Graduate Public Economics
Introduction and Road Map

Emmanuel Saez

PUBLIC ECONOMICS DEFINITION

Public economics = Study of the role of the government in the economy

Government is instrumental in most aspects of economic life:

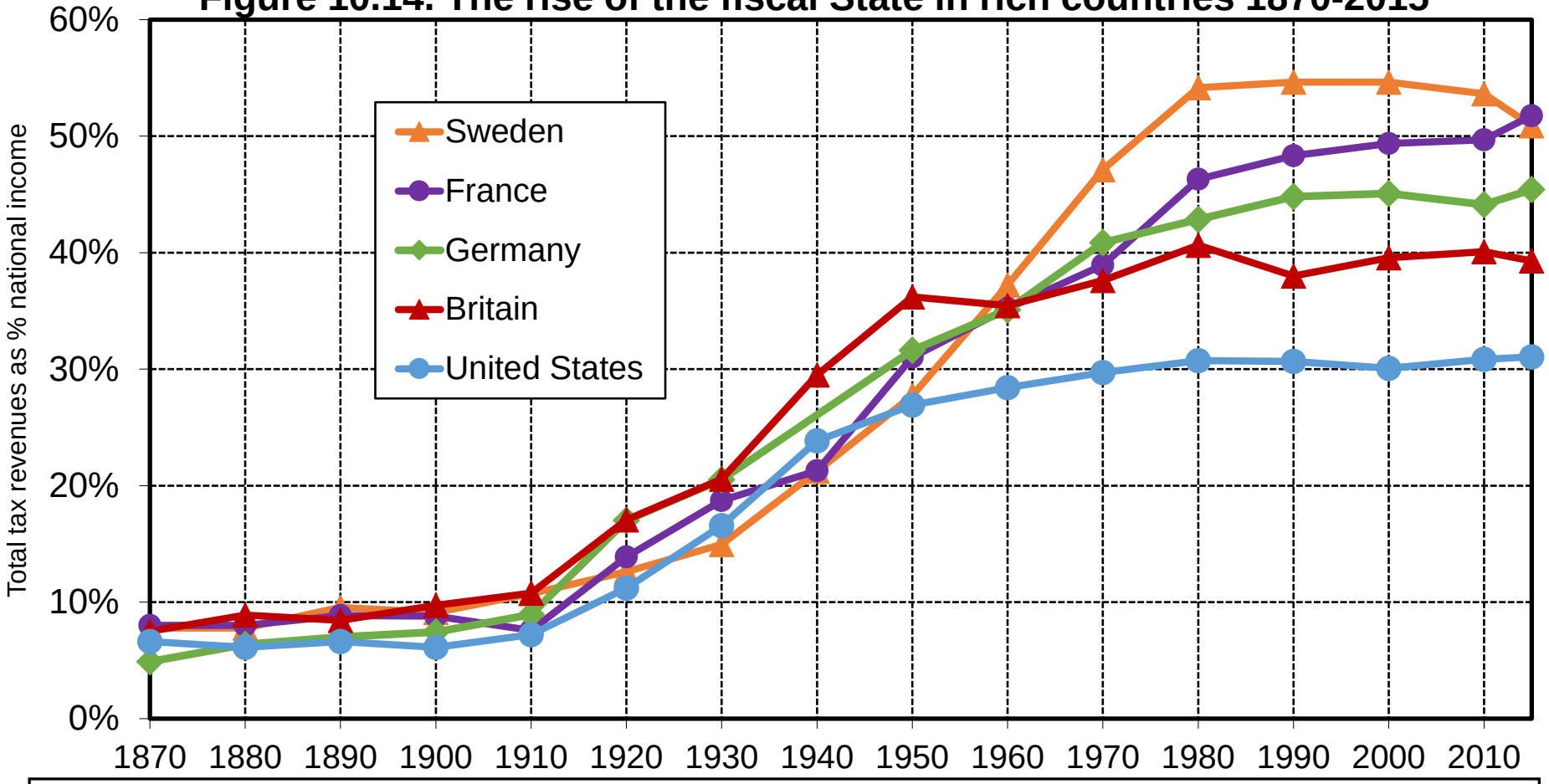
1) Government in charge of huge regulatory structure

2) Taxes: governments in advanced economies collect 30-50% of National Income in taxes

3) Expenditures: tax revenue funds traditional **public goods** (infrastructure, public order and safety, defense), and **social state** (education, retirement benefits, health care, income support)

4) Macro-economic stabilization through central bank (interest rate, inflation control), fiscal stimulus, bailout policies

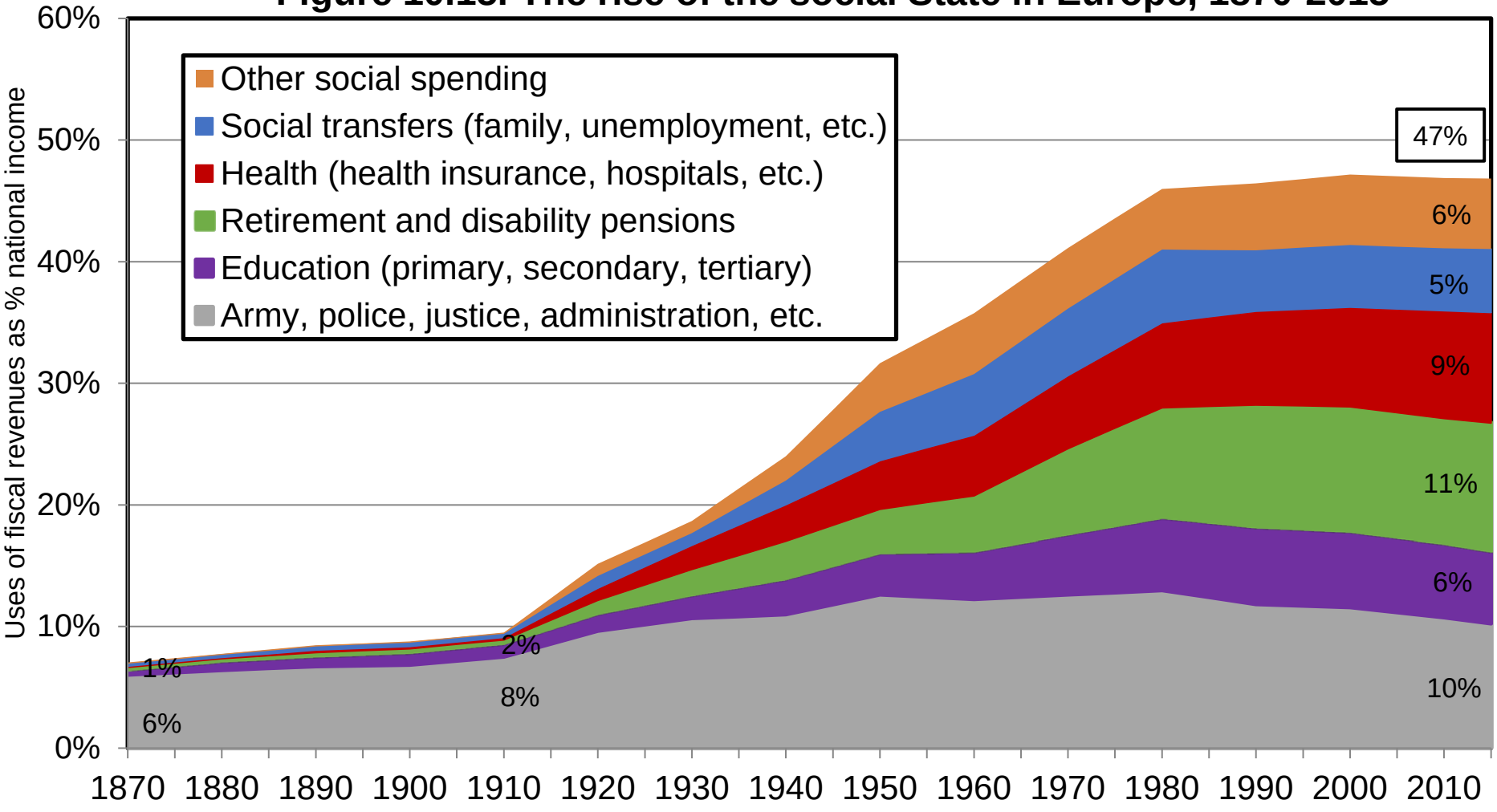
Figure 10.14. The rise of the fiscal State in rich countries 1870-2015



Interpretation. Total fiscal revenues (all taxes and social contributions included) made less than 10% of national income in rich countries during the 19th century and until World War 1, before rising strongly from the 1910s-1920s until the 1970s-1980s and then stabilizing at different levels across countries: around 30% in the U.S., 40% in Britain and 45%-55% in Germany, France and Sweden.

Sources and series: see piketty.pse.ens.fr/ideology.

Figure 10.15. The rise of the social State in Europe, 1870-2015



Interpretation. In 2015, fiscal revenues represented 47% of national income on average in Western Europe et were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% for health; 5% for social transfers (other than pensions); 6% for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues. **Note.** The evolution depicted here is the average of Germany, France, Britain and Sweden (see figure 10.14). Sources and séries: see piketty.pse.ens.fr/ideology.

Bigger view on government (Saez 2021)

Economists have a narrow minded view of individual behavior: selfish and rational individuals interacting through markets

But social cooperation is pervasive at many levels: families, workplaces, communities, nation states

Cooperation leads to joint production and then requires distribution explaining why humans are so attuned to inequality

Governments are a formal way to organize cooperation/distribution

Archaic human societies depended on social cooperation for protection and taking care of the young, sick, and old

$\Rightarrow$ Explains best why our modern nation states provide defense, education, health care, and retirement benefits

Replacing social institutions by markets does not always work

For Economists:
Two General Rules for Government Intervention

1) Failure of 1st Welfare Theorem: Government intervention can help if there are market or individual failures

2) Fallacy of the 2nd Welfare Theorem: in practice, inequality can only be reduced with distortionary government intervention

Role 1: 1st Welfare Theorem Failure

1st Welfare Theorem: If (1) no externalities, (2) perfect competition, (3) perfect information, (4) agents are rational, then private market equilibrium is Pareto efficient

Government intervention may be desirable if:

1) Externalities require government interventions (Pigouvian taxes/subsidies, public good provision)

2) Imperfect competition requires regulation (typically studied in Industrial Organization)

3) Imperfect or Asymmetric Information (e.g., adverse selection may call for mandatory insurance)

4) Agents are not rational (= **individual failures** analyzed in behavioral economics, field in huge expansion): e.g., myopic or hyperbolic agents may not save enough for retirement

Role 2: 2nd Welfare Theorem Fallacy

Even with no market failures, free market might generate substantial inequality that society, through its government, may want to reduce

2nd Welfare Theorem: Any Pareto Efficient outcome can be reached by (1) Suitable redistribution of initial endowments [individualized **lump-sum** taxes based on individual characteristics and not behavior], (2) Then letting markets work freely

$\Rightarrow$ No conflict between efficiency and equity [1st best taxation]

Redistribution of initial endowments is not feasible (information pb) $\Rightarrow$ govt needs to use **distortionary** taxes and transfers based on economic outcomes (income, consumption, wealth)

$\Rightarrow$ Trade-off between efficiency and equity [2nd best taxation]

This class will focus primarily but not exclusively on role 2

Illustration of 2nd Welfare Theorem Fallacy

Suppose economy is populated 50% with disabled people unable to work (hence they earn \$0) and 50% with able people who can work and earn \$100

Free market outcome: disabled have \$0, able have \$100

2nd welfare theorem: govt is able to tell apart the disabled from the able [even if the able do not work]

$\Rightarrow$ can tax the able by \$50 [regardless of whether they work or not] to give \$50 to each disabled person $\Rightarrow$ the able keep working [otherwise they'd have zero income and still have to pay \$50]

Real world: govt can't tell apart disabled from non working able

$\Rightarrow$ \$50 tax on workers + \$50 transfer on non workers destroys all incentives to work $\Rightarrow$ govt can no longer do full redistribution $\Rightarrow$ Trade-off between equity and size of the pie

Normative vs. Positive Public Economics

Normative Public Economics: Analysis of How Things Should be (e.g., should the government intervene in health insurance market? how high should taxes be?, etc.)

Positive Public Economics: Analysis of How Things Really Are (e.g., Does govt provided health care crowd out private health care insurance? Do higher taxes reduce labor supply?)

Positive Public Economics is a required 1st step before we can complete Normative Public Economics

Positive analysis is primarily empirical and Normative analysis is primarily theoretical

Positive Public Economics overlaps with Labor Economics

Political Economy is a positive analysis of govt outcomes [public choice is political economy from a libertarian view]

Plan for 230B Lectures

1) **Labor Income Taxation and Redistribution (SAEZ):**
(a) Normative Aspects: Optimal Income Taxes and Transfers,
(b) Empirical Aspects: Labor Supply and Taxes and Transfers,
(c) Social security retirement and disability benefits

2) **Wealth inequality and taxing capital income (MUNOZ):**
(a) Wealth inequality, (b) Taxation of capital, (c) International tax and tax enforcement issues

Macro-aggregates: Labor vs. Capital Income

National Income Y= income earned by residents of nation
=GDP - depreciation of capital + net income from abroad

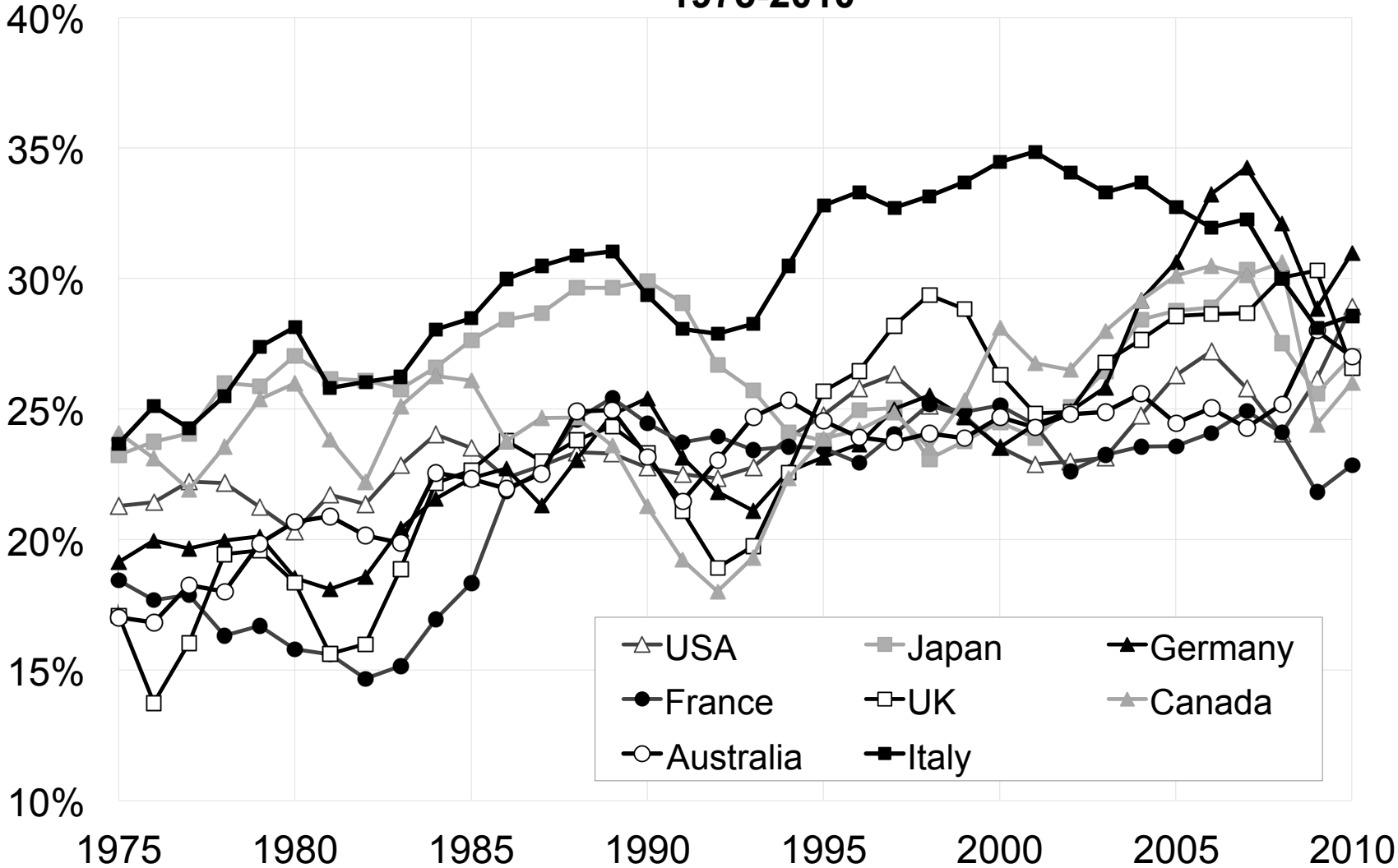
Labor income $Y_L \simeq$ 70-75% of national income Y

Capital income $Y_K \simeq$ 25-30% of national income Y (has increased in recent decades)

In GDP, gross capital share is higher (35-40%) because it includes depreciation of capital ($\simeq$ 10% of GDP)

Capital income is income from wealth: housing rents, profits of businesses and corporations, interest on fixed claim assets minus interest paid on debt

Figure 12: Capital shares in factor-price national income 1975-2010



Source: Piketty and Zucman (2014)

Macro-aggregates: Wealth and Capital Income

Wealth arises from expected future income and value of assets

Private wealth includes real estate (land+buildings), corporate and business equity, fixed claimed assets (bonds+deposits), net of debts (mortgage, student loans, consumer credit)

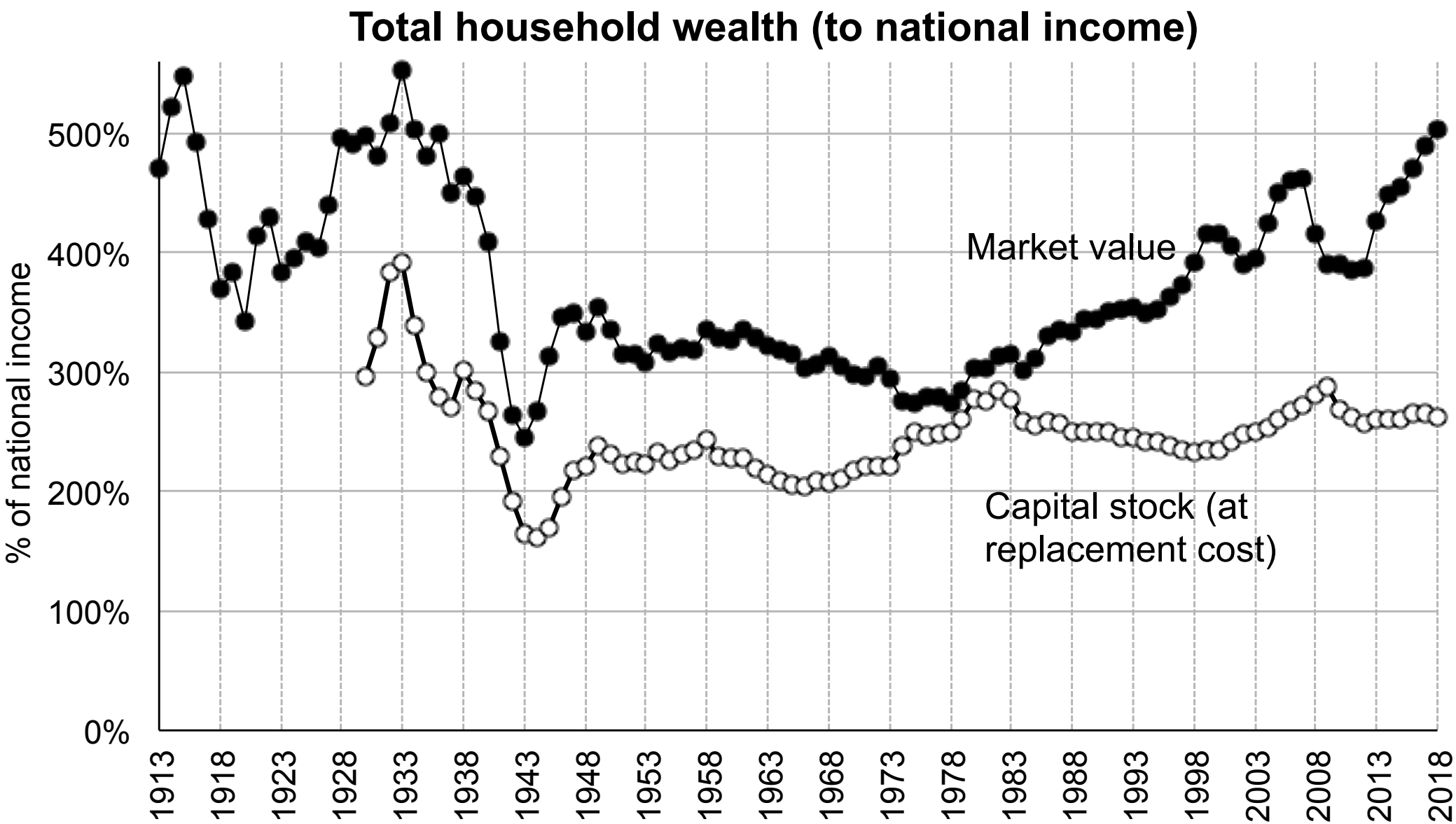
Aggregate US Private Wealth $\simeq 6 \times$ Annual National Income (big increase in recent years)

Private wealth reflects both capital stock accumulated through savings and pure price effects

Example 1: house can increase in value because it is improved (capital) or because local prices go up (pure price effect)

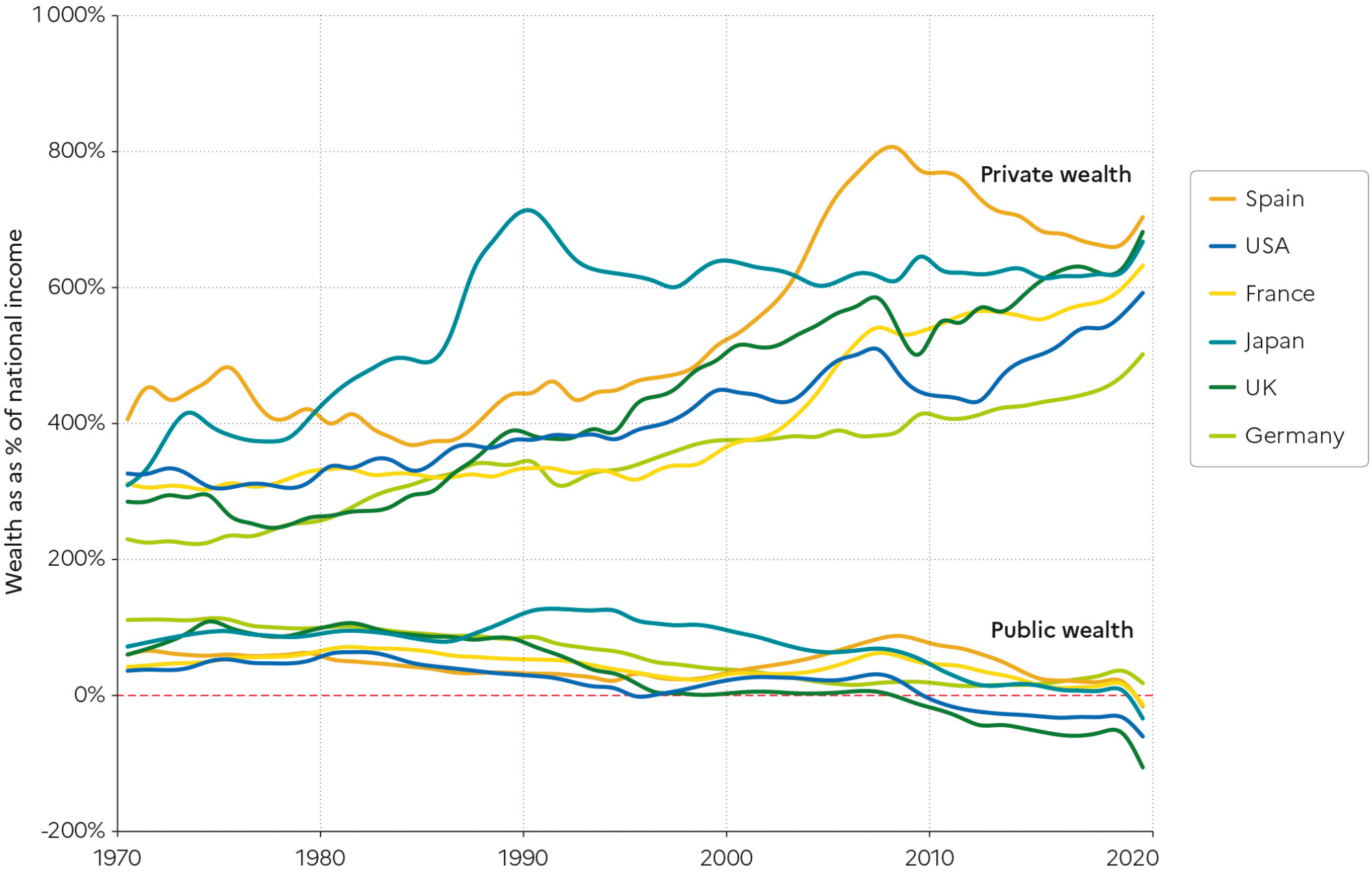
Example 2: greater monopoly power makes a business more valuable to owners (but at the expense of consumers)

Recent increase in US private wealth mostly from price effects



This figure depicts the share of total household wealth relative to national income Source: Piketty, Saez, and Zucman (2018).

