Wealth Inequality in the United States since 1913

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Introduction

US Income inequality has increased sharply since the 1970s

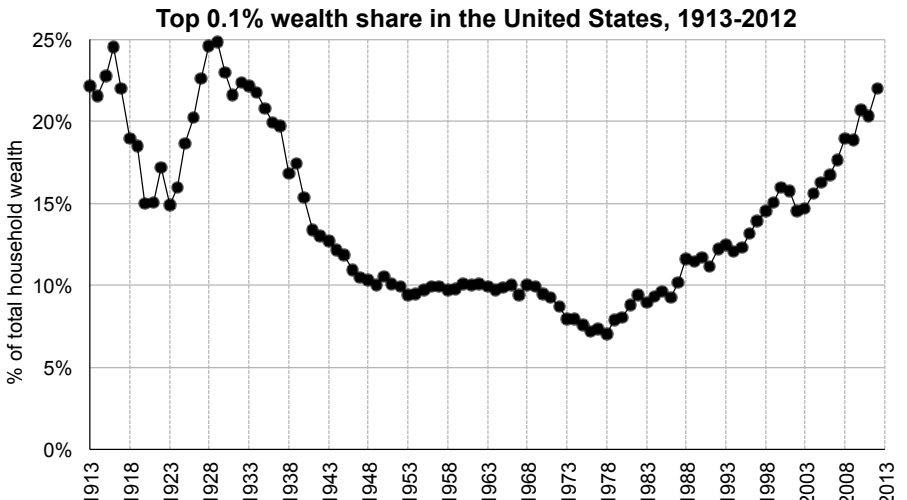
Mixed existing evidence on wealth inequality changes

$\Rightarrow$ Is inequality increase driven solely by labor income?

We capitalize income tax return data to estimate new annual series of US wealth concentration since 1913

Key result: Wealth inequality has surged but phenomenon is concentrated mostly within the top .1% (=wealth above \$20m)

U-Shaped Wealth Concentration



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.

Outline of the talk

I.The capitalization method

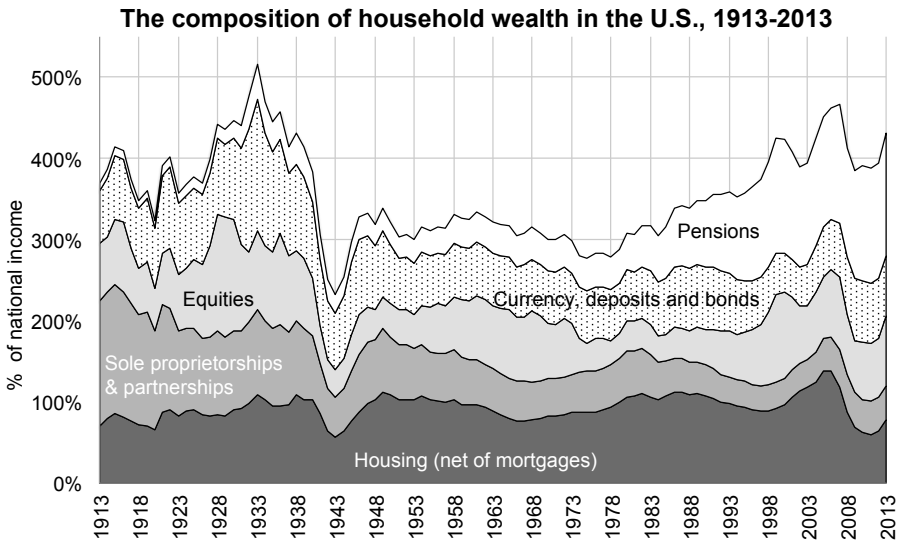
II. The distribution of wealth

III. Comparison with existing estimates

IV. Decomposing wealth accumulation: income and saving rates

I- The capitalization method

Goal: distribute the total household wealth in the Flow of Funds



To obtain wealth, we capitalize incomes

How the capitalization technique works:

Start from each capital income component reported on individual tax returns

Compute aggregate capitalization factor for each asset class

Multiply each individual capital income component by capitalization factor of corresponding asset class

Simple idea, but lot of care needed in reconciling tax with Flow of Funds data

Key assumption: uniform capitalization factor within asset class

$\Rightarrow$ Need detailed income components to obtain reliable results

Distributional data: income tax returns

Consistent, annual, high quality data since 1913:

Composition tabulations by size of income 1913-

IRS micro-files with oversampling of the top 1962-

Various additional IRS published stats (estates, IRAs, trusts, foundations)

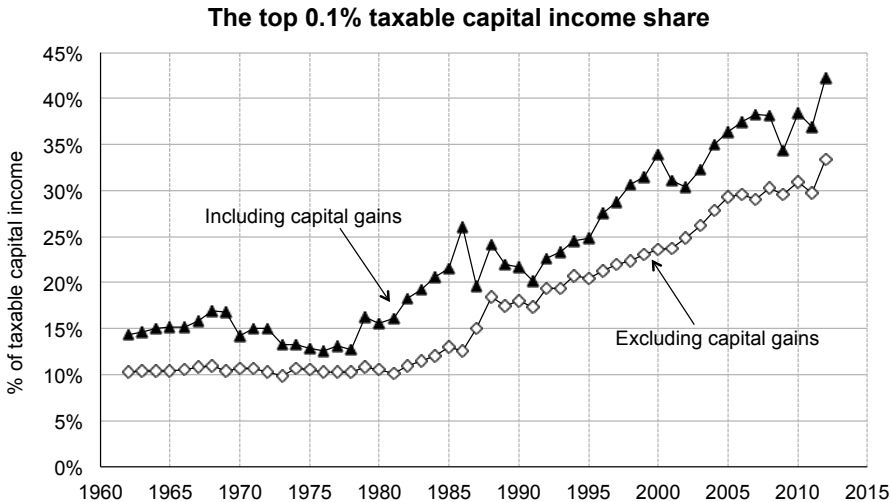
Detailed income categories:

Dividends, interest (+ tax exempt since 1987), rents, unincorporated business profits (S corporations, partnerships, sole prop.), royalties, realized capital gains, etc.

A lot of income "flows to" individual income tax returns

Mutual funds, S corporations, partnerships, holding companies, trusts, etc.

Concentration of reported capital income has increased dramatically



How we deal with non-taxable components

Owner-occupied housing

Home values set proportional to property tax paid

Home mortgages set proportional to mortgage interest paid

We assume (based on SCF) that itemizers have 75% of home wealth and 80% of home mortgages

Pensions

Pension wealth set proportional to pension distributions and wages above 50th percentile

Consistent with SCF and with direct information on IRA wealth from IRS (IRAs $\approx$ 30% of pension wealth)

$\Downarrow$

Only matters for top 10% but irrelevant for top 1% and above, because pensions and housing very small there

Is the return constant within asset class?

