Discussion of “Social Security and the Racial Wealth Gap” by Catherine and Sarin

Arshia Hashemi

Conference on Empirical Legal Studies
The University of Chicago Law School
October 14, 2023

Arshia.Hashemi@chicagobooth.edu
arshiahashemi.com

CHICAGO BOOTH

An Empirical Paper with a Noteworthy Contribution

- **Puzzle**: In the U.S., the racial wealth gap is ~6x, while the racial income gap is ~1.5x.
- **Main Point**: One misses part of the picture by excluding social security in measures of wealth inequality.
- **Main Result**: Racial wealth gap shrinks to ~2x after including social security in total wealth (2019 SCF).
- **My discussion**: Taking the main result as given, what can we learn about *ex-ante heterogeneity* across racial groups that affects the racial wealth gap?
  1. Interpret main result through the lens of a simple dynamic model of consumption-saving.
  2. Use the model to derive testable implications for ex-ante heterogeneity across racial groups.
- Recent research establishes the importance of heterogeneity in initial conditions for dynamics of the racial wealth gap (Derenoncourt, Kim, Kuhn, Schularick, 2023).

Modeling Drivers of the Racial Wealth Gap

- Consider a dynamic two-period model: working period $t = 0$ and retirement period $t = 1$.
- Household's dynamic optimization problem.

$$V(a_0, y_0, R_m) \coloneqq \max_{c_0, c_1, a_1} \{\ln c_0 + \beta \ln c_1\}$$

$$\text{s.t.} \;\; c_0 + a_1 = y_0 - \tau y_0 + a_0$$

$$c_1 = R_m a_1 + R_s \tau y_0$$

- Allow for three sources of ex-ante heterogeneity across racial groups.
  1. Initial private wealth endowment: $a_0 \geq 0$
  2. Labor income in working period: $y_0 > 0$
  3. Gross rate of return on private wealth: $R_m > 1$
- Model parameters that are common across racial groups.
  1. Discount rate: $\beta \in (0,1)$
  2. Gross rate of return on social security wealth: $R_s > 1$
  3. Share of labor income paid into social security: $\tau \in (0,1)$

Characterizing the Racial Wealth-Income Wedge

- Characterize **two** measures of the racial wealth gap using endogenous private wealth policy function $a_1^*(a_0, y_0, R_m)$.

  1. Racial wealth gap *exclusive* of social security wealth.

$$G_m := \frac{R_m(w)a_1^*\big(a_0(w), y_0(w), R_m(w)\big)}{R_m(b)a_1^*\big(a_0(b), y_0(b), R_m(b)\big)} = \underbrace{\left[\frac{\beta R_m(w)\left[(1-\tau)+\frac{a_0(w)}{y_0(w)}\right]-R_s\tau}{\beta R_m(b)\left[(1-\tau)+\frac{a_0(b)}{y_0(b)}\right]-R_s\tau}\right]}_{\text{Wealth}-\text{Income Wedge 1}} \cdot \frac{y_0(w)}{y_0(b)}$$

  2. Racial wealth gap *inclusive* of social security wealth.

$$G_s := \frac{R_m(w)a_1^*\big(a_0(w), y_0(w), R_m(w)\big) + \boldsymbol{R_s\tau y_0(w)}}{R_m(b)a_1^*\big(a_0(b), y_0(b), R_m(b)\big) + \boldsymbol{R_s\tau y_0(b)}} = \underbrace{\left[\frac{R_m(w)\left[(1-\tau)+\frac{a_0(w)}{y_0(w)}\right]+R_s\tau}{R_m(b)\left[(1-\tau)+\frac{a_0(b)}{y_0(b)}\right]+R_s\tau}\right]}_{\text{Wealth}-\text{Income Wedge 2}} \cdot \frac{y_0(w)}{y_0(b)}$$

- A key determinant of the wealth-income wedge is the composite variable: $R_m\left[(1-\tau)+\frac{a_0}{y_0}\right]$.

Testable Implications of a Smaller Racial Wealth Gap

- What does a smaller racial wealth gap (inclusive of social security) imply about ex-ante heterogeneity across racial groups?

$$R_m(w)\left[(1-\tau)+\frac{a_0(w)}{y_0(w)}\right] > R_m(b)\left[(1-\tau)+\frac{a_0(b)}{y_0(b)}\right] \quad (1)$$

- Consider two special cases.

    1. Zero initial private wealth endowment, i.e., $a_0(w) = a_0(b) = 0$.

$$R_m(w) > R_m(b) \quad (2)$$

    2. Equal rate of return on private wealth, i.e., $R_m(w) = R_m(b) = R_m > 1$.

$$\frac{a_0(w)}{y_0(w)} > \frac{a_0(b)}{y_0(b)} \quad (3)$$

- Social security compensates for ex-ante heterogeneity in (i) private returns R_m or (ii) initial private wealth a_0/y_0 or (iii) both.
- **Suggestion**: Test whether model predictions (eq. 1, 2, 3) hold in the data. If so, then ex-ante heterogeneity is a driver of the racial wealth gap. If not, then we falsify the model. Either way, one learns something new.