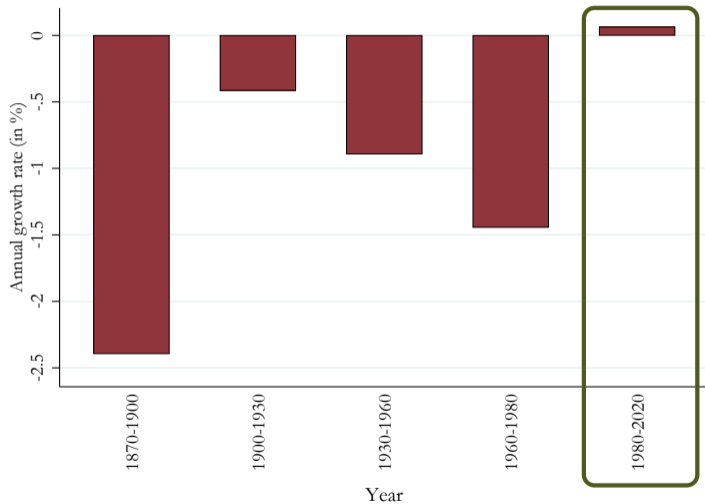


Unemployment risk, portfolio choice, and the racial wealth gap

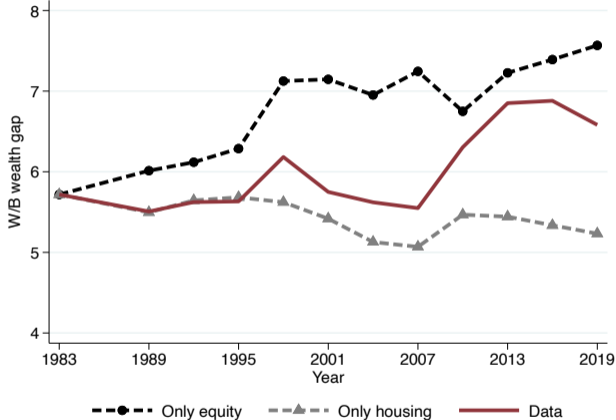
Ellora Derenoncourt, Chi Hyun Kim, Moritz Kuhn, and Moritz Schularick

September 25, 2023

Post-1980: Diverging racial wealth gap (DKKS, forthcoming QJE)

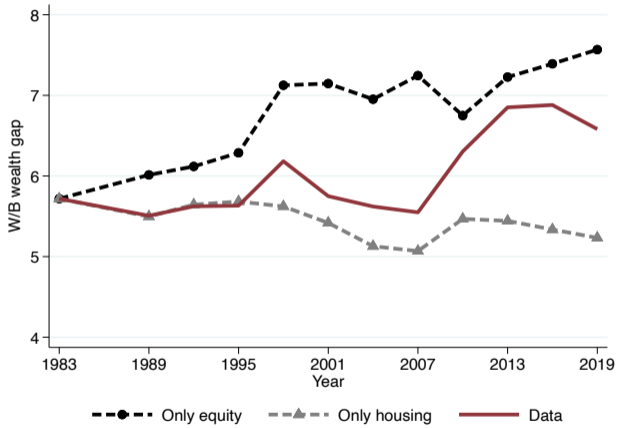


Stock market is one important diverging force



- Dashed line with dots: counterfactual racial wealth gap with capital gains only from the stock market.

Stock market is one important diverging force



► Why do Black Americans invest less in stocks?

This paper: Unemployment risk and portfolio choice

- ▶ Cyclical income risk leads to lower equity positions of households ▶ literature
(Guvenen et al., 2014; Catherine et al., 2020; Busch et al., 2022)
 - ▶ Equity holders take the risk of losing their earnings and savings at the same time
- ▶ Black Americans have worse labor market conditions ▶ ugap
(Bayer and Charles, 2018; Chetty et al., 2020; Derenoncourt and Montialoux, 2021)
- ▶ Key message: Lower equity investment due to unemployment risk is *rational*

Outline

Investigate the role of unemployment risk on Black and white portfolio choices

1. Empirical analysis: Document racial differences in unemployment risk
 - ▶ Cyclicalities of labor market flows
 - ▶ Correlation unemployment risk and stock returns
2. Theoretical framework: Life-cycle model with portfolio choices
 - ▶ Investigate the optimal equity share given racial differences in unemployment risk
 - ▶ Contribution to the overall racial wealth gap