Figure 8 *The rise of private versus the decline of public wealth in rich countries, 1970-2020*



Interpretation: *Public wealth is the sum of all financial and non-financial assets, net of debts, held by governments. Public wealth dropped from 60% of national income in 1970 to -106% in 2020 in the UK.* ***Sources and series:*** *wir2022.wid.world/methodology, Bauluz et al. (2021) and updates.*

Income Inequality: Labor vs. Capital Income

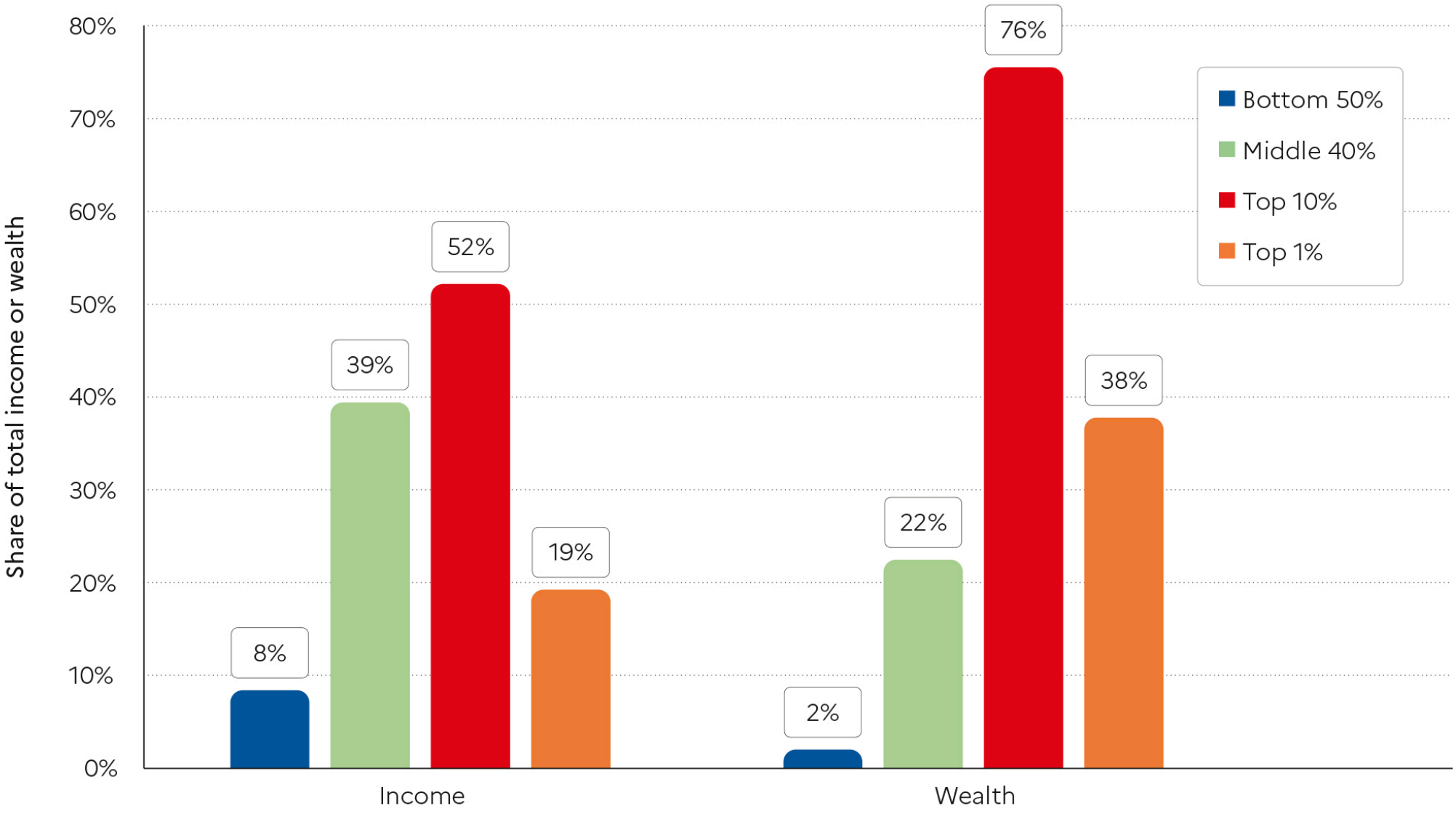
Individuals derive market income (before tax) from **labor** and **capital**: $z = wl + rk$ where w is wage, l is labor supply, k is wealth, r is rate of return on wealth

1) **Labor income inequality** is due to differences in working abilities (education, talent, physical ability, etc.), work effort (hours of work, effort on the job, etc.), labor regulations (min wage, unions), social forces (discrimination, etc.)

2) **Capital income inequality** is due to differences in wealth k (due to past saving behavior, inheritances received, price effects), and in rates of return r (varies dramatically overtime and across assets)

Capital Income (or wealth) is much more concentrated than Labor Income. World Inequality Lab wid.world provides stats worldwide

Figure 1.1 ***Global income and wealth inequality, 2021***



Interpretation: *The global 50% captures 8% of total income measured at Purchasing Power Parity (PPP). The global bottom 50% owns 2% of wealth (at Purchasing Power Parity). The global top 10% owns 76% of total Household wealth and captures 52% of total income in 2021. Note that top wealth holders are not necessarily top income holders. Income is measured after the operation of pension and unemployment systems and before taxes and transfers.* ***Sources and series:*** *wir2022.wid.world/methodology*

Income Inequality Measurement

Inequality can be measured by indexes such as Gini, log-variance, quantile income shares which are functions of the income distribution $F(z)$

Gini = 2 * area between 45 degree line and Lorenz curve

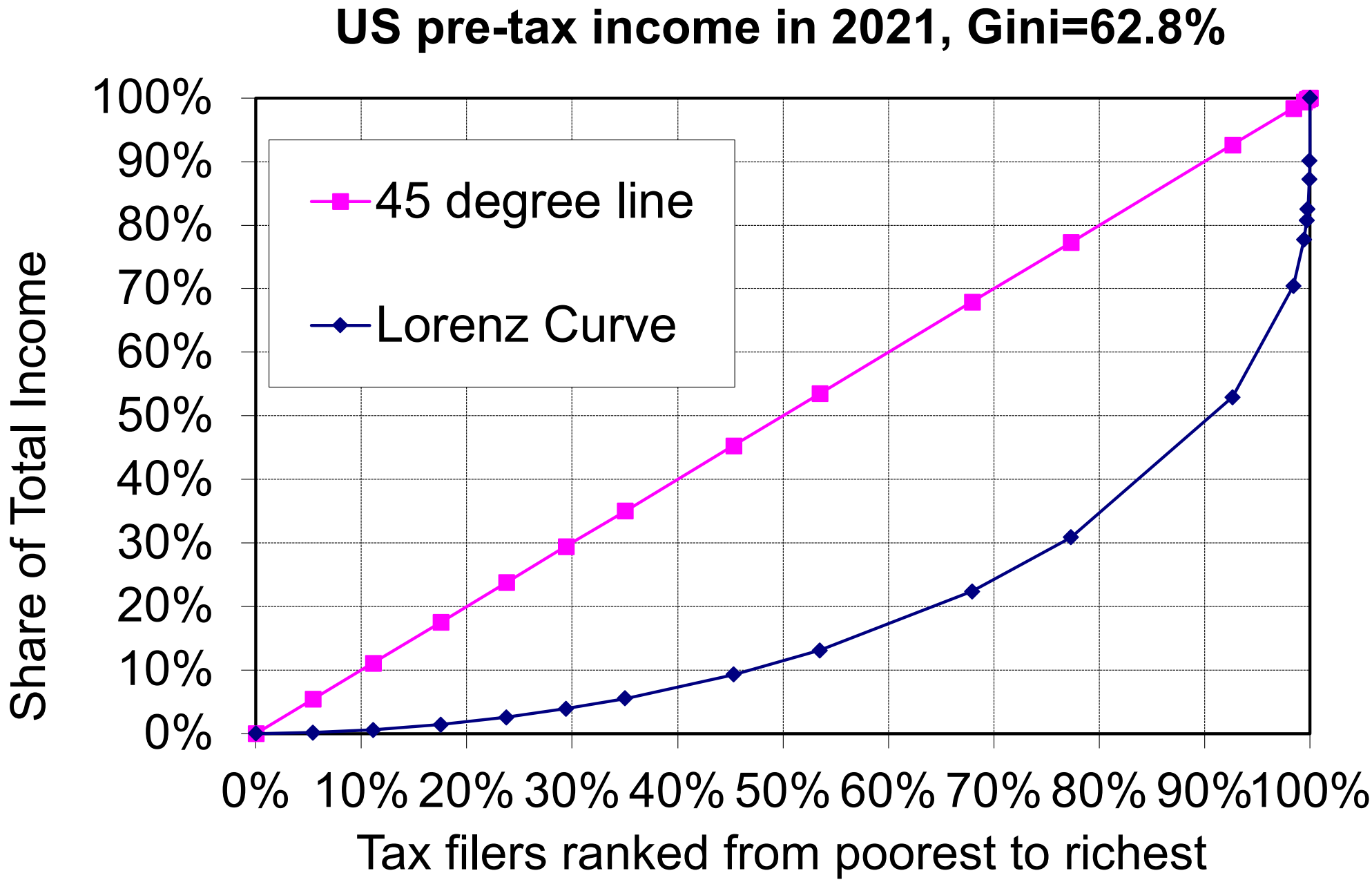
Lorenz curve $L(p)$ at percentile p is fraction of total income earned by individuals below percentile p

$0 \leq L(p) \leq p$

Gini=0 means perfect equality

Gini=1 means complete inequality (top person has all income)

Weakness: Gini is abstruse (top income share more intuitive)



Source: IRS Individual income tax statistics for 2021

Key Empirical Facts on Income Inequality

1) In the US, labor income inequality has increased substantially since 1970: debate between skilled biased technological progress view vs. institution view (min wage and unions) [Autor-Katz'99]

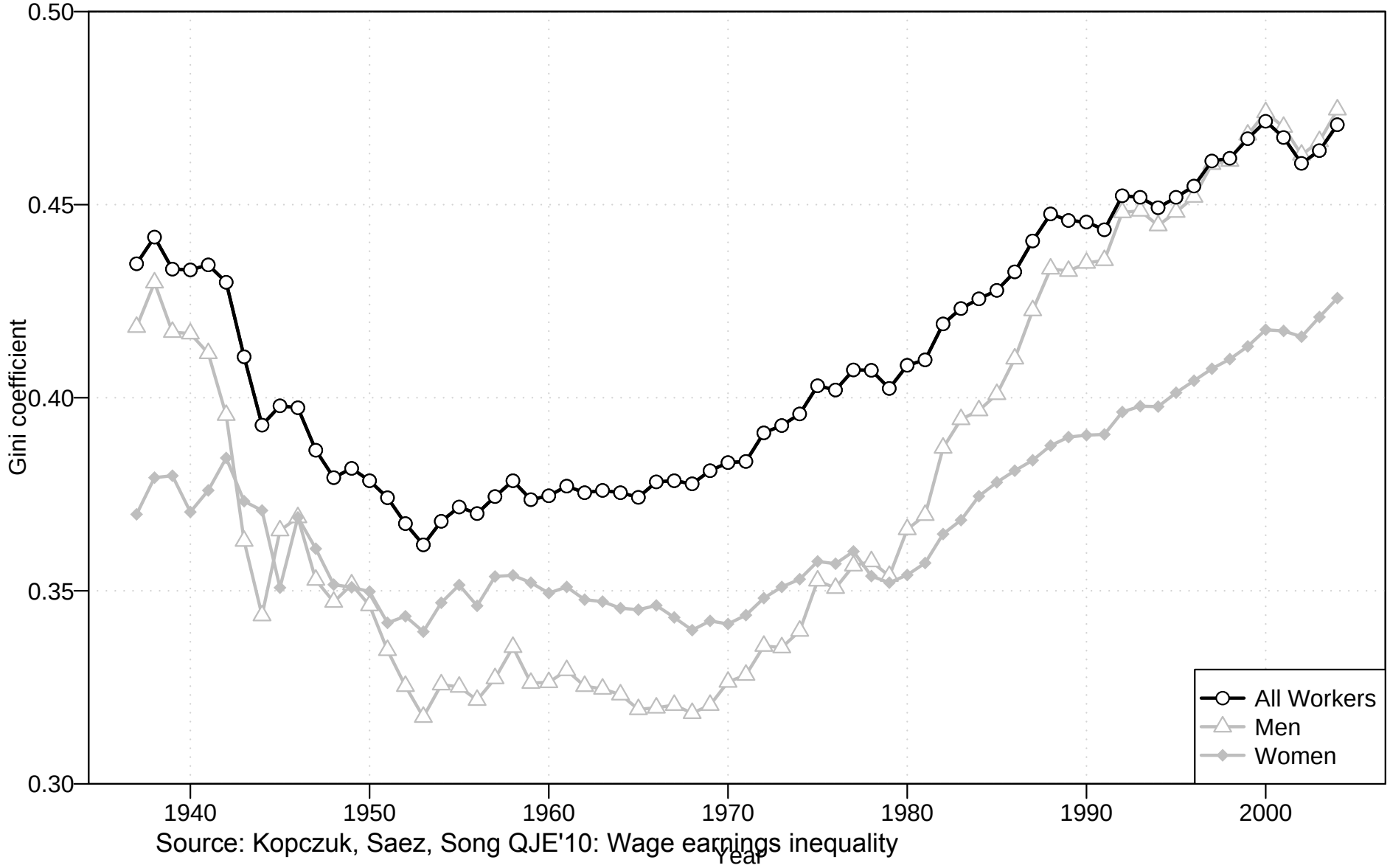
2) Gender gap has decreased but remains substantial especially at the very top

3) In the US, top income shares dropped dramatically from 1929 to 1950 and increased dramatically since 1980

4) Bottom 50% pre-tax income per adult has stagnated since 1980 in spite of macro-economic growth

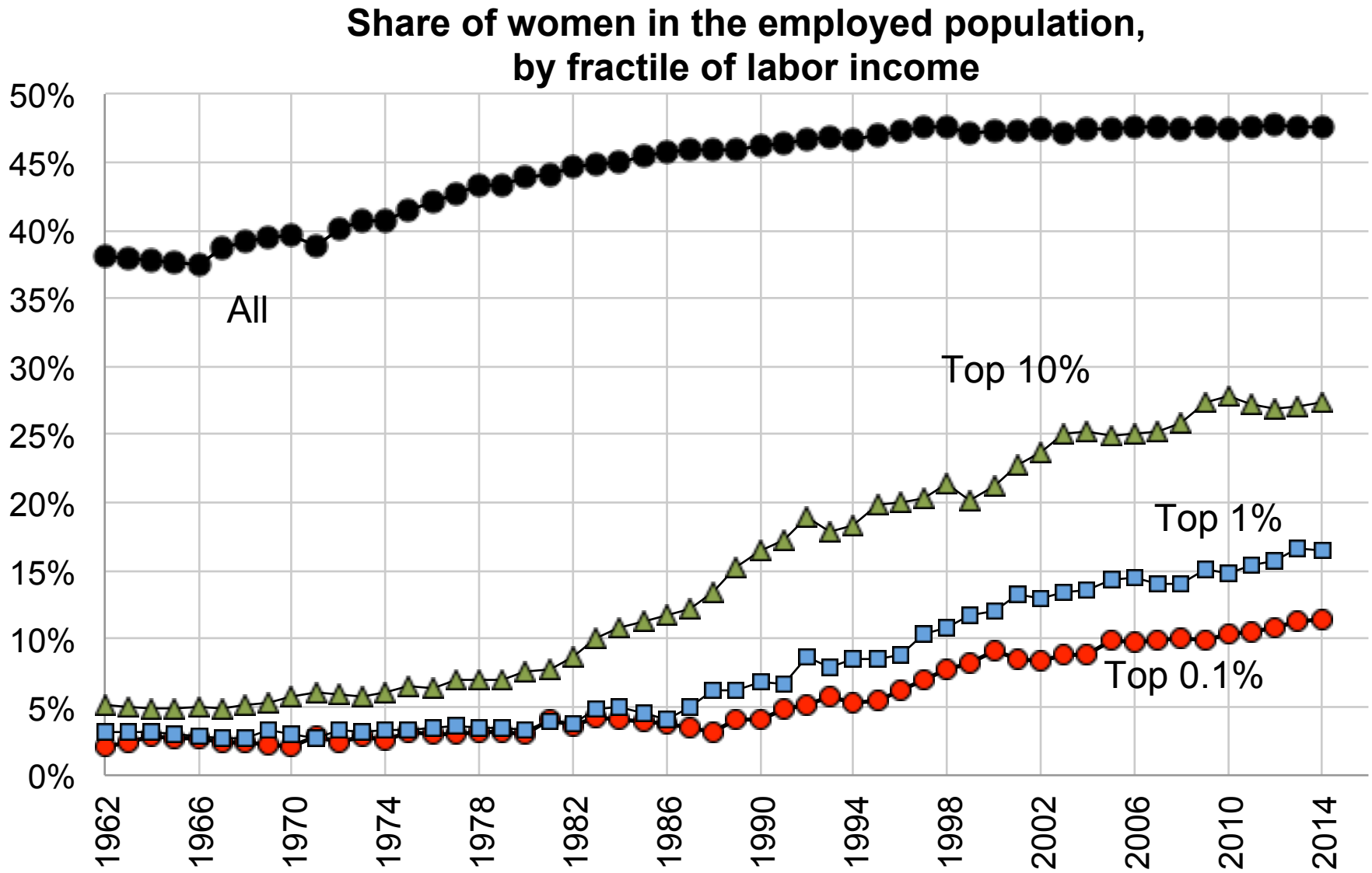
5) Fall in top income shares from 1900-1950 happened in most OECD countries. Surge in top income shares has happened primarily in English speaking countries, not as much in Continental Europe and Japan [Atkinson, Piketty, Saez JEL'11]

Figure 1: Gini coefficient



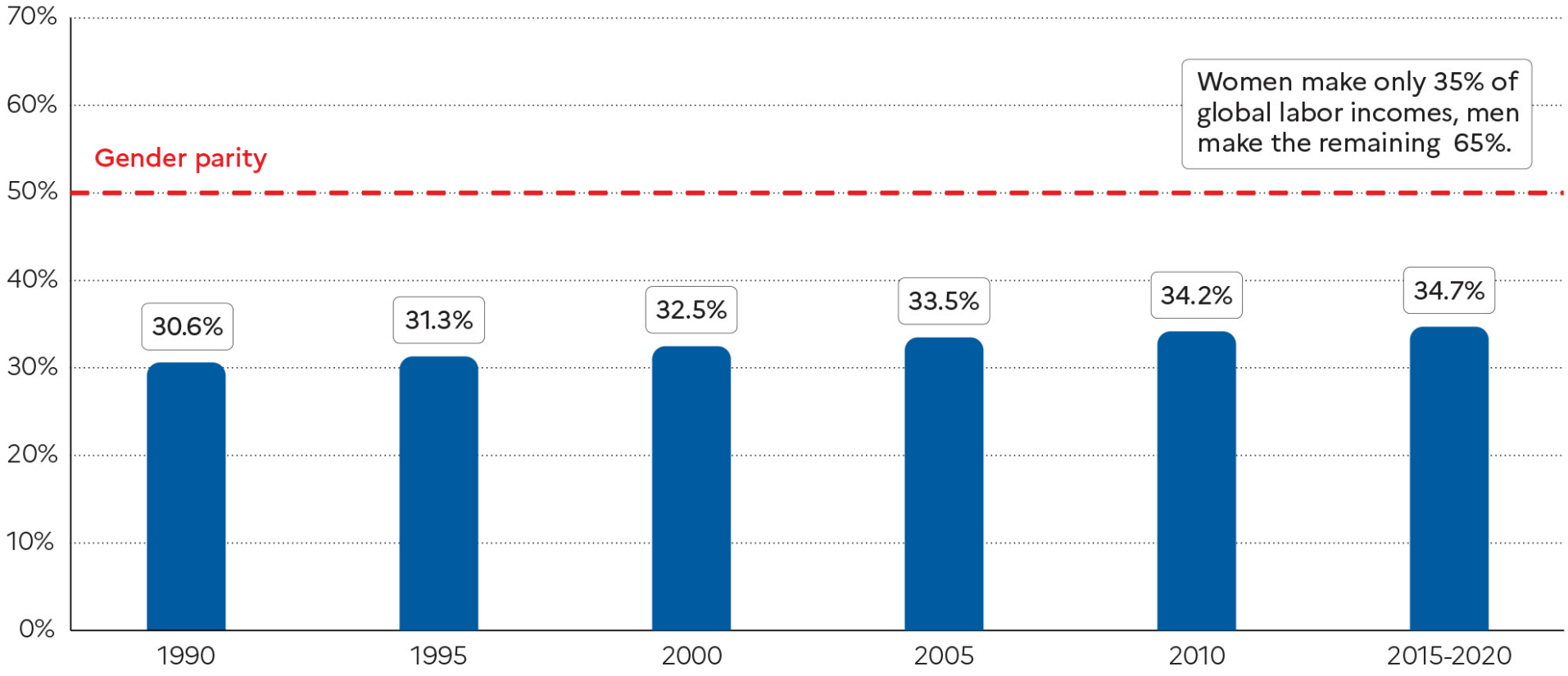
Source: Kopczuk, Saez, Song QJE'10: Wage earnings inequality

Men still make 85% of the top 1% of the labor income distribution



Source: Appendix Table II-F1.

