Discussion of “Social Security and Trends in Wealth Inequality”
by Catherine, Miller and Sarin

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This paper

- Measures individual wealth \textit{inclusive of social security wealth (a}^{SS}\text{)}
- Finds that once measured that way, wealth concentration:
  1. is lower than under the headline measure
  2. has fallen rather than risen over time

At retirement, this price is sunk and does not change their Social Security wealth. However, for younger cohorts, a large fraction of this cost remains to be paid, which reduces the net present value of Social Security disproportionately for high earners.

4.8 Baseline top wealth shares

This section compares the levels and trends of top wealth shares under alternative specifications, both including and excluding Social Security wealth. We define top wealth shares based on the top 10% and top 1% of the population by measures of marketable wealth. This allows for comparison of how previously documented inequality trends are impacted by the inclusion of Social Security.

Figure 8: Top 10% and Top 1% Wealth Shares with and without Social Security

This figure reports the evolution of the top 10% and 1% wealth shares with and without Social Security wealth. In the risk-free valuation, future Social Security cash flows are discounted using the yield curves implied by the price of government bonds. In the risk-adjusted valuation, we adjust discount rates to account for the long-run cointegration between the labor and stock markets, as detailed in Section 5.1.

A. Top 10%

Figure 8 reflects our baseline specification. Panel A focuses on the top 10%. The top 10% wealth share (excluding Social Security) grew by 10 percentage points between 1989–2016. This
This paper

- Measures individual wealth *inclusive of social security wealth* \((a^{SS})\)
- Finds that once measured that way, wealth concentration:
  1. is lower than under the headline measure
  2. has fallen rather than risen over time
- Contemporaneous work by Sabelhaus and Volz [SV] does the same. Finds 1., but not 2.

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Where this paper fits in the literature

- Part of ongoing work that challenges the assumptions behind Piketty, Zucman, and Saez’s [PSZ] measures of wealth inequality:
  1. How should we measure private wealth? eg Smith-Zidar-Zwick
  2. Should we use broader measures of wealth? eg SV, this paper

General theme of this work: assumptions matter! Deaton’s take:
“Because distribution is such a controversial topic, these assumptions leave plenty of scope for politically-biased challenges, in which each commentator can choose their own alternatives and get almost any result they choose, inequality is increasing, inequality is not increasing, and everything in between.”
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- This discussion: consider the conceptual basis for this measure of wealth, highlight the importance of assumptions
A model to frame conceptual issues

- Consider a simple general eqbm OLG model with social security
  - Special case of Auclert-Malmberg-Martenet-Rognlie

- Everyone works to age $T^\text{ret}$, then gets SS, dies at age $T$

- Population growth rate $n$. Assume stationary distn: $\pi_j \propto \left(\frac{1}{1+n}\right)^j$

- SS payroll tax rate $\tau$ while working, benefits $tr_j$ indexed to wages

- Assume no growth in productivity. Maximization problem:

$$
\max \sum_{j=0}^{T} \beta^j \frac{c_j^{1-\sigma}}{1-\sigma}
$$

$$
c_j + \frac{1}{1+r}a_{j+1} = w \left((1-\tau)l_j + tr_j\right) + a_j
$$

$$
a_0 = a_{T+1} = 0$$
Individual budget constraint and SSW

- Intertemporal budget constraint for individual of age $j$:

$$\sum_{s \geq j}^T \left( \frac{1}{1 + r} \right)^s c_s = a_j + w \sum_{s \geq j}^T \left( \frac{1}{1 + r} \right)^s (tr_s - \tau l_s) + w \sum_{s \geq j}^T \left( \frac{1}{1 + r} \right)^s l_s$$

- Private wealth

- Social security wealth $a_{jSS}$

- Human wealth $a_{jH}$

- Piketty and co. measure $a_j$

- Paper argues wealth should be $a_j + a_{jSS}$, goes on to measure $a_{jSS}$

- Big difference: $\sum_j \pi_j a_{jSS}$ is over 2 times GDP in 2016

- But is $a_{jSS}$ wealth?
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- Social security wealth $a_{j}^{SS}$
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- But is $a_{j}^{SS}$ wealth?
  - It looks like private wealth: similar life-cycle pattern as $a_{j}$
  - But: it is not liquid; (mostly) not bequeathable; not a choice variable
  - Also very different from GE perspective (more on this next)
Individual budget constraint and SSW

