

Eco L3 - Globalization, Inequality, and Redistribution

Lecture 4: Globalization and the Rise of Extreme Wealth

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Roadmap

1. Measuring wealth inequality
2. The rise of extreme wealth
3. The role of top-end taxes

1 Measuring wealth inequality

Wealth inequality more difficult to measure than income inequality

- Idea data source would be annual wealth tax declarations for the entire population
- But exist in very few countries only (eg, Norway)
- For most countries, need to use indirect methods and combine data sources

1.1 Estate tax multiplier method

- Start with wealth-at-death reported on estate tax returns
- Compute mortality rate by age and gender
- Then weight wealth-at-death by inverse of mortality rate
- Main limitation: differential mortality by wealth conditional on age and gender

1.2 Capitalization of investment income

- Start with capital income reported in personal income tax returns
- Compute rate of return on each asset class
- Multiply capital income by inverse of rate of return
- Main limitation: differential realized rates of return by wealth group within asset class

1.3 Rich lists

- Rankings by magazines like Forbes (US and global), Bloomberg (global), Challenges (France), Sunday Times (UK,) etc.
- Significant information on shares in listed companies due to reporting requirements to securities and exchange commissions
- Much less information on private businesses, debts

2 The rise of extreme wealth

2.1 Levels of wealth inequality

Private wealth always more concentrated than income

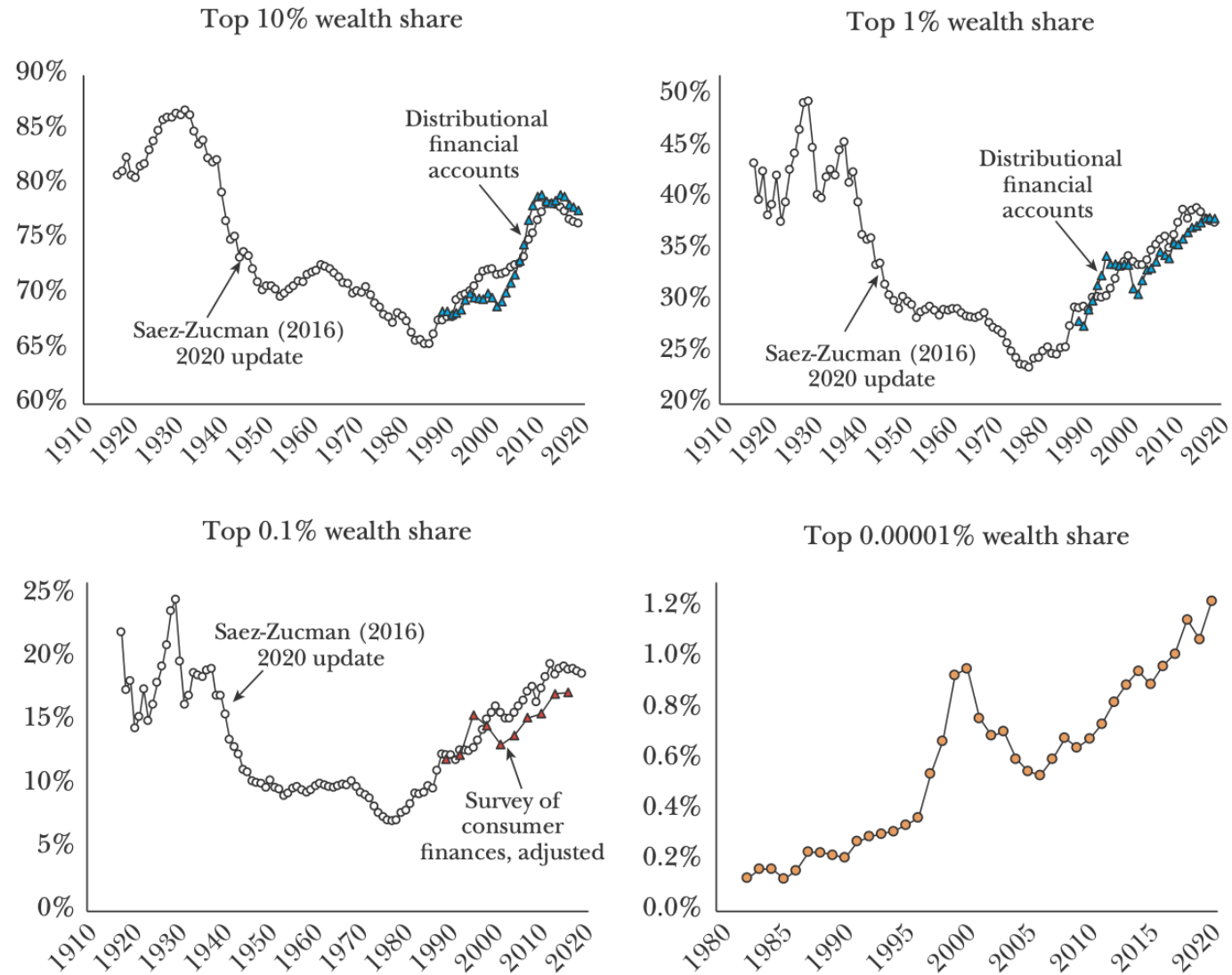
- Top 10% owns more than 50% of wealth in China, Europe, US
- Bottom 50% owns less than 10%; middle 40% owns 40% or less

2.2 Trends in wealth inequality within countries

- As for income, general trends towards more inequality, but different magnitude across countries
- Large rise in US, Russia, China, less so in Europe
- Long-term: great reversal US vs. Europe