Three potential issues:

Maybe the very rich have higher equity/bond returns (e.g., better at spotting good investment opportunities) $\rightarrow$ level bias

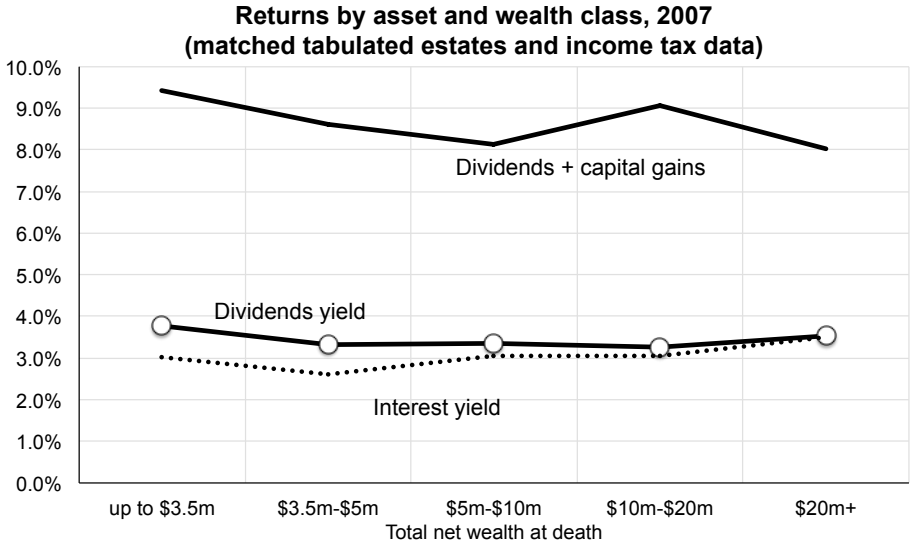
Maybe this differential has increased since the 1970s (e.g., due to financial globalization/innovation) $\rightarrow$ trend bias

Maybe rich people realize particularly low or high returns to avoid taxes

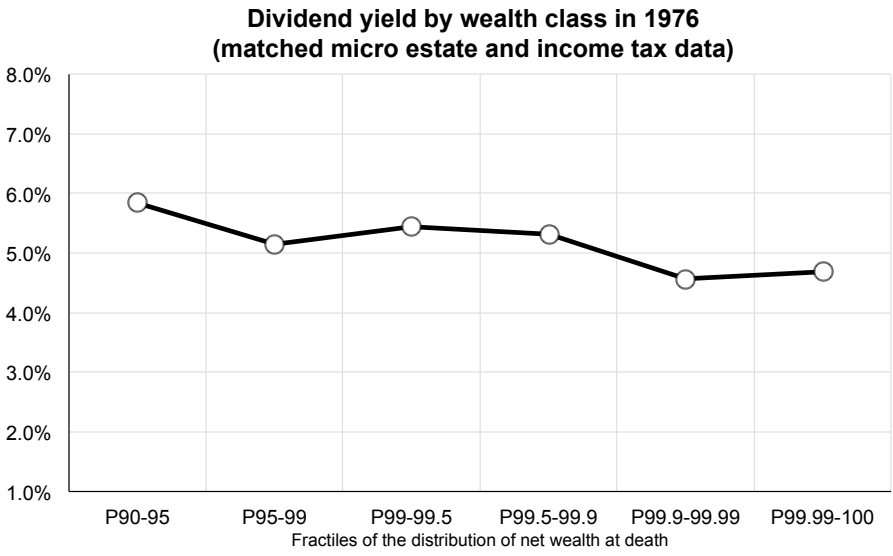
$\Downarrow$

Three checks show that realized return within asset class is flat and has remained flat

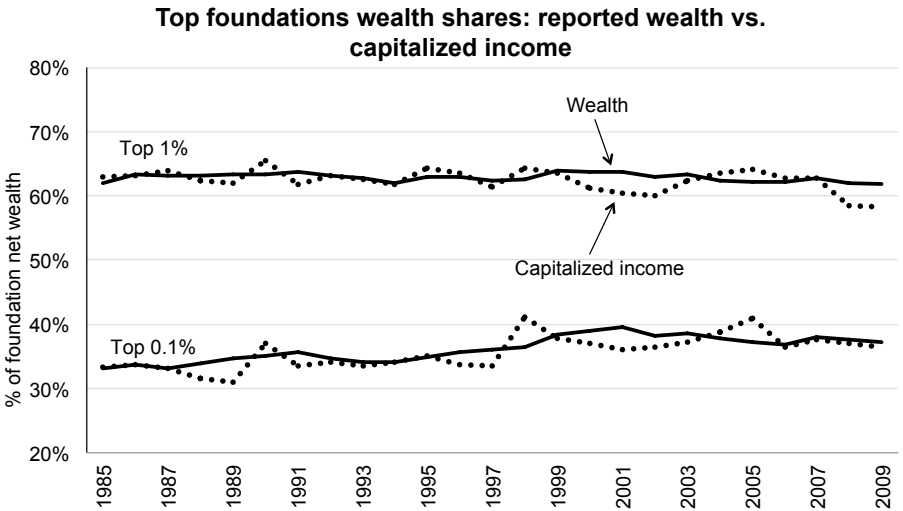
Check 1: Flat returns in matched estates-income tax data



The very rich did collect a lot of dividends in the 1970s

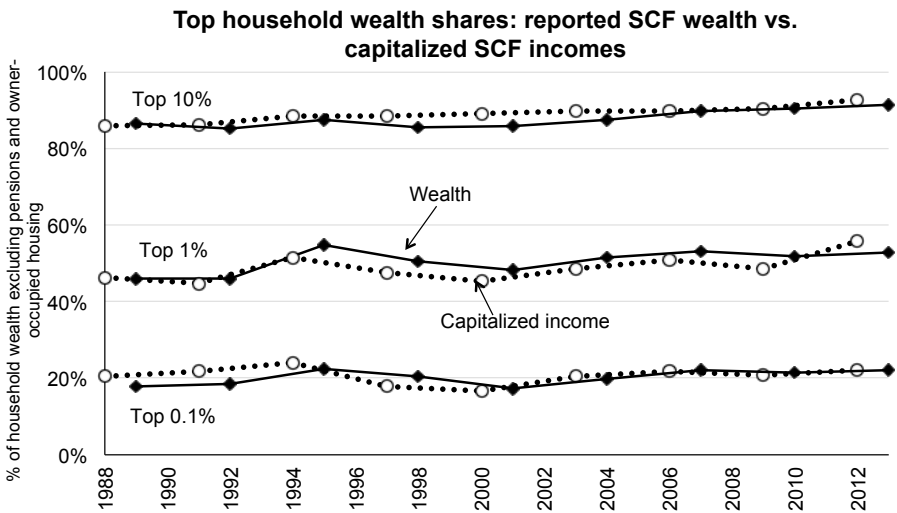


Check 2: Capitalization method works for foundations



The figure compares top foundation wealth shares obtained by using balance sheet wealth data as reported to the IRS and obained by capitalizing IRS-reported income. Source: Appendix Tables C11 and C13.

