The Racial Wealth Gap and the Role of Firm Ownership

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Federal Reserve Board[1]

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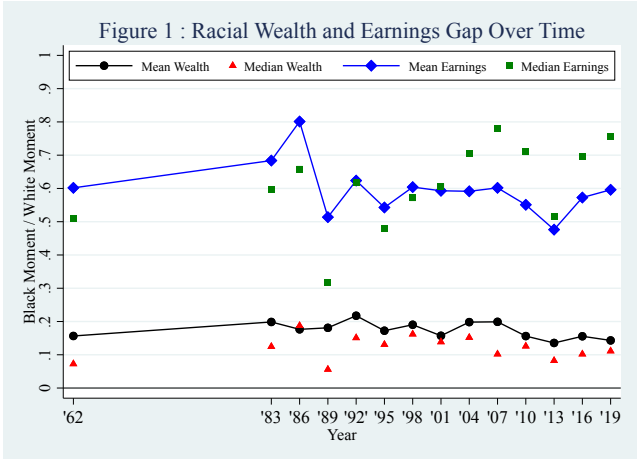
[1]The analysis and conclusions set forth are those of the author and do not indicate concurrence by other members of the research staff or the Board of Governors.

Motivation

- There has been a large and persistent racial wealth gap that has barely moved over 6 decades.



Data: Survey of Consumer Finances

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  - Importance of earnings gap $\implies$ one time transfers like reparations are unlikely to do much.

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- Model: An overlapping generations model with two types of households, warm glow bequest motives, and a stock market.
- Results: Because white households start with more firm ownership than black households, and can pass that ownership across generations, they maintain a consistent advantage in profit income which in turn leads to a steady state wealth gap.
- Policy Implications: A reparations policy that addresses the initial discrepancy in firm ownership is necessary to close the racial wealth gap — wealth transfers that do not target the underlying distribution of ownership will not suffice.

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  - The old cohort rents their savings as productive capital to earn a rate of return r_t, decides how much to consume, c_{2t}, decides how much capital to leave as a bequest to the young cohort, b_t^i, decides how many marketable firm shares to sell or leave to the young cohort, and passes on the off market firm shares to the young cohort.

Household Equations

- Household Problem:

$$\max_{c^i_{1t}, c^i_{2(t+1)}, b^i_{t+1}, \pi^i_{t+1}} \ln(c^i_{1t}) + \beta \ln(c^i_{2(t+1)}) + \rho\beta \ln(b^i_{t+1}) + \zeta\beta \ln(\pi^i_{t+1})$$

$$s.t. \quad c^i_{2(t+1)} + b^i_{(t+1)} + v_{t+1}\pi^i_{t+1}$$

$$\leq (1 + r_{t+1})(b^i_t + IW_t + \left(\frac{\pi^i_t + \phi_i}{100}\right) P_t - c^i_{1t}) + v_{t+1}\pi^i_t.$$

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- First Order Conditions:

$$c^i_{1t} = \frac{b^i_t + IW_t + \left(\frac{\pi^i_t + \phi_i}{100}\right) P_t + \frac{v_{t+1}}{1+r_{t+1}}\pi^i_t}{\beta + \rho\beta + \zeta\beta + 1} \tag{1}$$

$$b^i_{t+1} = \rho\beta(1 + r_{t+1})c^i_{1t} \tag{2}$$

$$\pi^i_t = \frac{\zeta b^i_t}{\rho v_t} \tag{3}$$

Firm Equations

- Firm Problem:

$$\max_{\mathcal{K}_t, \mathcal{L}_t} \mathcal{K}_t^{\alpha} \mathcal{L}_t^{\gamma} - W_t \mathcal{L}_t - r_t \mathcal{K}_t - \delta \mathcal{K}_t$$