Figure 1

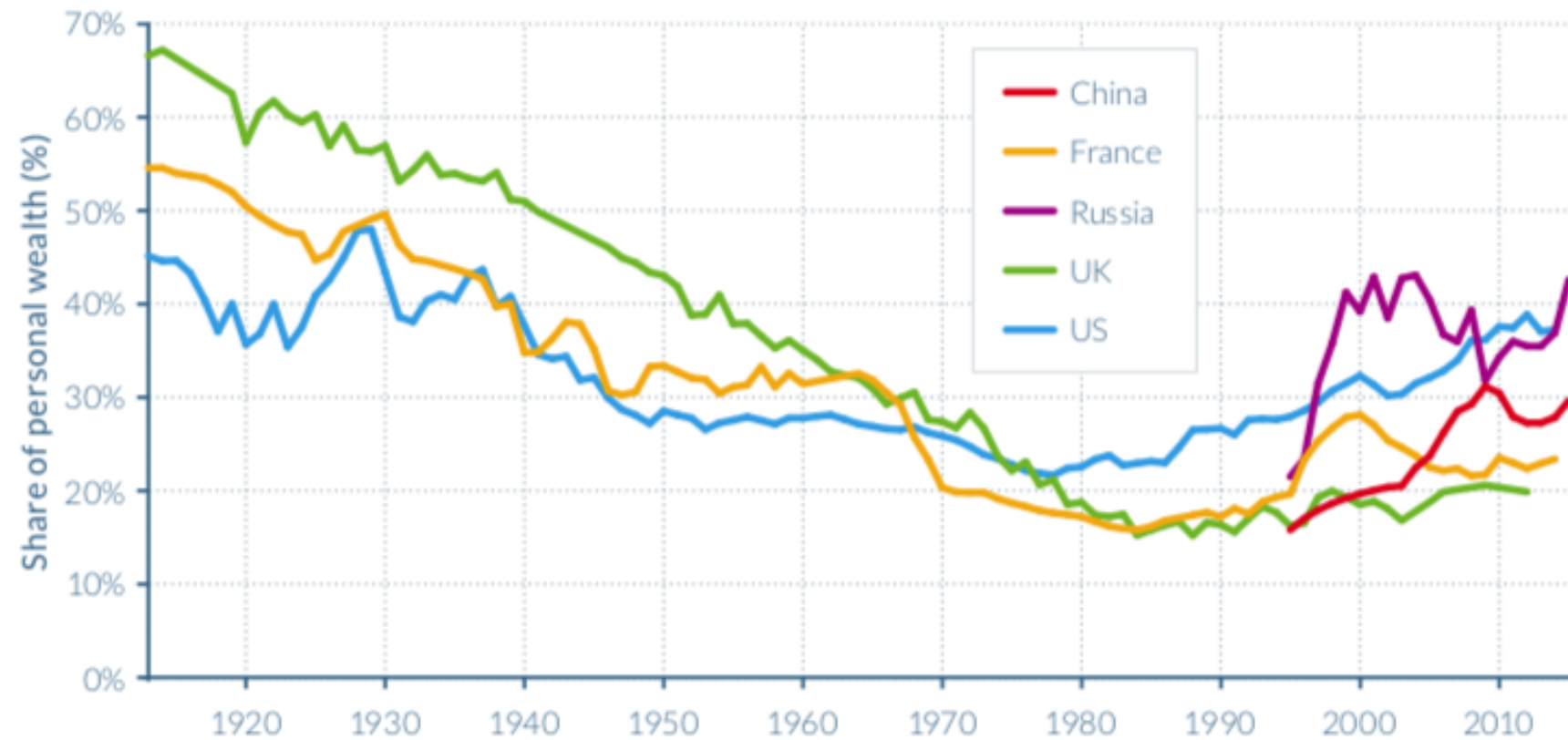
Top Wealth Shares in the United States: Comparing Estimates



Source: Saez and Zucman (2020)

Figure E8

Top 1% wealth shares across the world, 1913–2015: the fall and rise of personal wealth inequality



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

In 2015, the Top 1% wealth share was 43% in Russia against 22% in 1995.