Figure 12 ***Female share in global labor incomes, 1990-2020***



Interpretation: *The share of female incomes in global labour incomes was 31% in 1990 and nears 35% in 2015-2020. Today, males make up 65% of total labor incomes.* ***Sources and series:*** *wir2022.wid.world/methodology and Neef and Robilliard (2021).*

Figure 13 ***Female labor income share across the world, 1990-2020***

Interpretation: *The female labour income share rose from 34% to 38% in North America between 1990 and 2020.* ***Sources and series:*** *wir2022.wid.world/methodology and Neef and Robilliard (2021).*

METHODOLOGY ON TOP INCOME SHARES

Traditional survey data (such as Current Population Survey in US) cannot measure top incomes well (small sample size, measurement error, top coding). Tax data much superior:

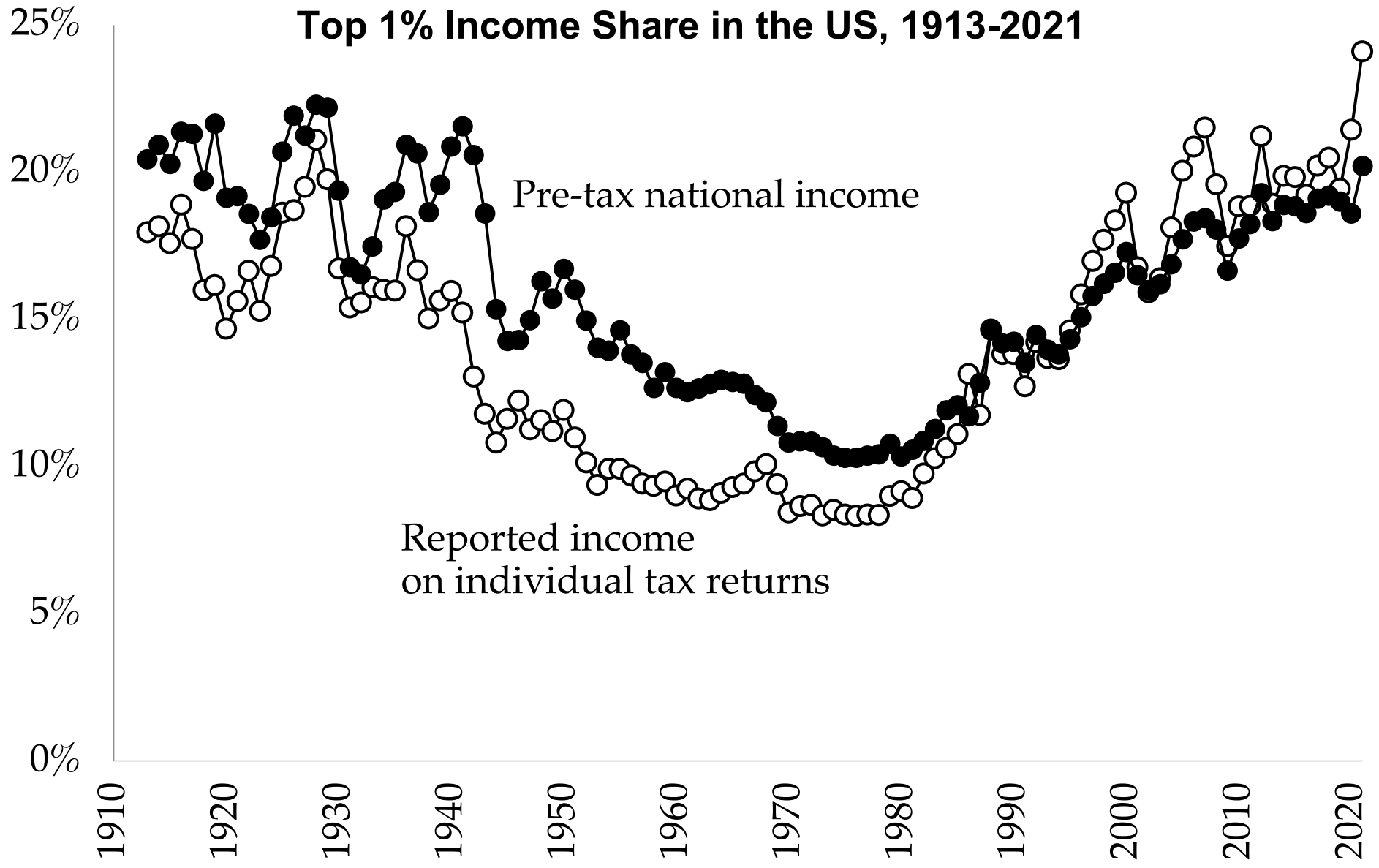
1) Top income shares using income tax data tabulations: (Kuznets 1955 for US, Piketty 2001 for France, Piketty-Saez 2003 for US, Atkinson-Piketty-Saez JEL11 survey)

Reported income is incomplete: misses nontaxable fringe benefits, undistributed corporate profits, evaded income

2) Distributional national accounts consider broader definition of income consistent with national income from national accounts. Conceptually sounder but requires imputations

3) Worldwide coverage in World Inequality Database wid.world: income (pre-tax vs. post-tax), wealth, gender stats for all countries


Top 1% Income Share in the US, 1913-2021
25%
20%
15%
10%
5%
0%
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Reported income
on individual tax returns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Pre-tax national income
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1910
1920
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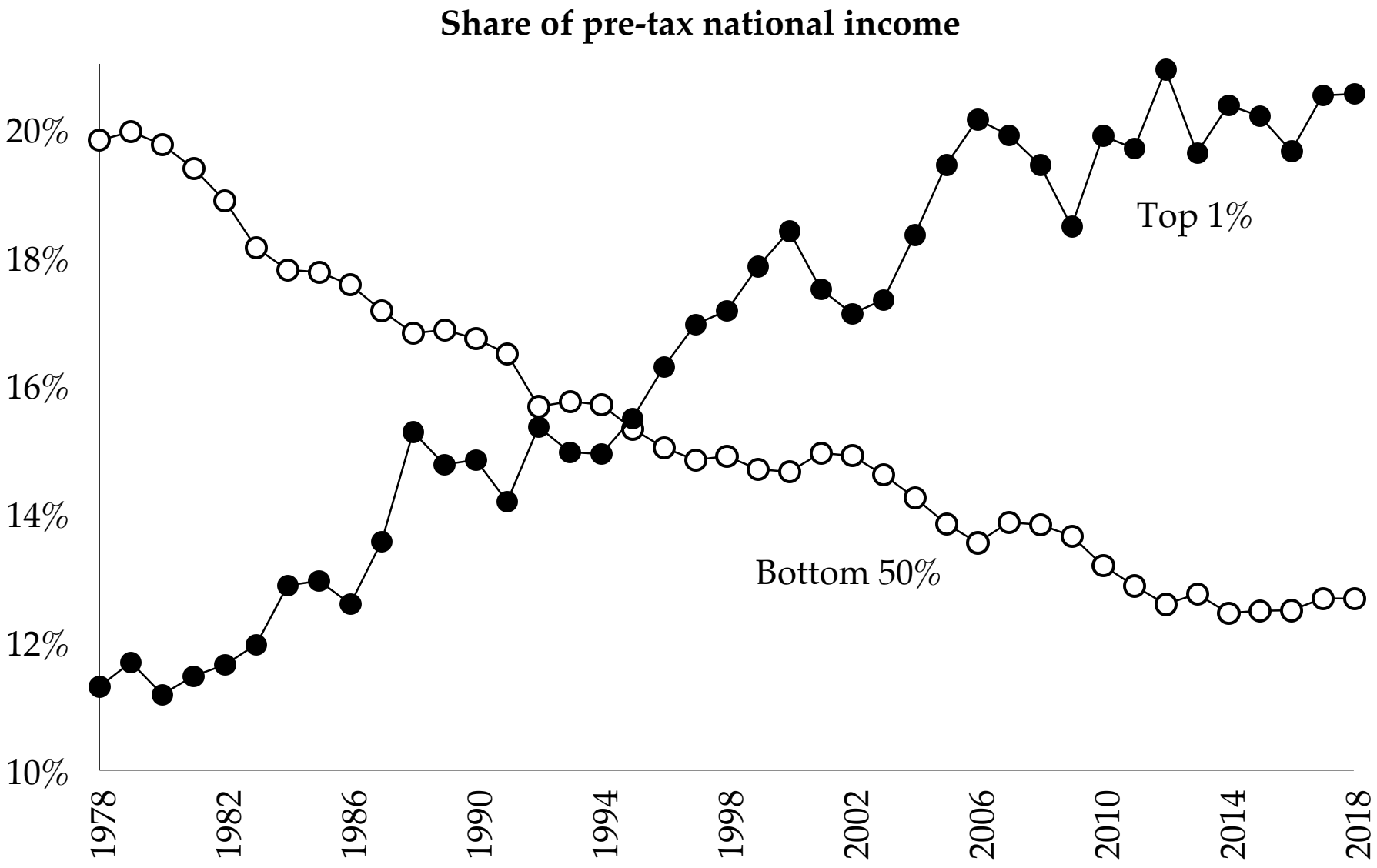
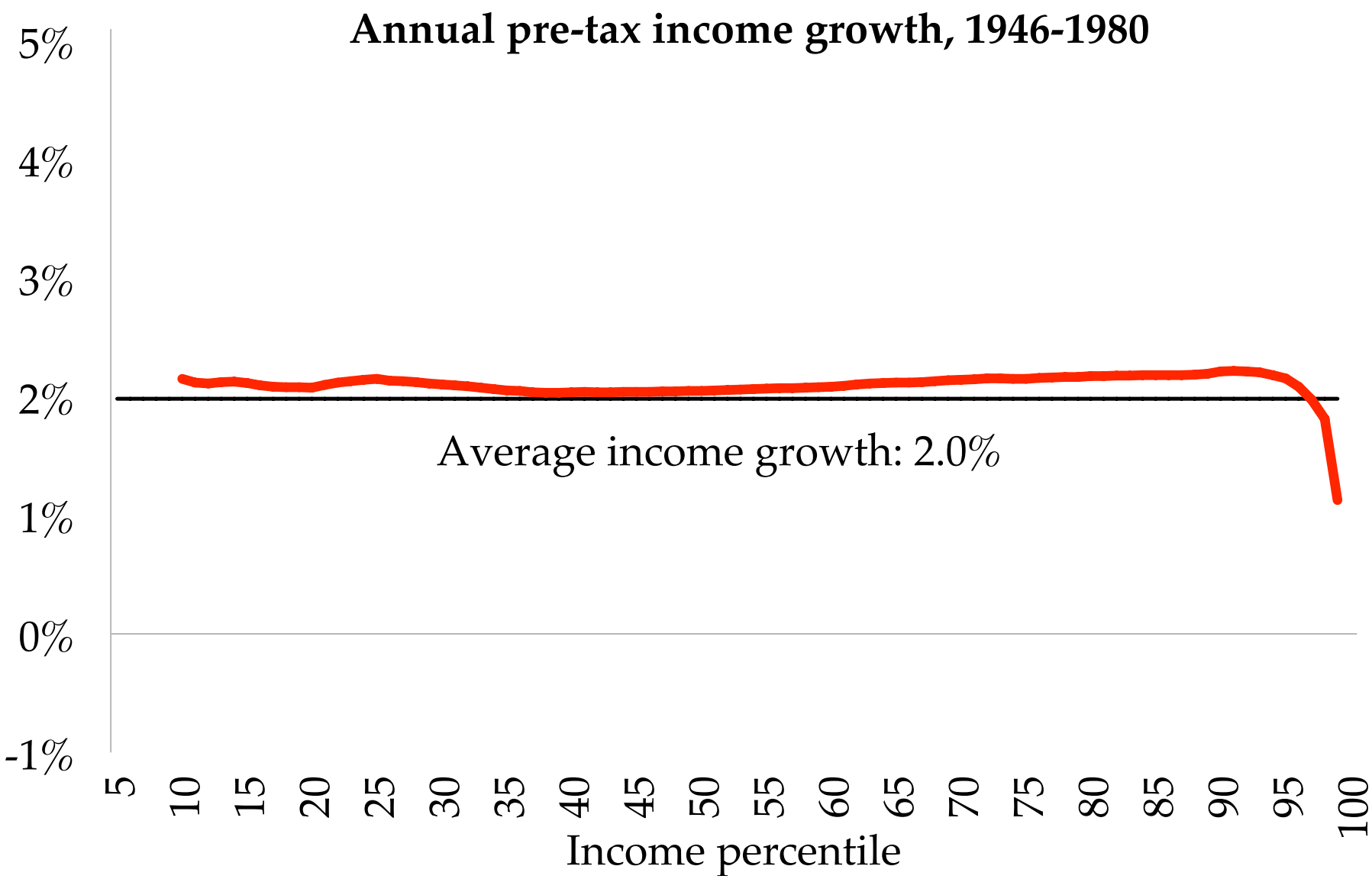
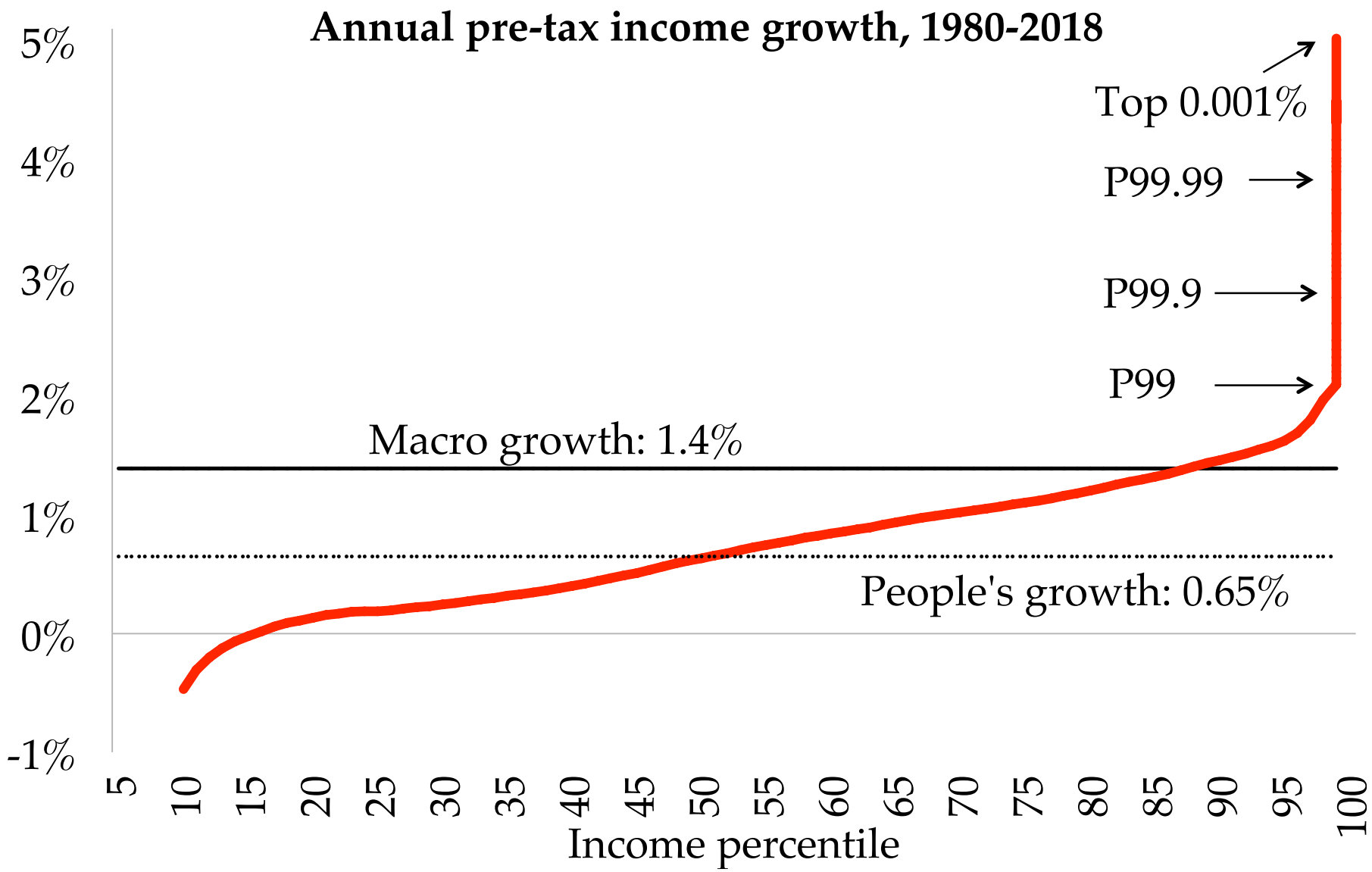
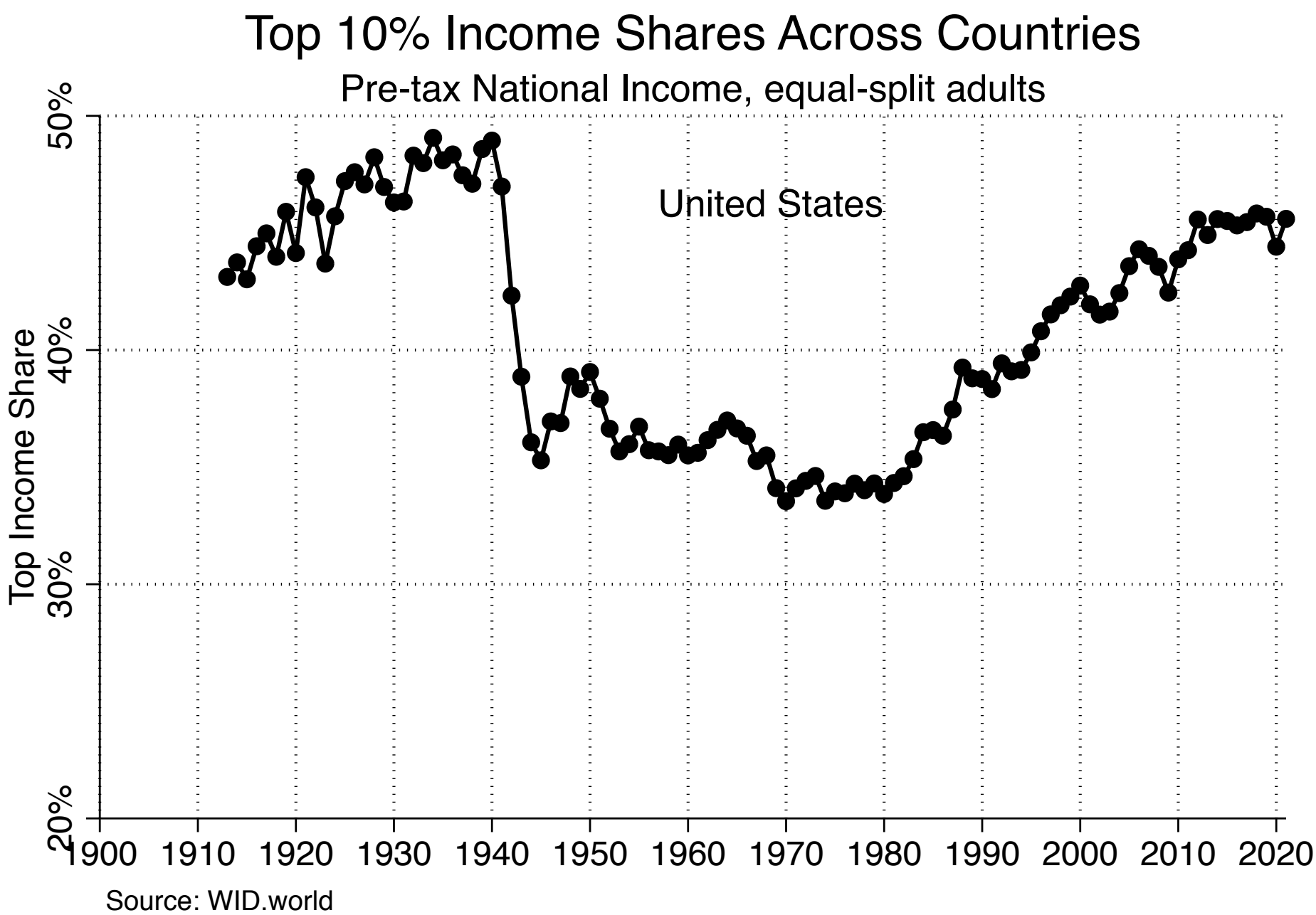
1990
2000
2010
2020

