003, Atkinson-Piketty 2007; 2010, Alvaredo et al., 2013.

- In 2011, we released the World Top Incomes Database, gradually extended to over thirty countries and to wealth

Alvaredo et al., 2013, Saez-Zucman , 2016, Alvaredo-Atkinson-Morelli, 2016, etc.

- What about the bottom of the distribution?
 - What about wealth?
 - What about taxes and transfers?
 - What about differences in statistical units?
 - What about tax-exempt income?
- Need to measure economic inequality within a consistent framework, with standard guidelines and a comprehensive measure of both income and wealth

- There is already a set of internationally accepted guidelines on how to quantify income and wealth: **the System of National Accounts**.
 - The SNA has a huge impact on how we think about and act upon the economy.

- **Distributional National Accounts (DINA)** agenda: present the best possible estimates of the distribution of national income and wealth between all adult individuals living in a given country during a given year

Distributional National Accounts Guidelines: Concepts and Methods used on WID.world,

Alvaredo, A., Atkinson, T., Chancel, L., Piketty, T., Saez, E., Zucman, G.,
2016, WID.world WP 2016/2

WID.world WORKING PAPER N° 2016/2

Distributional National Accounts Guidelines: Concepts and Methods used on WID.world

Facundo Alvaredo
Tony Atkinson*
Lucas Chancel
Thomas Piketty
Emmanuel Saez
Gabriel Zucman

November 2016

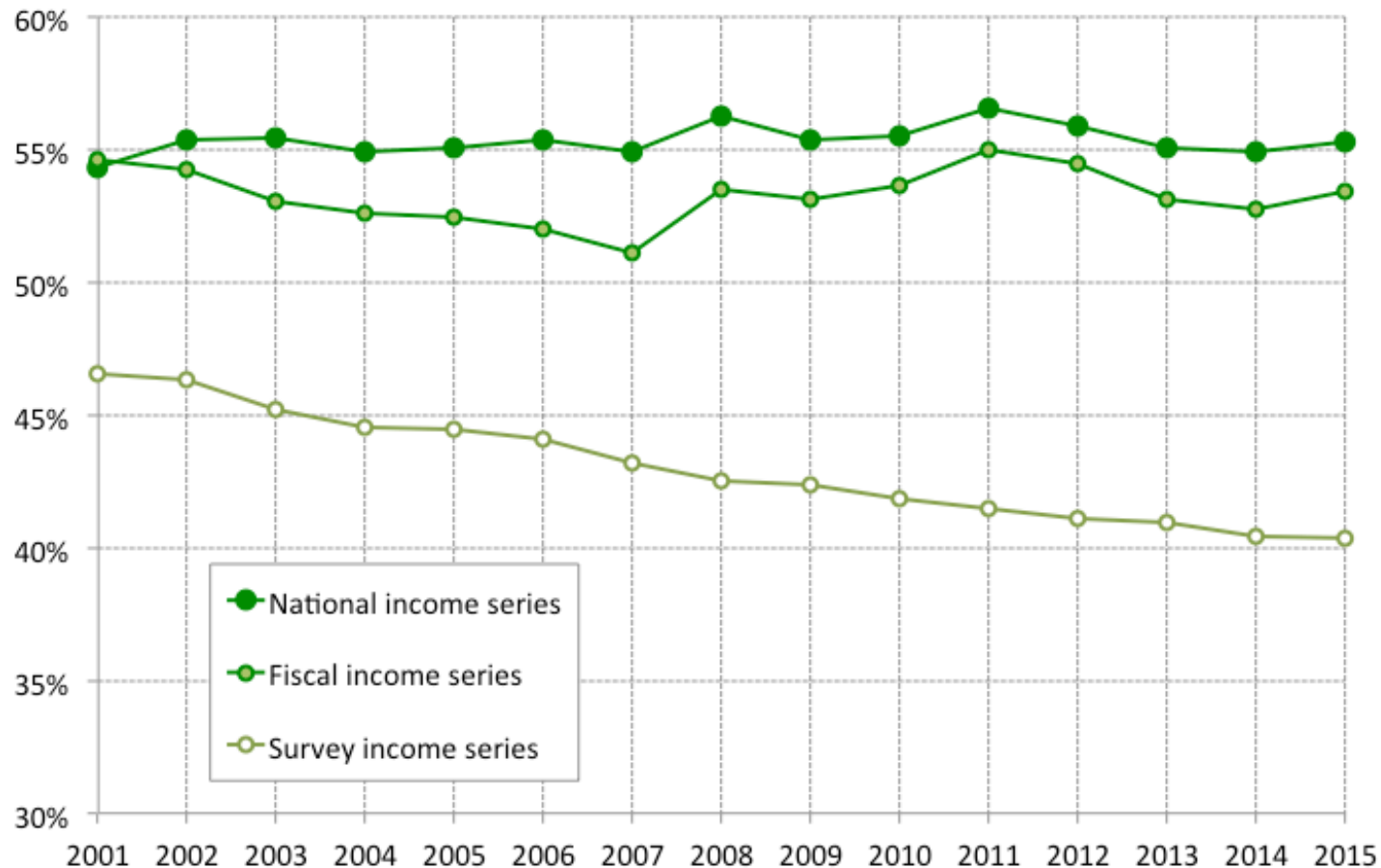


World Inequality Lab

- There's no such thing as **“the correct data source”**
 - All sources have their merits and demerits and we should combine them in consistent + transparent ways to use their respective strengths → Trying to achieve consistency between sources is a driving force for better data quality
- There's no such thing as **“the right indicator”**
 - We provide as much detail as possible on the distribution and let users decide what suits their purpose
- Collaborative and cumulative project
 - Collaboration between research groups and with public statisticians is paramount

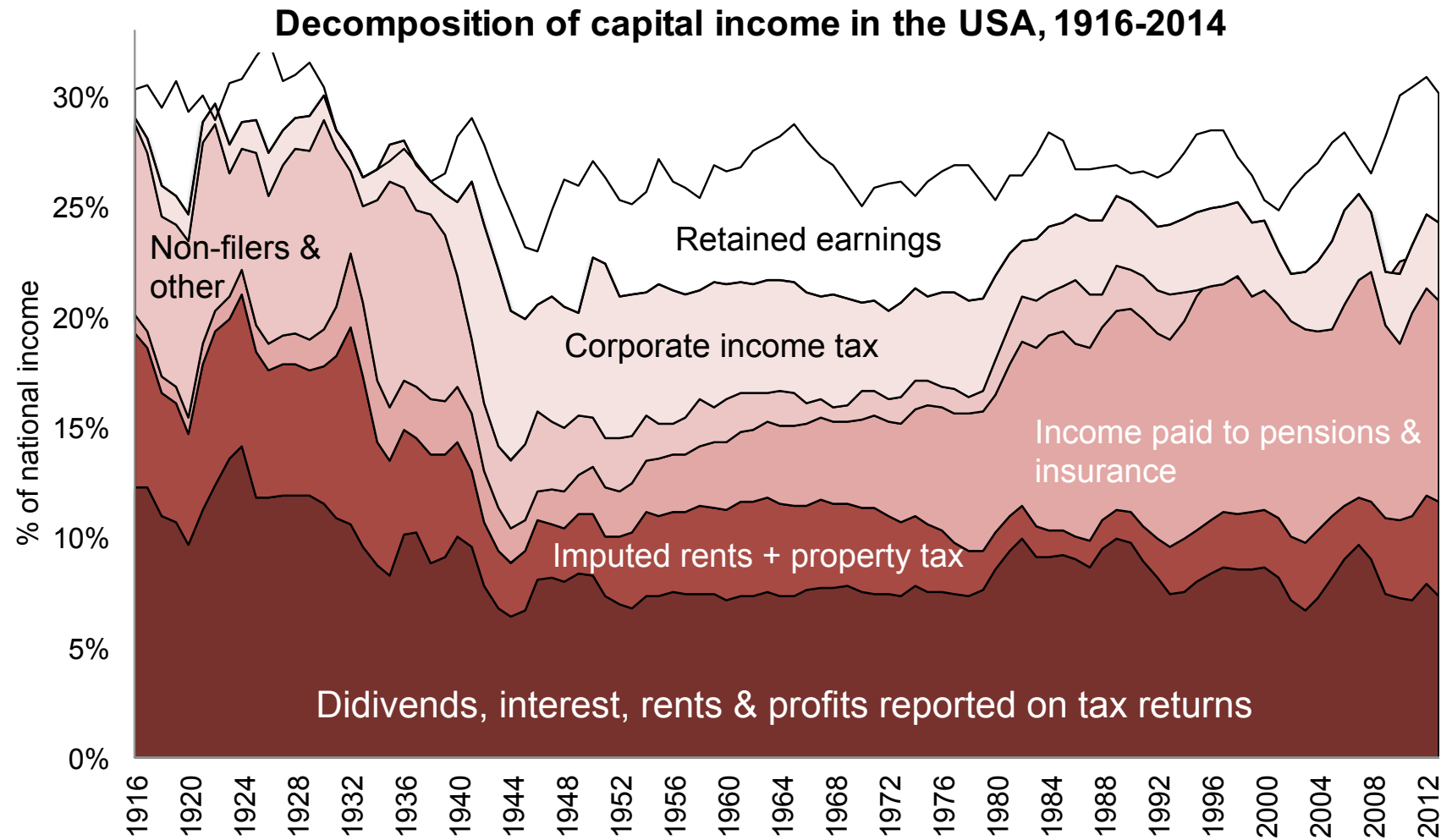
- **National accounts**
 - Broadest and most standard definition of income and wealth
 - Reference for measuring inequality between countries
- **Survey data**
 - Covers the entire distribution (the bottom in particular)
 - Usually available as microdata ⇒ richness + flexibility in the use of concepts
 - Small sample + richest households underrepresented
- **Tax data**
 - Covers the top well
 - Only covers the top well
 - Not always available as microdata
 - Influenced by various legislative quirks (tax units, income definition)
 - Tax evasion
- Useful complements: **Rich lists** (but few observations, not transparent) + **Leaks** (but rare cases)

