

Econ 133 – Global Inequality and Growth

Global wealth inequality

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Roadmap

- Measurement of wealth inequality
- Wealth inequality across time and space
- The interplay between wealth and income inequality

1 How to measure 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
- Limit: need to assume that conditional on age and gender, death is a random event

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
- Limit: does not work well if taxable rates of return vary with wealth

1.3 Survey data with top-end correction

- Main problem of surveys: poor coverage of the top
- Information from the very top can be obtained from named-lists of rich individuals, e.g., Forbes
- These lists have limitations (diversified wealth; debts)
- But they can be useful to supplement surveys

To study wealth inequality in the long run, the ideal data source is:

A — Survey data

B — Estate tax data

C — Income tax data

D — Wealth tax data

2 Levels and Trends in wealth concentration

2.1 Levels

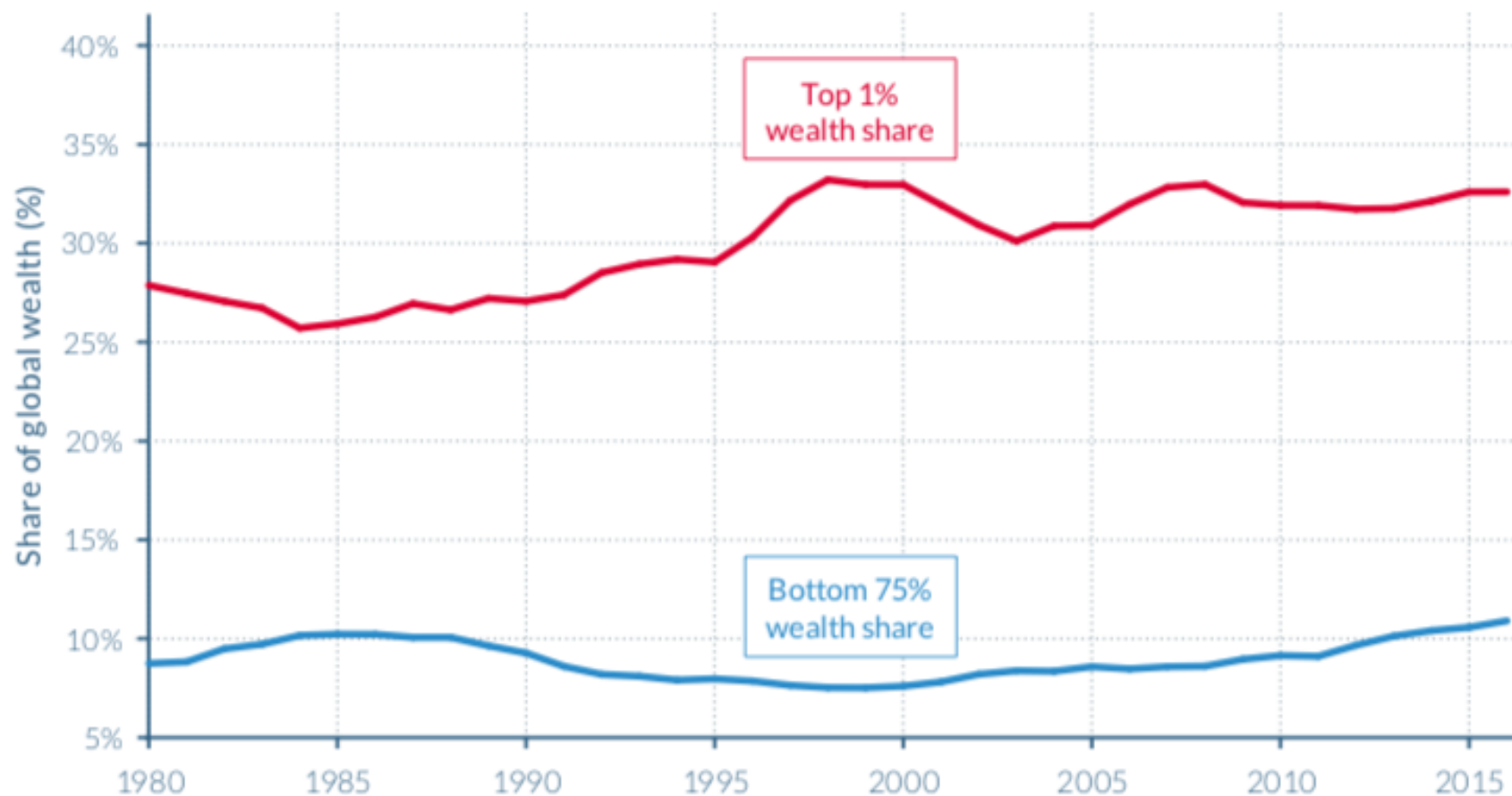
Private wealth always more concentrated than income