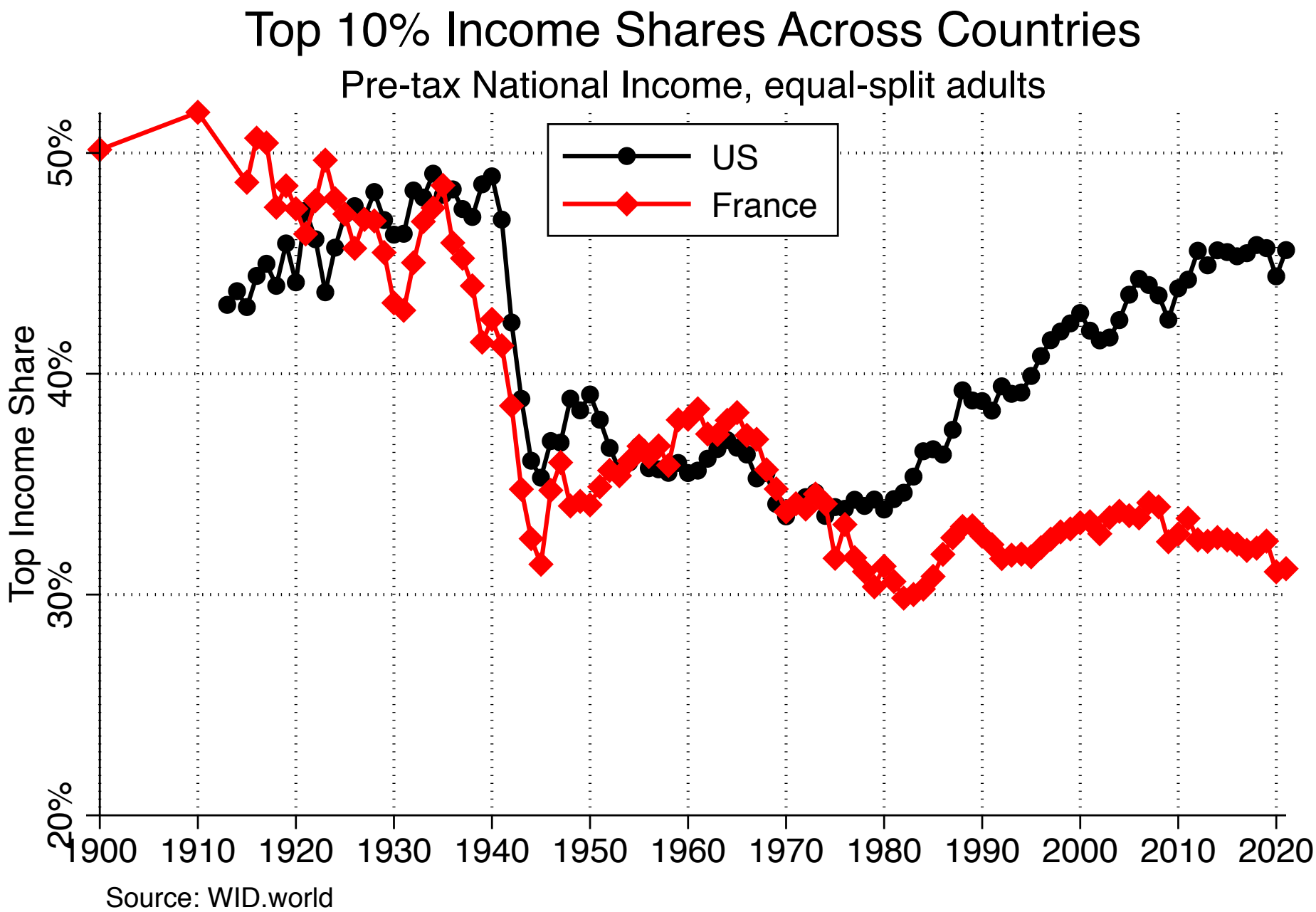


Source: Saez and Zucman (2019), Figure 1.1


Annual pre-tax income growth, 1946-1980
5%
4%
3%
2%
1%
0%
-1%
Average income growth: 2.0%
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
Income percentile


Annual pre-tax income growth, 1980-2018
5%
4%
3%
2%
1%
0%
-1%
Top 0.001%
P99.99
P99.9
P99
Macro growth: 1.4%
People's growth: 0.65%
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
95
100
Income percentile


Top 10% Income Shares Across Countries
Pre-tax National Income, equal-split adults
United States
Top Income Share
50%
40%
30%
20%
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Source: WID.world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Pre-tax National Income, equal-split adults
US
France
Top Income Share
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1900
1910
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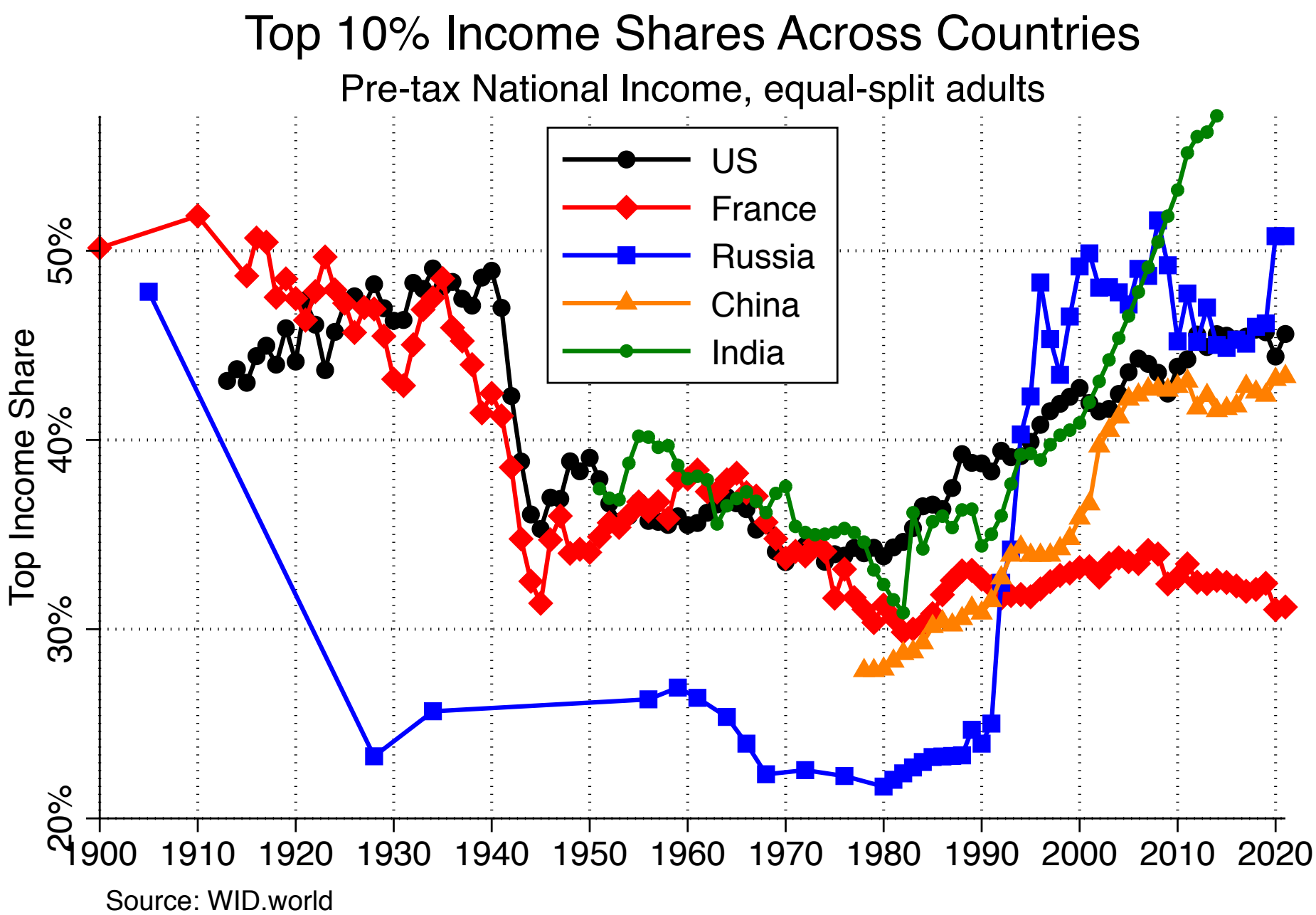
1950
1960
1970
1980
1990
2000
2010
2020
Source: WID.world


Top 10% Income Shares Across Countries
Pre-tax National Income, equal-split adults
US
France
Russia
China
India
Top Income Share
50%
40%
30%
20%
1900
1910
1920
1930
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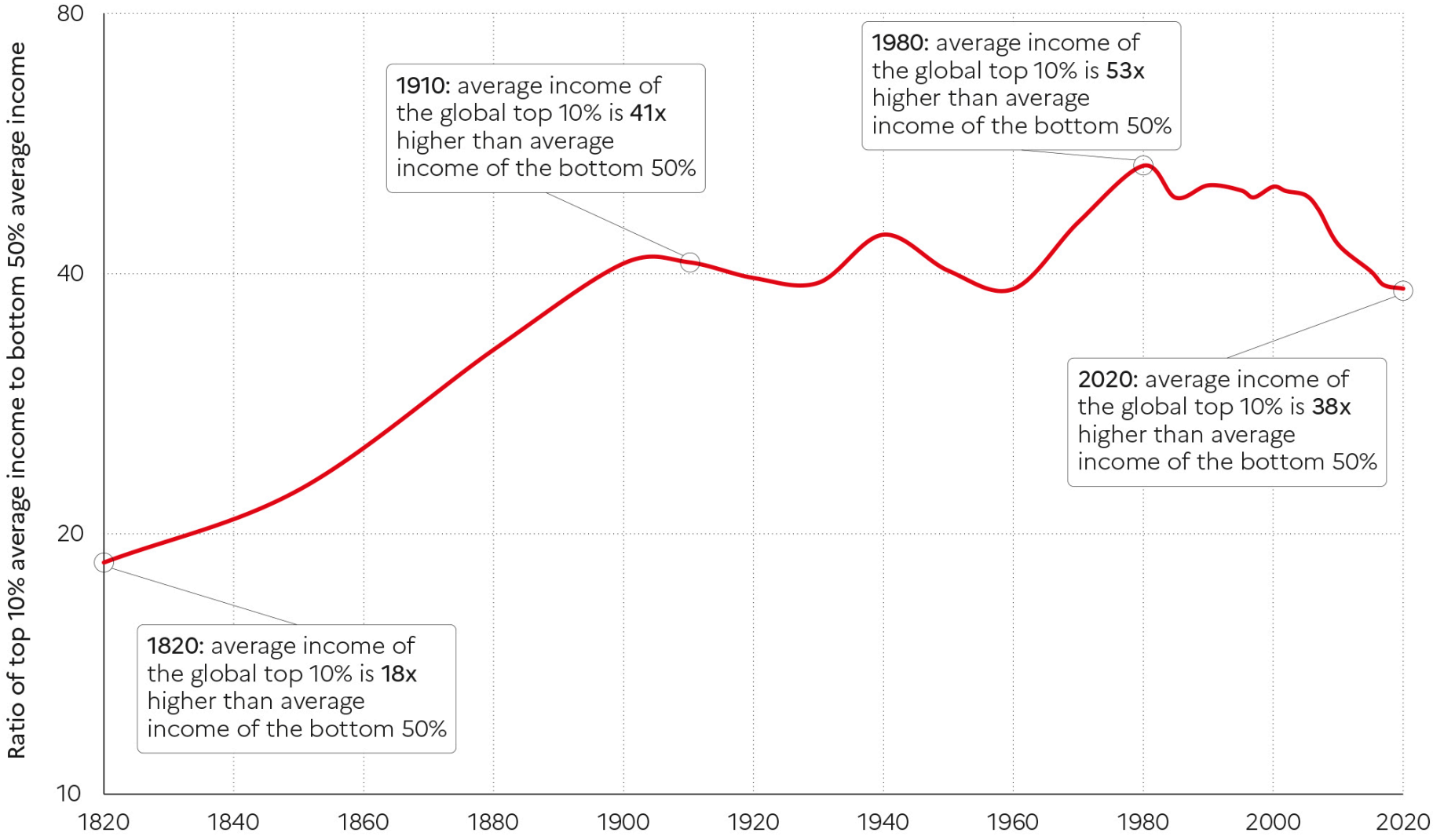
1990
2000
2010
2020
Source: WID.world

Figure 5 ***Global income inequality: T10/B50 ratio, 1820-2020***



Interpretation: *Global inequality, as measured by the ratio T10/B50 between the average income of the top 10% and the average income of the bottom 50%, more than doubled between 1820 and 1910, from less than 20 to about 40, and stabilized around 40 between 1910 and 2020. It is too early to say whether the decline in global inequality observed since 2008 will continue. Income is measured per capita after pension and unemployement insurance transfers and before income and wealth taxes.* ***Sources and series:*** *wir2022.wid.world/lmethodology and Chancel and Piketty (2021).*

Govt Redistribution with Taxes and Transfers

Government taxes individuals based on income and consumption and provides transfers: z is pre-tax income, $y = z - T(z) + B(z)$ is post-tax income

1) If inequality in y is less than inequality in z $\Leftrightarrow$ tax and transfer system is redistributive (or progressive)

2) If inequality in y is more than inequality in z $\Leftrightarrow$ tax and transfer system is regressive

a) If $y = z \cdot (1 - t)$ with constant t, tax/transfer system is neutral

b) If $y = z \cdot (1 - t) + G$ where G is a universal (lumpsum) allowance, then tax/transfer system is progressive (approx what rich countries do)

c) If $y = z - T$ where T is a uniform tax (poll tax), then tax/transfer system is regressive

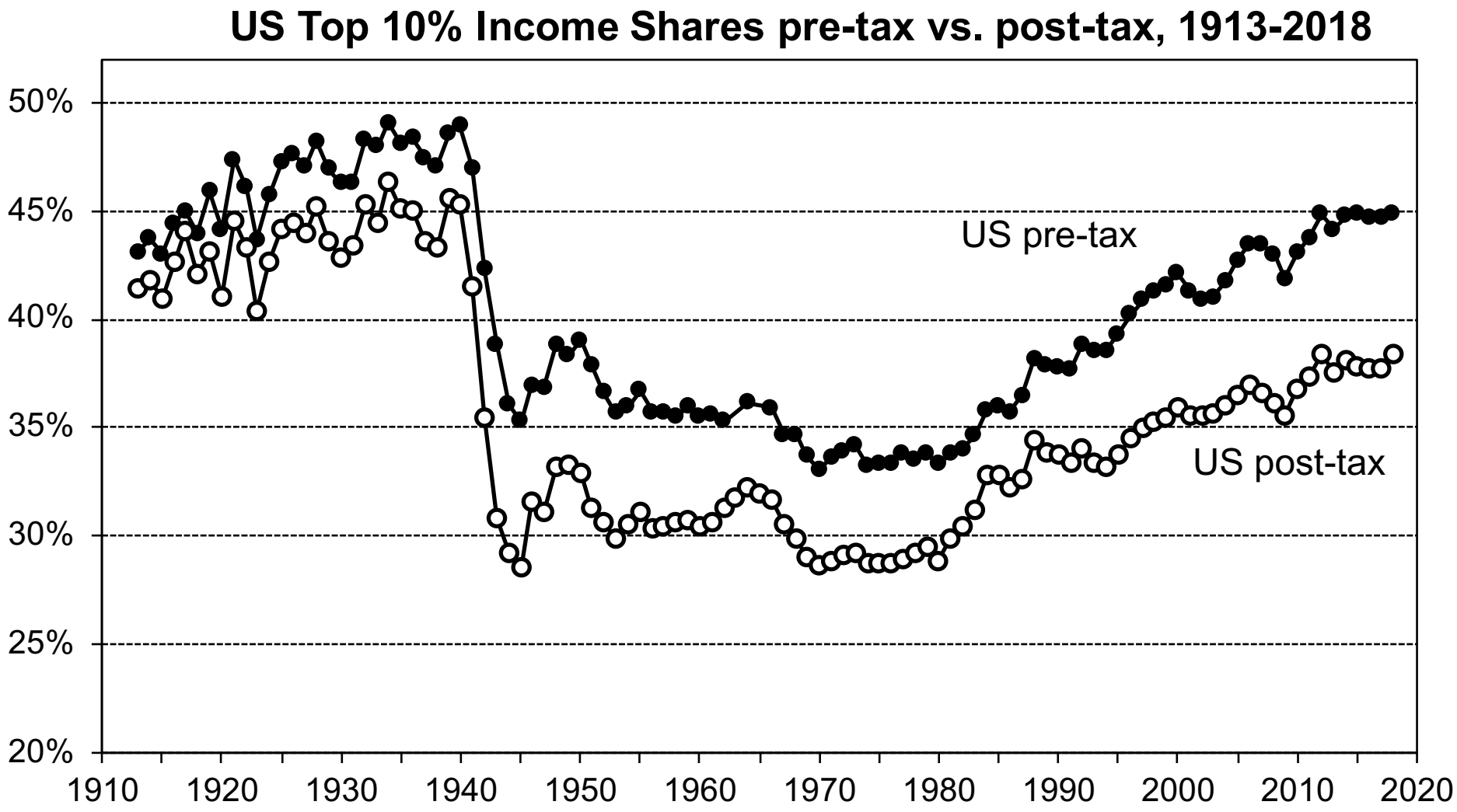
US Distributional National Accounts

Piketty-Saez-Zucman (2018) distribute both pre-tax and post-tax US national income across adult individuals

Pre-tax income is income before taxes and transfers

Post-tax income is income net of all taxes and adding all transfers and public good spending

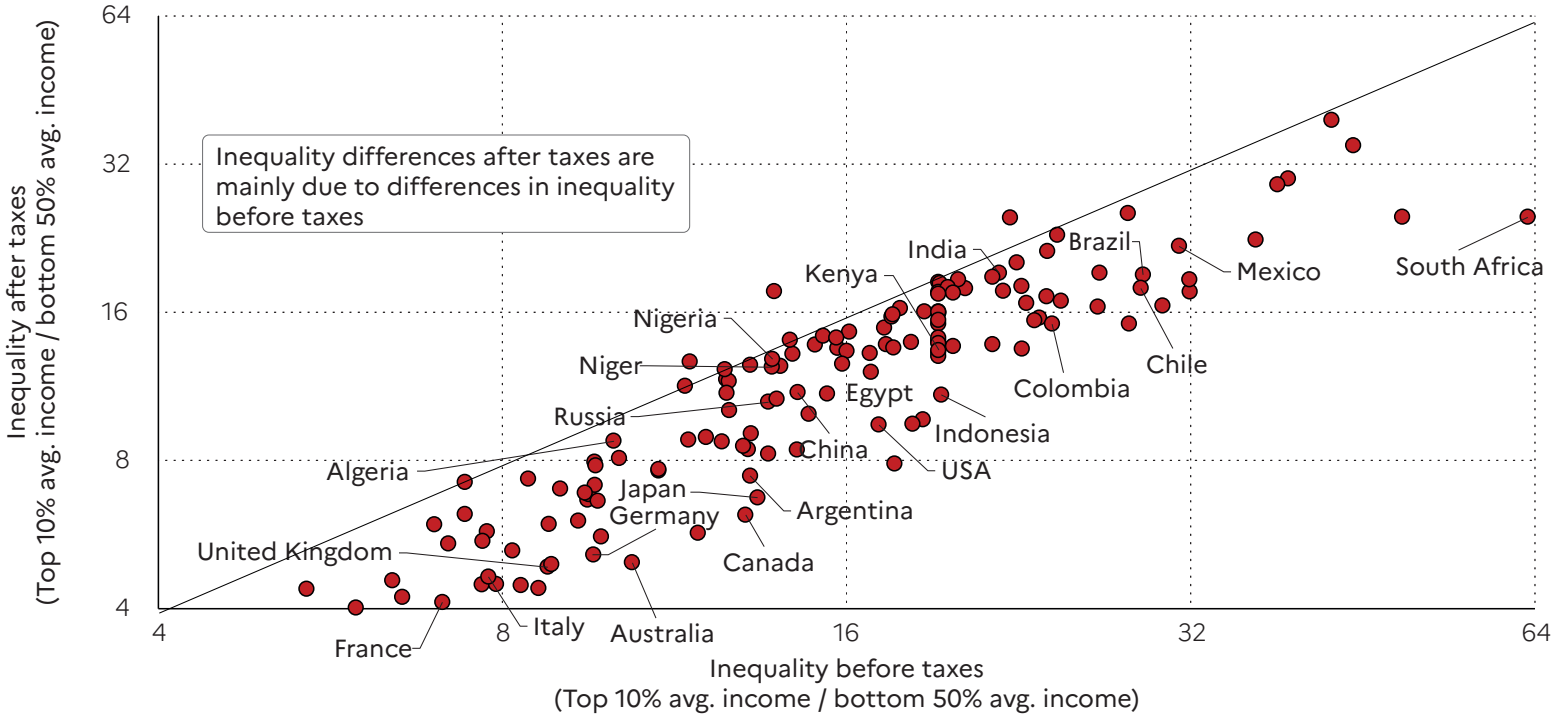
Both concepts add up to national income, consistent with national accounts aggregates, and provide a comprehensive view of the mechanical impact of government redistribution



Top income shares of pretax and posttax national income among adults (income within married couples equally split). Source is Piketty, Saez, Zucman (2018) for US and Piketty et al. (2020) for France.