Figure 5. Top 10% in Brazil: survey vs fiscal vs DINA series



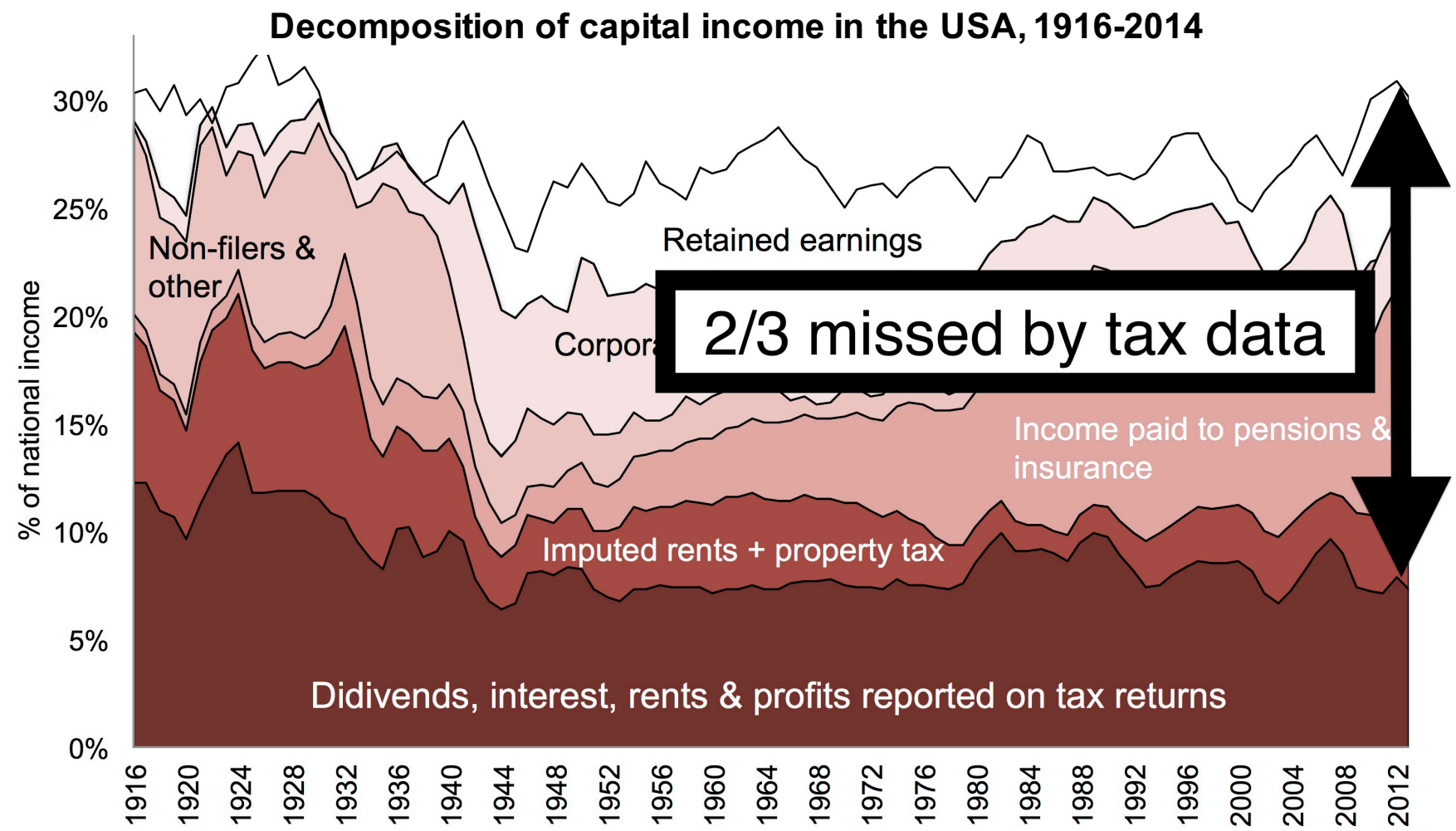
Notes: Distribution of income (before taxes and transfers, except pensions and unemployment insurance) among adults in our three series, raw estimates from surveys, a fiscal income series (combining surveys and fiscal data) and a national income series (combining national accounts, surveys and fiscal data). Equal-split-adults series (income of married couples divided by two).

Morgan 2017 available on WID.world



Source: Appendix Table I-S.A8.

Piketty, Saez, Zucman 2018 available on WID.world



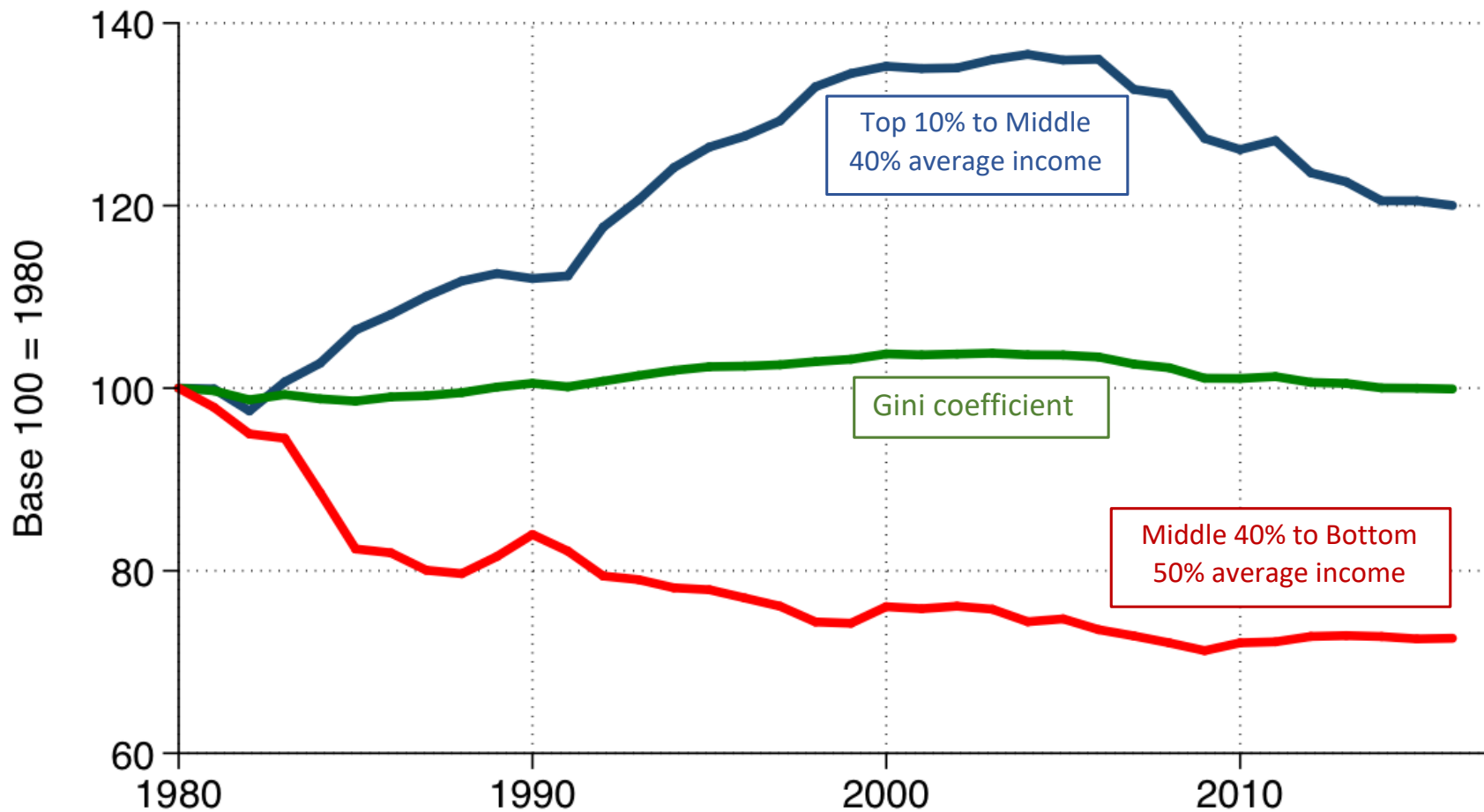
Source: Appendix Table I-S.A8.