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- Capital Stock law of motion:

$$K_{t+1} = \frac{\beta + \rho\beta}{\beta + \rho\beta + 1} \left(\frac{\rho\beta}{\beta + \rho\beta} (1 + N^{1-\alpha-\gamma} L^{\gamma} \alpha K_t^{\alpha-1} - \delta) K_t + N^{1-\alpha-\gamma} L^{\gamma} (1-\alpha) K_t^{\alpha} \right) \tag{7}$$

Model Dynamics

- Bequest Dynamics:

$$b_{t+1}^{i} = \frac{\rho\beta(1+r_{t+1})}{\beta+\rho\beta+\zeta\beta+1}\left(1+\frac{\zeta P_t}{100\rho v_t}+\frac{v_{t+1}\zeta}{(1+r_{t+1})\rho v_t}\right)b_t^{i} + \frac{\rho\beta(1+r_{t+1})}{\beta+\rho\beta+\zeta\beta+1}\left(IW_t+\frac{\phi_i P_t}{100}\right) \tag{8}$$

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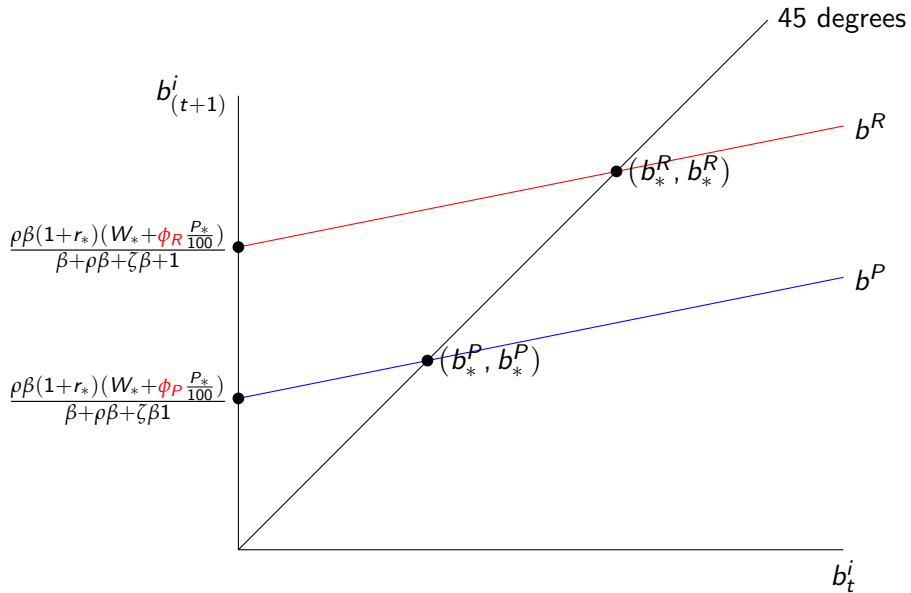
Figure 2: Dynamics of the Intergenerational Transfer of Capital



Main Result

- Wealth: savings + market value of firm shares

$$W_t^i = \frac{\beta + \rho\beta + \zeta\beta}{\beta + \rho\beta + \zeta\beta + 1}\left(b_t^i + IW_t + \frac{\pi_t^i + \phi_i}{100}P_t\right) - \frac{v_{t+1}\pi_t^i}{(1 + r_{t+1})(\beta + \rho\beta + \zeta\beta + 1)} + v_t(\pi_t^i + \phi_i) \tag{9}$$

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- Steady State Wealth Gap:

$$\phi_R > \phi_P \implies b_*^R > b_*^P \implies \underbrace{\left(\frac{\zeta b_*^R}{\rho v_*}\right)}\ \pi_*^R > \underbrace{\left(\frac{\zeta b_*^P}{\rho v_*}\right)}\ \pi_*^P \implies \lim_{t\to\infty} W_t^R > \lim_{t\to\infty} W_t^P.$$

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- Future Research
  - Bring the model to the data to explore the quantitative relevance of this mechanism.
  - Explore other mechanisms in addition to firm ownership that link wealth and income (i.e. human capital investment).

References

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Thank you!