Inequality differences after taxes are mainly due to inequality gaps before taxes: role of pre-distribution

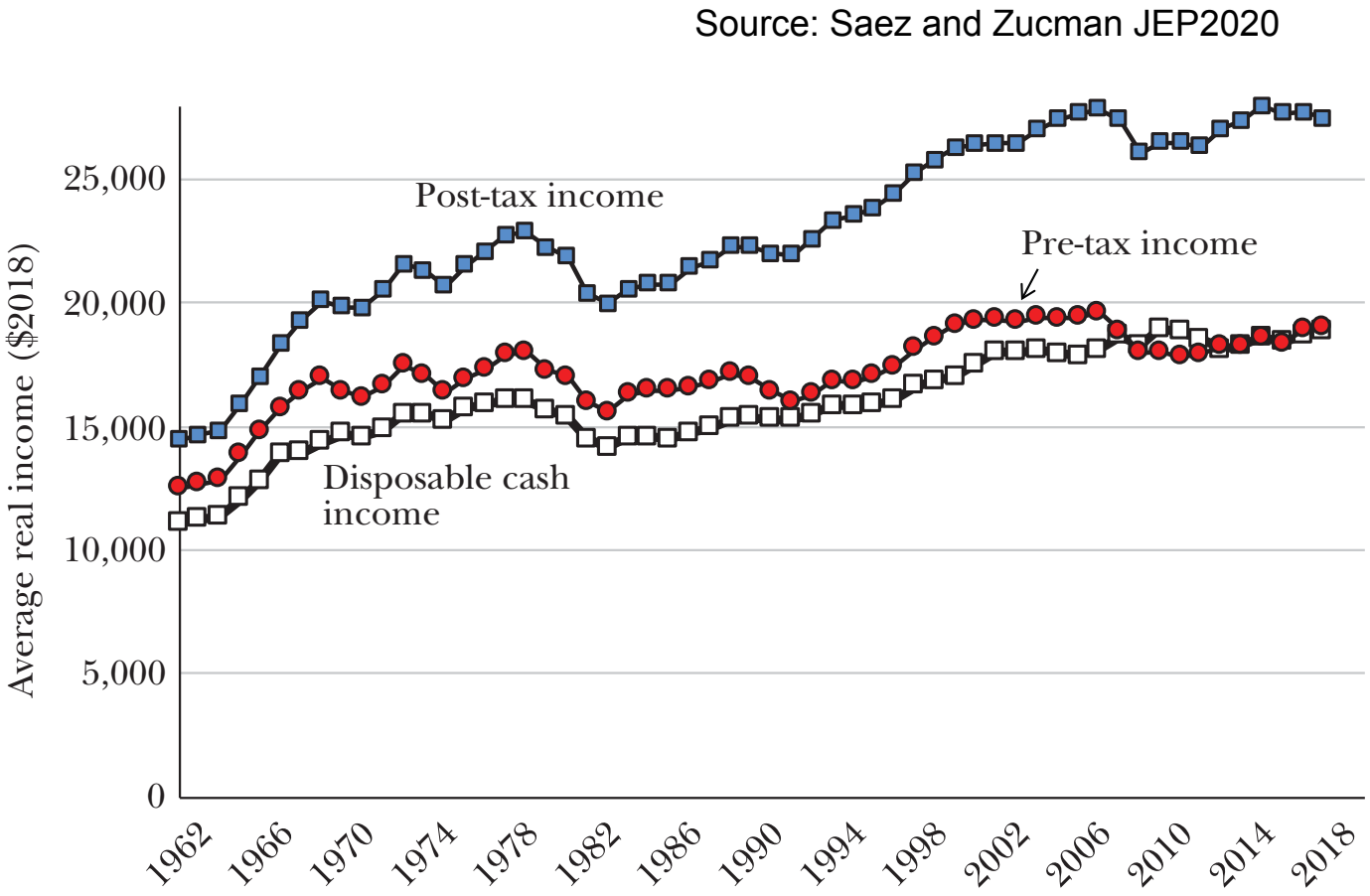
Figure 1.10 *Inequality before and after taxes 2018-2021: Top 10/Bottom 50 income gap*



Interpretation: *Before taxes, the bottom 50% in South Africa earns 63 times less than the top 10%, whereas after taxes, the bottom 50% earns 24 times less than the top 10%. Income is measured after pension and unemployment payments and benefits received by individuals but before other taxes they pay and transfers they receive. Data for 2018-2021.* ***Sources and series:*** *wir2022.wid.world/methodology*

Figure 6

The Evolution of Bottom 50 Percent Incomes



Source: Piketty, Saez, and Zucman (2018), updated September 2020.

Note: The figure depicts the evolution of the real incomes per adult (in 2018 dollars) for the bottom half of the income distribution for three income concepts: (1) pre-tax income before deducting taxes or adding government transfers (concept sums up to national income), (2) post-tax income that deducts all taxes and adds all transfers (cash and in-kind) and collective public expenditures minus the government deficit (also sums up to national income), (3) disposable cash income which is pre-tax income minus all taxes plus cash (or quasi-cash) transfers, i.e., (3) does not include in-kind transfers (primarily Medicaid and Medicare) and collective public expenditures that are included in (2).

Inequality During COVID

Inequality data tends to lag almost real time growth data

Blanchet-Saez-Zucman '22 realtimeinequality.org provides US inequality statistics in real time by projecting inequality based on monthly aggregates and employment

1) COVID had a large negative impact on **factor income** (labor+capital income), especially among low earners (job loss)

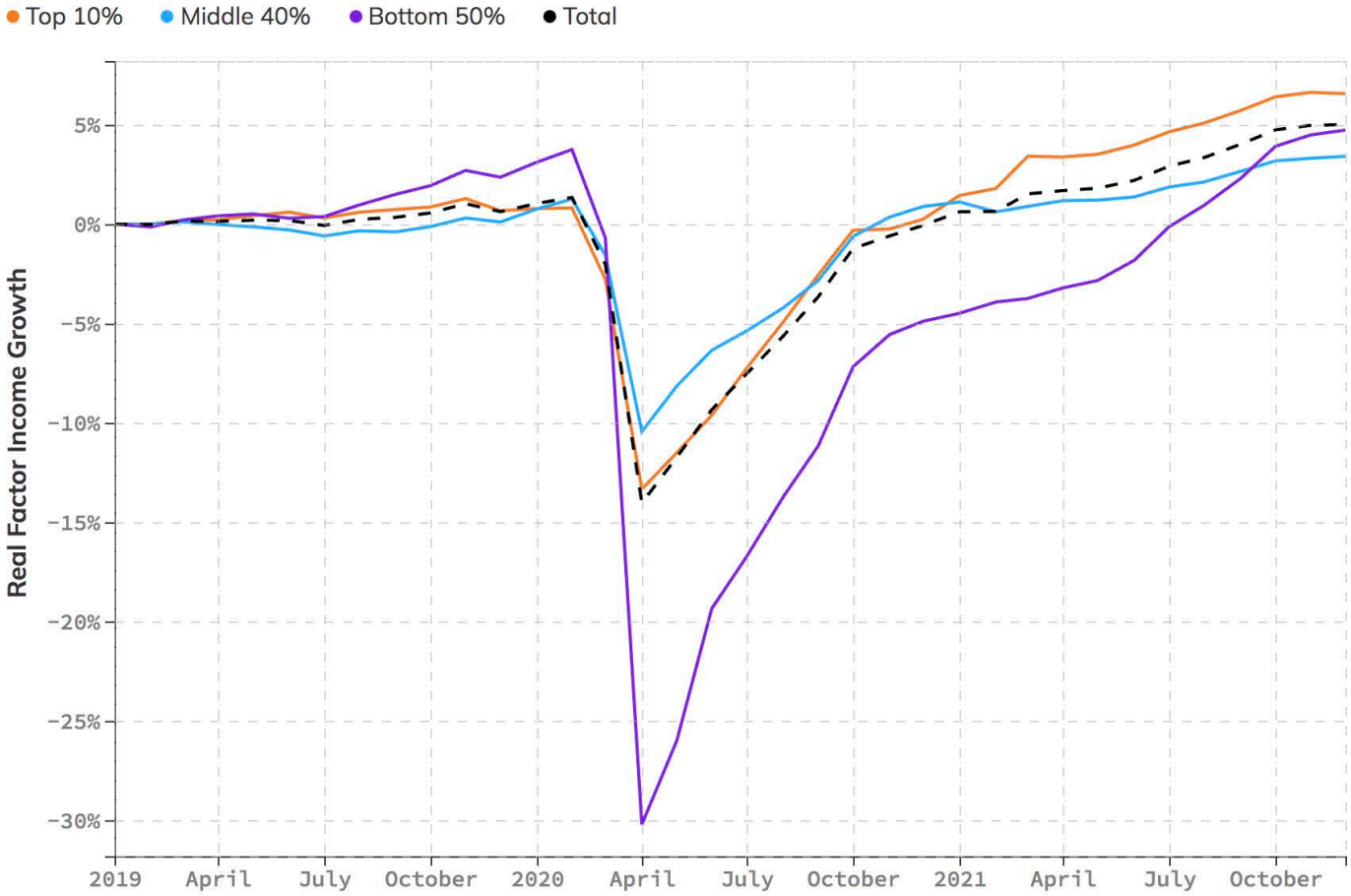
But all income groups recovered fast (in contrast to Great Recession of 2008)

2) But **disposable income** increased a lot during COVID, especially so for bottom 50% due to government transfers:

(a) direct checks to families, (b) extra unemployment benefits for job losers, (c) paycheck protection program for businesses, (d) expanded child tax credit

Factor Income During the Pandemic

Factor income (defined as labor income from work and capital income from ownership) fell a lot during COVID and the fall was much more dramatic for people in the Bottom 50%. But factor income recovered fast for all groups. All income figures adjust for price inflation.



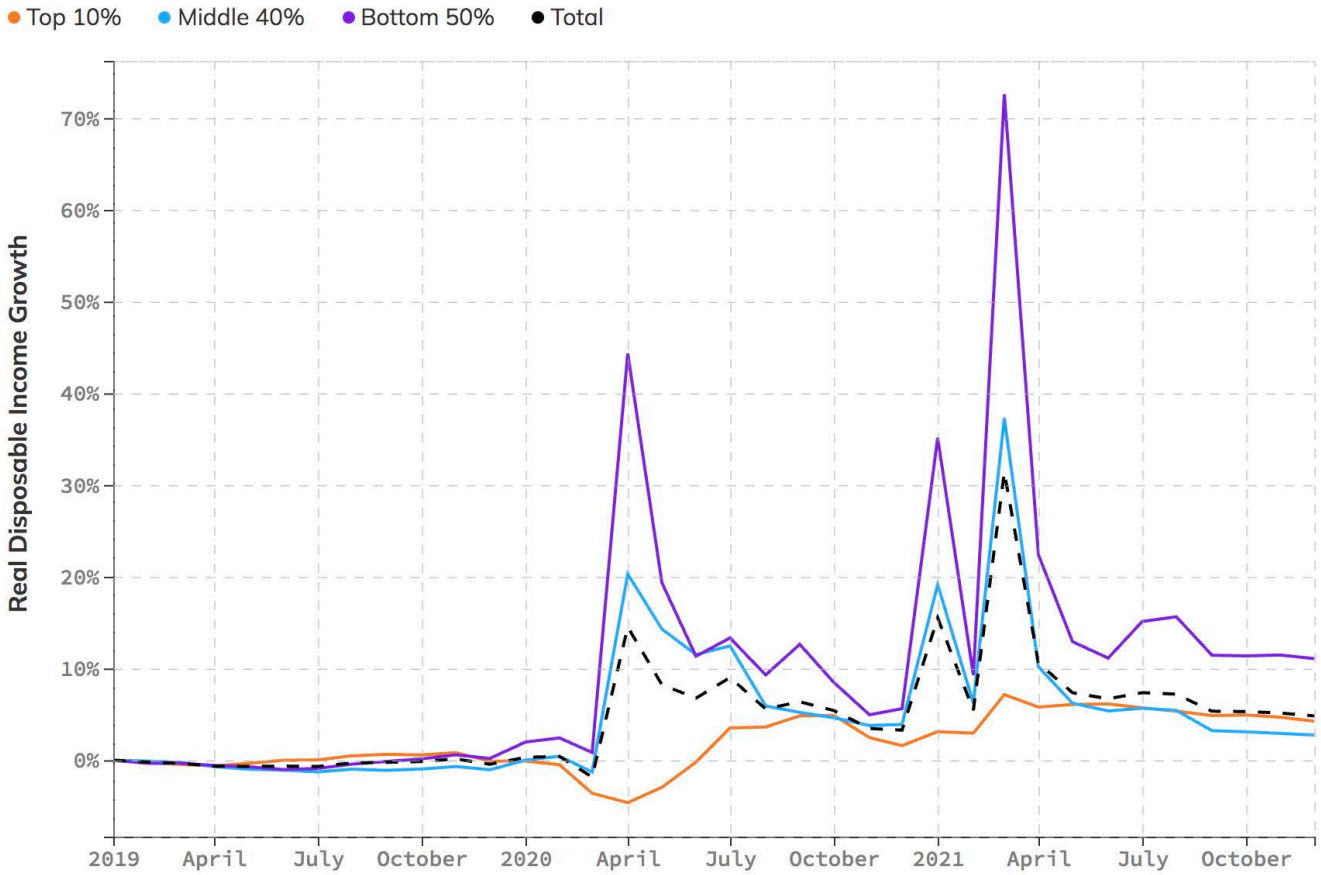
Factor income growth per unit

From 01/2019 to 12/2021

Group	Growth (%)	Gain ($)
☐ Top 0.01%	5.7%	$1.8M
☐ Top 0.1%	6.9%	$470k
☐ Top 1%	8.2%	$120k
☑ Top 10%	6.6%	$24k
☑ Middle 40%	3.4%	$2.9k
☑ Bottom 50%	4.7%	$870
☑ Total	5%	$4.0k

Disposable Income During the Pandemic

Thanks to government transfers to help with covid losses (such as checks to families, extra unemployment benefits, the paycheck protection program, etc.), disposable income (defined as income after taxes and cash transfers) increased a lot, especially so for the Bottom 50%.

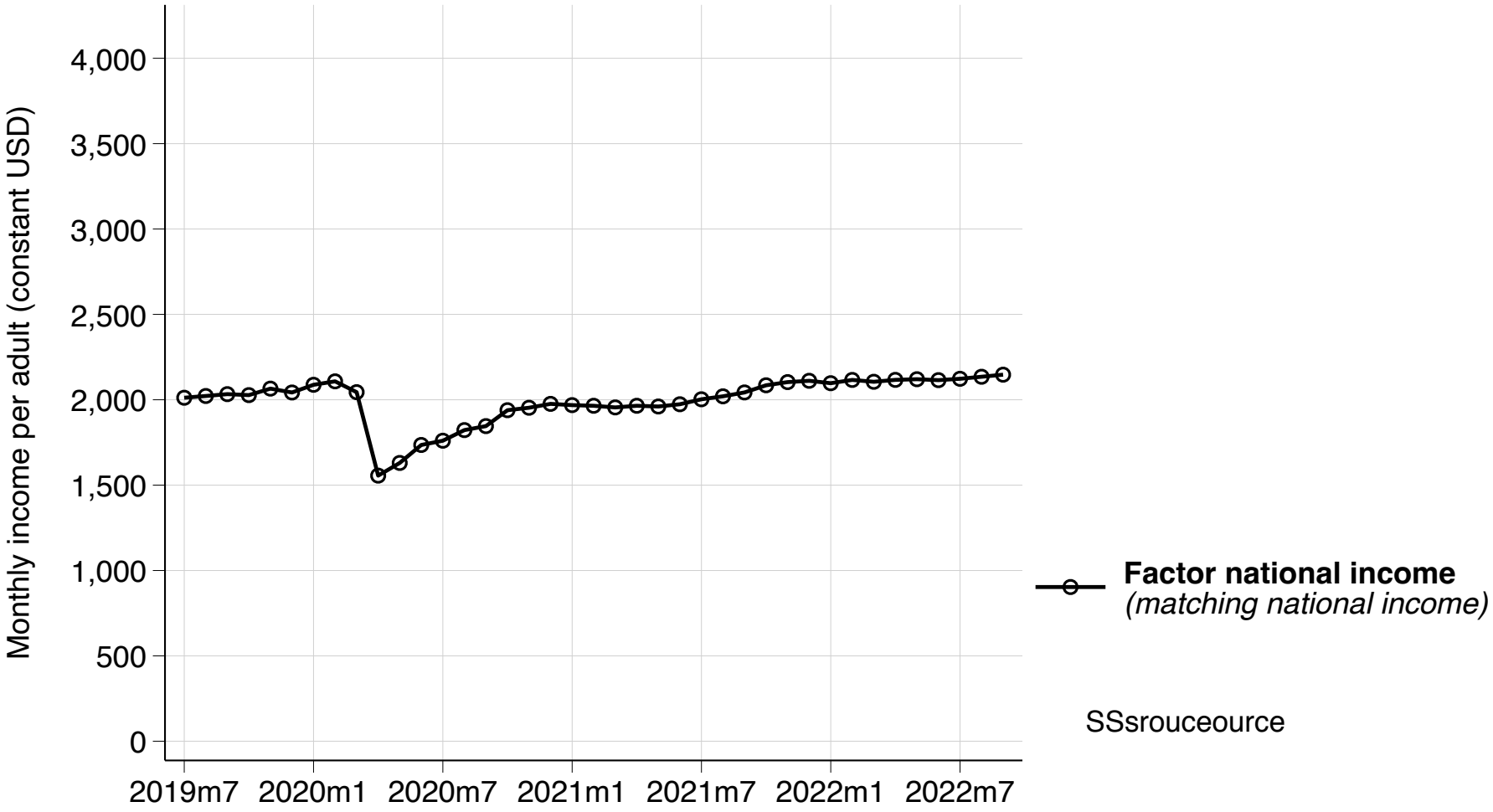


Disposable income growth per unit

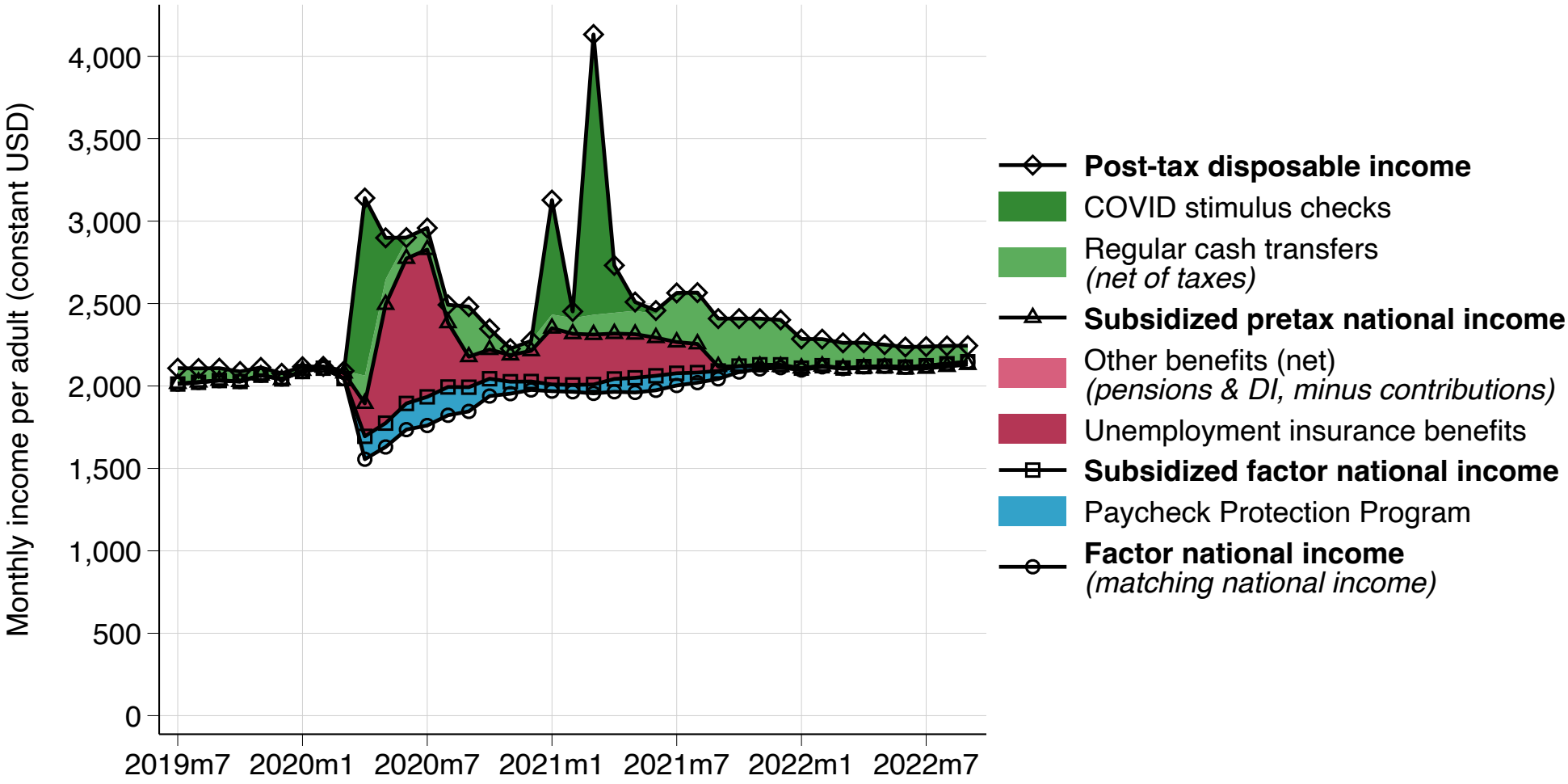
From 01/2019 to 12/2021

Group	Growth (%)	Gain ($)
☐ Top 0.01%	4.6%	$910k
☐ Top 0.1%	5.8%	$260k
☐ Top 1%	6.4%	$67k
☑ Top 10%	4.2%	$11k
☑ Middle 40%	2.7%	$1.9k
☑ Bottom 50%	11.1%	$2.6k
☑ Total	4.8%	$3.2k

Bottom 50% Incomes (aged 20-64): The Role of Government Transfers



Bottom 50% Incomes (aged 20-64): The Role of Government Transfers



Modern Tax Systems

Taxes are a combination of progressive and regressive taxes. In most OECD countries today: amount to giant flat rate tax relative to income (with some regressivity at the very top)

1) Consumption taxes (VATs outside the US, sales taxes, excise taxes) are regressive because rich can save