Piketty, Saez, Zucman 2018 available on WID.world

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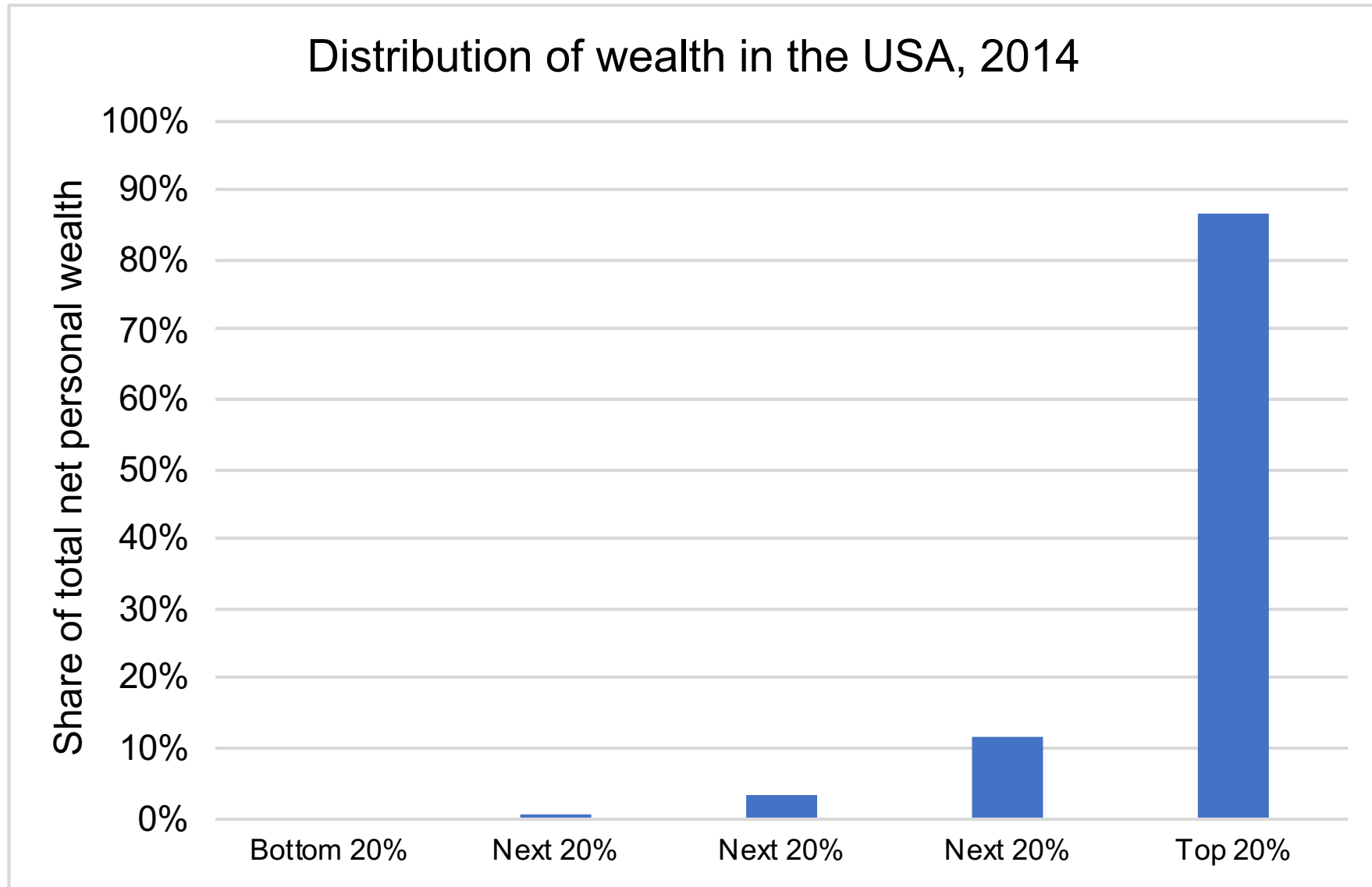
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Global income inequality dynamics, 1980-2016 Behind apparent Gini stability: rising Top, falling Middle



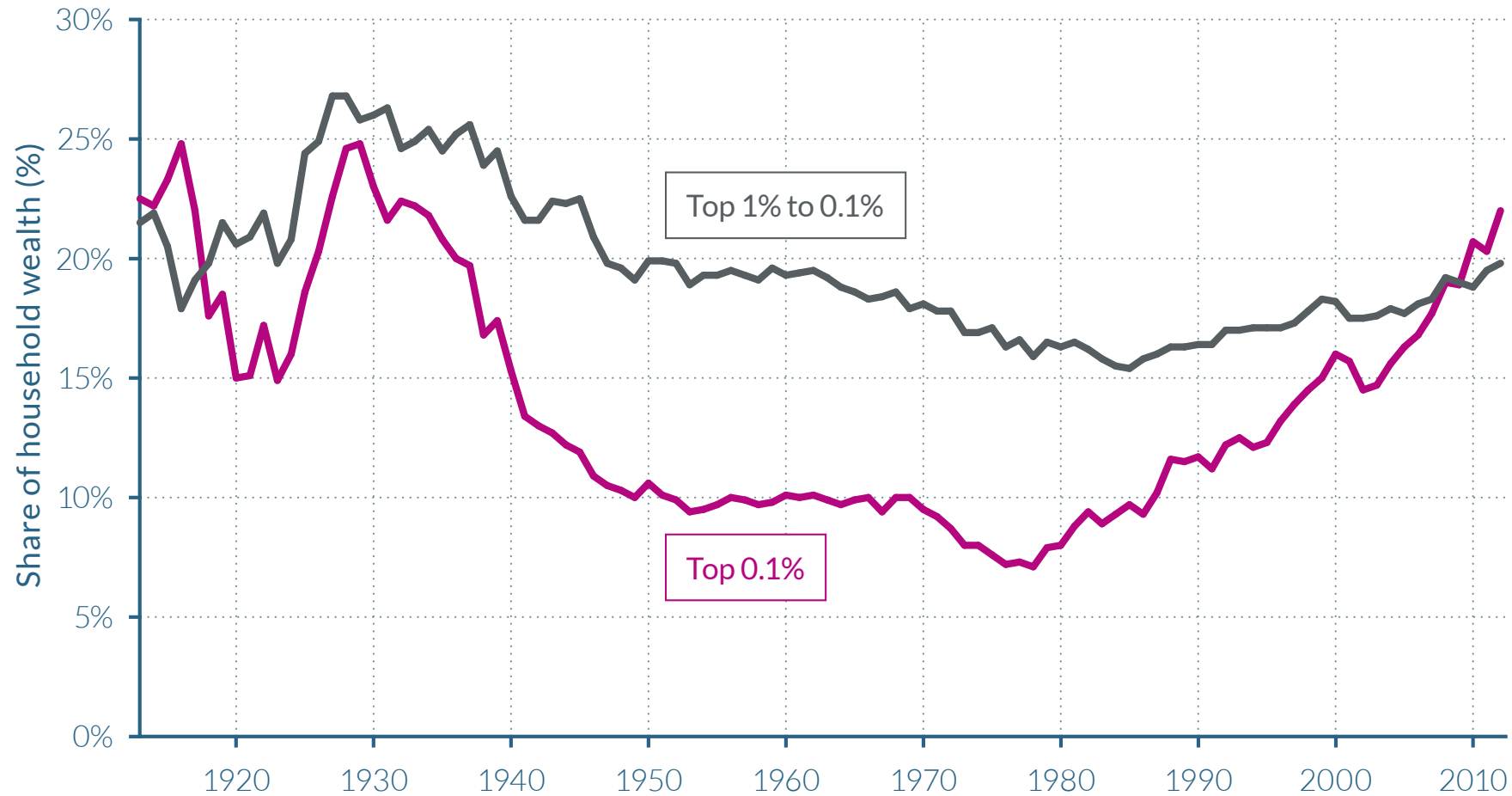
The ratio of the average income of the Top 10% to that of the Middle 40% increased by 20 percentage points (p.p.) between 1980 and 2016 (it increased from x4.5 to x5.6). The ratio of the average income of the Middle 40% to that of the Bottom 50% decreased by 27 p.p. between 1980 and 2016 (it decreased from x6.9 to x4.8). The global Gini in 2016 was at its 1980 level (65).

