The racial wealth gap, 1860-2020¹

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Motivation

- The largest racial economic gap continues to be wealth
  - White to Black wealth ratio in 2019 is 6:1
  - Compared to income ratio of 2:1
- The gap has shown remarkable stability over the late 20C
- We know little of its evolution prior to modern wealth data

[Du Bois (1901); Spriggs (1984); Margo (1984); Margo & Collins (2011)]
Our project:

- Compile first long-run series on the racial wealth gap from Civil War to the present
  - Fill in ∼100 missing years of data, 1880s-1980s
- Rationalize shape of wealth convergence with a stylized model
- Explain mechanisms behind periods of convergence/divergence
- Shed light on future gap, policy implications (e.g., reparations)
Related Literature

▶ Historical wealth by race and legacy of slavery
  ▶ Du Bois (1901); DeCanio (1979); Higgs (1982); Margo (1984); Schweninger (1989, 1990); Ng & Virts (1993); White (2007); Canaday (2008); Miller (2020); Baradaran (2017); Craemer, Smith, Harrison, Logan, Bellamy, & Darity (2020); Darity & Mullen (2020).

▶ Housing and homeownership gaps
  ▶ Margo & Collins (2011); Kollmann & Fishback (2011); Rothstein (2017); Aaronson, Hartley, & Mazumder (2019); Akbar, Li, Shertzer, & Walsh (2019).

▶ Modern racial wealth gap
  ▶ Barsky, Bond, Charles, & Lupton (2002); Charles & Hurst (2002); Gittleman & Wolff (2004); Altonji & Doraszelski, (2005); Killewald (2013); Pfeffer & Killewald (2019); Wolff (2019); Aliprantis, Carroll, & Young (2019); Ganong, Jones, Noel, Farrell, Greig, & Wheat (2020).

▶ Wealth dynamics and inequality
  ▶ Kotlikoff & Summers (1981); Piketty (2014); Piketty & Zucman (2014); Saez & Zucman (2016, 2020a, 2020b); Derenoncourt (2017); Wolff (2017); Killewald, Pfeffer, & Schachner (2017); Pfeffer & Killewald (2018); Kuhn, Schularick, & Steins (2020).
A new historical series on the racial wealth gap, 1860-2020
Accounting model of racial wealth convergence
Determinants of the shape of convergence and divergence
Policy and wealth convergence counterfactuals
A new historical series on the racial wealth gap, 1860-2020
Why are we missing 100 years of the racial wealth gap?

- Census recorded wealth in 1850 (real estate), 1860, and 1870
- Next measures of the racial wealth gap are begin in 1980s
  - Panel Survey of Income Dynamics (wealth: 1984-present)
  - Survey of Consumer Finances (typically, 1983-present)
Definitions and data sources for our new long-run series

- Wealth gap: white-to-Black per capita wealth ratio
- White wealth = total wealth - Black wealth
- Primary data sources:
  - US Census, 1860 & 1870: gross wealth
  - Southern state tax records, 1860s-1910s: assessed wealth
  - Monroe Nathan Work, 1920-1940: assessed wealth
  - SCF+ (Kuhn et al., 2020), 1949-present: net wealth
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  - Monroe Nathan Work, 1920-1940: **assessed wealth**
  - SCF+ (Kuhn et al., 2020), 1949-present: **net wealth**
- **Secondary data sources:**
  - Wealth, debt, and taxation report, 1922 (US Census)
  - Black population report, 1918 (US Census)
  - Saez & Zucman (2016) aggregate wealth estimates, early 20C
White-Black per capita wealth ratio, 1860-2020

Authors' series
White-Black wealth ratio, 1860-2020

Incorporates enslaved population with zero assumed wealth in 1860. Census measure of per capita Black wealth.
White-Black wealth ratio, 1860-2020

1870 wealth ratio from Census
Robust to sensitivity analyses addressing censoring from below.
White-Black wealth ratio, 1860-2020

White-Black wealth ratio, 1860-2020

Authors' series

White-Black wealth ratio, 1860-2020

Authors' series

SCF+: 1950-2020,
wealth = marketable assets - debt
Key takeaways from the long-run series

- Rapid convergence in first 50 yrs after emancipation
  - In 1860, W-B ratio is 56 to 1
  - By 1920, W-B ratio is ∼10 to 1
- Convergence slows dramatically by mid-to-late 20C
  - W-B ratio in 1950s: 7
  - W-B ratio in 2019: 6
- Overall series exhibits a “hockey-stick” shape
- What forces explain this shape of convergence?
Accounting model of wealth convergence
The trajectory of the racial wealth gap