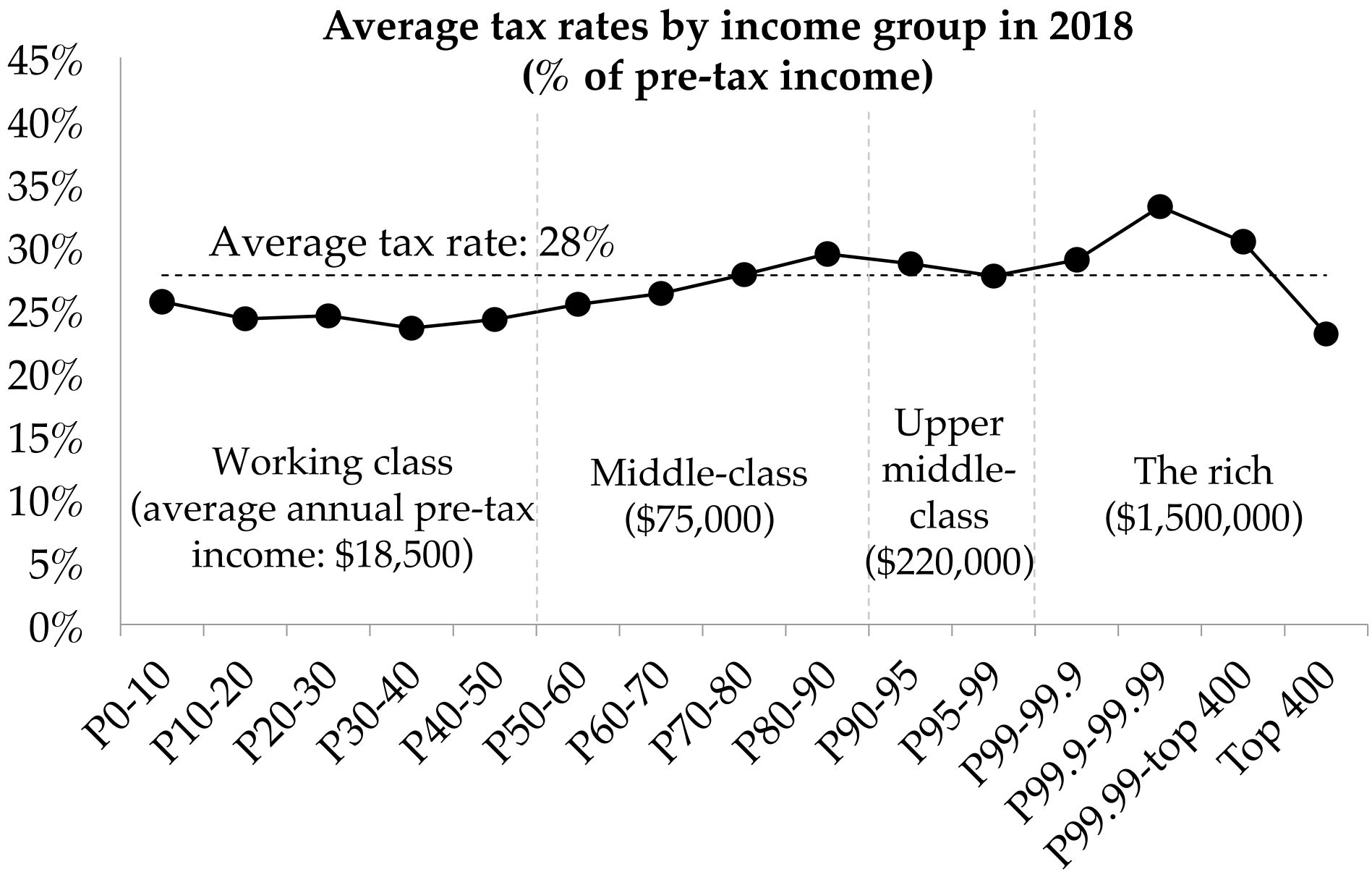
2) Labor income taxes tend be regressive due to caps on payroll taxes and because top is mostly capital income

3) Individual income tax is progressive except at very top

4) Corporate profits tax is progressive (flat nominal rate but corporate ownership concentrated at top)

5) Inheritance/estate, wealth taxes very progressive but small

Saez-Zucman 2019, 2023 do basic distributional analysis assigning consumption taxes to consumers, labor taxes to workers, capital taxes to owners (not ultimate incidence including behavioral responses)


Average tax rates by income group in 2018
(% of pre-tax income)
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Average tax rate: 28%
Working class
(average annual pre-tax
income: $18,500)
Middle-class
($75,000)
Upper
middle-
class
($220,000)
The rich
($1,500,000)
P0-10
P10-20
P20-30
P30-40
P40-50
P50-60
P60-70
P70-80
P80-90
P90-95
P95-99
P99-99.9
P99.9-99.99
P99.99-top 400
Top 400

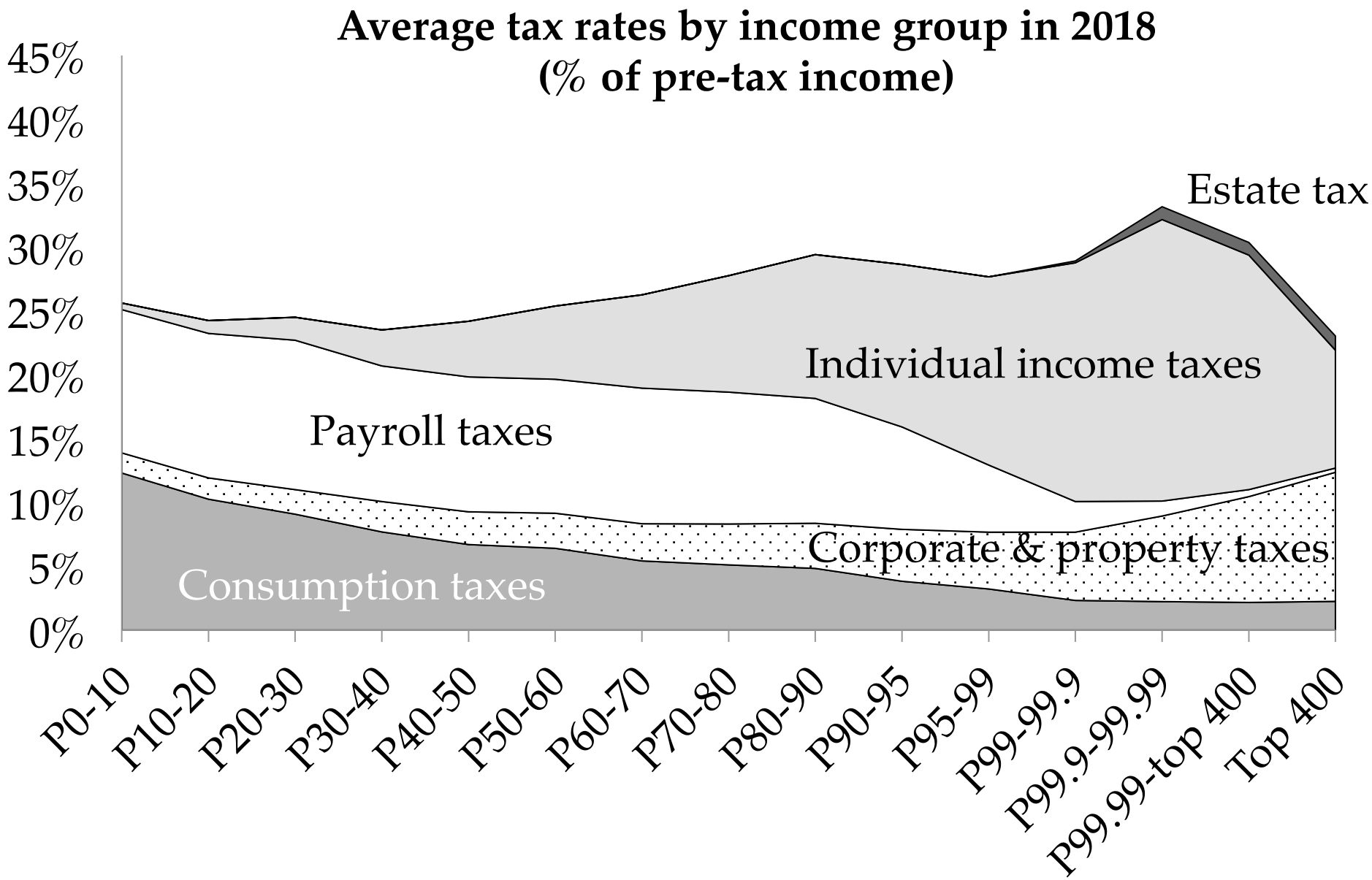
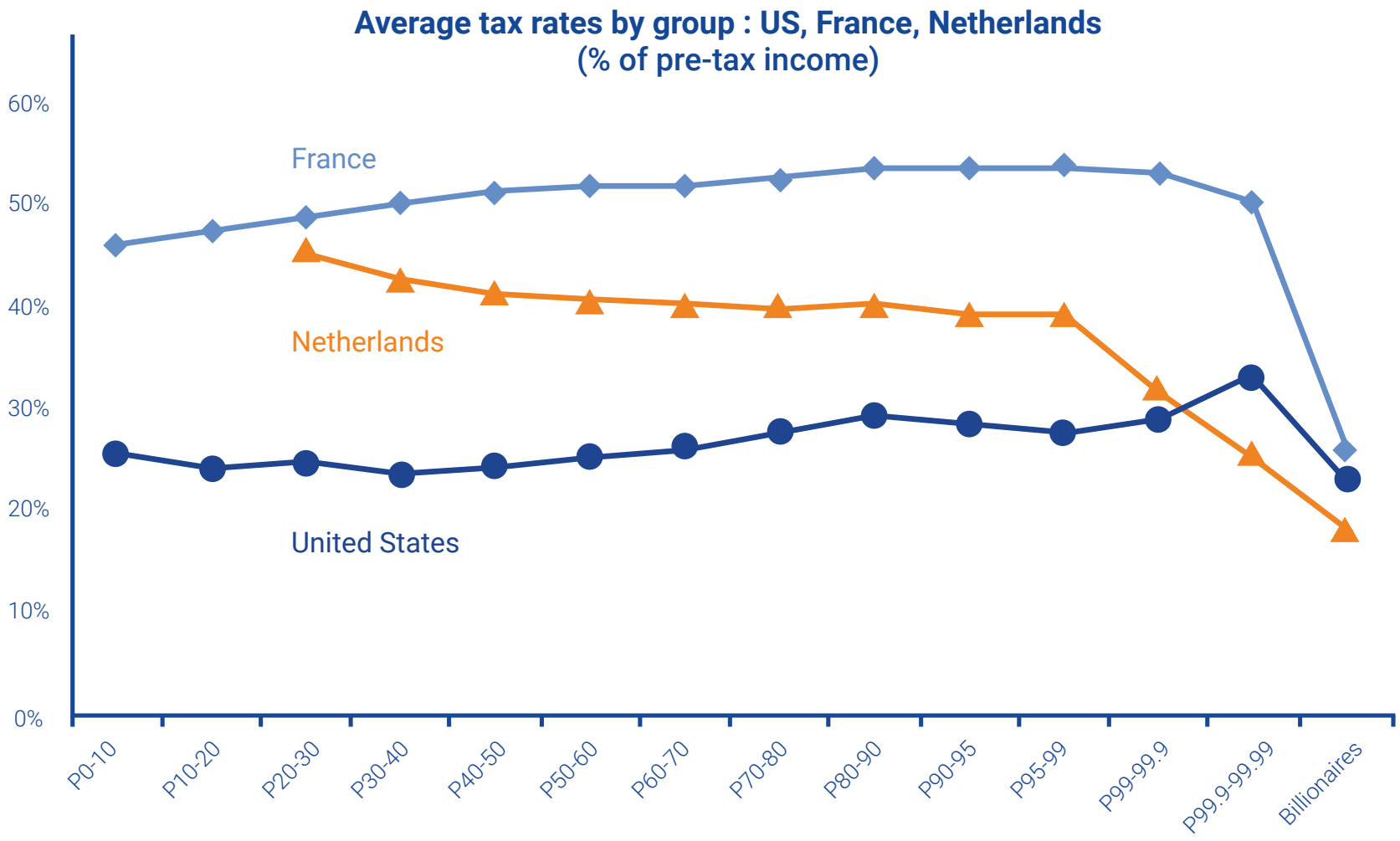

Average tax rates by income group in 2018
(% of pre-tax income)
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
Estate tax
Individual income taxes
Payroll taxes
Corporate & property taxes
Consumption taxes
P0-10
P10-20
P20-30
P30-40
P40-50
P50-60
P60-70
P70-80
P80-90
P90-95
P95-99
P99-99.9
P99.9-99.99
P99.99-top 400
Top 400

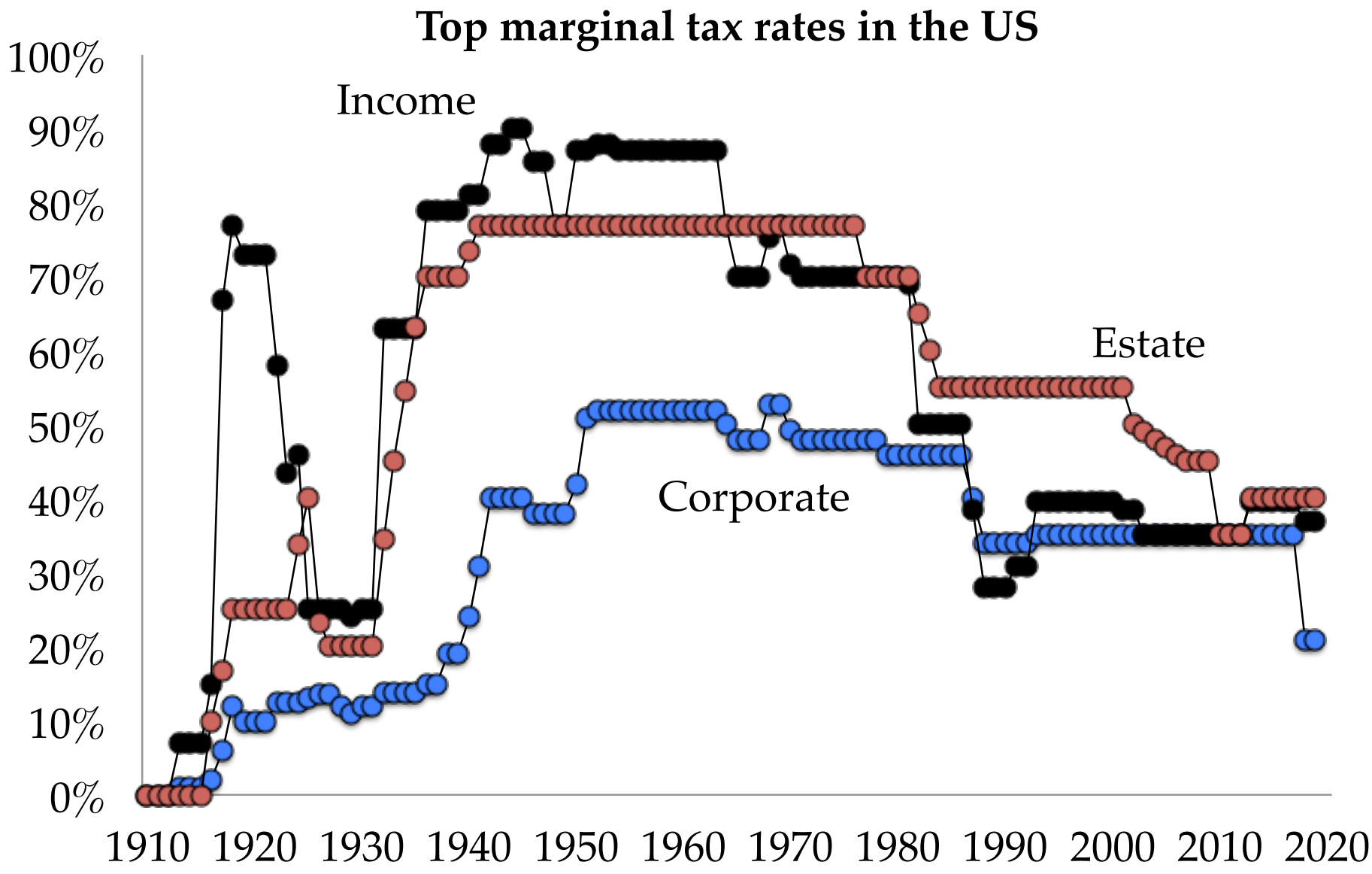
Figure 4

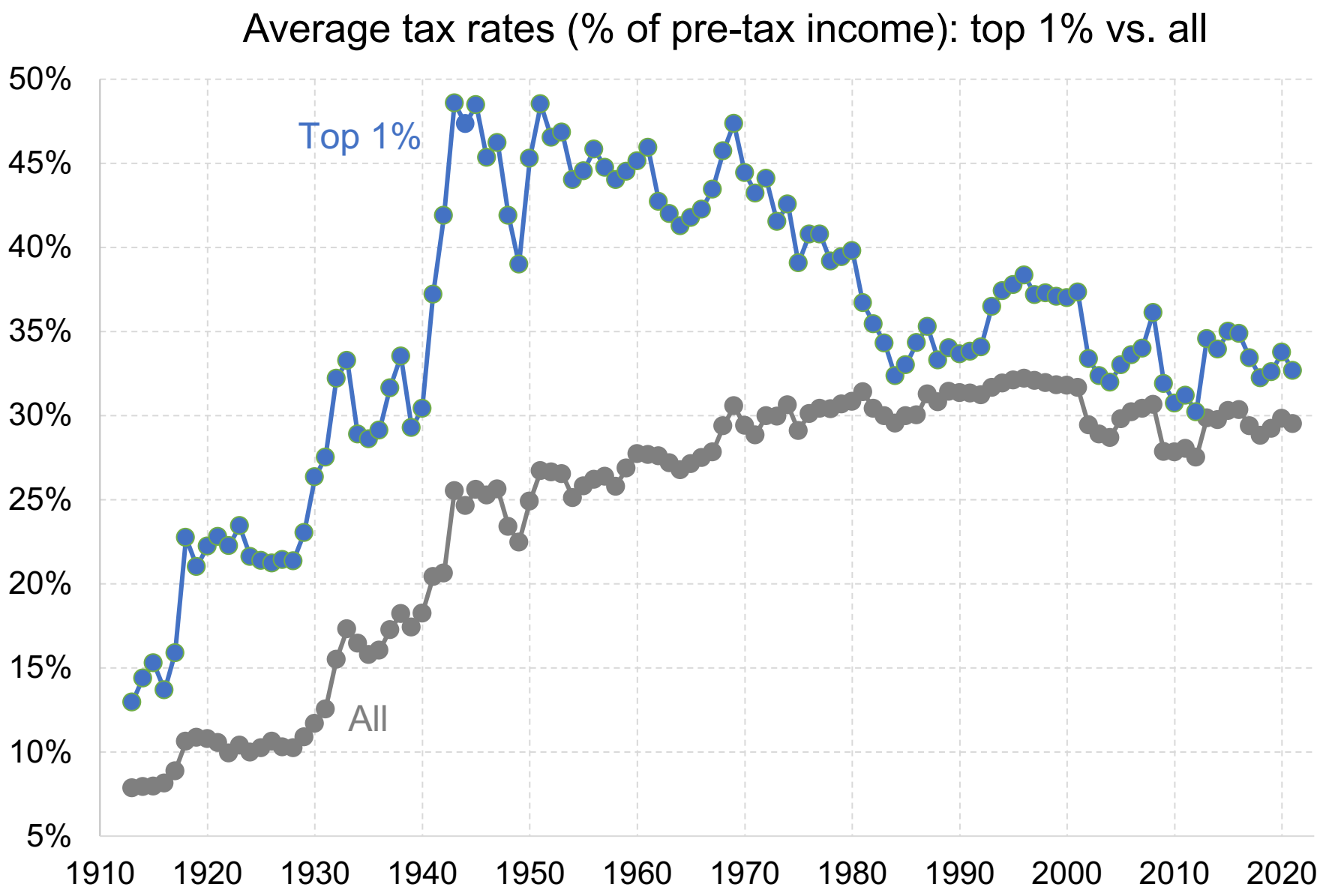
The tax deficit of billionaires

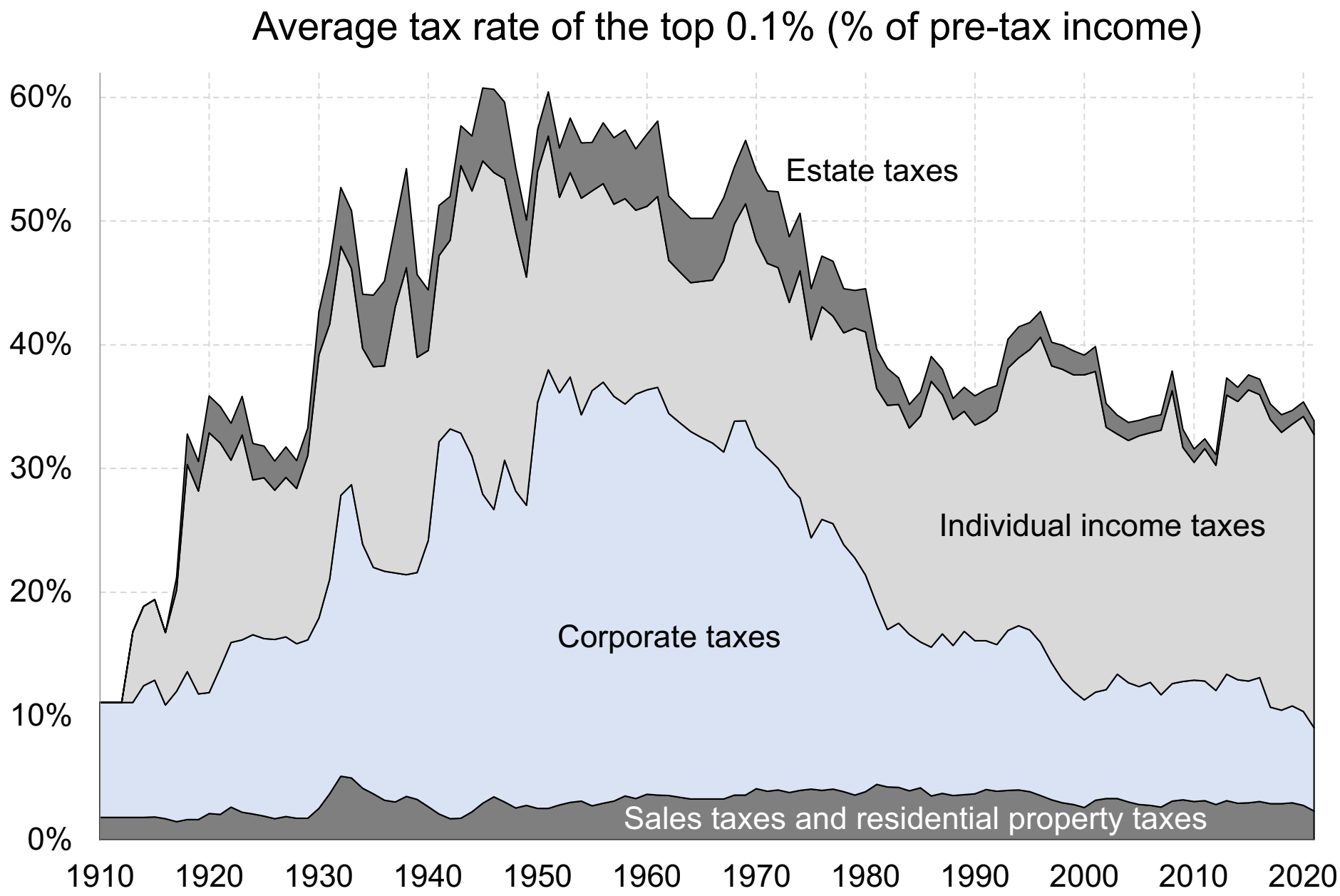
Source: Global Tax Evasion Report 2024



Notes: This figure reports estimates of effective tax rates by pre-tax income groups and for billionaires in France, the Netherlands, and the United States. These estimates include all taxes paid at all levels of government and are expressed as a percent of pre-tax income. P0-10 denotes the 10% of adults at the bottom of the pre-tax income distribution, P10-20 the next decile, etc. Pre-tax income includes all national income (measured following standard national account definitions) before government taxes and transfers and after the operation of the pension system. National income excludes unrealized capital gains but includes the retained earnings of companies. Sources: see chapter 4.