Data from WIR2018 available on WID.world



Data from Saez, Zucman 2016 available on WID.world

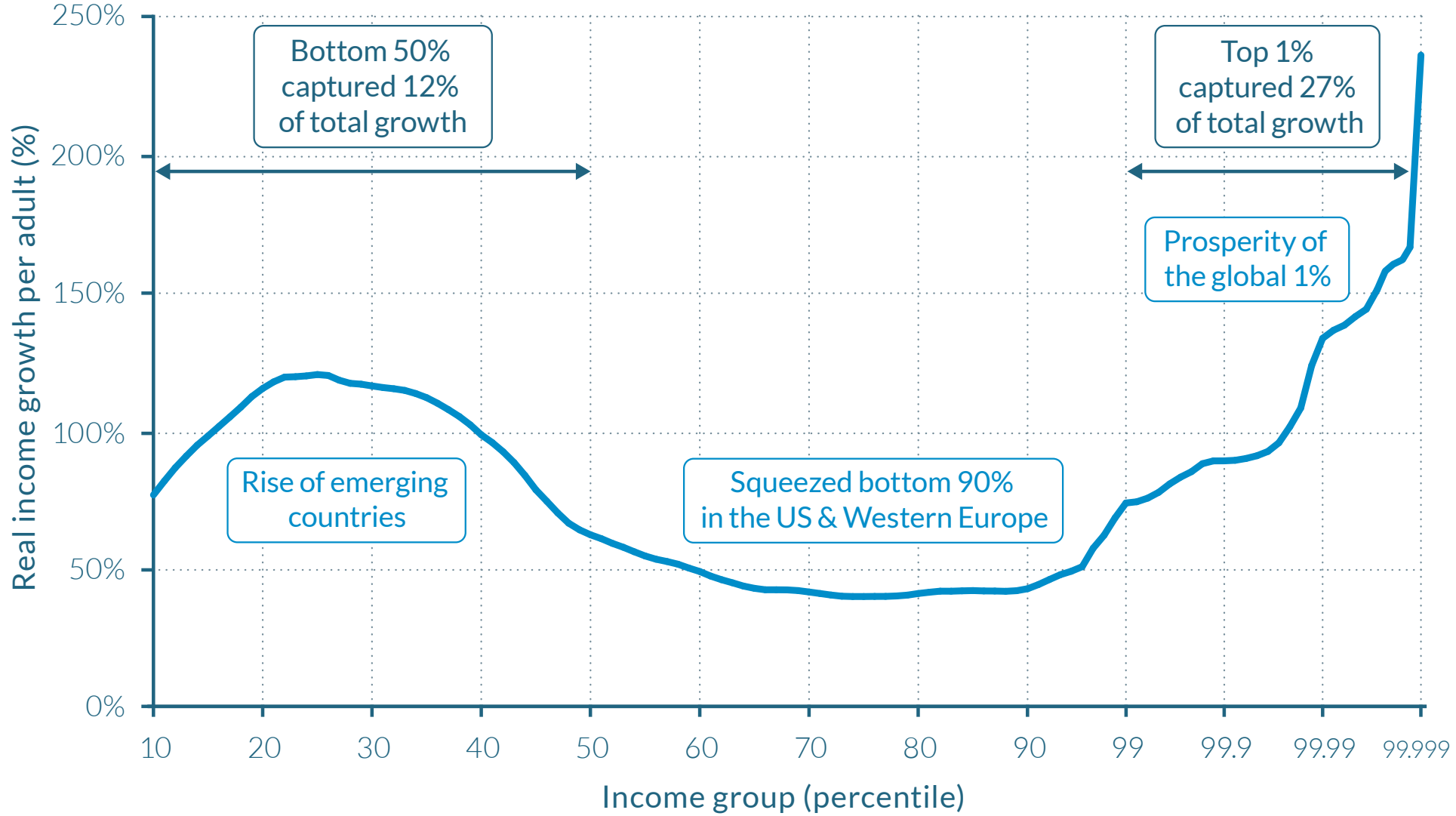
Wealth shares of the Top 1-0.1% and Top 0.1% in the US, 1913-2012



Source: Saez & Zucman (2016). See wir2018.wid.world for data series and notes.

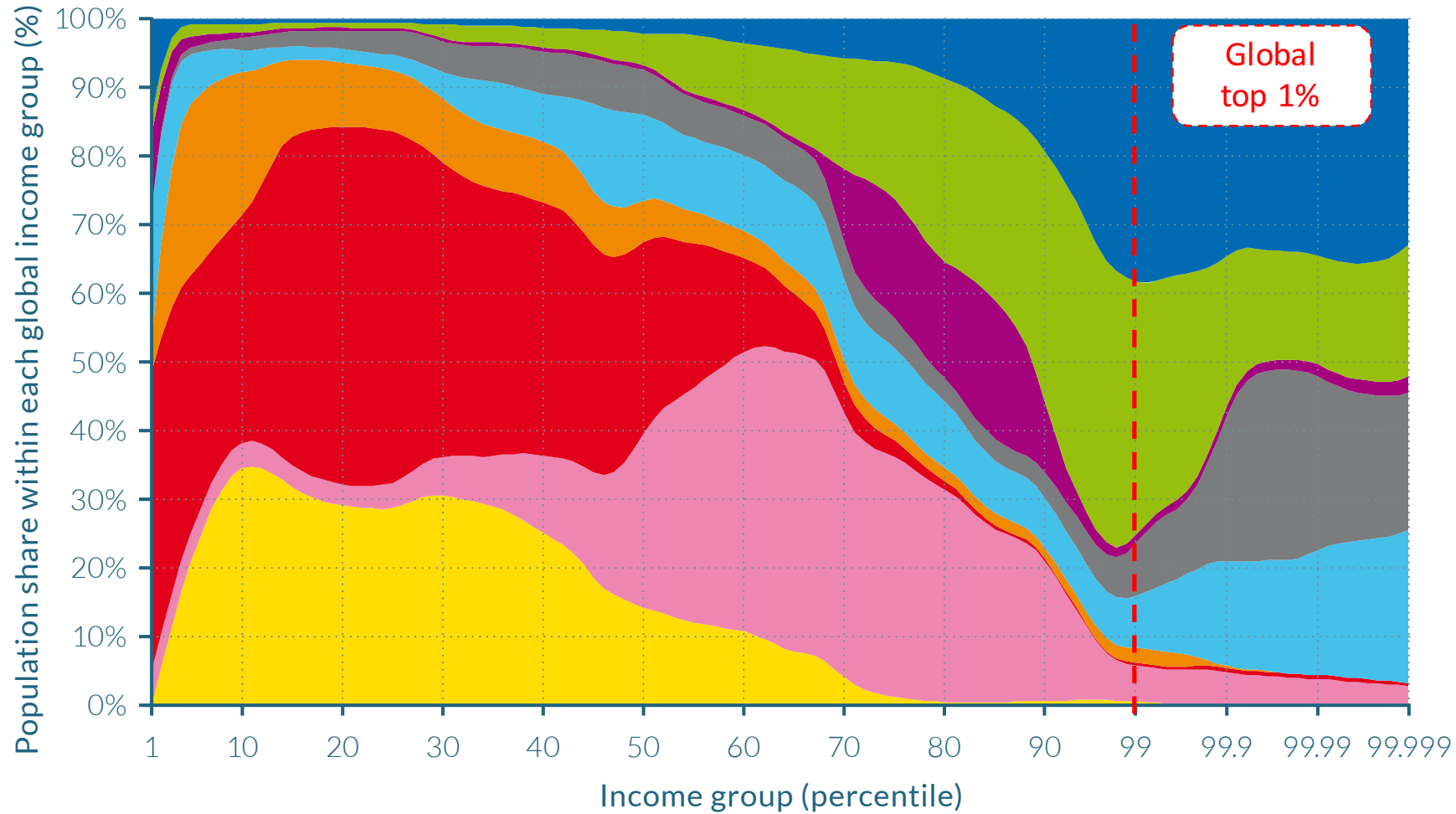
In 2012, the share of household wealth owned by the Top 0.1% in the US was 22%.

