Econ 133 – Global Inequality and Growth

Inherited vs. self-made wealth (1)

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What we've learned so far:

- There have been dramatic changes in wealth concentration:
  - Wealth used to be very concentrated in Europe; less so today
  - US used to be more equal than Europe; is now more unequal
- $r - g$ model useful to think about these developments

What we're going to learn in this lecture:

- How to divide wealth into inherited vs. self-made wealth
- How the importance of inherited wealth has changed over time
- What factors can account for these changes

1 Wealth = inherited wealth + self-made wealth

- What is the fraction of aggregate wealth W that comes from the past (= inherited) vs. the present (= self-made)?

- Modern societies like to view themselves as meritocratic

- Widespread view that inheritance was important in the past (Balzac, Austen...) but less important today

Kotlikoff-Summers vs. Modigliani controversy:

- Kotlikoff & Summers (1981, 1988): 80% of US wealth inherited
- Modigliani (1986, 1988): 80% of US wealth is self-made
- Who's right?

1.1 How to measure share of inherited wealth in total W

- Assume that we observe the aggregate wealth stock W_t at time t
- We'd like to estimate aggregate inherited wealth stock $W_{Bt} \leq W_t$
- And the share of inherited wealth in total wealth $\varphi_t = W_{Bt}/W_t$.
- Assume we observe annual inheritance flow B_s in any year $s \leq t$.

- We could define stock of inherited wealth W_{Bt} as sum of past B_s

- Problem 1: critical to include inter vivos gift flows

- Problem 2: Should only take into account fraction of inheritance flow $B_{st} \leq B_s$ received at time s by people still alive in t

- Standard simplifcation: cumulate the full inheritance flows observed the previous H =30 years (H: average generation length)

- Problem 3: inheritances produce flow returns!

1.2 The Modigliani vs. Kotlikoff-Summers measures

- Modigliani (1986, 1988) chooses zero capitalization:

$$W_{Bt}^{M} = \sum_{t-30 \leq s \leq t} B_s$$

- Kotlikoff and Summers (1981, 1988) capitalize past inheritance flows using economy's average rate of return to wealth r

$$W_{Bt}^{KS} = \sum_{t-30 \leq s \leq t} B_s \cdot (1+r)^{t-s}$$

- If $g = r = 0\%$ and $B_s = B$, both definitions coincide and

$$W_{Bt}^{M} = W_{Bt}^{KS} = H \times B_s$$

- Ex: if $B = 10\%$ of national income and $H = 30$ years, then stock of inherited wealth $W_{Bt}^{M} = W_{Bt}^{KS} = 300\%$ of national income

- If aggregate wealth amounts to 400% of national income, then share of inherited wealth $\varphi_t^M = \varphi_t^{KS} = 75\%$ of total wealth

- But in general case where g and $r - g$ are different from zero, the two definitions lead to widely different conclusions

- Ex: with $g = 2\%$, $r = 4\%$ and $H = 30$, for a given inheritance flow $B = 10\%$ of national income and aggregate wealth $W = 400\%$ of national income, $\varphi_t^M = 56\%$ and $\varphi_t^{KS} = 103\%$.

- About half of wealth comes from inheritance according to the Modigiani definition, and all of it according to the KS definition

1.3 The problems with the Modigliani and KS measures

- Both Modigliani's and KS's definitions are problematic
- 0 capitalization makes no sense: inheritors with 0 labor income can appear as life-cycle savers
- Full capitalization also inadequate: φ_t can be higher than 100%

- In reality, wealth accumulation always involves 2 kinds of people:

- Inheritors: people whose assets are $<$ capitalized value of wealth they inherited (they consume more than their labor income)

- Savers: people whose assets are $>$ capitalized value of wealth they inherited (they consume less than their labor income)

1.4 Example: Is Donald Trump a self-made man?

- Born in 1946, son of real estate tycoon Fred Trump
- Trump's wealth today $\approx$ \$2.9 billion (= Bloomberg 2015 detailed investigation)
- Inherited his father's real estate company. Value of inheritance $\approx$ 40 million in 1974 (= \$200 million divided among 5 children)

- Average post-tax real rate of return on wealth in the US $\approx$ 5%:

$$r = (1 - \tau_K) \cdot \frac{\alpha}{\beta} \approx 5\%$$

(With $\alpha \approx$ 30%, $\beta \approx$ 400% and tax rate on capital $\approx$ 30%)

- Inflation rate of 3.5% so nominal return $r \approx$ 8.5%

- Capitalized value of 1974 bequest = 40 million $\times e^{42 \cdot r}$ = \$1.42 billion = \$40m bequest received + \$1,380m cumulated return

- 1.42 billion $<$ 2.9 billion: by that metric, Trump is a "saver"