Source: World Inequality Report 2018

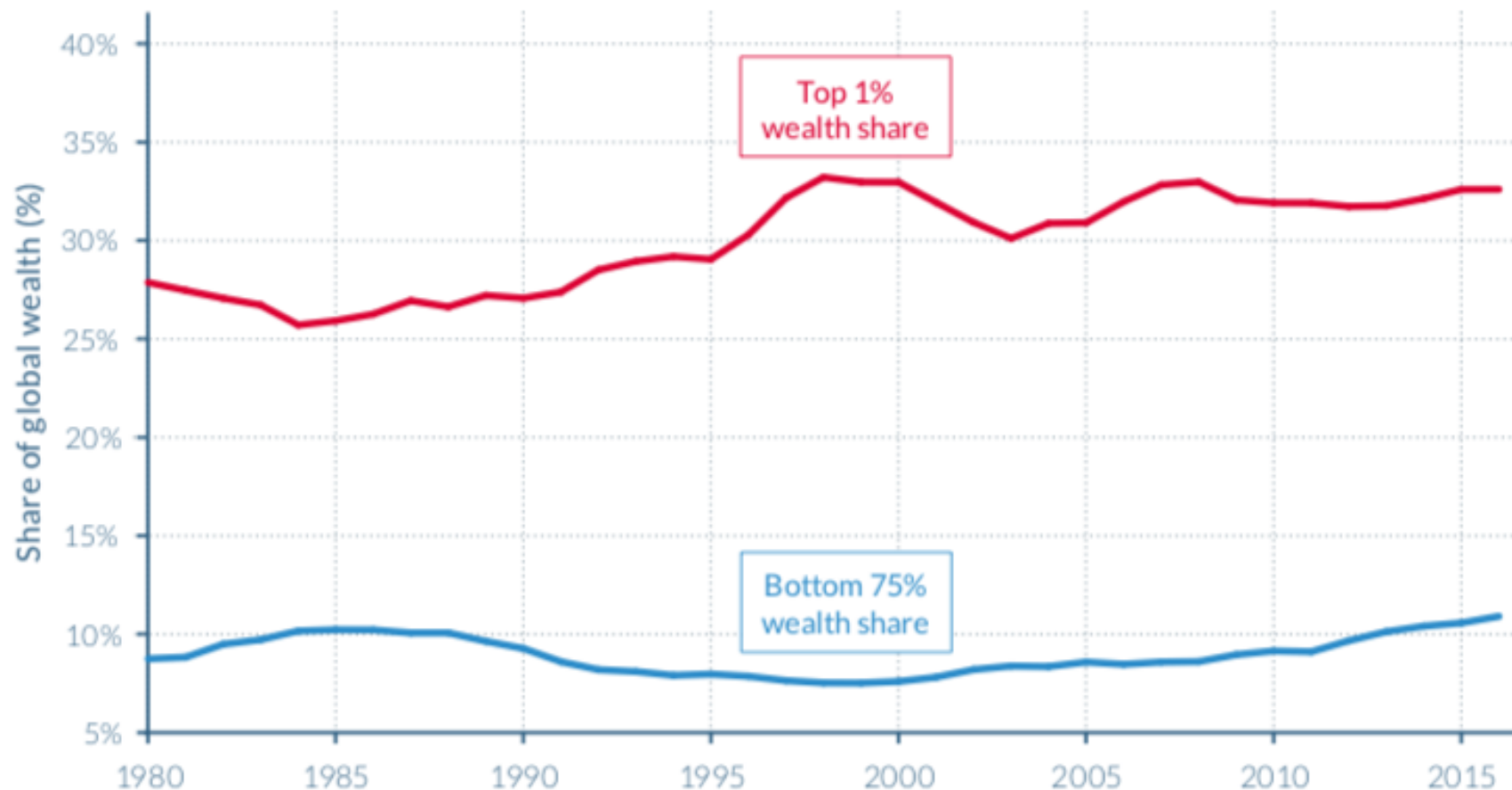
2.3 Trends in world wealth inequality

Evidence points toward rise in global wealth inequality over past decades

- Given data limitation, in what follows: world = Europe + China + US
- Global top 1% increased from 28% in 1980 to 33% today
- Bottom 75% share hovered around 10%

Figure 4.1.1

Top 1% and Bottom 75% shares of global wealth, 1980–2017: China, Europe and the US



Source: WID.world (2017). See [wir 2018.widworld](#) for data series and notes.

In 2016, 33% of global wealth was owned by the Top 1%. The evolution of global wealth groups from 1980 to 2017 is represented by China, Europe and the US.