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



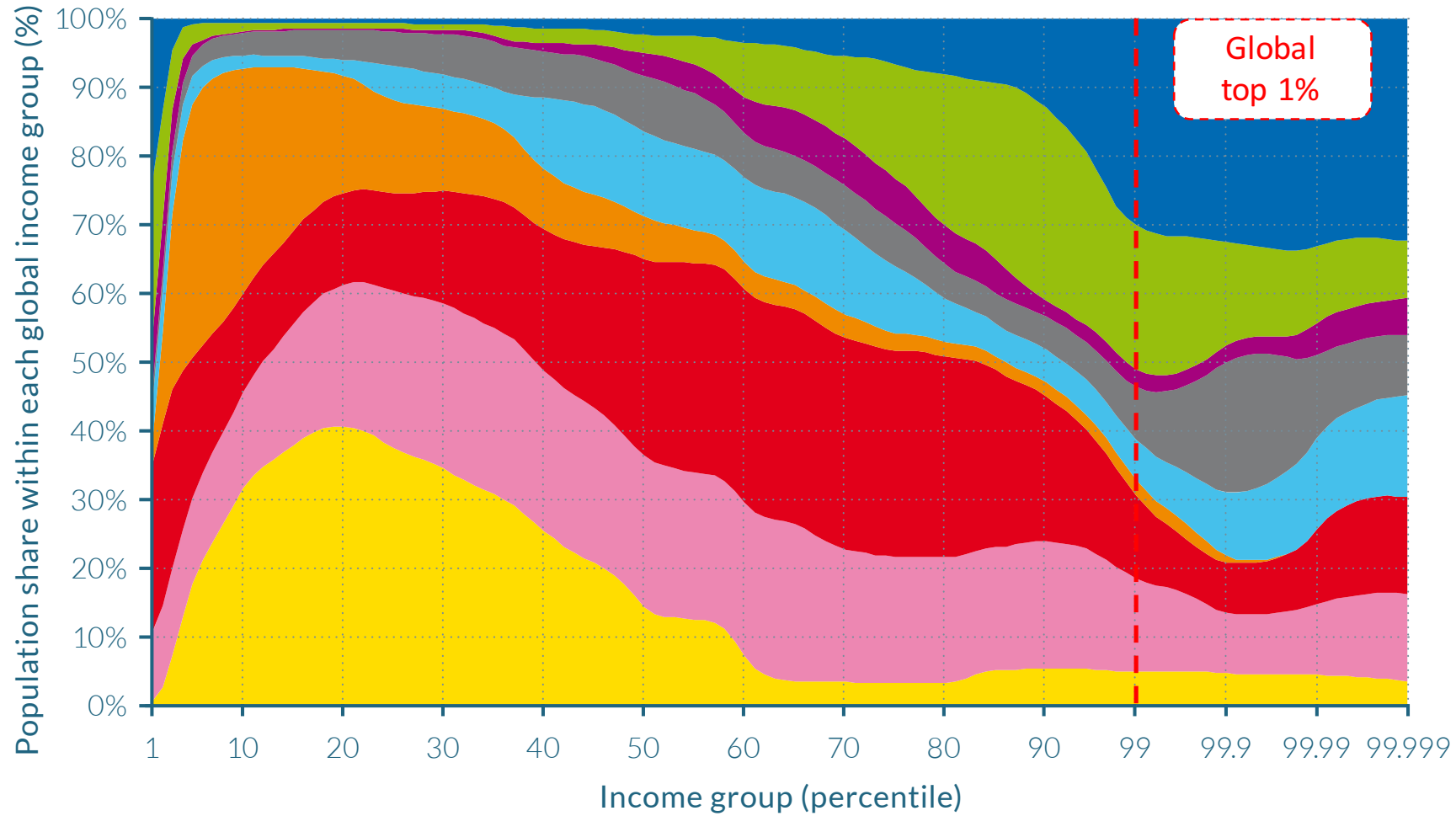
Source: World Inequality Report 2018, Figure 2.1.4. See wir2018.wid.world for data, sources and notes. WIR 2018, available on WID.world

Geographic breakdown of global income groups in 1990



Source: World Inequality Report 2018, Figure 2.1.5. See wir2018.wid.world for data sources and notes.

Geographic breakdown of global income groups in 2016



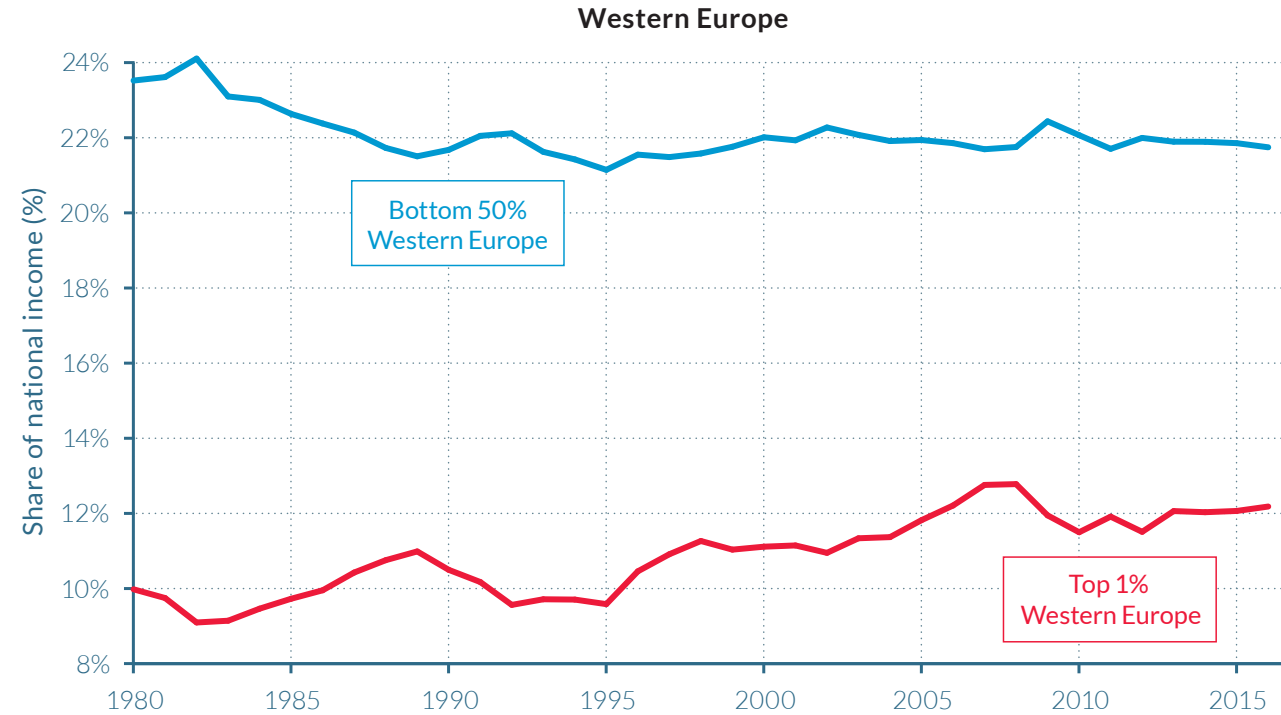
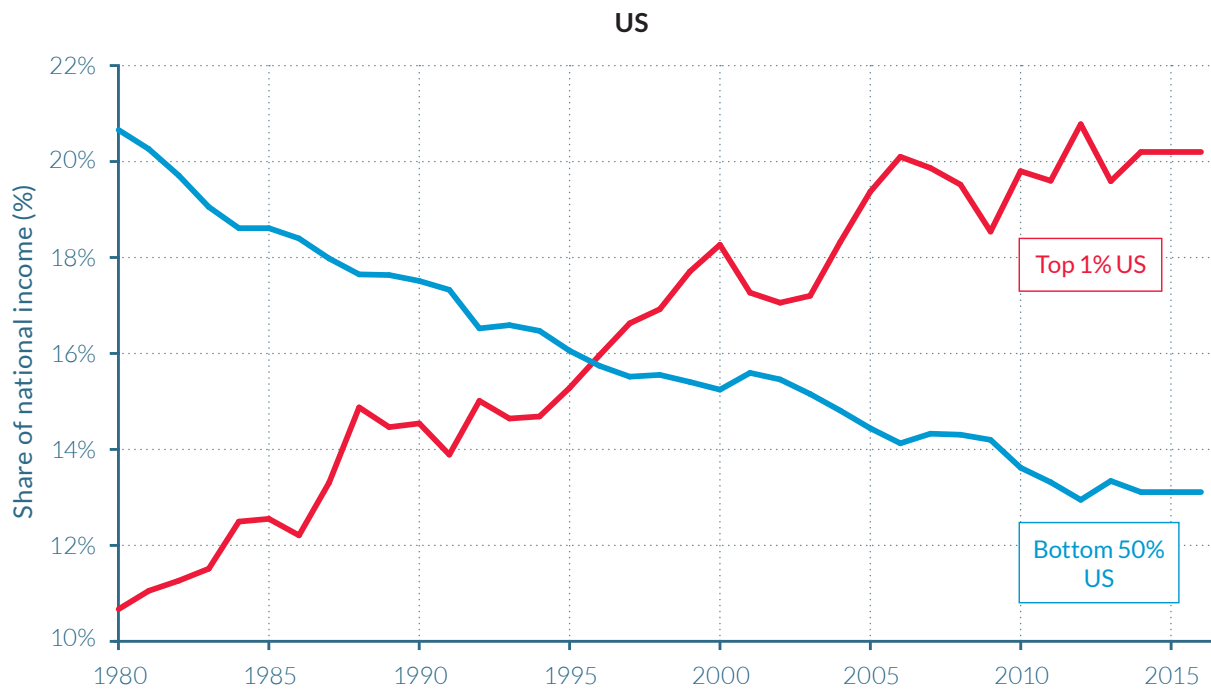
Source: World Inequality Report 2018, Figure 2.1.6. See wir2018.wid.world for data sources and notes.