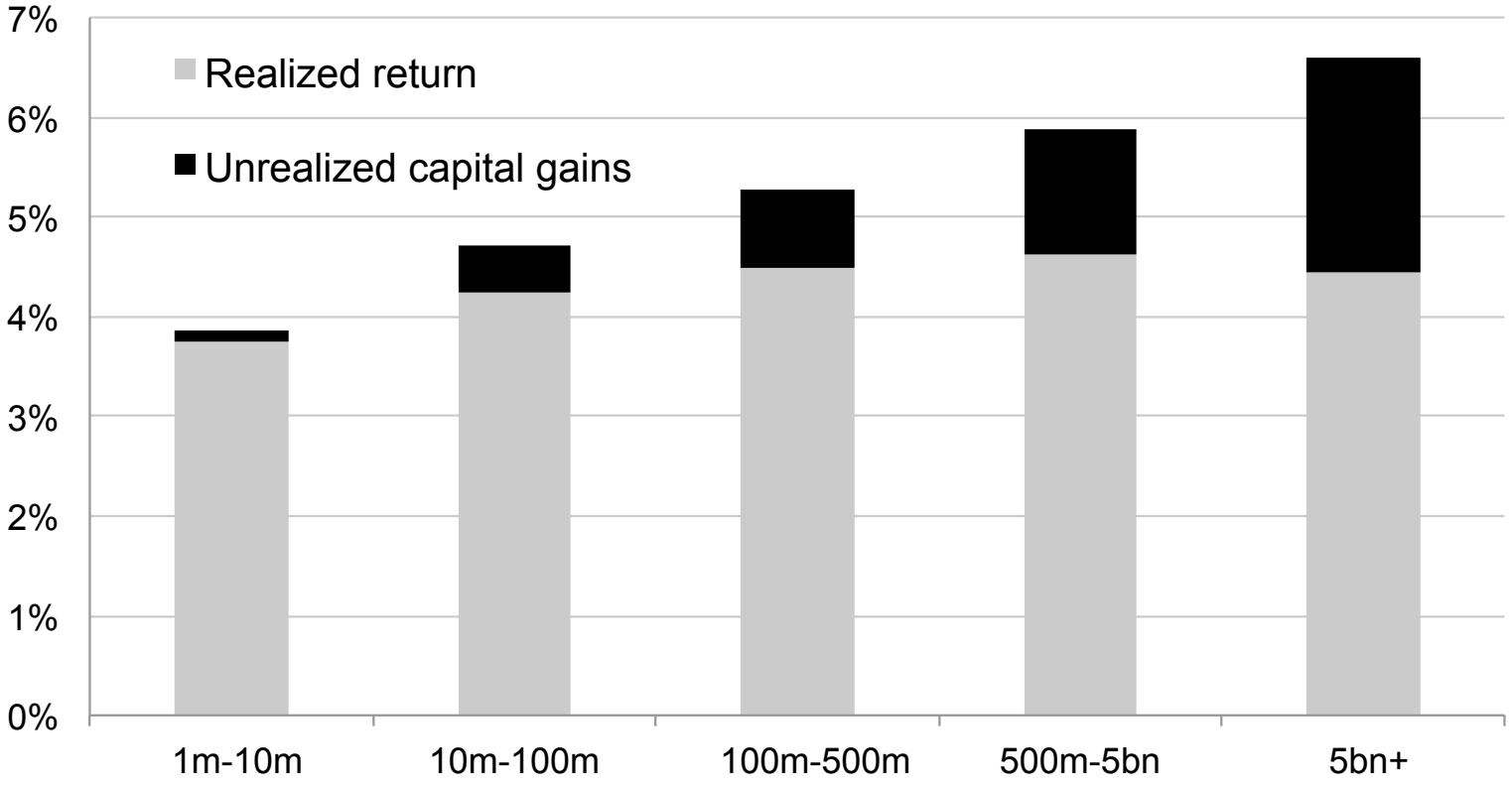
- But what if real return equals 7.0% rather than 5%?

- Then capitalized value of 1974 bequest = 40 million $\times e^{42 \cdot r} =$ \$3.29 billion = \$40m bequest received + \$3,250m cum. return

- In that case Trump is a rentier: has consumed more than his labor income

- Nobody knows what r he got, but evidence that rates of return rise a lot with initial wealth

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



Source: Saez and Zucman (2016)

1.5 The correct measure of φ_t

- Correct measure = Piketty, Postel-Vinay, and Rosenthal (2013)
- Aggregate inherited wealth = sum of inheritors' wealth plus the inherited fraction of savers' wealth
- Self-made wealth = non-inherited fraction of savers' wealth
- By construction, inherited and self-made wealth are less than 100% and sum to aggregate wealth

2 Summary

- Aggregate wealth is the sum of inherited wealth and self-made wealth

- To properly measure aggregate inherited wealth, one has to distinguish two types of agents: savers and inheritors

- The aggregate stock of inherited wealth = sum of inheritors' wealth + inherited fraction of savers' wealth

References

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