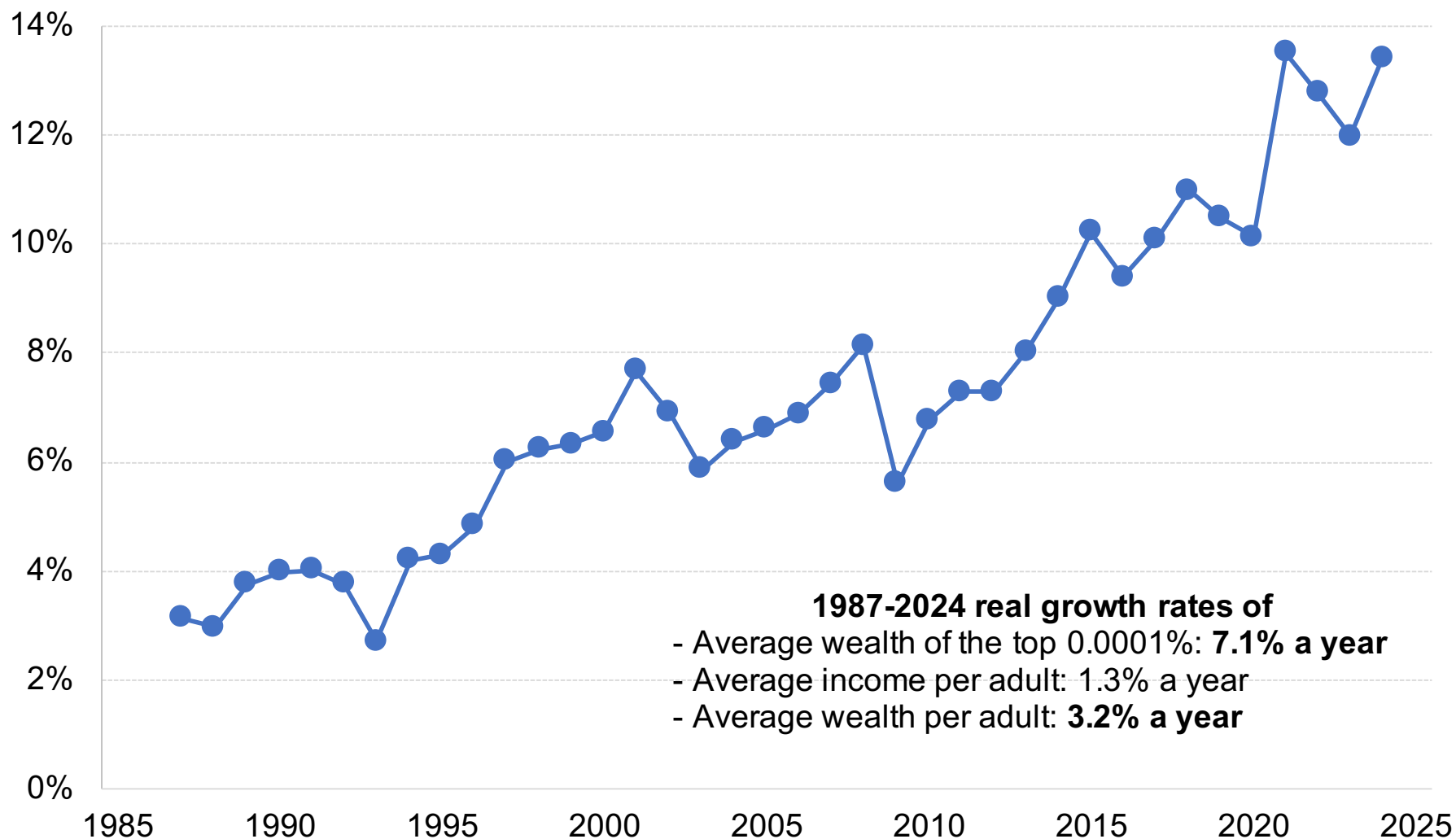
Source: World Inequality Report 2018

2.4 The rise of global billionaires

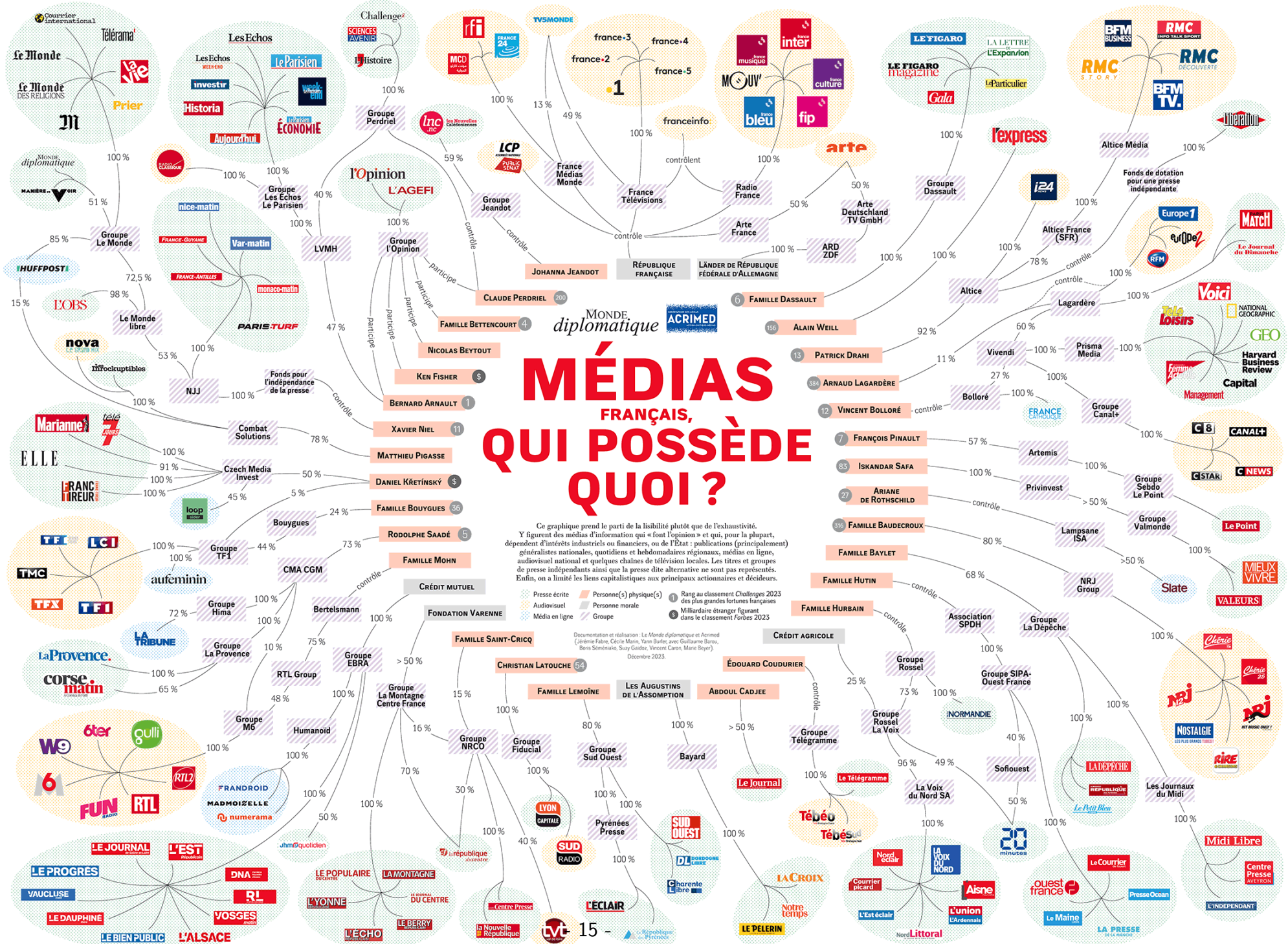
- Rise of extreme wealth: striking dimension of the dynamics of global inequality
- Billionaires still own a relatively small fraction of global wealth (about 2%–3%)
- But significant power due to control over large businesses, influence on policymaking, ownership of media
- Ex: concentration of media ownership in France

Wealth of the global top 0.0001%, as a fraction of world GDP

(top 0.0001% = 1/million = 2,900 tax units = number of \$ billionaires in 2024)



Source: Zucman (2024) "A Blueprint for a Coordinated Minimum Effective Taxation Standard on Ultra-High-Net-Worth Individuals"



3 Theories of the wealth distribution

3.1 The role of saving rate

- Individual i wealth accumulation can always be written:

$$W_{t+1}^i = (1 + q_t^i) \cdot (W_t^i + s_t^i \cdot Y_t^i)$$

- where W_t^i is wealth, Y_t^i is income, s_t^i is net savings rate, $1 + q_t^i$ is rate of capital gains (price effect) in year t
- In a long-run steady-state without price effect, then:

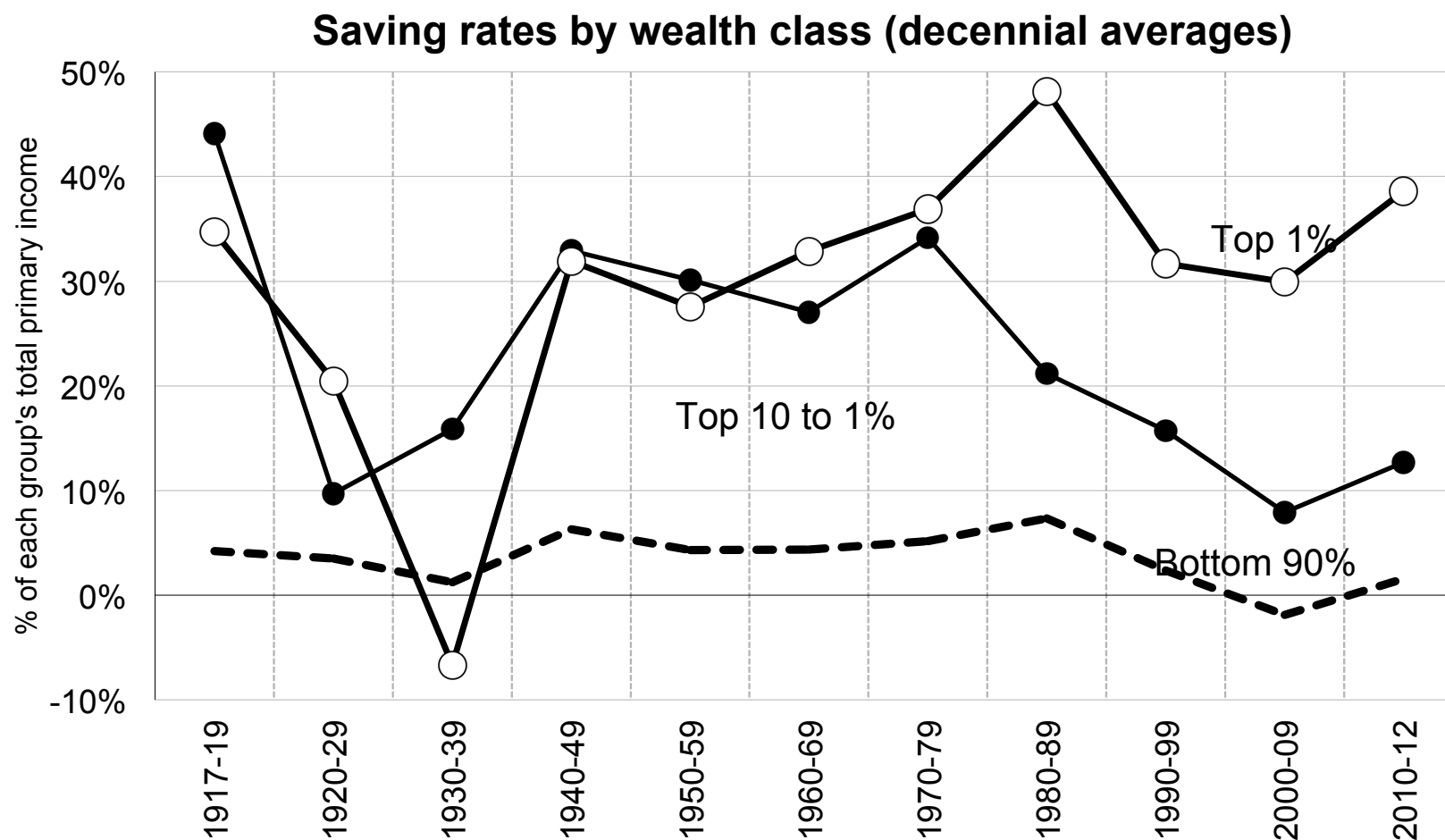
$$sh_W^p = sh_Y^p \cdot \frac{s^p}{s}$$

- where sh_W^p is share of wealth owned by fractile p (e.g., top 1%), sh_Y^p share of income earned by p , and s^p/s is relative savings rate
- This is a generalization of Harrod-Domar-Solow formula $\beta = s/g$
- Shows key role of relative saving rates

3.2 Where does s come from?

3.3 Precautionary saving model

- Income is uncertain \rightarrow hold wealth as precaution for “rainy days”
(main uncertainty: job loss)
- As one gets richer, less need to insure against labor income risk \rightarrow
model predicts that saving rate falls with income
- Not consistent with the data



The rich save more as a fraction of their income, except in the 1930s when there was large dis-saving through corporations. NB: The average private saving rate has been 9.8% over 1913-2013.

Source: Saez and Zucman (2016)

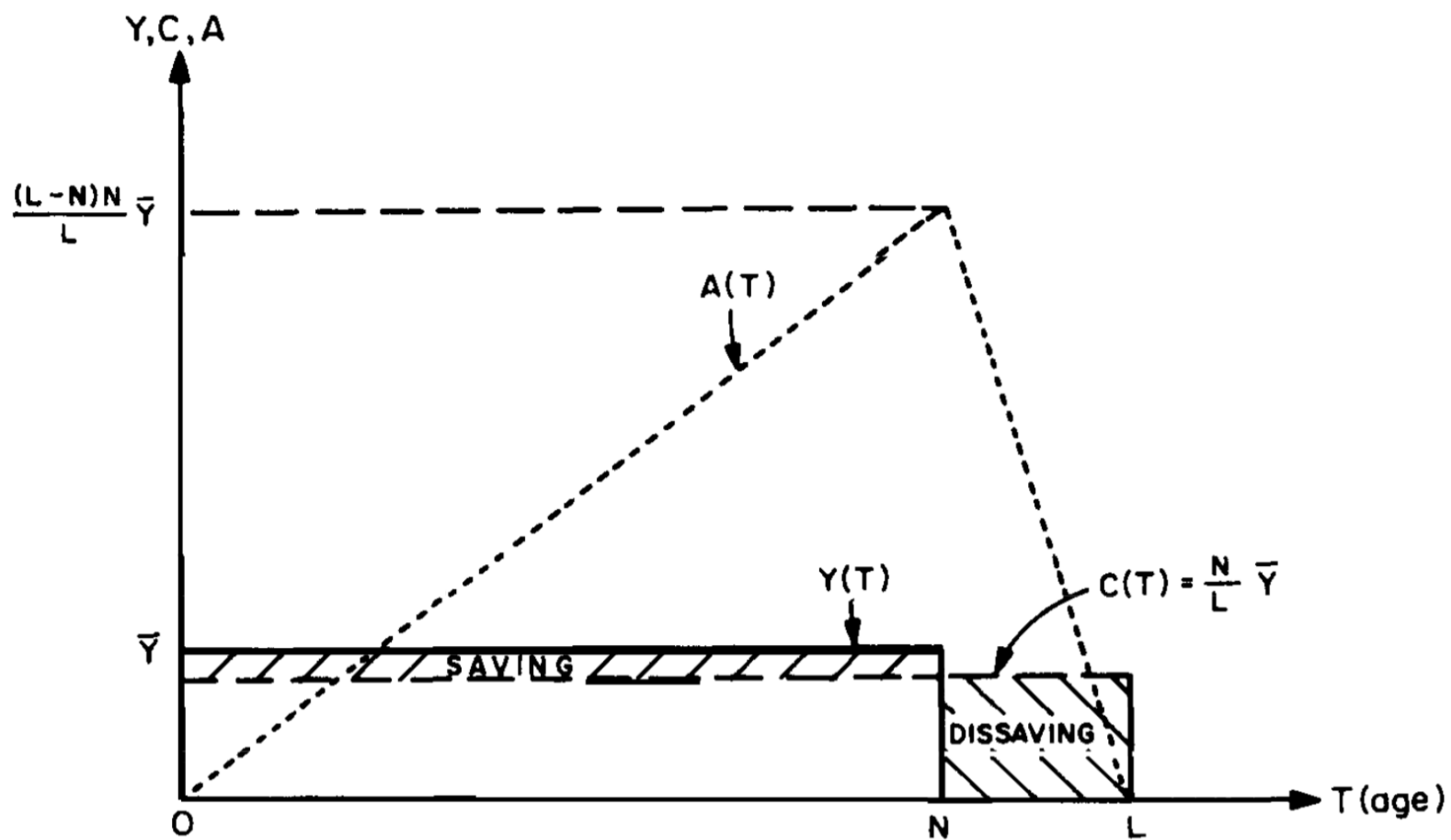
3.4 Life-cycle saving models

Main idea: people save to spread resources over the life-cycle

- Individuals die with 0 wealth, wealth accumulation entirely driven by need to save for retirement
- Assume that everybody starts working at age 0, works for N years, dies at age L , and that there is no growth ($n = g = r = 0$)
- Ex: $N = 60$, $L = 70 \rightarrow$ retirement length $L - N = 10$ years
- Labor income is constant at \bar{Y} during working age period, then 0
- Everybody fully smoothes annual consumption so that C is always

equal to average per capita output: $C = \bar{Y} \cdot N/L$

- While working, people save $S = (1 - N/L) \cdot \bar{Y}$
- Then during retirement people dis-save $S = -N/L \cdot \bar{Y}$