Check 3: Capitalization method works for the SCF



The figure compares direct SCF wealth shares to wealth shares estimated by capitalizing SCF income. Wealth excludes pensions and owner-occupied net housing. Source: Appendix Table C1.

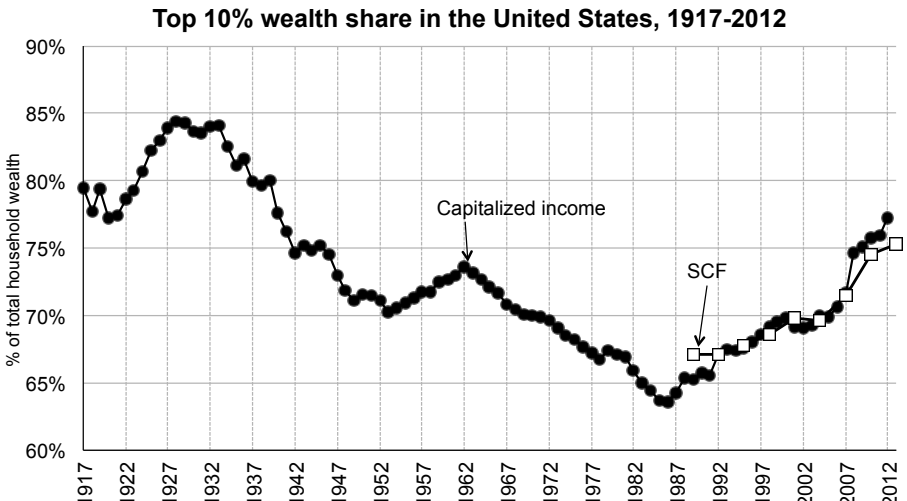
II- The US Wealth Distribution, 1913-2012

Wealth today is very concentrated

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

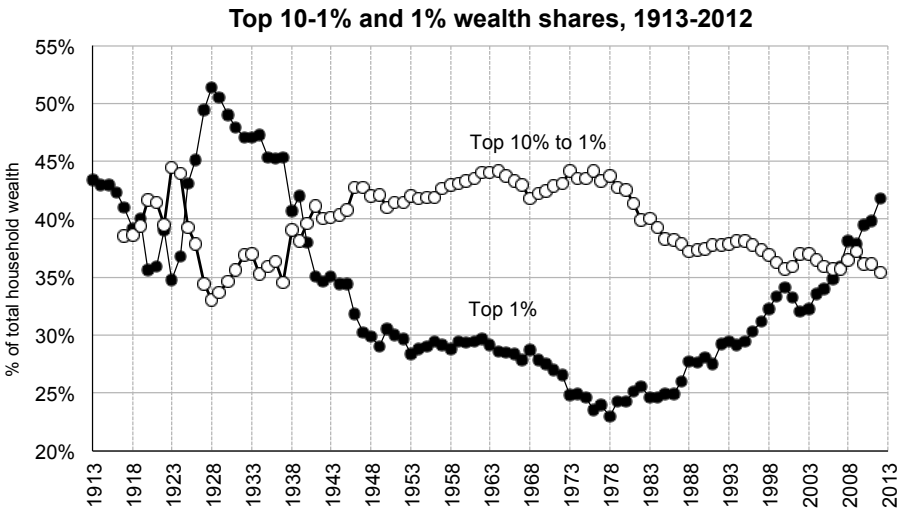
Wealth group	Number of families	Wealth threshold	Average wealth	Wealth share
A. Top Wealth Groups				
Full Population	160,700,000		$343,000	100%
Top 10%	16,070,000	$660,000	$2,560,000	77.2%
Top 1%	1,607,000	$3,960,000	$13,840,000	41.8%
Top 0.1%	160,700	$20,600,000	$72,800,000	22.0%
Top .01%	16,070	$111,000,000	$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%

Wealth has always been concentrated

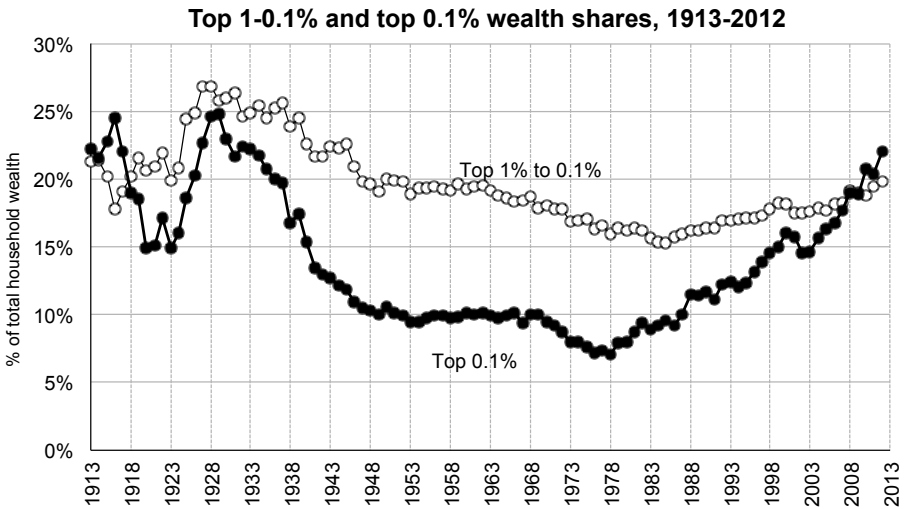


The figure depicts the share of total household wealth owned by the top 10%, obained by capitalizing income tax returns versus in the Survey of Consumer Finances. The unit of analysis is the familly. Source: Appendix Tables B1 and C4.