- 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 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%

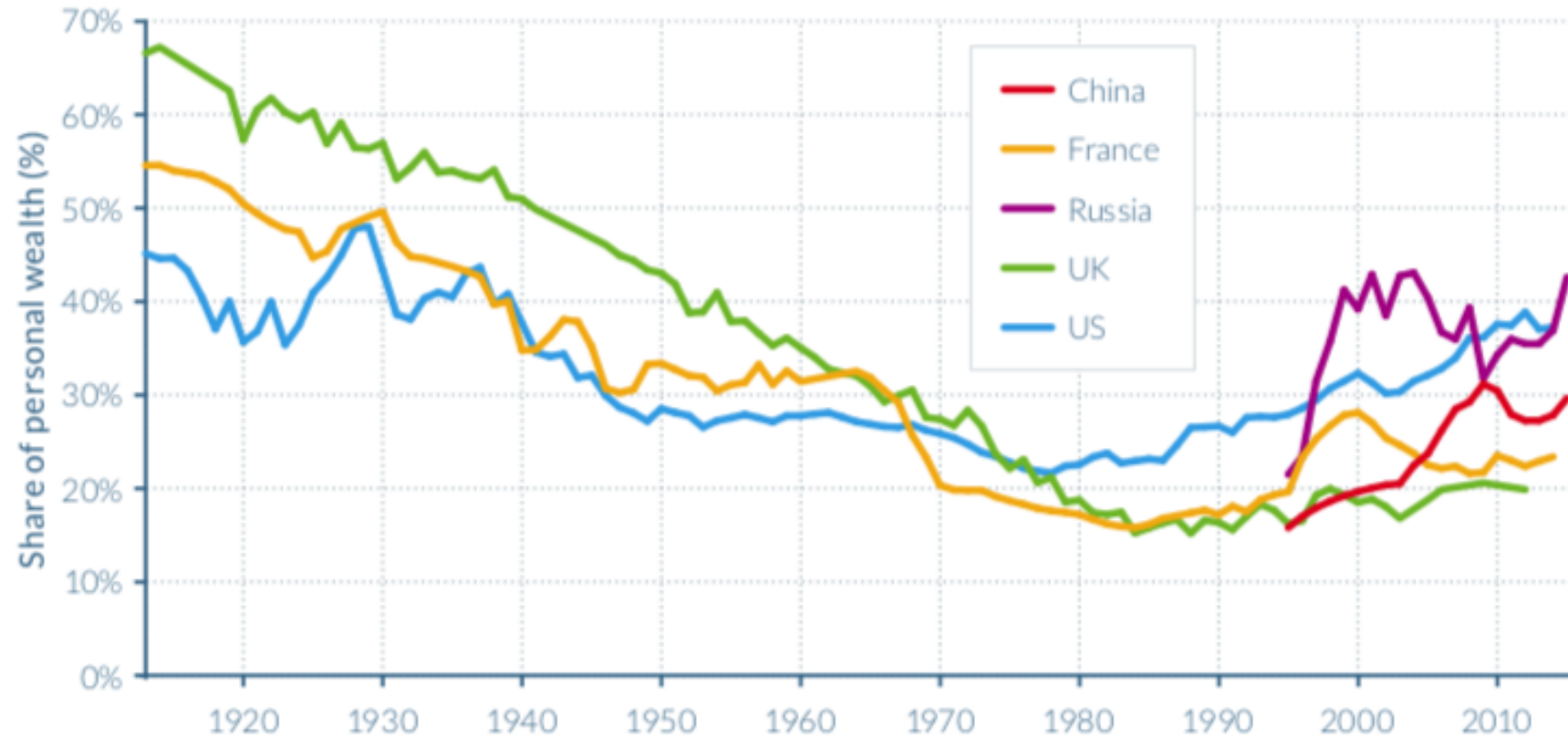
Figure 4.1.1**Top 1% and Bottom 75% shares of global wealth, 1980-2017: China, Europe and the US**

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.

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.wid.world](#) for data series and notes.