INCOME, CONSUMPTION, SAVING AND WEALTH AS A FUNCTION OF AGE

Source: Modigliani (1985)

Limits of simple life-cycle model

- Social Security → reduces need to save for retirement
- What fraction of aggregate wealth comes from life-cycle savers?
Modigliani vs. Kotlikoff-Summers controversy
- Main limit: life-cycle model generates too little wealth inequality:
wealth inequality simply the mirror image of income inequality

3.5 Dynamic random shock models

Key question for the study of wealth inequality: why is wealth much more concentrated than labor income?

- Precautionary saving models: wealth less unequal than income
- Life-cycle saving models: wealth as unequal as labor income
- To generate a higher concentration of wealth, one needs dynamic models with cumulative shocks

General formulation: $W_{t+1i} = \tilde{a}_{ti} \cdot W_{ti} + \tilde{b}_{ti}$

- \tilde{a} : multiplicative stochastic shock to wealth
- \tilde{b} : additive component (e.g., labor income)

Different types of shocks

- Shocks to rates of return: $W_{t+1} = (1 + \tilde{R}) \cdot W_t + \tilde{b}$
- Shocks to number of children
- Shocks to saving taste across generations

Theorem: under a certain number of assumptions, wealth converges to a steady-state distribution that has the following properties:

- It follows a Pareto law at the top
- The Pareto exponent a depends on shocks \tilde{a}_{ti}
- The higher $E(\tilde{a}_{ti}) < 1$, the lower a (higher steady state inequality)
- The higher the variance of shocks, the lower a
- With globalization, likely higher variance: top businesses reap profits from global markets

4 The role of top-end taxes

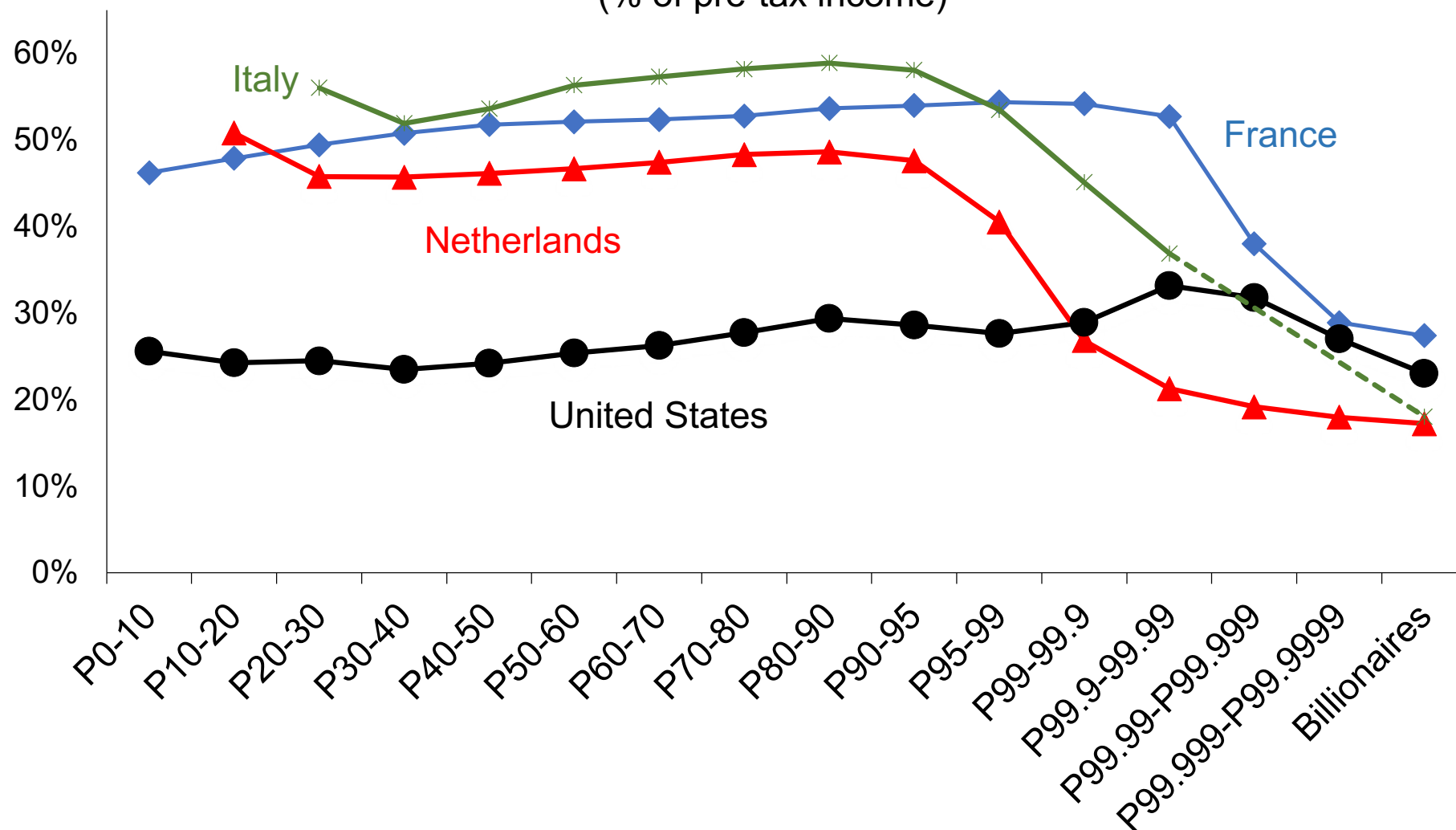
Relevant return for wealth accumulation process is net-of-tax return

$$W_{t+1} = (1 + \tilde{R} - \tau) \cdot W_t + \tilde{b}$$

- \tilde{R} : stochastic return on wealth (net of corporate tax)
- τ : individual taxes expressed as a fraction of wealth
- \tilde{b} : saving out of labor income