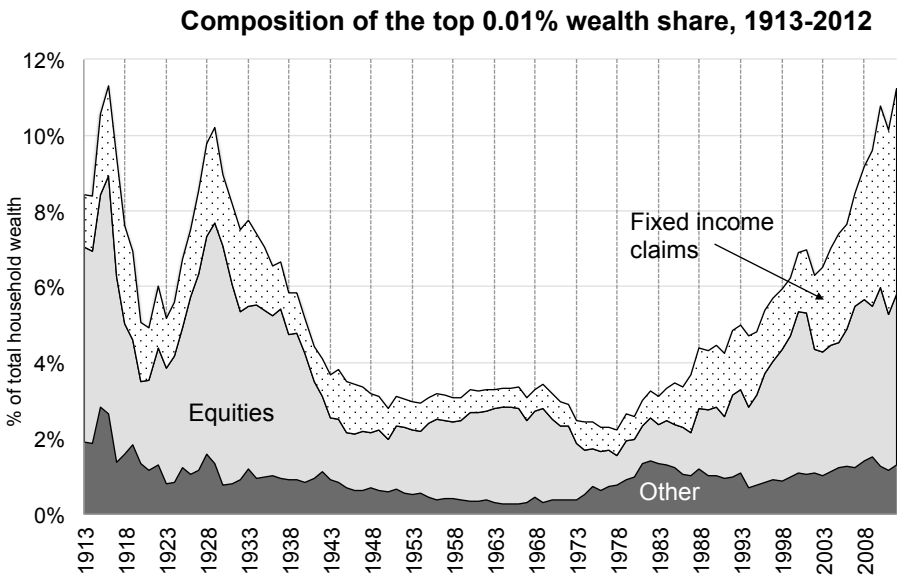
Top 1% has gained more than top 10%



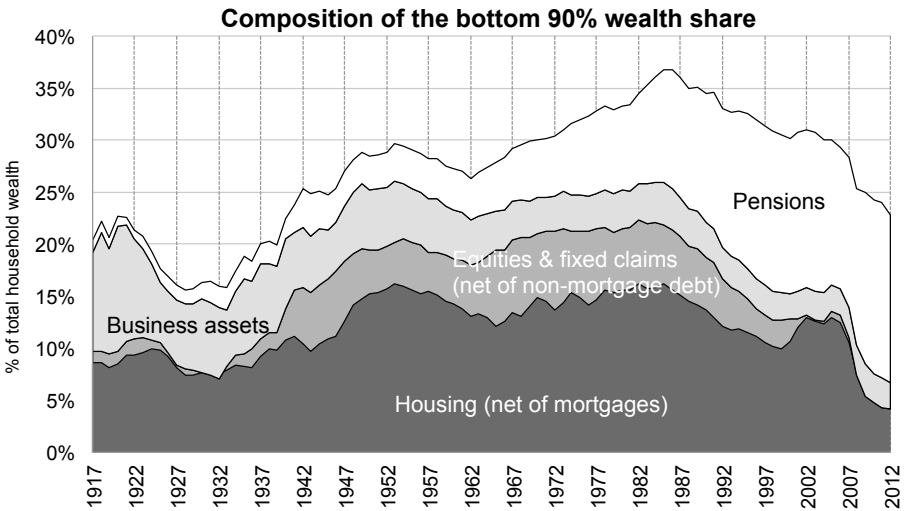
Top 1% surge is due to the top 0.1%



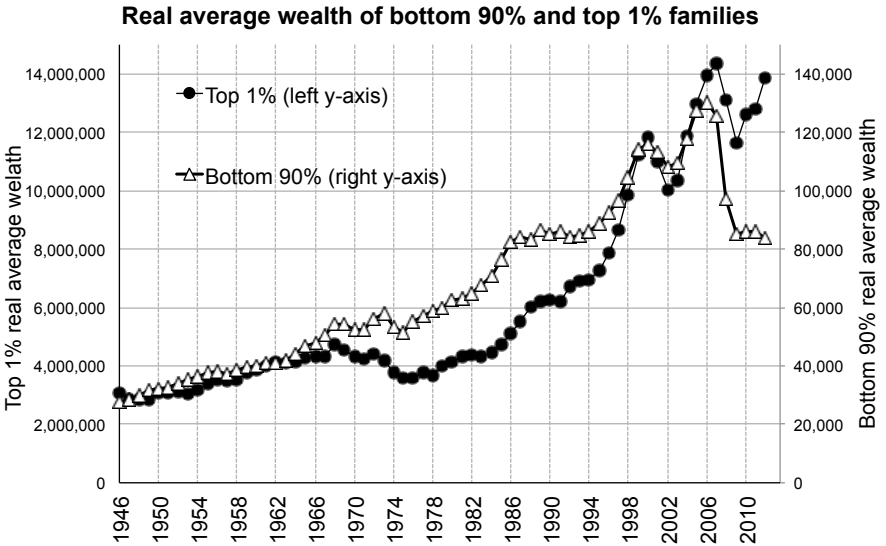
Top 0.01% share: $\times$ 4 in last 35 years



The rise and fall of middle-class wealth

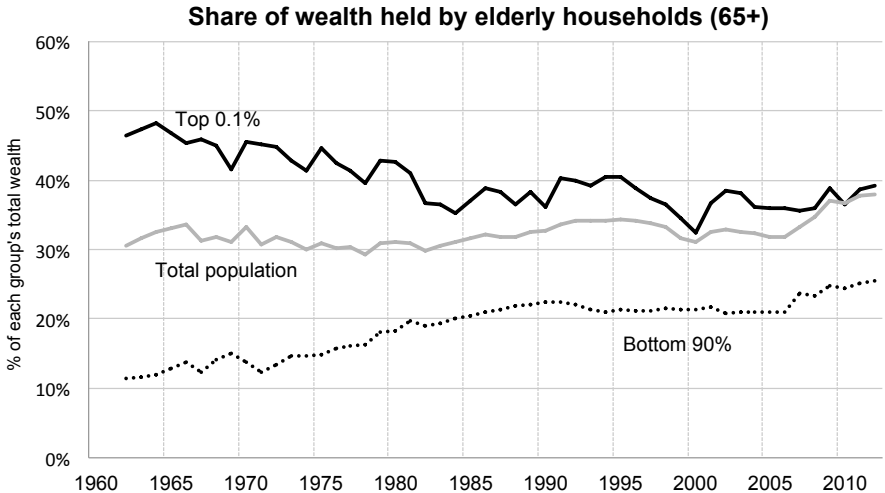


Top 1% vs. bottom 90% wealth growth

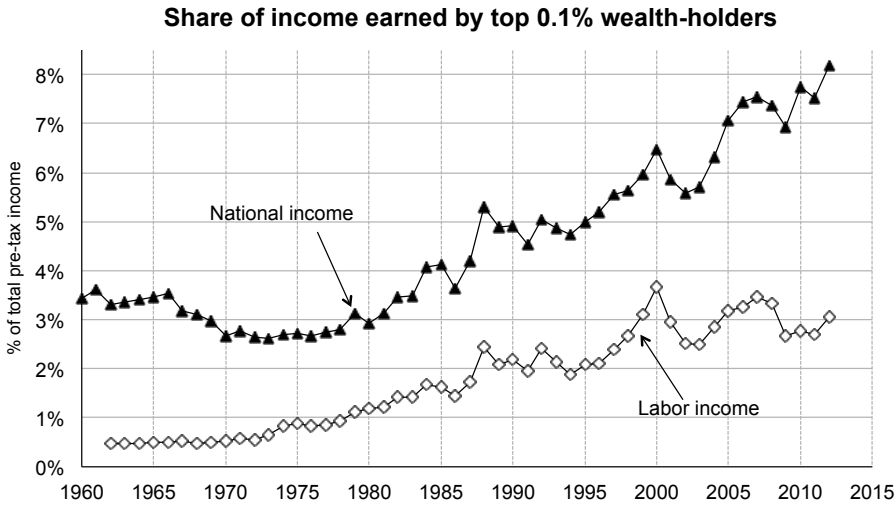


Real values are obtained by using the GDP deflator, 2010 dollars. Source: Appendix Tables B3.