- Wealth accumulation model:

\[
W_{t+1} = (1 + q) \cdot (W_t + sY_t) \\
Y_t = (1 + g)Y_{t-1}
\]

- Growth rate of the racial wealth gap \((WR = \frac{W^w}{W^b})\):

\[
\log\left(\frac{WR_{t+1}}{WR_t}\right) \approx \underbrace{(q^w - q^b)}_{\text{Differences in capital gains}} + \underbrace{\left[s^w \frac{Y^w_t}{W^w_t} - s^b \frac{Y^b_t}{W^b_t}\right]}_{\text{Differences in saving}}
\]
Thought experiment: convergence under $q^w = q^b$, $s^w = s^b$

How would the racial wealth gap have evolved, if Black and white Americans faced same wealth accumulating conditions?

- Set $q$ and $s$ to be equal across the two groups
  - $q = 1\%$, $s = 5\%$
    
    [Saez and Zucman (2016)]

- Plug in annualized income growth for the two groups,
  - $g^b = 2.3\%$ & $g^w = 2\%$  
    
    [data]

- Start from 1870 wealth & income gap (W/B): 20 and 3.6

$$
\log \left( \frac{WR_{t+1}}{WR_t} \right) = s \cdot \left( \frac{Y_t^w}{W_t^w} - \frac{Y_t^b}{W_t^b} \right).
$$
Thought experiment: convergence under $q^w = q^b$, $s^w = s^b$

Hockey stick shape follows from initial conditions
Simulation vs. data

<table>
<thead>
<tr>
<th></th>
<th>2020 (data)</th>
<th>2020</th>
<th>2050</th>
<th>2230</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wealth ratio (W/B)</td>
<td>5.7</td>
<td>3.1</td>
<td>2.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Income ratio (W/B)</td>
<td>2.1</td>
<td>2.1</td>
<td>1.9</td>
<td>1</td>
</tr>
</tbody>
</table>

- Simulation yields large wealth gap of 3.1 to 1 in 2020
- Wealth gap remains after income convergence
- Nevertheless, observed wealth convergence slower
Determinants of the shape of convergence and divergence
Slower convergence: $q^b < q^w$ and/or $s^b < s^w$
Slower convergence: $q^b < q^w$ and/or $s^b < s^w$

- Violent destruction/expropriation of property ($q$)
  
  [Cook (2014); Messer et al. (2018); Albright et al. (2021)]

- Differences in income, life expectancy, family structure $\rightarrow$ differences in saving ($s$)
  
  [Carroll et al. (1999); Aaronson et al., (2020); Gittleman and Wolff (2004); Keister (2004); Altonji and Doraszelski (2005); Dal Borgo (2019); Dynan et al., (2004)]

- Capital market discrimination, segregation, unequal access to financial institutions ($q \& s$)
  
  [Spriggs (1984); Baradaran (2017); Aaronson et al., (2020); Akbar et al. (2019); Avenancio-Léon & Howard (2019)]
Slower convergence: $q^b < q^w$ and/or $s^b < s^w$
Divergence post-1980

- Data
- Equal qs
- Different qs (w>b)
- Simulation post-1980
Changes in wealth accumulating conditions over time

Understanding post-1980 divergence through $g$, $s$, and $q$:

<table>
<thead>
<tr>
<th>Period</th>
<th>$g^w - g^b$</th>
<th>$s^w - s^b$</th>
<th>$q^w - q^b$</th>
</tr>
</thead>
<tbody>
<tr>
<td>1870-1950</td>
<td>-0.53 p.p.</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Convergence in income, 1870-2020
Reduced role for savings, increased role for capital gains
Diverging wealth-to-income ratios due to differences in $q$

Absolute change in wealth-to-income ratios (1971 base year)
Heterogeneous capital gains due to portfolio composition

\[ q_{total}^{b/w} = \sum_c \omega_c^{b/w} R_c \]

- \( \omega_c \): share of asset \( c \) (SCF+)
- Assume identical \( R_c \) within asset class (JST, FA)
- Period: 1983-2019