- **Benchmark DINA:** best case scenario, large data availability and in-depth decomposition of income concepts + tax structure
 - ✓ USA, Europe, Brazil

- **« Simplified » DINA:** decomposition into key concepts only
 - ✓ Other large emerging countries: Russia, India, China + Thailand + Malaysia
 - Preliminary estimates for Africa + Asia + Latin America more refined in the coming 18 months

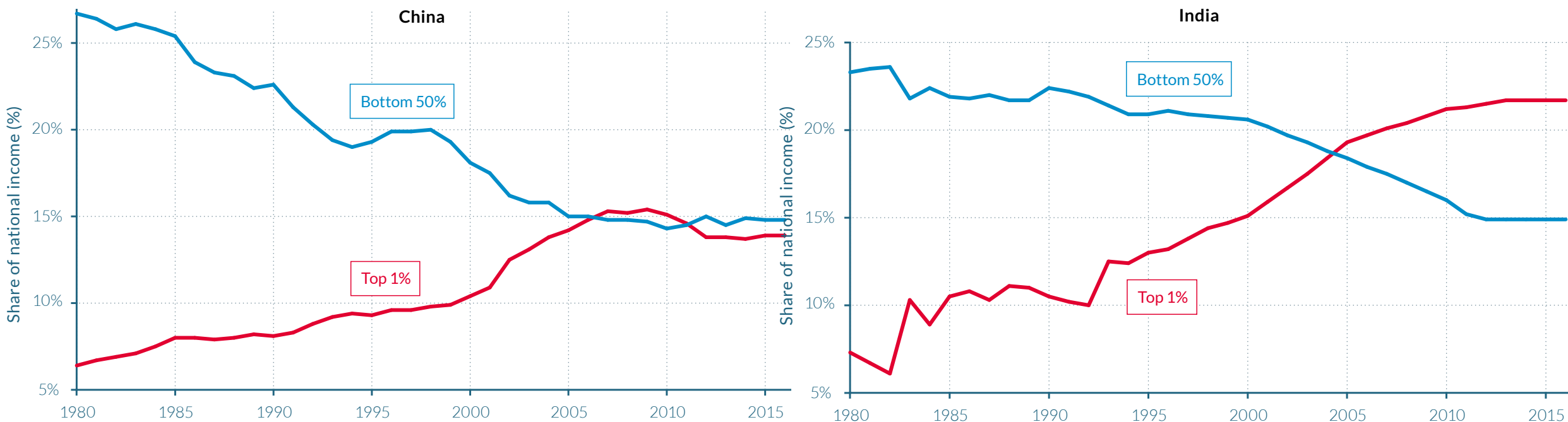
- **Evolutionary process:** simplified DINA to be progressively upgraded

Top 1% vs. bottom 50% in the US and Western Europe, 1980-2016



Source: World Inequality Report 2018, Figure 2.1.3. See wir2018.wid.world for data sources and notes.

Top 1% vs. bottom 50% in China vs. India, 1980-2016



Source: World Inequality Report 2018, Appendix Figure A4. See wir2018.wid.world for data sources and notes.