Wealth is getting older, but at the very top remains younger than in the '60s-'70s



Share of income and labor income of top wealth holders has grown a lot



This figure shows the share of total pre-tax national income and pre-tax labor income earned by top 0.1% wealth-holders. Labor income includes employee compensation and the labor component of business income. Source: Appendix Tables B25 and B28.

III- Comparison with existing estimates

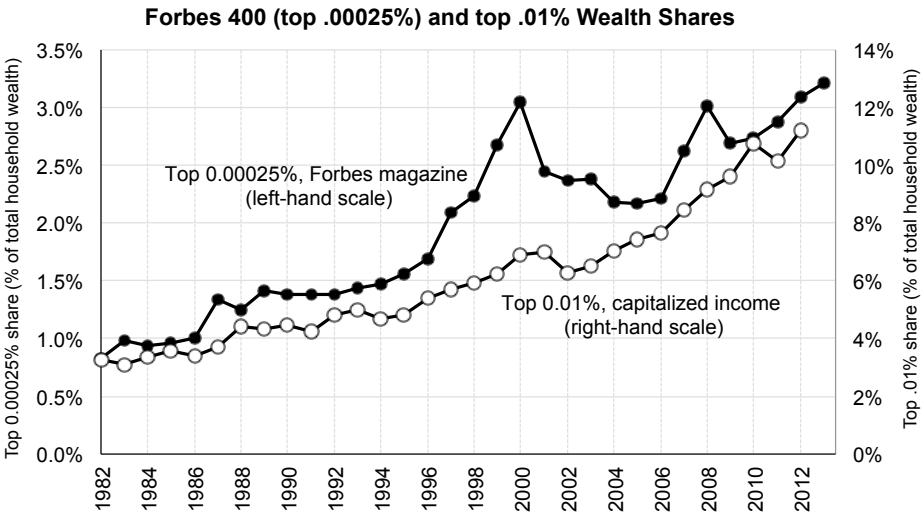
Link with previous studies using alternative data

Forbes 400 rich list: large increase in wealth concentration

Surveys: SCF shows increase in top 10% but less in top 1%

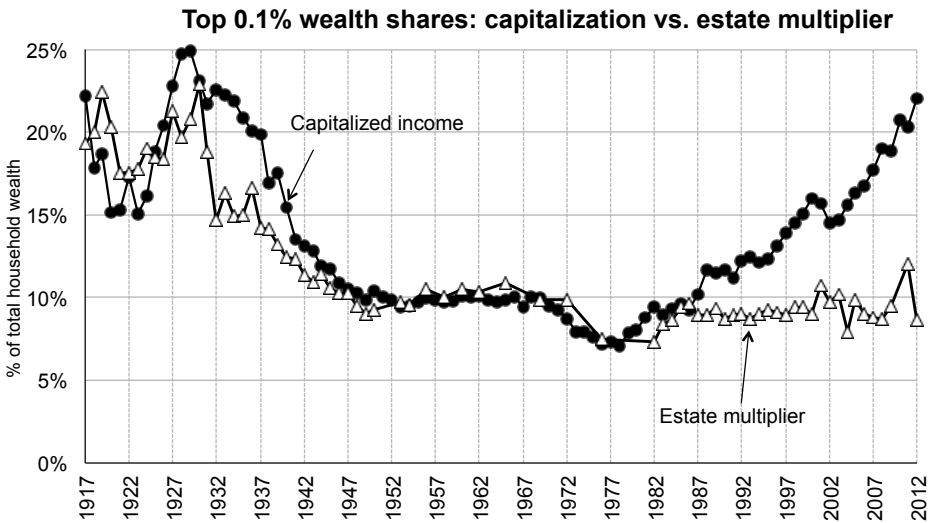
Estate tax multiplier: No increase in top 1% wealth share since 1980s (Kopczuk-Saez 2004, SOI studies)

Our estimate for top 0.01% is consistent with Forbes rankings



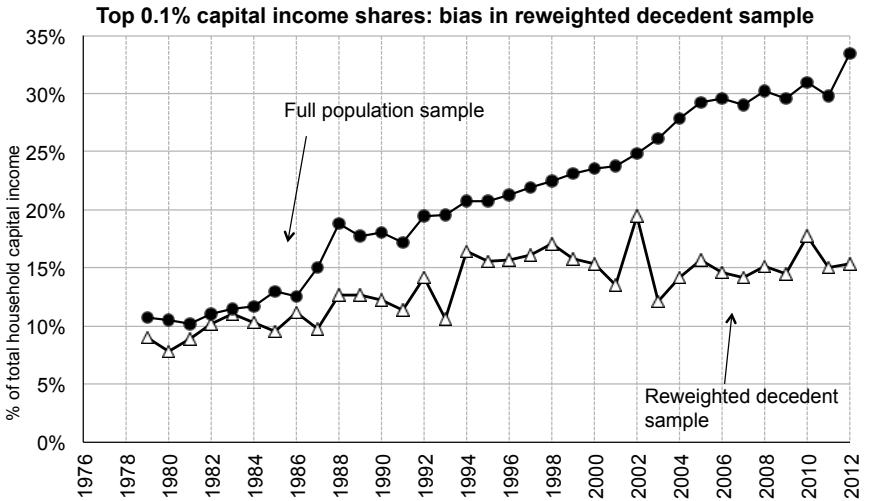
The figure depicts the top .00025% wealth share as estimated from the Forbes 400 list on the left axis. For comparison, the figure reports our top 0.01% wealth share obtained by capitalizing income tax returns (on the right axis). Source: Appendix Table C3.

Estate multiplier technique does not find rising top wealth shares



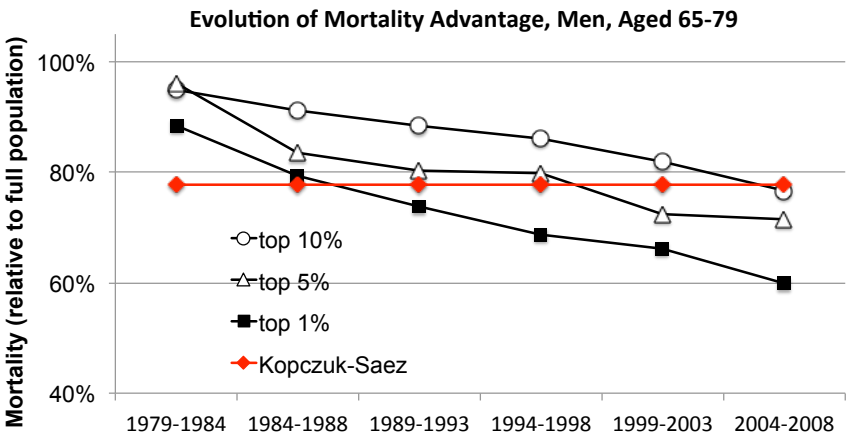
The figure depicts the top 0.1% wealth share obained by capitalizing income and by using estate tax data (Kopczuk and Saez, 2004). Source: Appendix C4 and C4b.