Top marginal tax rates in the US
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Income
Estate
Corporate
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020


Average tax rates (% of pre-tax income): top 1% vs. all
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Top 1%
All


Average tax rate of the top 0.1% (% of pre-tax income)
60%
50%
40%
30%
20%
10%
0%
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Estate taxes
Individual income taxes
Corporate taxes
Sales taxes and residential property taxes

Government Redistribution in Practice

1) Tax system: Taxes can be more or less progressive (right vs. left debate). Most OECD countries today have fairly flat tax systems. Taxes used to be very progressive in US and UK.

2) Social state: (size of social state also right vs. left debate)

a) Publicly funded education: everybody gets access to quality education $\Rightarrow$ Pro-growth, redistributive and gives opportunity

b) Universal health care (outside US): everybody gets access to quality health care $\Rightarrow$ Redistributive by income and health

c) Retirement benefits: old get support $\Rightarrow$ redistributive in cross-section but not necessarily on life-time basis

d) Income support: direct redistribution but tends to be targeted to specific groups (children, unemployed, disabled, poor elderly) or in-kind (housing, nutrition, job training)

The Distribution of Global Economic Growth, 1980-2019

Total Per Capita Income Growth by Percentile in the World as a Whole, 1980-2019

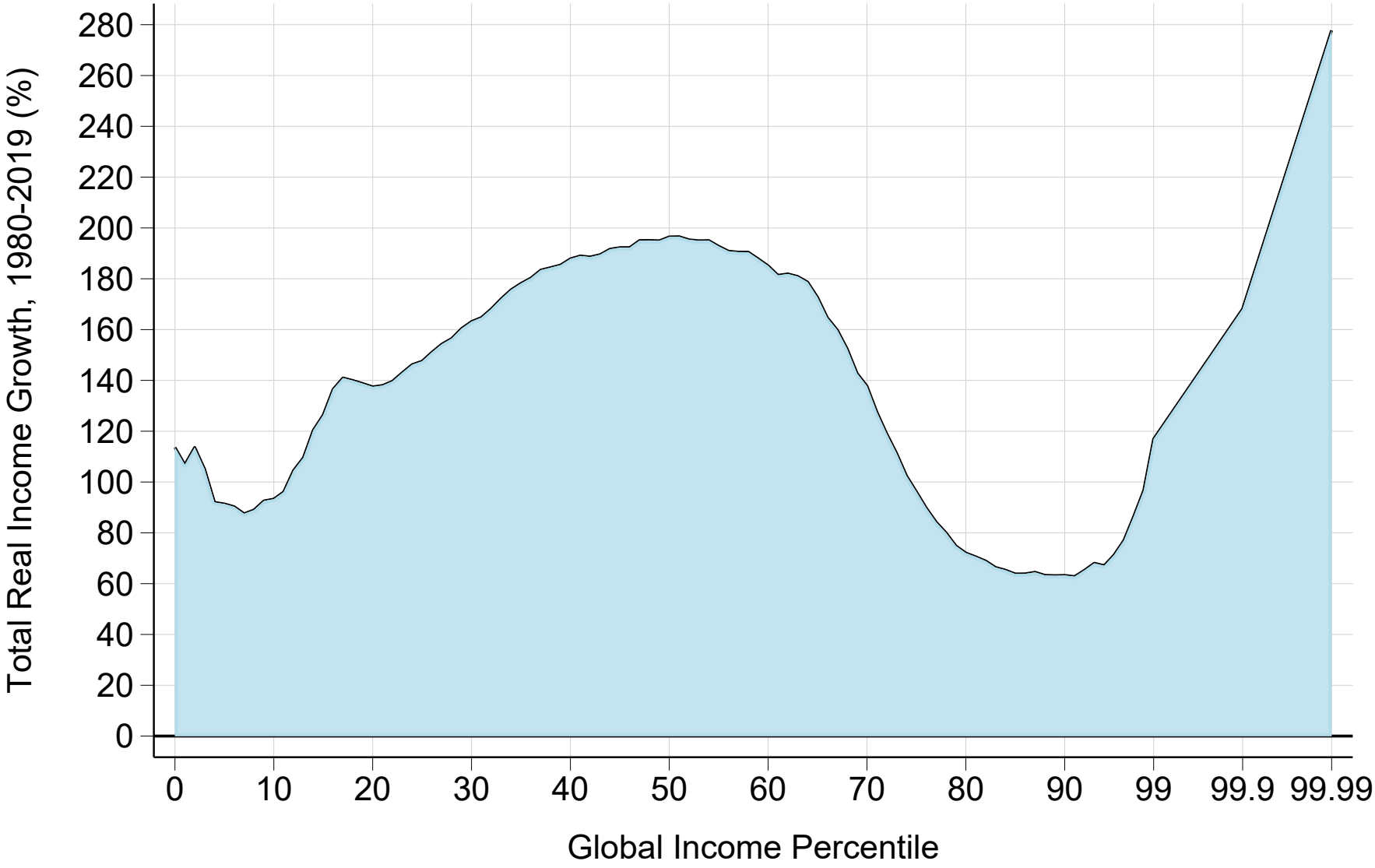
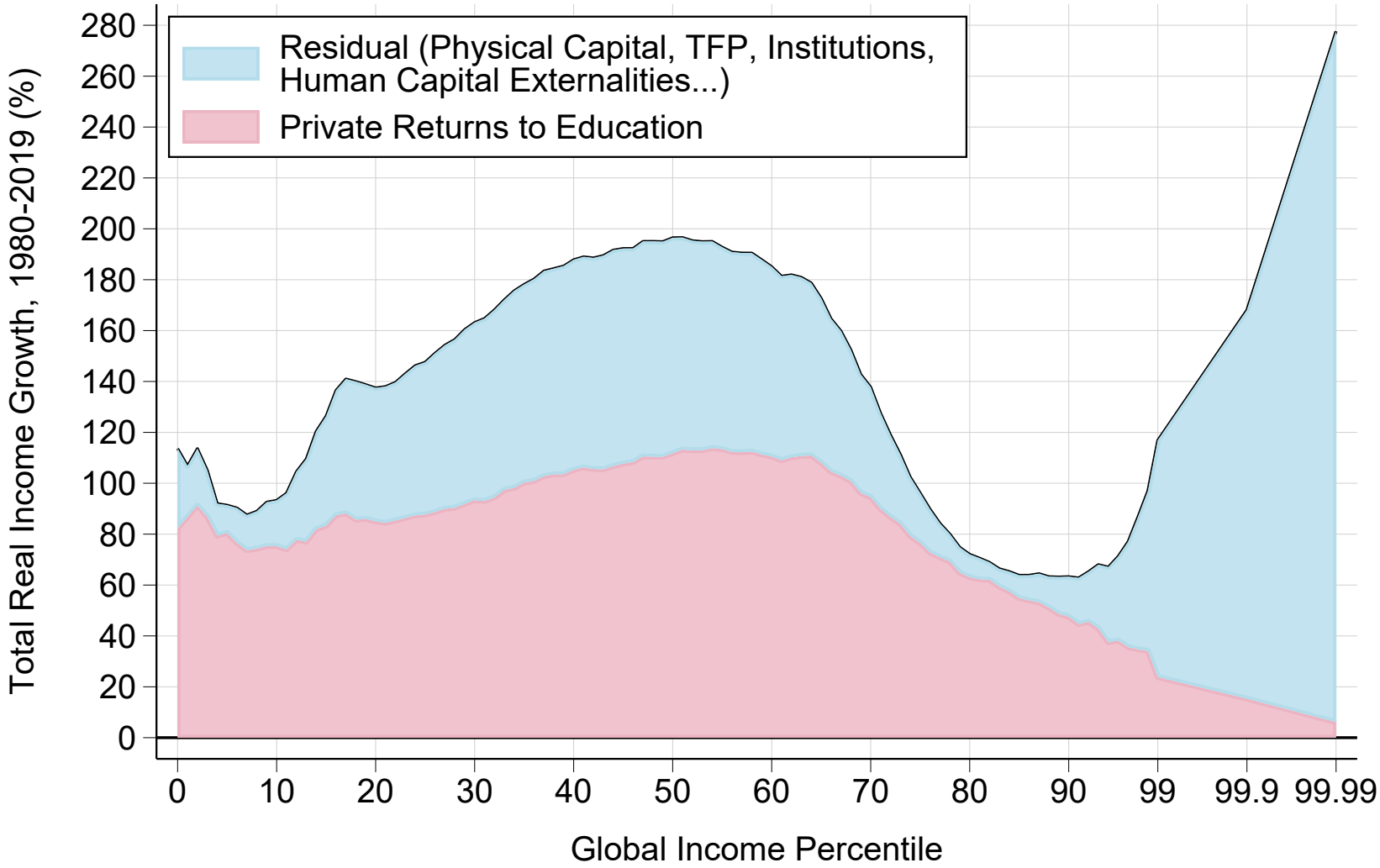
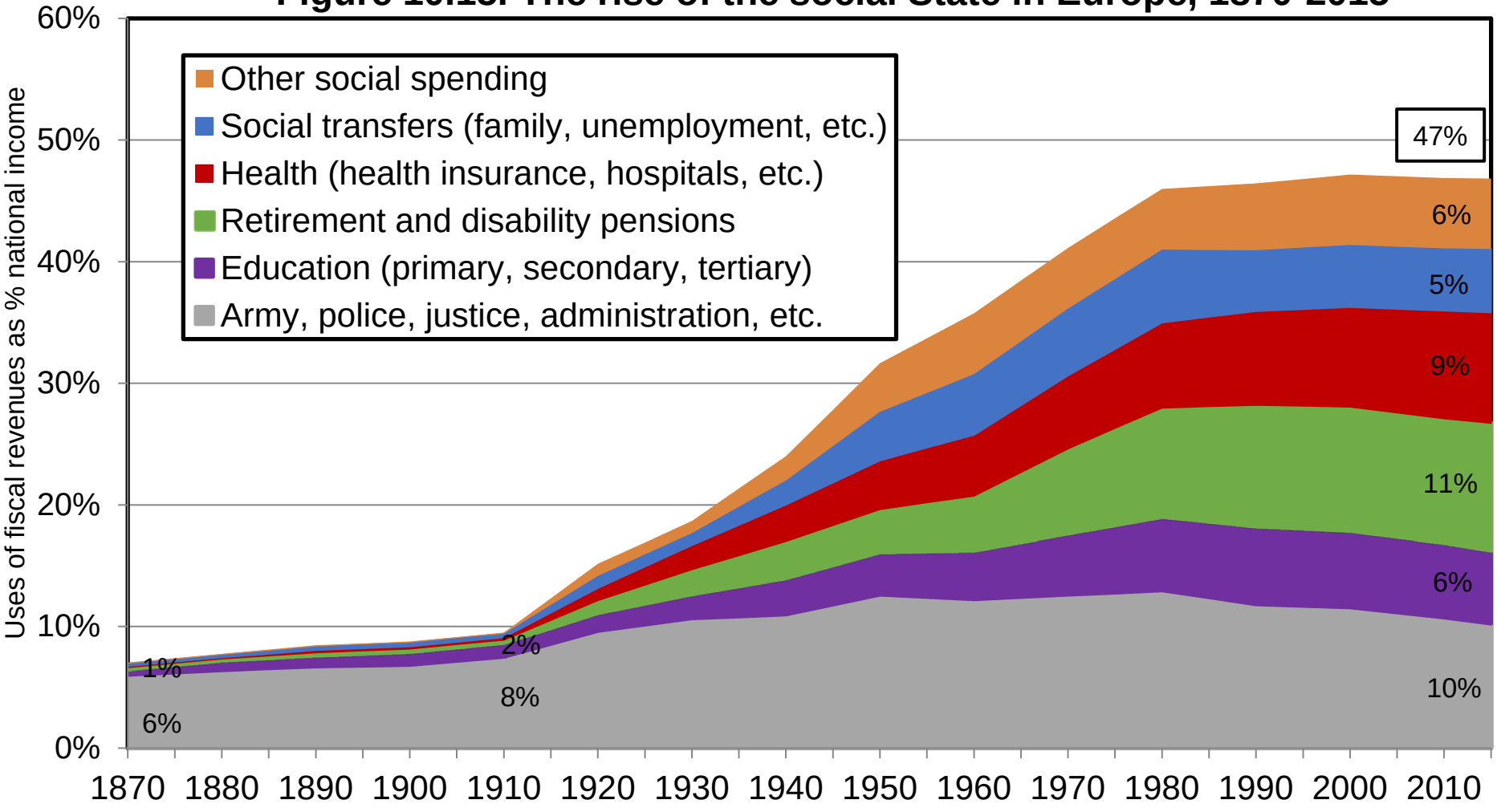


Figure 1 – Education and the Distribution of Global Economic Growth, 1980-2019



Notes. The figure plots total real income growth by global income percentile from 1980 to 2019, decomposing it into a part that can be explained by private returns to schooling and an unexplained component. The upper shaded area represents the growth rates that would have prevailed absent any improvement in the education of the world's working-age population since 1980. The lower shaded area represents the corresponding contribution of education to economic growth. From 1980 to 2019, the average income of the 20th percentile of the world distribution of income grew by 140%, 80 percentage points of which can be rationalized by private returns to education. Education thus accounts for about 60% of growth among this group since 1980.

Figure 10.15. The rise of the social State in Europe, 1870-2015



Interpretation. In 2015, fiscal revenues represented 47% of national income on average in Western Europe et were used as follows: 10% of national income for regalian expenditure (army, police, justice, general administration, basic infrastructure: roads, etc.); 6% for education; 11% for pensions; 9% for health; 5% for social transfers (other than pensions); 6% for other social spending (housing, etc.). Before 1914, regalian expenditure absorbed almost all fiscal revenues. **Note.** The evolution depicted here is the average of Germany, France, Britain and Sweden (see figure 10.14). Sources and séries: see piketty.pse.ens.fr/ideology.

Measuring Intergenerational Income Mobility

Strong consensus that children's success should not depend too much on parental income [Equality of Opportunity]

Studies linking adult children to their parents can measure link between children and parents income

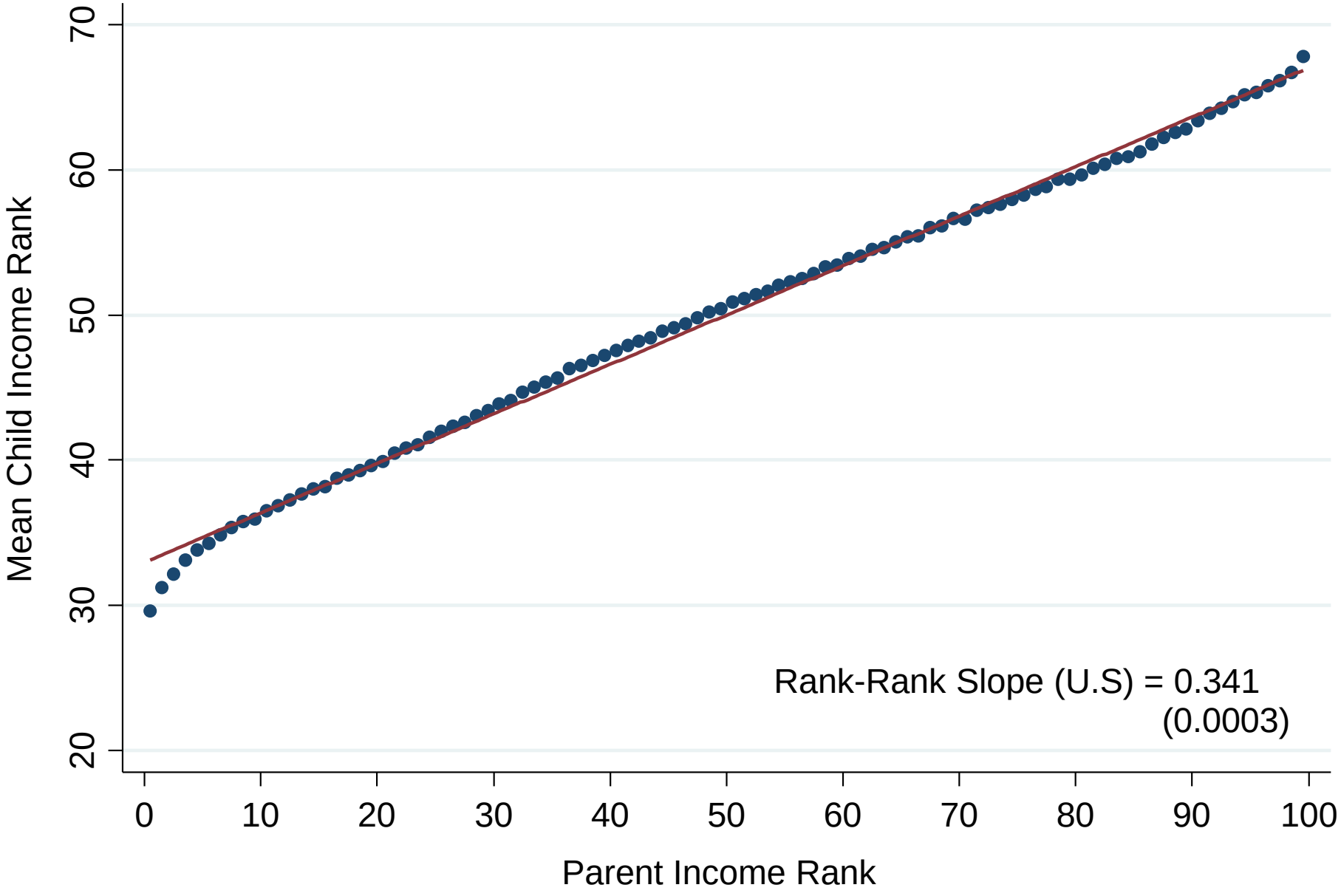
Simple measure: average income rank of children by income rank of parents [Chetty et al. 2014]

1) US has less mobility than European countries (especially Scandinavian countries such as Denmark)

2) Substantial heterogeneity in mobility across cities in the US

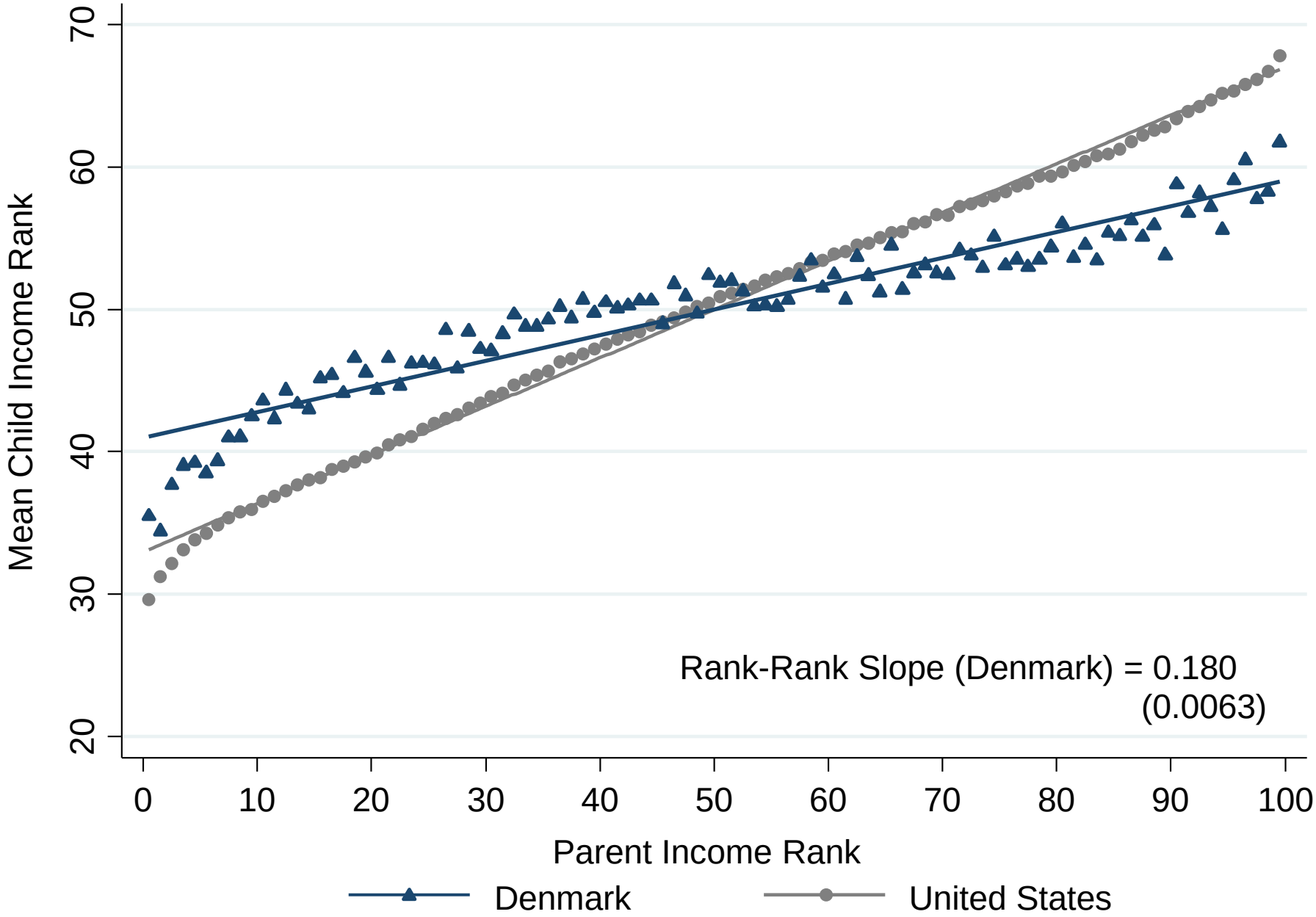
3) Places with low race/income segregation, low income inequality, good K-12 schools, high social capital, high family stability tend to have high mobility [these are correlations and do not imply causality]