Top 1% income shares in China, India, Russia, Brazil, 1905-2015

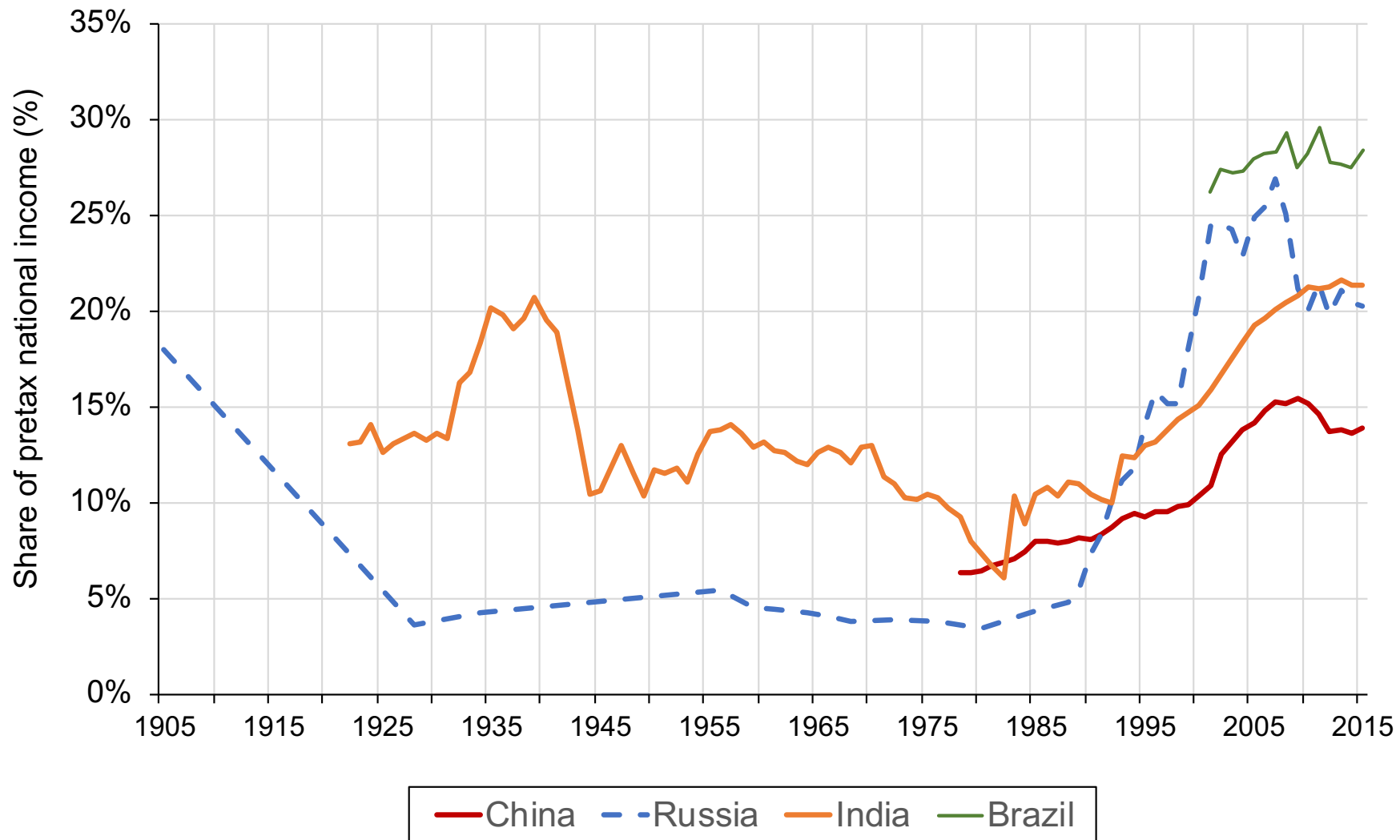
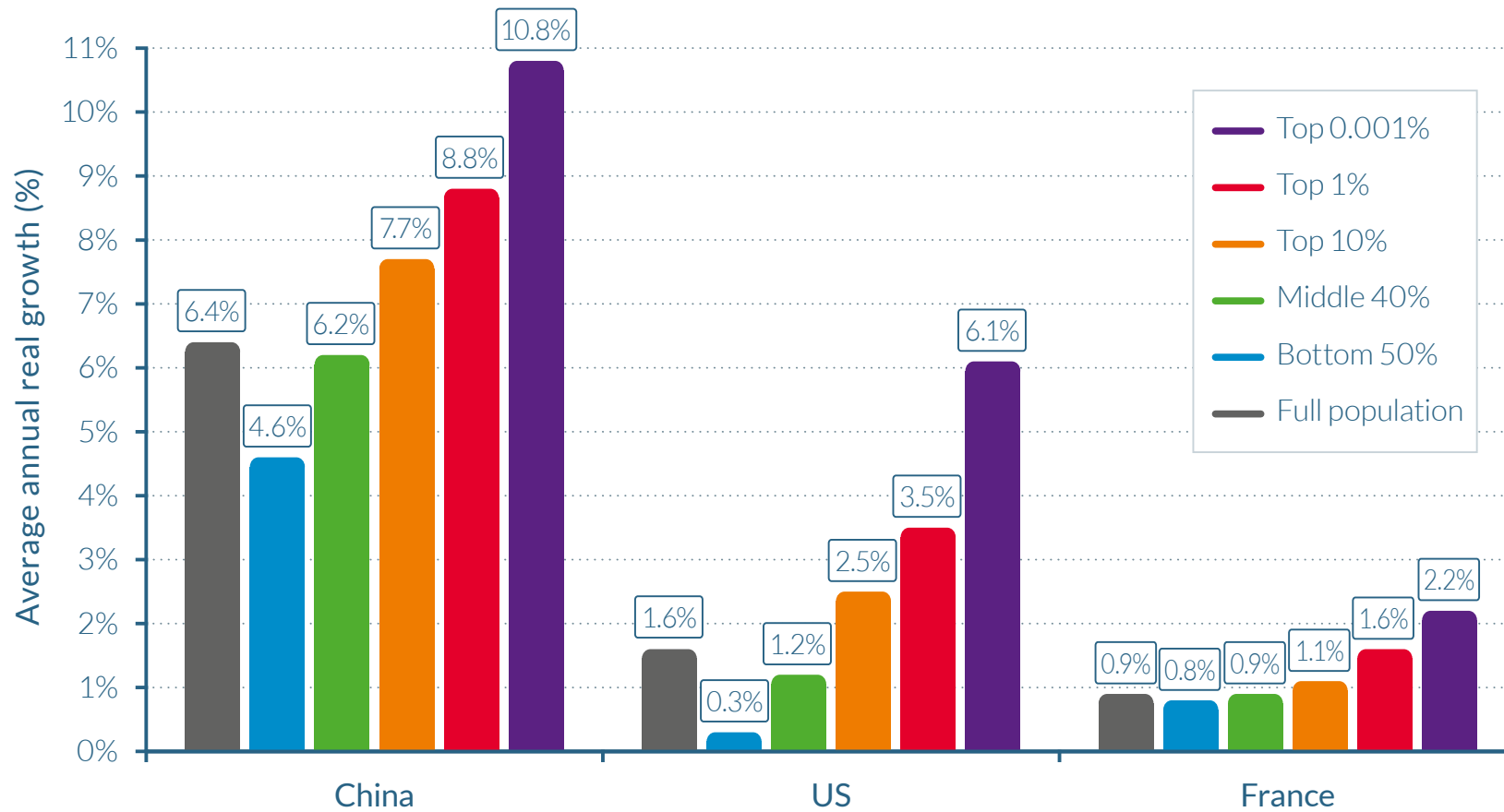


Figure 2.7.2

Average annual national income growth by income group in China, France and the US, 1980–2015

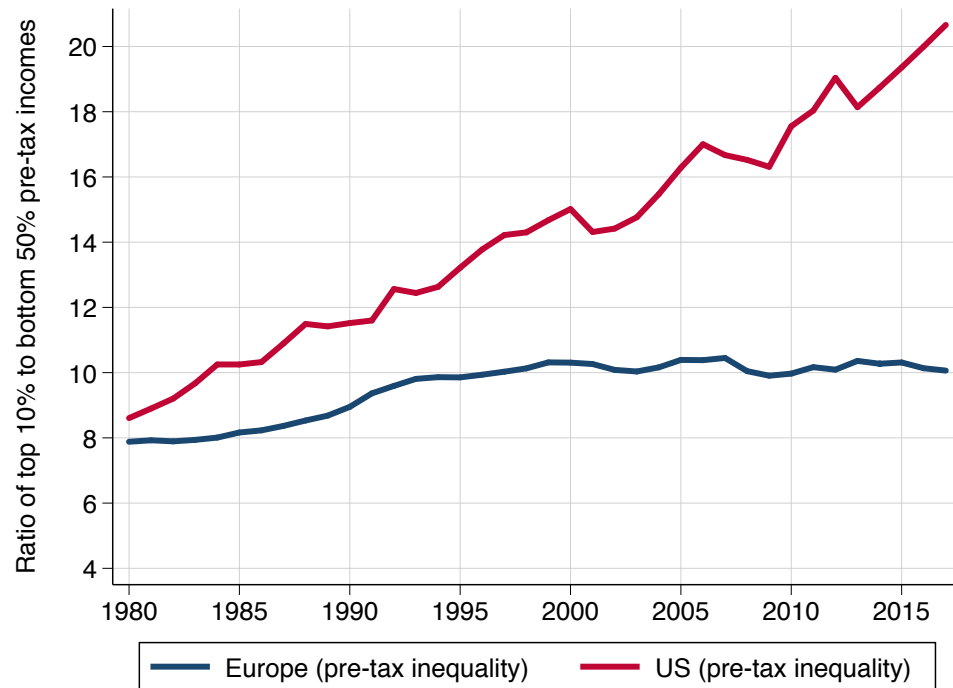


Source: Piketty, Yang and Zucman (2017). See wir2018.wid.world for data series and notes.