Estate multiplier fails because weighted decedents sample is not representative



The figure depicts the top 0.1% capital income share (excluding realized capital gains) for the full sample and the sample of decedents re-weighted using the Kopczuk-Saez (2004) estate mutiplier weights

The mortality differential by wealth group is widening



The figure depicts the relative mortality rate for men aged 65-79 by wealth group and period. E.g., male top 1% wealth holders aged 65-79 mortality rate is 90% of males aged 65-79 population wide in 1979-1984. Kopczuk-Saez is based on the mortality of white college goers relative to population in the 1980s. The graph shows that the wealth mortality advantage increases overtime and more so for the top 1% wealthiest. Source: Appendix Figure C7.

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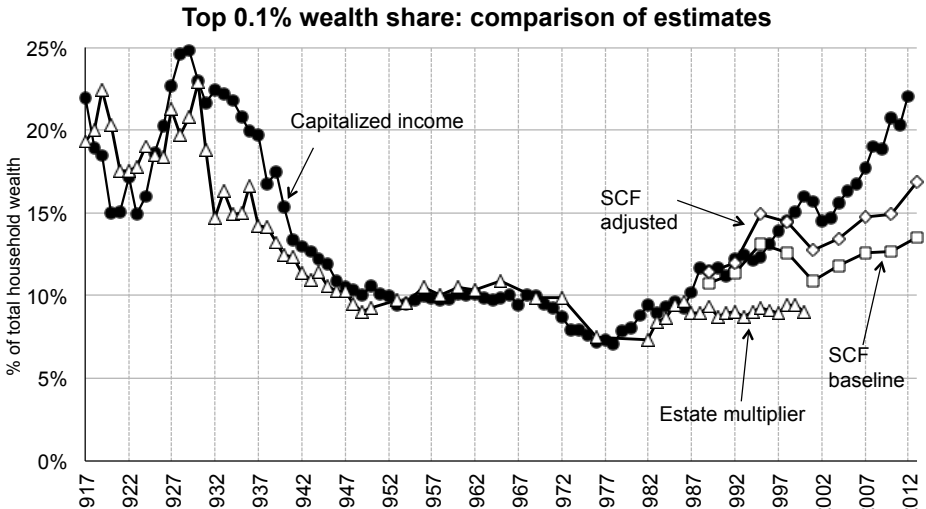
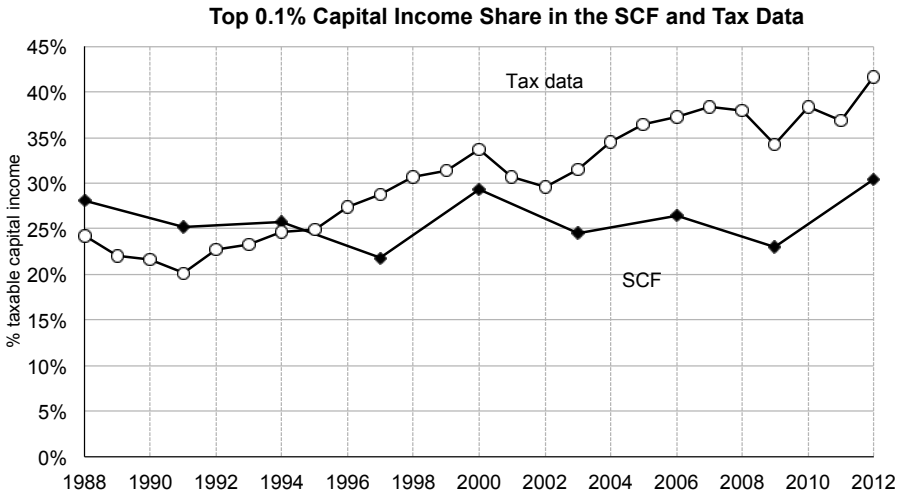
SCF finds rising top wealth shares, but not as much as we do



The figure depicts the top 0.1% wealth share obained by capitalizing income, by using the Survey of Consumer Finances (SCF baseline and adjusted), and by using estate tax data (Kopczuk and Saez, 2004). Source: Appendix C4 and C4b.

SCF does not fully capture rising top capital income share



The figure compares the top 0.1% capital income shares estimated with the SCF data vs. the income tax data. Capital income includes realized capital gains, dividends, interest, net rents, and business profits. Source: Appendix Table C2.

IV- Decomposing Wealth Accumulation: Saving Rates and Income Shares of Top Wealth Holders

Wealth distribution Dynamics

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 pure price effect on assets in year t

We define **synthetic** savings rate s_t^p for fractile p (e.g., top 1%):

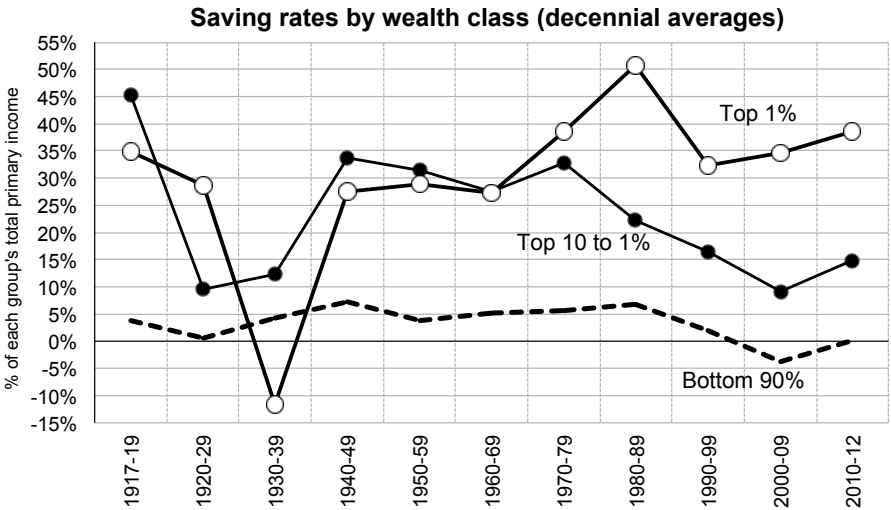
$$W_{t+1}^p = (1 + q_t^p) \cdot (W_t^p + s_t^p \cdot Y_t^p)$$