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

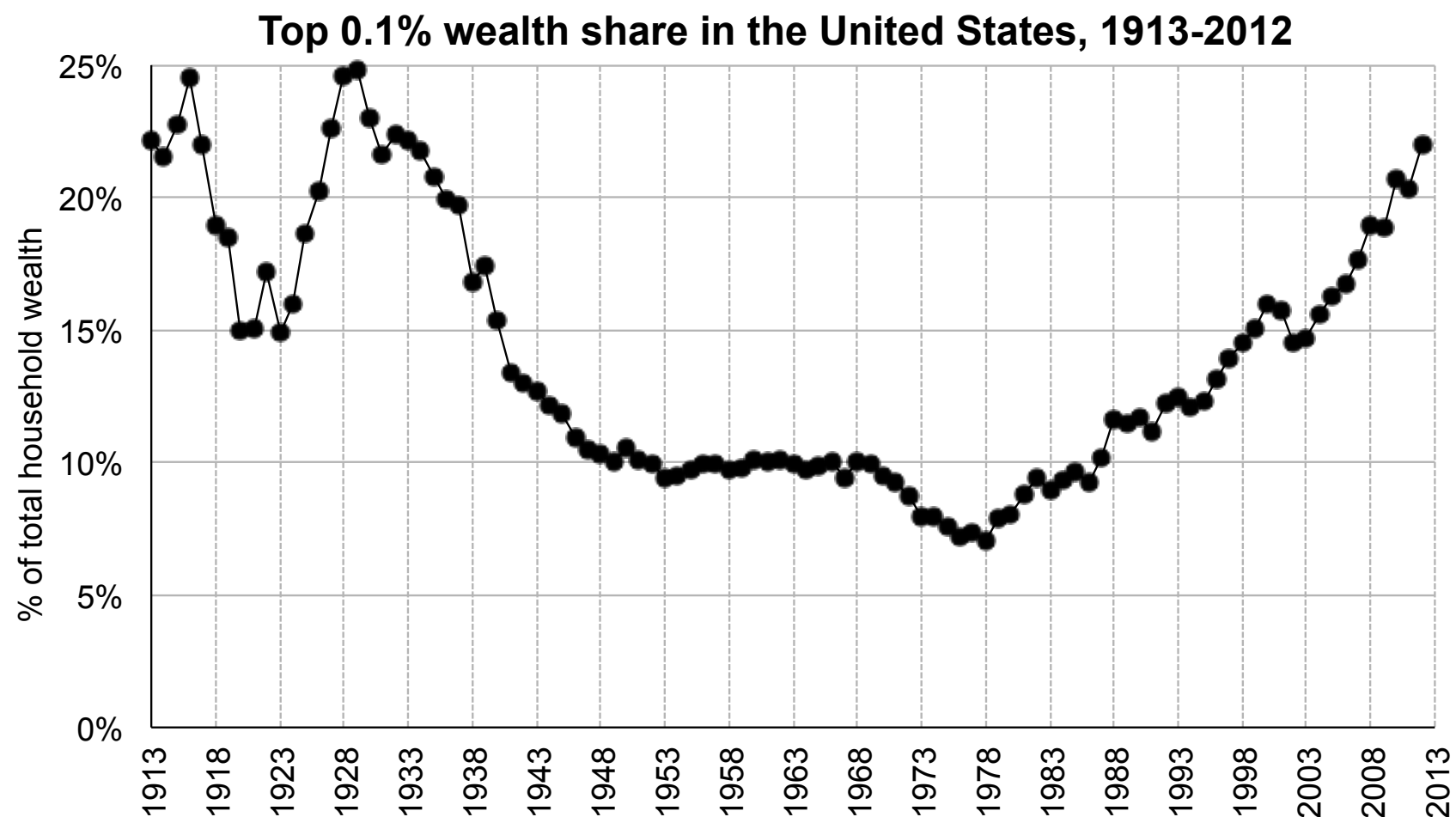
2.3 United States

- Great reversal: the US used to be much more equal than Europe, and now is much more unequal
- Before World War I, wealth was less concentrated in the US than in Europe
- Substantial fall in wealth inequality in the 1930s and 1940s
- Then gradual and dramatic increase since the late 1970s