- Intertemporal budget constraint for individual of age $j$:

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\sum_{s \geq j}^{T} \left( \frac{1}{1 + r} \right)^{s} c_s = a_j \underbrace{\sum_{s \geq j}^{T} \left( \frac{1}{1 + r} \right)^{s} \left( tr_s - \tau l_s \right)}_{\text{Social security wealth } a_j^{SS}} + w \underbrace{\sum_{s \geq j}^{T} \left( \frac{1}{1 + r} \right)^{s} l_s}_{\text{Human wealth } a_j^{H}} + \underbrace{w \sum_{s \geq j}^{T} \left( \frac{1}{1 + r} \right)^{s} l_s}_{\text{Private wealth}}
$$

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- Big difference: $\sum_{j} \pi j a_j^{SS}$ is over 2 times GDP in 2016

- But is $a_j^{SS}$ wealth?
  - It is a part of total wealth $a_j + a_j^{SS} + a_j^{H} \rightarrow$ closer to welfare metric
  - But: What about human wealth $a_j^{H}$ and its role in inequality?
  - Why take a cross-sectional measure? $j = 0$ more correct.
  - Why not $c$ inequality directly? eg Krueger-Perri, Aguiar-Bils, ...
Sensitivity to discounting

\[ a^SS_j(r) \equiv w \sum_{s \geq j}^T \left( \frac{1}{1 + r} \right)^s (tr_s - \tau l_s) \]

- Short-duration liability + long-duration asset $\rightarrow$ (usually) ↓ in $r$!
  - Historical decline in $r$ inflates $a^SS_j$, accounts for paper’s main findings
  - Discounting change over time appears to be main difference with SV

\[ \text{Adrien Auclert (Stanford)} \]
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- But what is correct \( r \) to use here?
  - Use nominal term structure + CPI forecasts, TIPS term structure
  - But model of future earnings has idiosyncratic risk: using risk-free discounting isn’t consistent with this
  - Paper does correct \( r \) for aggregate risk (nice!), but correction for idiosyncratic risk is equally important, and much harder
General equilibrium: dynamic inefficiency

- Assume government has zero debt, budget constraint

\[ 0 = \sum_{j=0}^{T} \left( \frac{1}{1+n} \right)^j (tr_j - \tau_l_j) = \frac{a_{0SS}(n)}{w} \]

- In particular, newborn social security wealth is

\[ a_{0SS}(r) < 0 \iff r > n \]

- In dynamically efficient economy, \(a_{jSS}\) starts negative, grows with \(j\)

- Fig 11: barely the case in 1989, and not at all in 2016.
  - Sign of dynamic inefficiency? Welfare improving social security!
General equilibrium: asset market clearing

- Let neoclassical firms produce using $Y = K^\alpha (\sum \pi_j L_j)^{1-\alpha}$

- Asset market clearing (determines GE $r$):
  $$\frac{\sum \pi_j a_j}{Y} = \frac{K}{Y} = \frac{\alpha}{r + \delta}$$

- $a_j^{SS}$ plays no role here! Not investible wealth, unlike $a_j$. 
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  - In general, removing SS will cause $r$ to fall, crowding in $K$ and mitigating the increase in $A$
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- Model also predicts that demographic change itself (eg, caused by decline in \( n \)) causes the \( r \) decline by shifting \( \pi_j \) [Auclert et al]
Conclusion

- Thought-provoking paper that challenges our take on inequality
- Places social security and demographics at center of debate on wealth measurement, where they should be
- Well written and well executed, with mostly reasonable assumptions
- Can clarify the conceptual basis for measuring wealth this way, and make statements about counterfactuals more precise, by drawing on insights from general equilibrium OLG models