where $1 + q_t^p$ is price effect for fractile p based on W_t^p composition

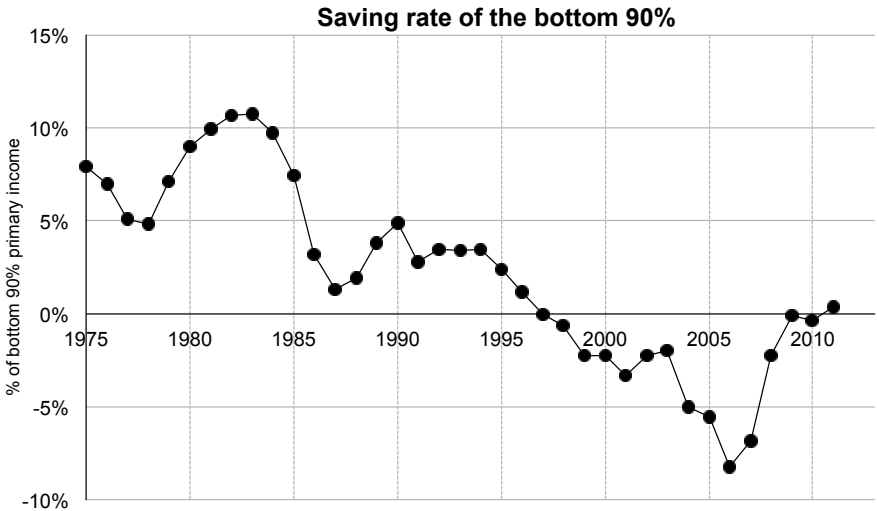
$$\Rightarrow \textbf{long-run steady state: } sh_W^p = sh_Y^p \cdot \frac{s^p}{s}$$

where sh_W^p is fractile p share of wealth, sh_Y^p is fractile p share of income, and s^p/s is relative savings rate of fractile p

Saving rates typically rise with wealth



The bottom 90% massively dis-saved in the decade preceding the crisis



Effects of Savings and Income Inequality

Bottom 90%: Since mid-1980s, plummeting savings rate s^p for bottom 90% relative to aggregate s [due to surge in debt]

$\Rightarrow$ Decline in bottom 90% wealth share, and expected to continue

Top 1%: Since mid-1970s, surge in income share held by top wealth holders and solid savings rate s^p (relative to aggregate s)

$\Rightarrow$ Short-run: Large increase in top wealth shares, and expected to continue

$\Rightarrow$ Long-run: Self-made wealth could become inherited wealth and lead to the "patrimonial society" of Piketty (2014)

Conclusion

A first step toward DINA

We are constructing new, consistent series on the distribution of wealth W and income $Y = Y_K + Y_L$ fully consistent with flow of funds and national accounts

Next step: construct a microfile with individual-level income (pre-tax and post-tax) and wealth consistent with macro flow of funds and national income accounts

$=$ **distributional national accounts (DINA), reconciling macro growth and inequality studies**

Need for better wealth and savings data

Using additional data would enable us to refine our estimates:

E.g., matched property and individual income tax data

Modest additional administrative data collection effort could have high value:

401(k) taccounts balance reporting (and not only IRAs)

Mortgage balances on forms 1098

Market value of portfolio securities on forms 1099

Purchases and sales of securities (to measure saving and consumption)

$\Rightarrow$ **Necessary to obtain fully accurate distributional national accounts**

Supplementary Slides

Wealth categories definition

Equities: corporate equities, including S corporation equities, and money market fund shares (treated as dividend-paying for income tax purposes)

Fixed claims: currency, deposits, bonds, and other interest-paying assets, net of non-mortgage debts

Business assets: sole proprietorships, farms (land and equipment), partnerships, intellectual property products

Housing: owner- and tenant-occupied housing, net of mortgage debt

Pensions: funded pension entitlements, life insurance reserves, IRAs. Excludes social security and unfunded defined benefit pensions

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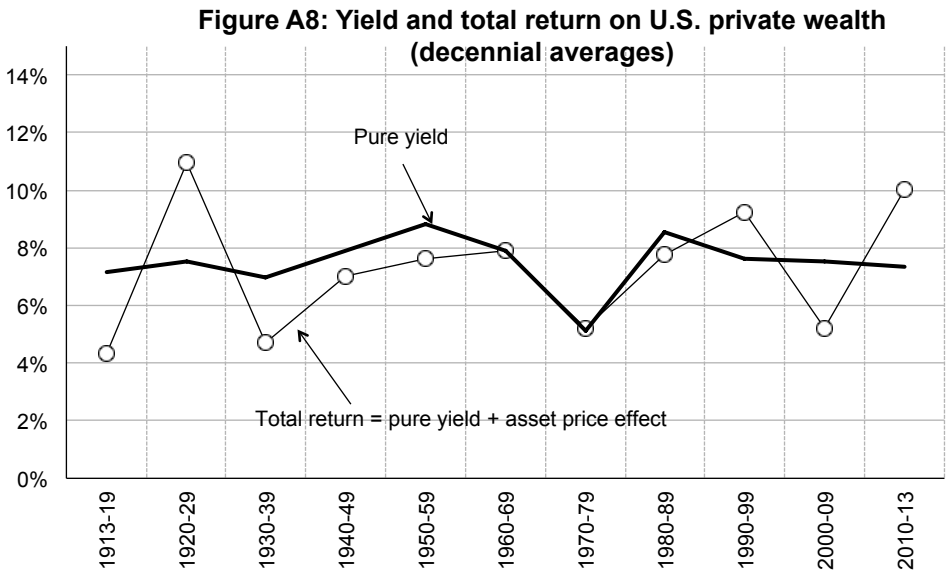
Rates of returns on wealth around 7%
No long-run price effects



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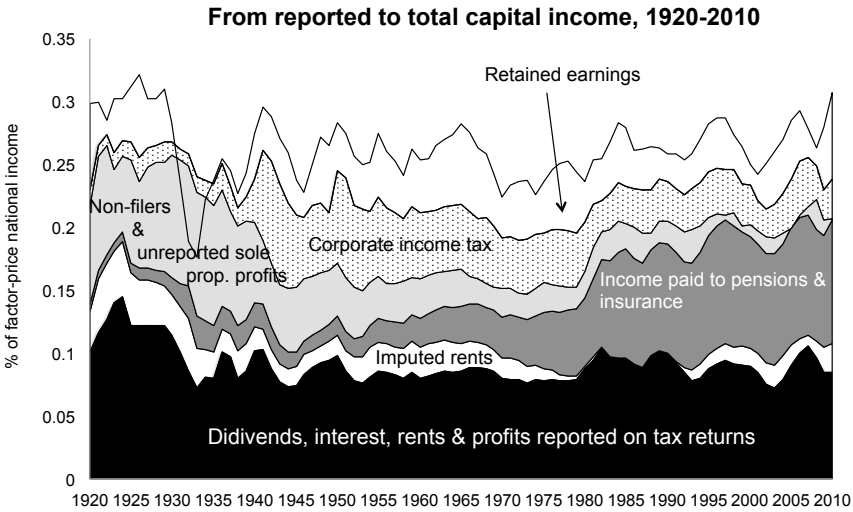
What tax data miss