Table 1: Thresholds and average wealth in top wealth groups, 2012

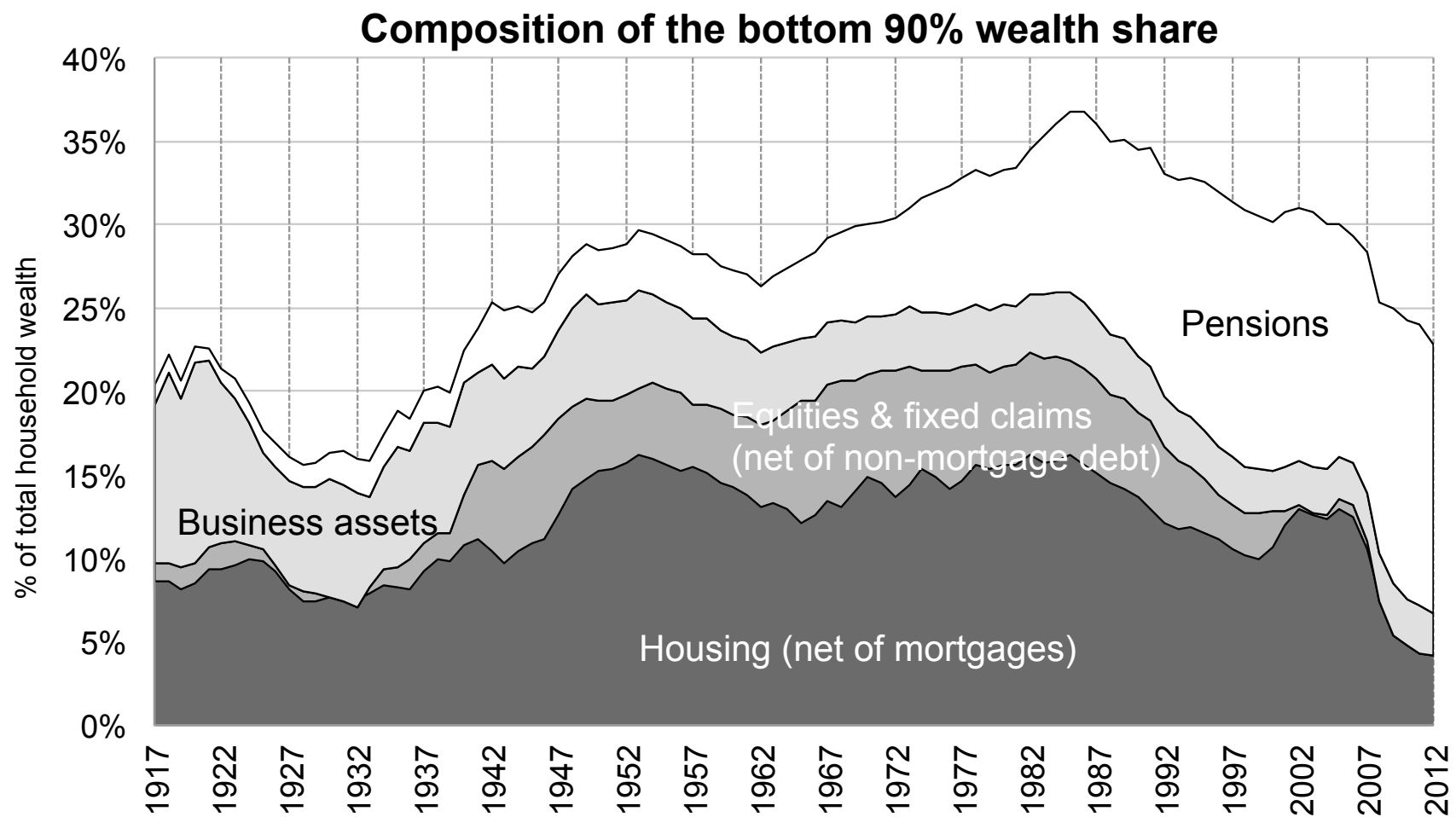
Wealth group	Number of families	Wealth threshold	Average wealth	Wealth share
A. Top Wealth Groups				
Full Population	160,700,000		\$343,000	100%
Top 10%	16,070,000	\$660,000	\$2,560,000	77.2%
Top 1%	1,607,000	\$3,960,000	\$13,840,000	41.8%
Top 0.1%	160,700	\$20,600,000	\$72,800,000	22.0%
Top .01%	16,070	\$111,000,000	\$371,000,000	11.2%
B. Intermediate Wealth Groups				
Bottom 90%	144,600,000		\$84,000	22.8%
Top 10-1%	14,463,000	\$660,000	\$1,310,000	35.4%
Top 1-0.1%	1,446,300	\$3,960,000	\$7,290,000	19.8%
Top 0.1-0.01%	144,600	\$20,600,000	\$39,700,000	10.8%
Top .01%	16,070	\$111,000,000	\$371,000,000	11.2%

Source: Saez and Zucman (2016)



This figure depicts the share of total household wealth held by the 0.1% richest families, as estimated by capitalizing income tax returns. In 2012, the top 0.1% includes about 160,000 families with net wealth above \$20.6 million. Source: Appendix Table B1.

Source: Saez and Zucman (2016)



Source: Saez and Zucman (2016)

3 The interplay between income and wealth inequality

3.1 Change in W inequality \rightarrow change in Y ineq.

- Changes in wealth inequality historically key driver of changes in overall income inequality
- Fall of the top 1% income share in US, Europe over first half of 20th century: due to decline of wealth inequality

3.2 Change in Y inequality \rightarrow change in W ineq.

Key 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

4 Summary

- There are several ways to measure wealth inequality
- Rise in global wealth inequality since the 1980s (particularly strong rise in US and ex-communist countries)
- Wealth shapes income, and income shapes wealth through saving

References

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