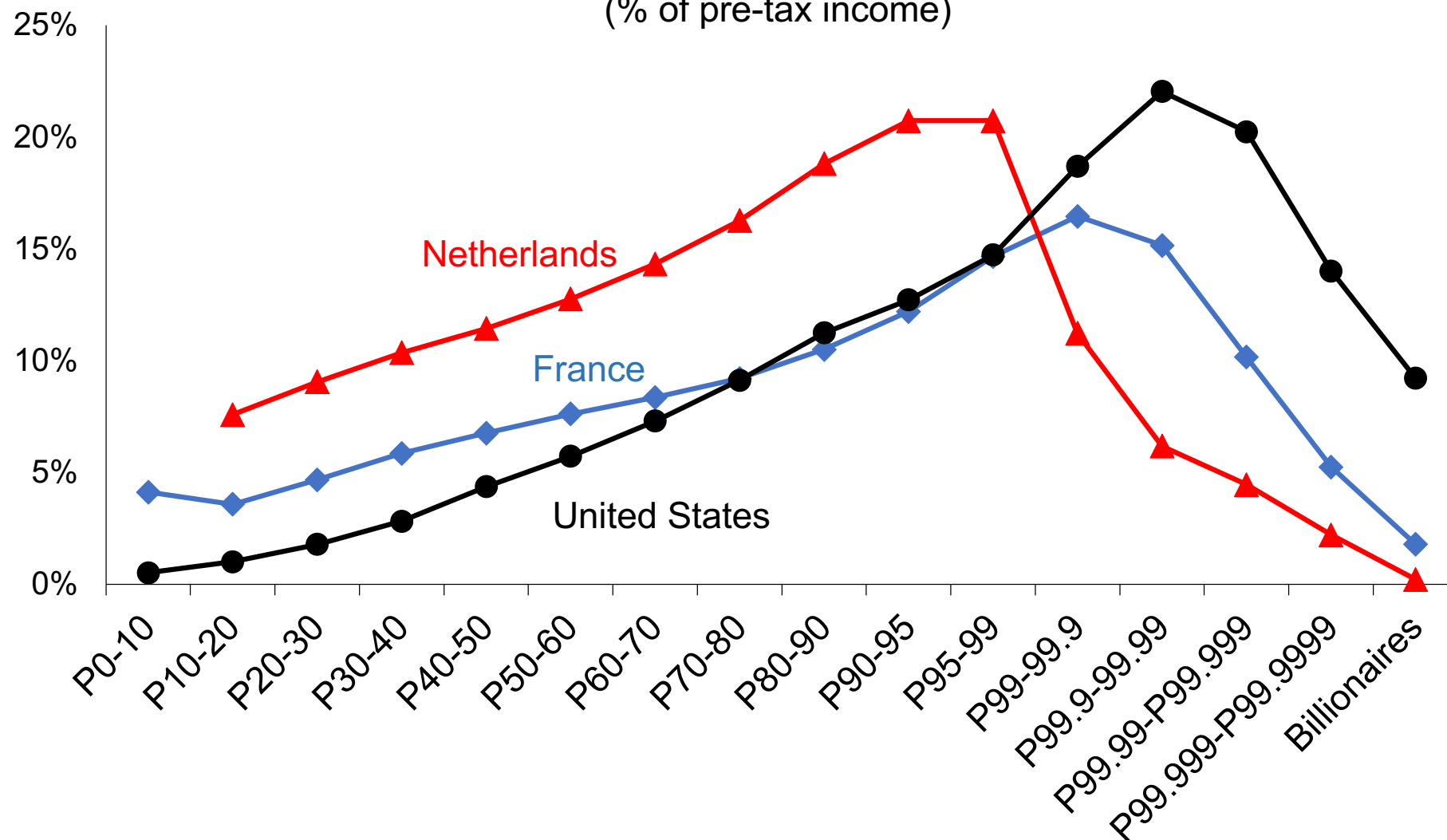
If $\tilde{R} = \tilde{R}(W) \nearrow$ with W and $\tau = \tau(W) \searrow$ with W : **explosive path** \rightarrow key role of $\tau(W)$

Average tax rates by income group and for billionaires
(% of pre-tax income)