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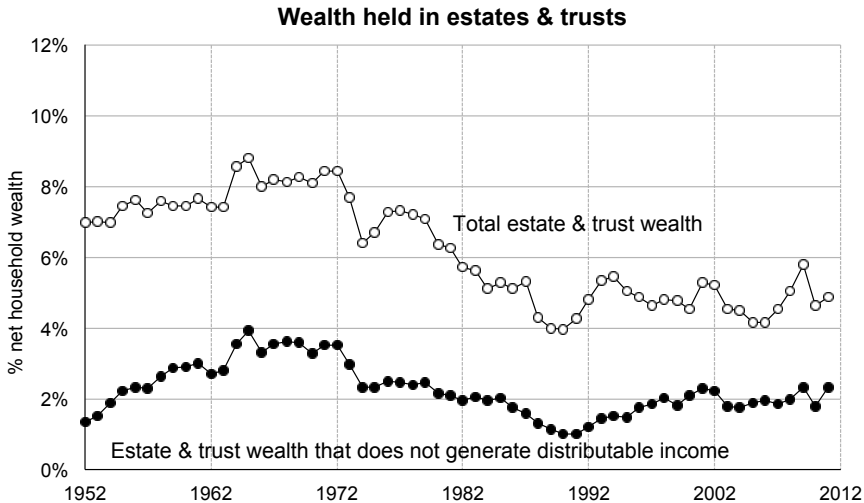
Most trusts generate income taxable at the individual level



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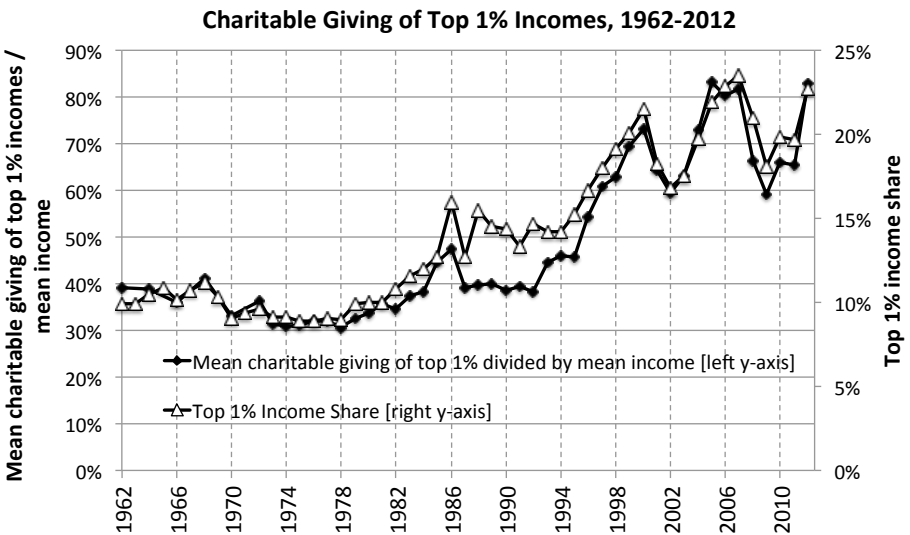
Charitable giving follows top incomes $\Rightarrow$ Surge in top incomes is real



Source: The figure depicts average charitable giving of top 1% inomes (normalized by average income per family) on the left y-axis. For comparison, the figure reports the top 1% income share (on the right y-axis).

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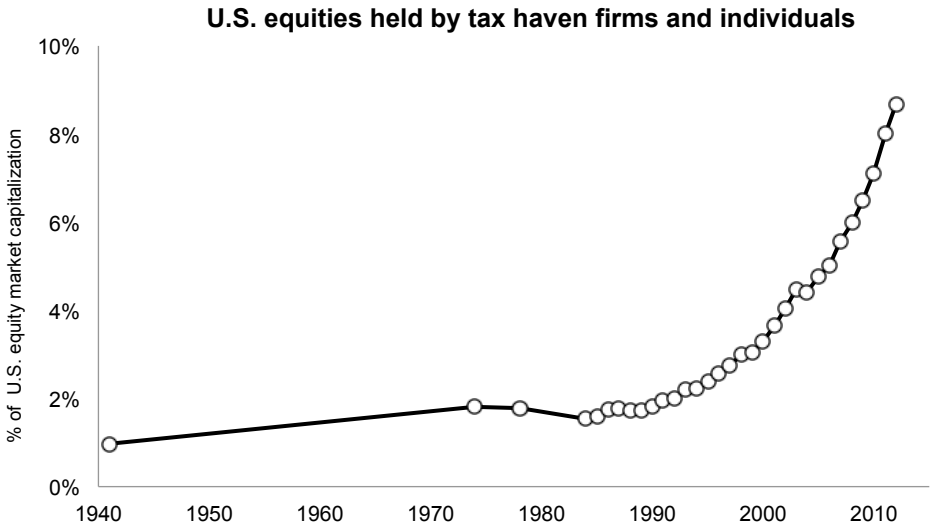
Off-Shore Tax evasion, if anything, has probably increased since the 1970s



In 2012, 9% of the U.S. listed equity market capitalization was held by tax haven investors (hedge funds in the Caymans, banks in Switzerland, individuals in Monaco, etc.). Source: Zucman (2014) using US Treasury International Capital data.

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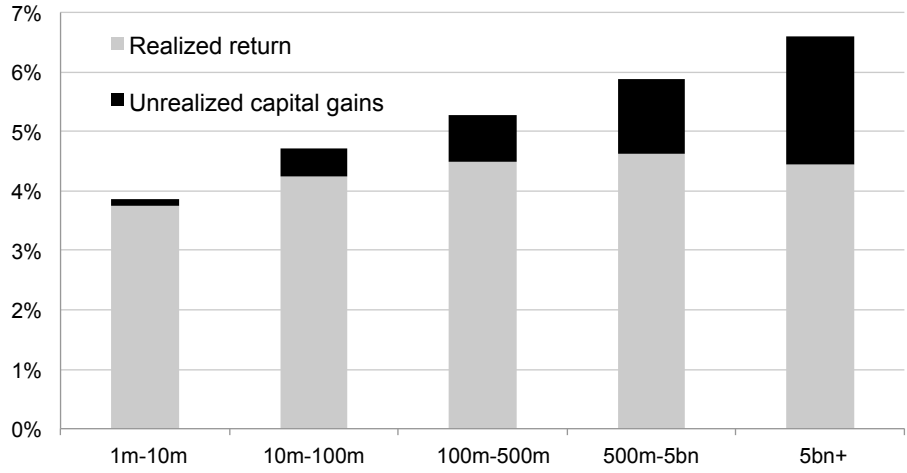
Total returns of foundations grow with wealth but realized returns do not

Figure C4: Return on foundation wealth, 1990-2010 average
Returns including realized & unrealized gains



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Findings are robust to different methodological choices

Robustness checks:

- Different treatment of capital gains
  - Capitalizing dividends only (Bill Gates world)
  - Capitalizing dividends plus capital gains (Warren Buffet world)
  - Capitalizing dividends plus capital gains for shares but not ranking (the best of both worlds)
- Allowing for bond yield rising with wealth
- Different imputations for pension wealth

All show wealth inequalities rising fast at the very top, but not below the top 0.1%

Results robust to alternative treatment of pensions, capital gains, bond returns

Figure B27: Top 0.1% wealth share, all methods