<table>
<thead>
<tr>
<th>Portfolio share</th>
<th>Housing</th>
<th>Equity</th>
<th>Business</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (( \omega^w ))</td>
<td>39%</td>
<td>19%</td>
<td>19%</td>
<td>77%</td>
</tr>
<tr>
<td>Black (( \omega^b ))</td>
<td>58%</td>
<td>8%</td>
<td>8%</td>
<td>74%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capital gains</th>
<th>White (( q^w ))</th>
<th>Equity</th>
<th>Business</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (( q^w ))</td>
<td>0.45%</td>
<td>0.88%</td>
<td>0.78%</td>
<td>2.72%</td>
</tr>
<tr>
<td>Black (( q^b ))</td>
<td>0.66%</td>
<td>0.30%</td>
<td>0.38%</td>
<td>1.43%</td>
</tr>
</tbody>
</table>
Distributional questions

- Main focus: the per capita or average racial wealth gap
- Gaps are higher lower in the distribution (median gap = 10:1)
- Average gap is strongly influenced by rising wealth inequality
The role of the general increase in US wealth

Absolute change in wealth-to-income ratios (1971 base year)

- Rising white W2Y ratios driven by the top 10% richest
- Q: can a wealth tax speed up convergence?
Policy and wealth convergence counterfactuals
How can we hasten convergence in Black & white wealth?

Long-run evidence shows

- Convergence has slowed to a halt
  - Full convergence occurs very slowly even under equal $q$ and $s$
  - For convergence by 2050, we would need $q^b = 5\%$, $s^b = 31\%$, or $g = 9.5\%$ (compared to $q^w = 2\%$, $s^w = 5\%$, $g^w = 1.3\%$)

- Interventions targeting gap’s origins speed up convergence
Reparations

Darity and Mullen (2020)

- Reparations = amount that closes racial wealth gap
- Value today: 267,000 USD per person (40 million eligible)
- Per capita wealth ratio (W/B) in 2019: \( \frac{416600}{72600} = 5.7 \)
- Wealth ratio after reparations: 1.3
The effect of reparations

- Average post-1950 income growth rate 1.3% for both groups
The effect of reparations

- Stabilizes around 1.3-1.4, in range where $q$ and $s$ matter
Conclusion

- New white-to-Black wealth ratio for the US, 1860-2020
- Stylized model of convergence shows
  - Persistent racial gap today is a legacy of slavery
  - Unequal conditions have slowed convergence
  - Rising wealth inequality $\rightarrow$ ↑ racial wealth gap
- Targeting $q$, $s$, or $g$ does not hasten convergence
- Post-reparations, $q$, $s$, & $g$ policies are more effective
The racial income gap

- 1950-2020: SCF+
Aggregate Black wealth by state, 1863-1917

White-to-Black per cap wealth ratio, 1863-1917

Estimating national white-Black wealth gaps, 1870-1940

We estimate the growth rate for Black wealth from state data

\[
\log \text{Wealth}_{st} = \alpha + \beta t + \delta_s + \varepsilon
\]

- \(t\) is year, \(\delta_s\) is state \(s\) fixed effect.
- Apply estimated growth rate to 1870 Census Black wealth.\(^2\)
- Calculate white wealth as national wealth - Black wealth.\(^3\)
- Incorporate and adjust Work (1922) Black wealth estimates using Census extrapolation (1900) and SCF (1950).

\(^2\)Results robust to sensitivity checks addressing censoring.
\(^3\)National wealth from 1907 Census report *Wealth, Debt, and Taxation.*
Log wealth and predicted log Black wealth in South

Data sources: Southern state auditor reports; Work (1922); Margo (1984). Notes: Log wealth and log wealth predicted using a linear time trend and state fixed effects. States included are Kentucky, North Carolina, Georgia, Arkansas, Virginia, and Louisiana.
Alternative wealth gap estimates for early 20C

*Data sources:* Censuses of Agriculture & Population; Black banks (Clarke, 2019); Saez & Zucman (2016); Authors’ series. *Notes:* All gaps are per capita. Alt. wealth estimate = Farm + Housing + Financial.
Alternative wealth gap estimates for early 20C

- Farm wealth gap (Census of Agriculture, 1900-1940):

\[
\frac{\text{Farm wealth}^W / \text{White pop}}{\text{Farm wealth}^{NW} / \text{NW pop}}
\]

where Farm wealth\(^W = \text{Farm value}^{\text{All operated}} - \text{Farm value}^{\text{owned}}^{NW}\)

and Farm wealth\(^{NW} = \text{Farm Value}^{\text{owned}}^{NW}\)
Alternative wealth gap estimates for early 20C

- Housing wealth gap (Census of Population, 1930-1940):
  \[
  \frac{\text{Housing wealth}^W / \text{White pop}}{\text{Housing wealth}^B / \text{Black pop}}
  \]
Alternative wealth gap estimates for early 20C