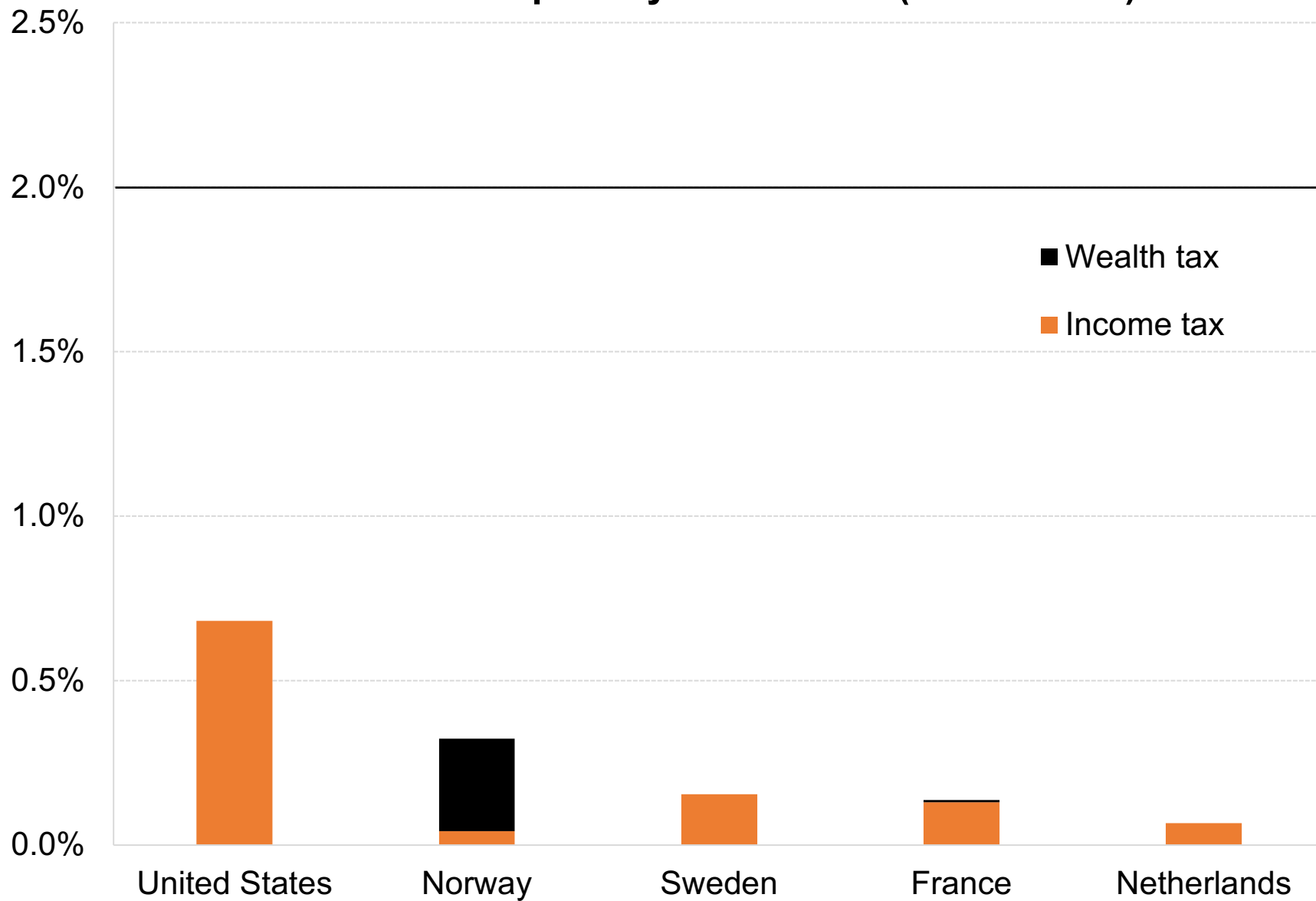
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Average income tax rates by income group and for billionaires (% of pre-tax income)

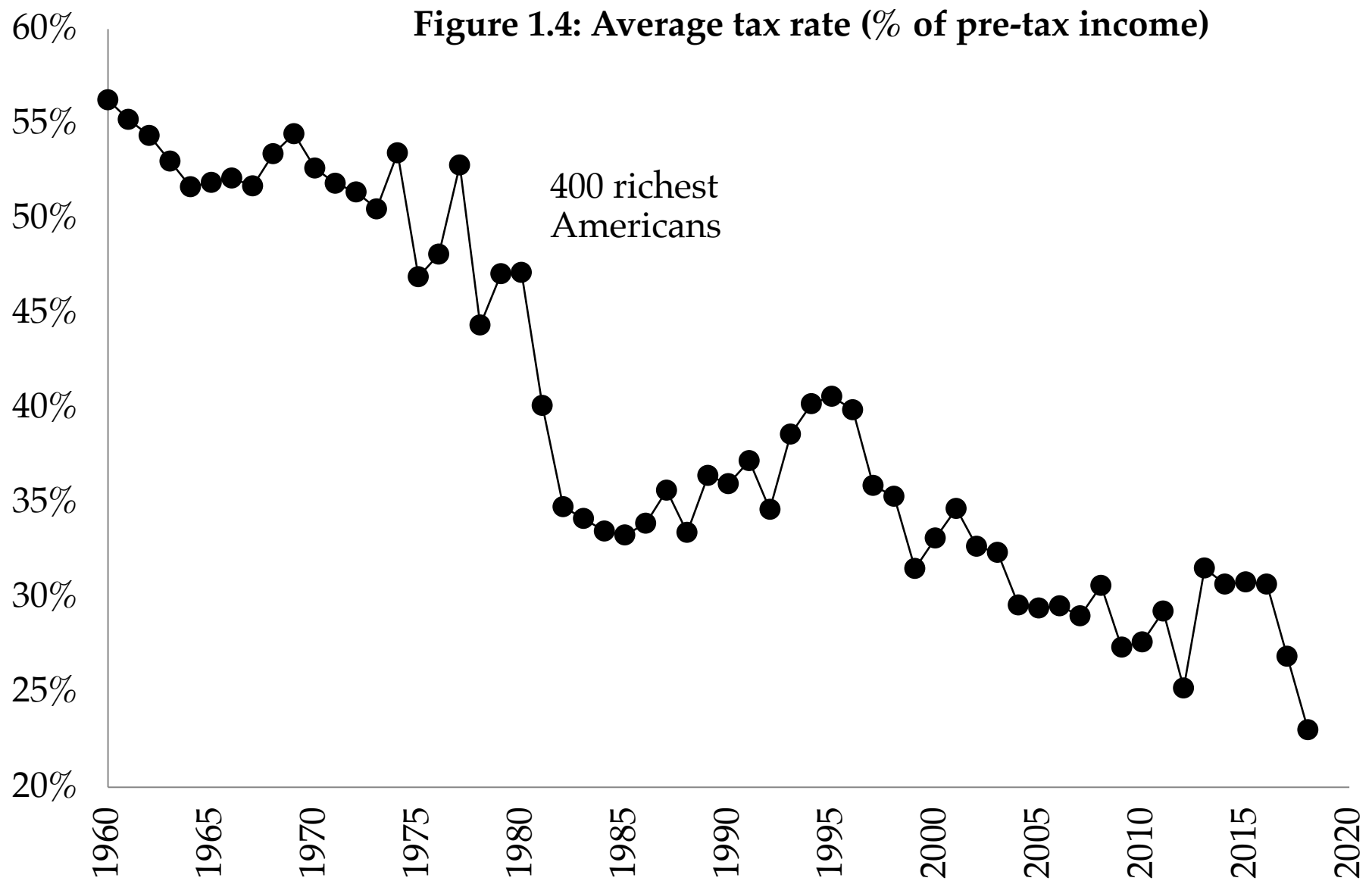


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Individual taxes paid by billionaires (% of wealth)



Source: Zucman (2024) "A Blueprint for a Coordinated Minimum Effective Taxation Standard on Ultra-High-Net-Worth Individuals"



Source: Saez and Zucman (2019), *The Triumph of Injustice*