A. Mean Child Income Rank vs. Parent Income Rank in the U.S.



Source: Chetty, Hendren, Kline, Saez (2014)

B. United States vs. Denmark

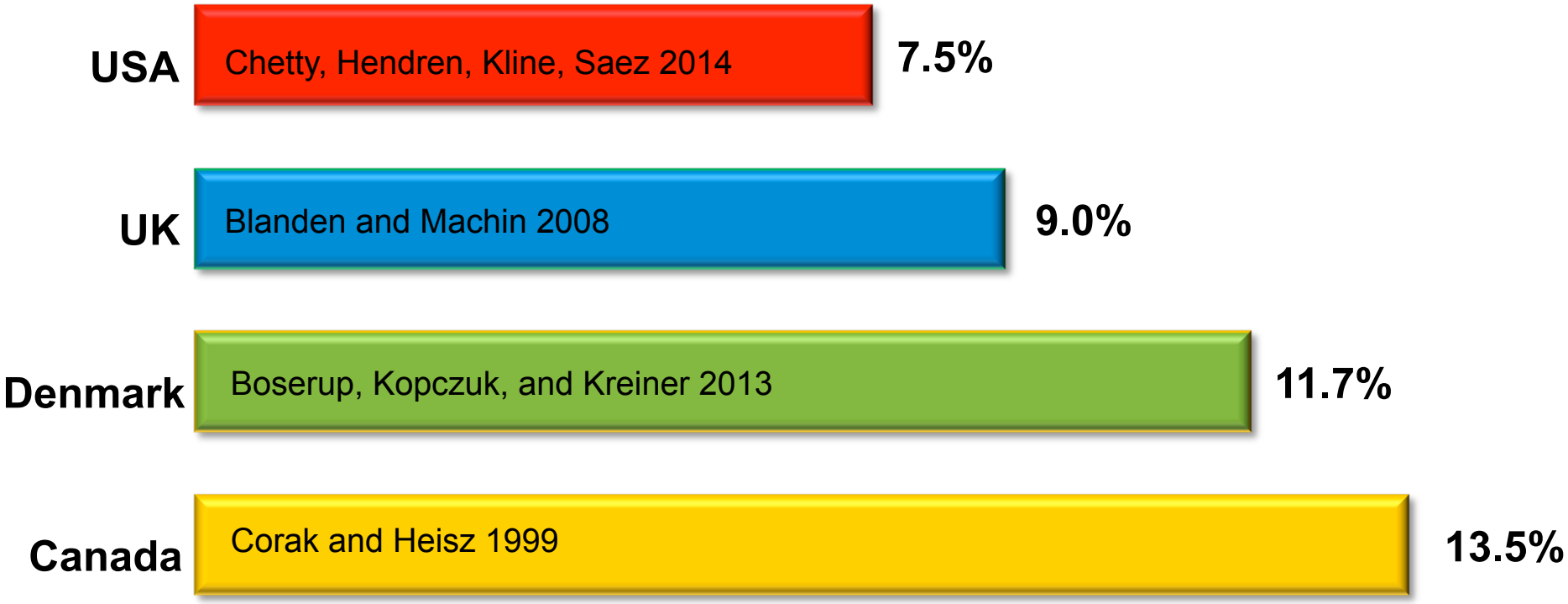


Source: Chetty, Hendren, Kline, Saez (2014)

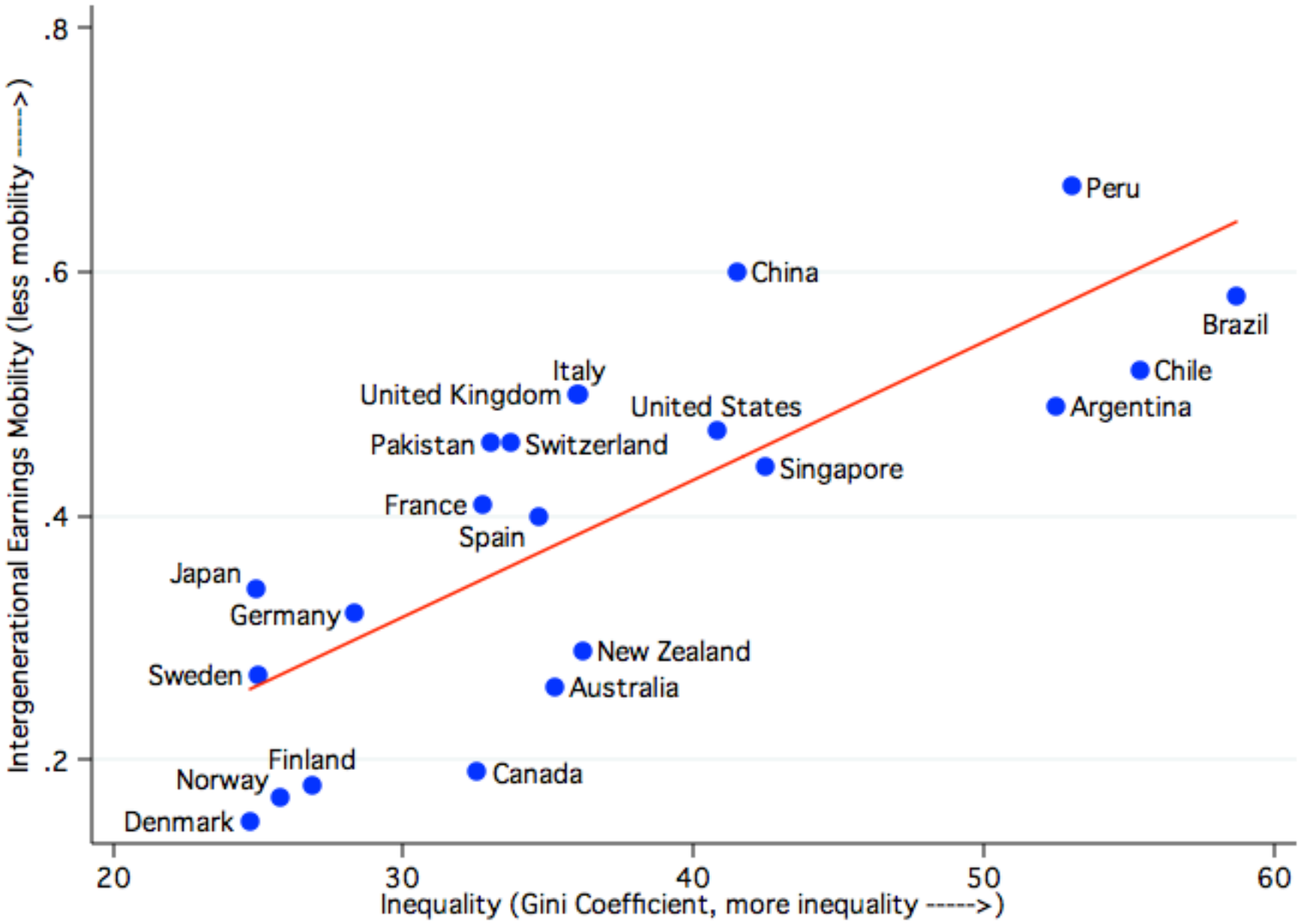
Source: Chetty et al. (2014)

The American Dream?

- Probability that a child born to parents in the bottom fifth of the income distribution reaches the top fifth:



→ Chances of achieving the "American Dream" are almost two times higher in Canada than in the U.S.

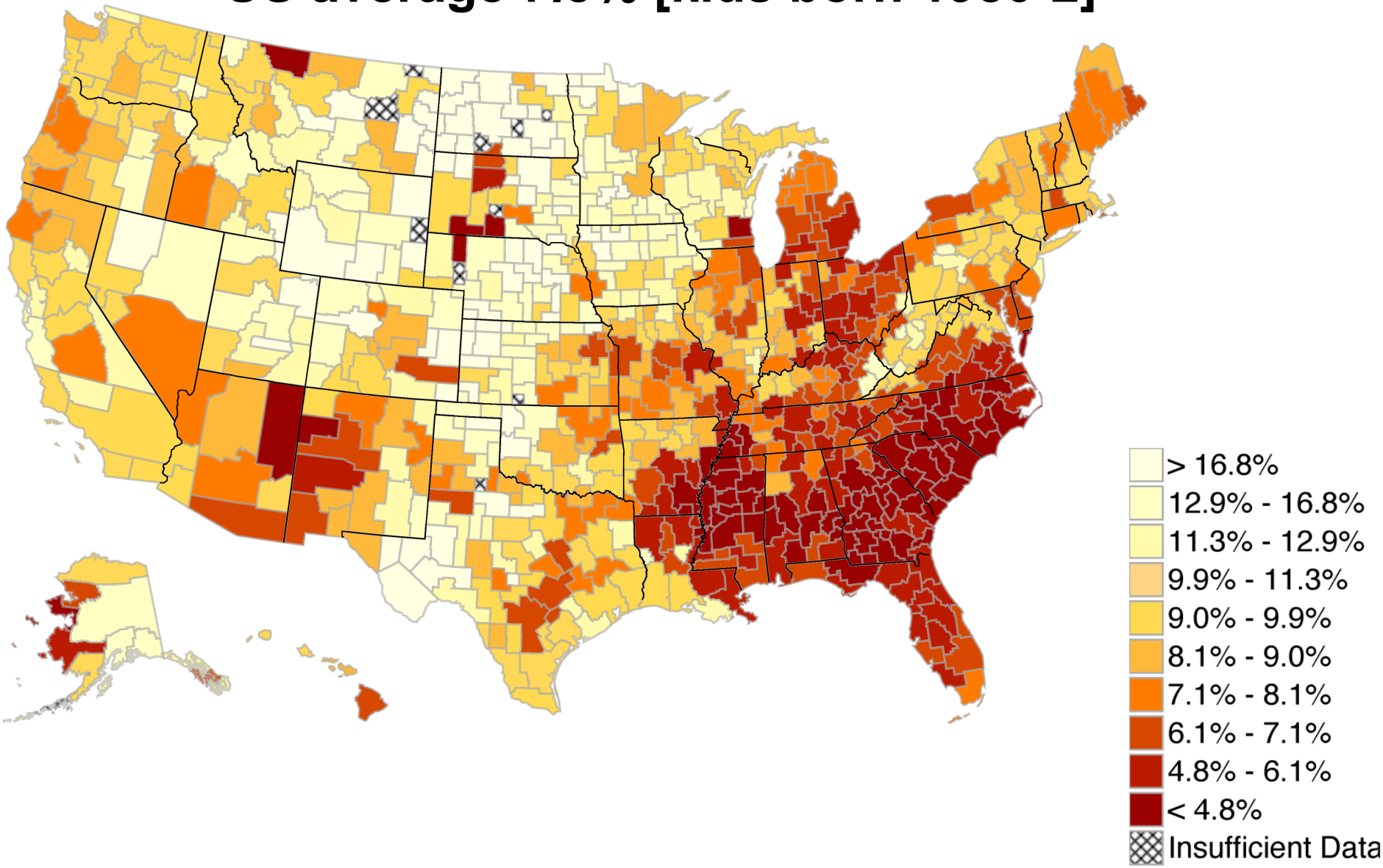

Intergenerational Earnings Mobility (less mobility ----->)
.8
.6
.4
.2
Peru
China
Brazil
Chile
Argentina
Italy
United Kingdom
United States
Pakistan
Switzerland
Singapore
France
Spain
Japan
Germany
New Zealand
Sweden
Australia
Finland
Norway
Canada
Denmark
20
30
40
50
60
Inequality (Gini Coefficient, more inequality ----->)

Source: Chetty et al. (2014)

The Geography of Upward Mobility in the United States

Probability of Reaching the Top Fifth Starting from the Bottom Fifth

US average 7.5% [kids born 1980-2]



Note: Lighter Color = More Upward Mobility

Download Statistics for Your Area at www.equality-of-opportunity.org

Source: Chetty et al. (2014)

The Geography of Upward Mobility in the United States

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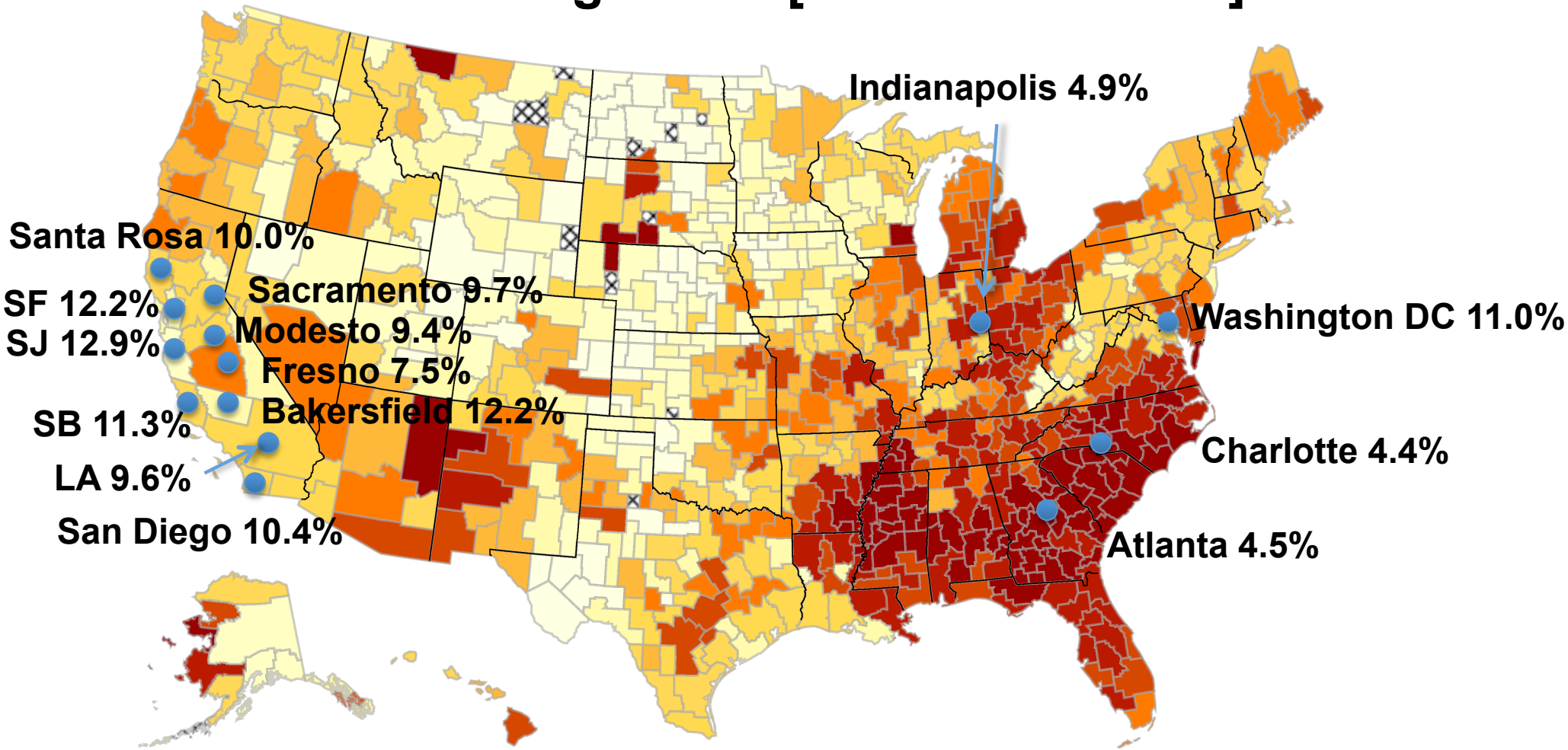

Note: Lighter Color = More Upward Mobility

Download Statistics for Your Area at www.equality-of-opportunity.org

REFERENCES CITED

Alvaredo, F., Atkinson, A., T. Piketty and E. Saez "The Top 1 Percent in International and Historical Perspective." *Journal of Economic Perspectives* 27(3), 2013, 3-20. (web)

Alvaredo, F., Atkinson, A., T. Piketty, E. Saez, and G. Zucman *World Inequality Database*, (web)

Alvaredo, F., Atkinson, A., T. Piketty, E. Saez, and G. Zucman. 2018 *World Inequality Report*, (web)

Atkinson, A., T. Piketty and E. Saez "Top Incomes in the Long Run of History", Journal of Economic Literature 49(1), 2011, 30–71. (web)

Blanchet, Thomas, Emmanuel Saez, and Gabriel Zucman. 2022. "Real-Time Inequality" NBER Working Paper, No. 30229. (web)

Chancel, Lucas, Thomas Piketty, Emmanuel Saez, and Gabriel Zucman. *The World Inequality Report 2022*, Cambridge: Harvard University Press, 2022. (web)

Chetty, Raj, Nathan Hendren, Patrick Kline, and Emmanuel Saez, "Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States," *Quarterly Journal of Economics*, 129(4), 2014, 1553-1623. (web)

Esping-Andersen, Gosta. 1990 *The Three Worlds of Welfare Capitalism*, Princeton University Press.

Gethin, Amory. 2024. "Distributional Growth Accounting: Education and the Reduction of Global Poverty, 1980-2019.", PSE Working Paper. (web)

EUTAX Observatory. 2023. *Global Tax Evasion Report 2024*. (web)

ITEP (Institute on Taxation and Economic Policy). 2018. "Who Pays: A Distributional Analysis of the Tax Systems in All 50 States", 6th edition. (web)

Kopczuk, Wojciech, Emmanuel Saez, and Jae Song "Earnings Inequality and Mobility in the United States: Evidence from Social Security Data since 1937," Quarterly Journal of Economics 125(1), 2010, 91-128. (web)

Piketty, Thomas, *Capital in the 21st Century*, Cambridge: Harvard University Press, 2014, (web)

Piketty, Thomas, *Capital and Ideology*, Cambridge: Harvard University Press, 2020, Chapter 10, (web)

Piketty, Thomas and Emmanuel Saez "Income Inequality in the United States, 1913-1998", Quarterly Journal of Economics, 118(1), 2003, 1-39. (web)

Piketty, Thomas and Emmanuel Saez "How Progressive is the U.S. Federal Tax System? A Historical and International Perspective," Journal of Economic Perspectives, 21(1), Winter 2007, 3-24. (web)

Piketty, Thomas, Emmanuel Saez, and Gabriel Zucman, "Distributional National Accounts: Methods and Estimates for the United States", Quarterly Journal of Economics, 133(2), 553-609, 2018 (web)

Piketty, Thomas and Gabriel Zucman, "Capital is Back: Wealth-Income Ratios in Rich Countries, 1700-2010", *Quarterly Journal of Economics* 129(3), 2014, 1255-1310 (web)

Saez, Emmanuel "Public Economics and Inequality: Uncovering Our Social Nature", AEA Papers and Proceedings, 121, 2021 (web)

Saez, Emmanuel and Gabriel Zucman, "Wealth Inequality in the United States since 1913: Evidence from Capitalized Income Tax Data", *Quarterly Journal of Economics* 131(2), 2016, 519-578 (web)

Saez, Emmanuel and Gabriel Zucman. The Triumph of Injustice: How the Rich Dodge Taxes and How to Make them Pay, New York: W.W. Norton, 2019. (web)

Saez, Emmanuel and Gabriel Zucman. 2019b. "Progressive Wealth Taxation" Brookings Paper (web)

Saez, Emmanuel and Gabriel Zucman. "The Rise of Income and Wealth Inequality in America: Evidence from Distributional Macroeconomic Accounts," Journal of Economic Perspectives 34(4), Fall 2020, 3-26. (web)

Saez, Emmanuel and Gabriel Zucman. "Distributional Tax Analysis in Theory and Practice: Harberger Meets Diamond-Mirrlees" with NBER Working Paper No. 31912, November 2023 (web)

Tiebout, Charles M. "A Pure Theory of Local Expenditures" Journal of Political Economy, 64(5), 1956, 416-424 (web)

GENERAL BOOK REFERENCES

Graduate Level

Atkinson, A.B. and J. Stiglitz, Lectures on Public Economics, New York: McGraw Hill, 1980.

Auerbach, A. and M. Feldstein, eds., Handbook of Public Economics, 4 Volumes, Amsterdam: North Holland, 1985, 1987, 2002, and 2002. (web)

Auerbach, A., Chetty, R., M. Feldstein, and E. Saez, eds., Handbook of Public Economics, Volume 5, Amsterdam: North Holland, 2013 (web)

Kaplow, L. The Theory of Taxation and Public Economics. Princeton University Press, 2008.

Mirrlees, J. Reforming the Tax System for the 21st Century The Mirrlees Review, Oxford University Press, (2 volumes) 2009 and 2010. (web)

Piketty, Thomas, *Capital in the 21st Century*, Cambridge: Harvard University Press, 2014, (web)

Piketty, Thomas, *Capital and Ideology*, Cambridge: Harvard University Press, 2020, (web)

Piketty, Thomas, *A Brief History of Equality*, Cambridge: Harvard University Press, 2022 (web)

Saez, Emmanuel and Gabriel Zucman. The Triumph of Injustice: How the Rich Dodge Taxes and How to Make them Pay, New York: W.W. Norton, 2019. (web)

Salanié, B. The Economics of Taxation, Cambridge: MIT Press, 2nd Edition 2010.

Slemrod, Joel and Christian Gillitzer. Tax Systems, Cambridge: MIT Press, 2014.

Under-Graduate Level

Gruber, J. Public Finance and Public Policies, 6th edition, Worth Publishers, 2019.

Rosen, H. and T. Gayer Public Finance, 10th edition, McGraw Hill, 2014.

Stiglitz, J. and J. Rosengard. Economics of the Public Sector, 4th edition, Norton, 2015.

Slemrod, J. and J. Bakija. Taxing Ourselves: A Citizen's Guide to the Debate over Taxes. 5th edition, MIT Press, 2017.