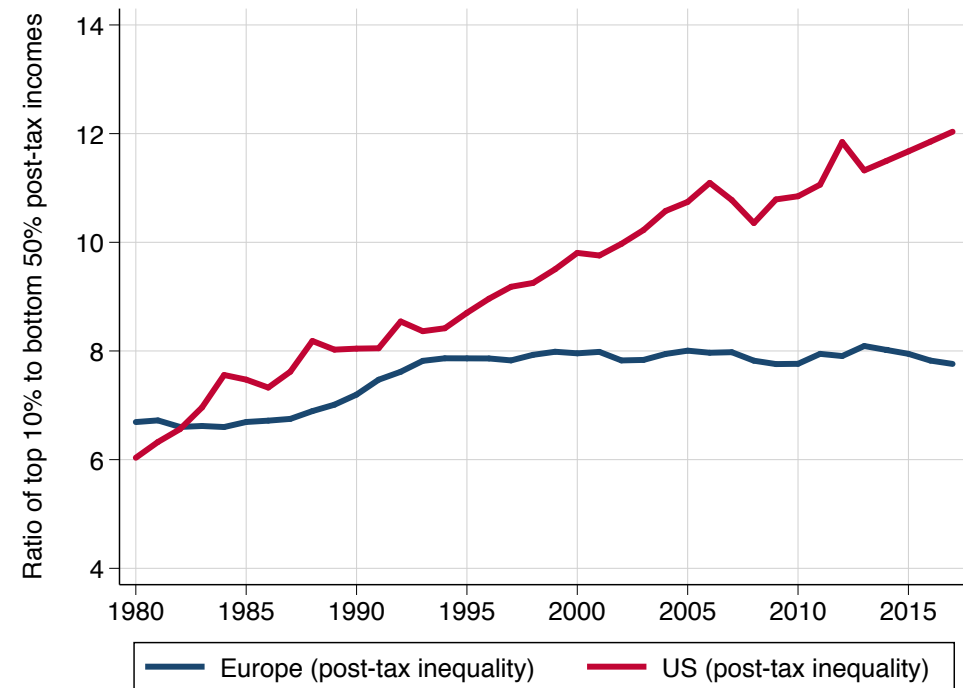
Between 1980 and 2015, the average pre-tax income of the Bottom 50% in China grew at an average of 4.6% per year, against 0.3% in the US. Values are net of inflation.

Figure 30: Redistribution in Europe and the United States:
Ratio top 10% to bottom 50% average incomes

(a) Pre-tax income inequality

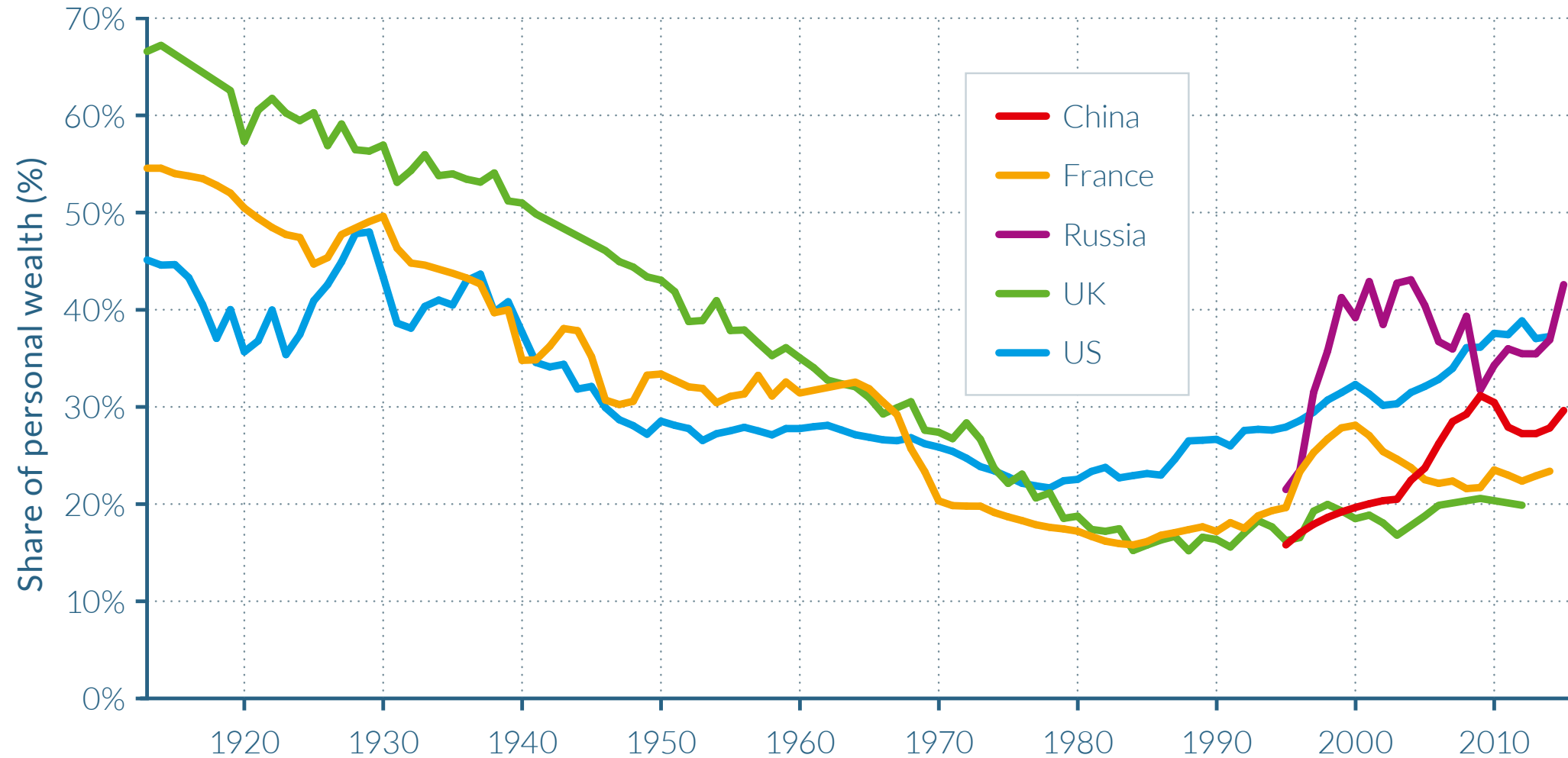


(b) Post-tax income inequality



Source: authors' computations combining surveys, tax data and national accounts for Europe; Piketty, Saez, and Zucman (2018) for the United States.

Top 1% personal wealth share in emerging and rich countries, 1913–2015



Source: World Inequality Report 2018, Figure 4.2.1. See wir2018.wid.world for data sources and notes.

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- WID.world today relies on the work of **100+ researchers** over the world from academia and statistical offices; 20 based in Paris + Berkeley
 - DINA for **50+ countries**
 - Top shares for **90+ countries**
 - Wealth income ratios and/or distribution for 30+ countries

- Developing DINAs
 - Different types of expertize required (surveys / tax / combination / national accounts) → reinforces the need for synergies between ‘survey’, ‘tax’, ‘national accounts’ experts, on a **country-by-country approach**

- “Shift to policy” requires **setting conventions**
 - Clarify agreements and agree that we can disagree
 - Importance of ongoing conversations with public statisticians (UN/OECD + national level)

Comparison between DINA and EG-DNA (OECD)

	DINA	EG-DINA	Comments
Coverage	Income and wealth	Income, consumption and savings (eventually wealth)	- DINA rationale: It is necessary to distribute wealth in order to properly analyze income inequality (and vice versa).
Target population	Adult individuals (benchmark, other groups available)	Private households	-
Unit of analysis	Individuals, assuming equal split of resources within households (benchmark)	Equivalent households	DINA rationale: equivalent scales are hard to understand for non-experts
Data sources	Tax, surveys and national accounts	Surveys, admin data and national accounts	DINA rationale: tax data much more reliable than surveys at the top
Income concept	Distribute 100% of national income	Distribute Household adjusted disposable income	DINA rationale: a <u>growing share of growth is not captured by household disposable income</u>
Level of detail of results	Synthetic micro files (for all percentiles, with detailed decomposition at the top)	Aggregated breakdowns (decile or quintile)	DINA rationale: Percentile level (inc. top 1%) is key <u>given dynamics of inequality over the recent period</u>

For more information, see DINA guidelines and OECD EG-DNA.

- **DINA agenda:** construct new series on the distribution pre- and post-tax income consistent with macro totals.
- **Many challenges ahead:** data challenge + methodological challenge + human resource challenge + standardization challenge.
- There may be technical and conceptual debates among inequality experts: to some extent there will always be. This shouldn't prevent the **development of common standards.**
- **Social and political demand** for data on macro growth and inequality (US Senate bill, G7, UN general assembly, etc.).

■ More technical details:

- **Distributional National Accounts Guidelines: Concepts and Methods used on WID.world**, (2016) Alvaredo, Atkinson, Chancel, Piketty, Saez, Zucman
- **World Inequality Report (2018)**, Alvaredo, Chancel, Piketty, Saez, Zucman, Harvard University Press.
- Evidence from Distributional National Accounts (2018), Piketty, Saez, Zucman
- **Capital Accumulation, Private Property and Rising Inequality in China (1978-2015)**, 2019, Piketty, Yang, Zucman, American Economic Review
- **How Unequal is Europe? Evidence from Distributional National Accounts (1980-2017)**, (2019), Blanchet, Chancel, Gethin, WID.world Working Paper