- Financial wealth gap (Clarke (2019); Saez & Zucman (2016)):

\[
\frac{\text{Fin. wealth}^W}{\text{White pop}} / \frac{\text{Fin. wealth}^B}{\text{Black pop}}
\]

where \(\text{Fin. wealth}^W = \text{Resources}^{\text{US banks}} - \text{Resources}^{\text{Black banks}}\) and \(\text{Fin. wealth}^B = \text{Resources}^{\text{Black banks}}\)
The racial housing gap: 1860-2020

Data sources: Census of Population; SCF+.
The racial home values gap: 1930-2020

Data sources: Census of Population; SCF+.
Share with positive wealth by racial group: 1860-2020

Data sources: Census of Population; SCF+.
Stalled income convergence

1980-2020: $g_b = g_w = 1.3\%$

Compare 1870-1980: $g_b = 2.6\%$ vs. $g_w = 2\%$
Model simulation with time-varying parameters

![Graph showing time-varying parameters over years with data points and curves for different scenarios: equal qs, time-varying qs, and diff qs (w>b).]
Wealth convergence under different saving rates
Increasing importance of capital gains post-1980

- Differences in $q$ change slope of convergence substantially
- $q^b < q^w$: captures diverging patterns of observed data
Heterogeneous capital gains within assets

- **PSID (1989-2019):** Calculate race-specific capital gains on equity, business, and housing

**Growth accum. capital gains**

**Wealth-to-Income ratio**
Accumulated capital gains across assets

Equity (Stocks + Business)
Housing
Different saving rates

- Dynan et al. (2004): Active saving rates 1984-2017
- Panel Study of Income Dynamics

<table>
<thead>
<tr>
<th></th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bottom 50%</td>
<td>6.08%</td>
<td>4.11%</td>
</tr>
<tr>
<td>50%-90%</td>
<td>7.97%</td>
<td>6.15%</td>
</tr>
<tr>
<td>Top 10%</td>
<td>10.02%</td>
<td>8.75%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7.23%</td>
<td>5.39%</td>
</tr>
</tbody>
</table>
Different capital gains

\[ CG_w = \sum_c \omega_c CG_c \]

- \( CG_w \): Capital gain on total portfolio, \( CG_c \): Capital gain on asset class \( c \), \( \omega_c \): Weight as a share of total wealth

- Data: SCF+, Macrohistory Database, US Financial Accounts

<table>
<thead>
<tr>
<th></th>
<th>Average capital gain</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>5.50%</td>
<td>0.94%</td>
<td>0.28%</td>
</tr>
<tr>
<td>Liquid assets</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Housing</td>
<td>0.8%</td>
<td>0.30%</td>
<td>0.50%</td>
</tr>
<tr>
<td>Business</td>
<td>3.37%</td>
<td>0.81%</td>
<td>0.51%</td>
</tr>
<tr>
<td>Total on portfolio</td>
<td>1.99%</td>
<td>2.01%</td>
<td>1.29%</td>
</tr>
</tbody>
</table>
Different rates of return

\[ RR_w = \sum_c \omega_c RR_c \]

- \(RR_w\): Return on total portfolio, \(RR_c\): Return on asset class \(c\),
- \(\omega_c\): Weight as a share of total wealth

- Adopt method of Kartashova (2014) and Xavier (2021) using SCF+

<table>
<thead>
<tr>
<th>Asset</th>
<th>White</th>
<th>Black</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1989-2019</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interest-earning assets</td>
<td>1.62%</td>
<td>0.53%</td>
</tr>
<tr>
<td>Public equity</td>
<td>2.1%</td>
<td>0.59%</td>
</tr>
<tr>
<td>Private businesses</td>
<td>12.12%</td>
<td>17.37%</td>
</tr>
<tr>
<td>Real estate</td>
<td>3.18%</td>
<td>3.07%</td>
</tr>
<tr>
<td>Total yield</td>
<td>4.64%</td>
<td>4.45%</td>
</tr>
</tbody>
</table>
Income estimation approach adapted from Margo (2016)

1. Use agricultural income to estimate rural Black income
   - Census of Agriculture: Farm income of farm owners and tenants (value farm products - expenditures)
   - Farm laborer wage (Historical Statistics of the United States)

2. Urban Black workers’ wages
   - Use Margo (2016) estimates for 1870
   - Estimate using Margo (2016) method for 1900
   - Use IPUMS occ score to calculate median income for urban laborers from 1910-1940

3. Use urban/rural share to calculate Black income per capita