Empirical analysis

Empirical analysis

Racial differences in labor market flows

Changes in labor market flows from non-recession to recession

	Black	White	Black/White
EU rate	0.4 p.p.	0.3 p.p.	1.33
UE rate	-1.8 p.p.	-0.9 p.p.	2.00
UE rate (≤ 1 y)	-2.0 p.p.	-1.9 p.p.	1.05
UE rate (> 1 y)	-1.3 p.p.	-0.8 p.p.	1.63

Changes in labor market flows from non-recession to recession

	Black	White	Black/White
EU rate	0.4 p.p.	0.3 p.p.	1.33
UE rate	-1.8 p.p.	-0.9 p.p.	2.00
UE rate ($\leq 1y$)	-2.0 p.p.	-1.9 p.p.	1.05
UE rate ($> 1y$)	-1.3 p.p.	-0.8 p.p.	1.63

- ▶ EU rate increases slightly more for Black
- ▶ However: Difference is negligible

Racial differences in labor market flows

► Raw 1980-2020

Changes in labor market flows from non-recession to recession

	Black	White	Black/White
EU rate	0.4 p.p.	0.3 p.p.	1.33
UE rate	-1.8 p.p.	-0.9 p.p.	2.00
UE rate ($\leq 1y$)	-2.0 p.p.	-1.9 p.p.	1.05
UE rate ($> 1y$)	-1.3 p.p.	-0.8 p.p.	1.63

- Black risk of remaining unemployed increases more strongly than white
- In particular: Risk of long-term unemployment very high

Empirical analysis

Correlation unemployment risk and equity returns: Black vs. white

Correlation between unemployment risk and stock market returns

- ▶ Measure of unemployment risk (Busch et al., 2022)
 - ▶ Data: Panel Study of Income Dynamics
 - ▶ Focus on the dispersion in the lower tail of the income distribution
 - ▶ Difference between the 50th to 10th percentile (L5010)
- ▶ Measure of cyclical: $L5010_t = \alpha + \gamma t + \beta \times \Delta(\log(R_t^{equ})) + u_t$
 - ▶ Run the regression separately for Black and white (β^{Black} vs. β^{White})

$$L5010_t^{B/W} = \alpha + \gamma t + \beta \times \Delta(\log(R_t^{equ})) + u_t,$$

	L5010
White earnings (β^{White})	-0.32*** (0.07)
Black earnings (β^{Black})	-0.67*** (0.25)

- ▶ Black U risk correlates more strongly to stock market returns than white

Key takeaways

- ▶ Black Americans experience
 - ▶ strong cyclical responses of downside risk
 - ▶ In particular: High risk of long-term unemployment during recessions
- ⇒ Given these unemployment risk dynamics, what is the optimal share of equity in Black and white wealth portfolios?

Optimal share of equity under unemployment risk

Life cycle model with portfolio choice

Agents ...

- ▶ invest either in risky or riskless assets (Cocco et al., 2005),
- ▶ are exposed to skewed idiosyncratic income shocks (Catherine, 2021), and
- ▶ be short-term and long-term unemployed (Bremus and Kuzin, 2014)

Agents

- ▶ Enter the model with the age of 20 and retires at 65
- ▶ Maximize consumption with CRRA preferences

Labor income

- ▶ Agent faces three different employment stages
 1. Employment
 - ▶ Earns labor income Y_t , which has a transitory and permanent component
 2. Short-term unemployment (≤ 1 year)
 - ▶ Earns a fraction λ_u of previous permanent income
 3. Long-term unemployment (> 1 year)
 - ▶ Earns fraction of previous permanent income ($\lambda_u > \lambda_{ul}$)
- ▶ Two regimes: Recessions vs. Non-Recession
 - ▶ Labor market transition probability differs between regimes

Investment

- ▶ Agents can save their money in risky and riskless assets
 - ▶ Riskless asset yields constant rate of 3%
 - ▶ Risky assets yield higher rates (8%)
 - ⇒ Differ across recession vs. non-recession regime
 - ⇒ During recessions, return is lower and more volatile
 - ▶ Stock market participation fee in case of entry

Calibration

▶ Table

- ▶ Unemployment risk and return estimates calibrated to match 1980-2020 period
- ▶ Calibrate model separately for Black and white
- ▶ Note: Differ only in their unemployment risk!
 - ▶ Labor market transition probabilities: Recession vs. non-recession
 - ▶ Unemployment insurance
(Skandalis et al. (2022): Black-white UI gap of 18 p.p.)

Results: Data vs. Model

▶ SMP

▶ Equity share

▶ Other simulations

Data vs. Model: White-to-Black equity gaps

	Data	Benchmark	Without UI gap
W-B SMP gap	22.6 p.p.	4.7 p.p.	3.8 p.p.
W-B equity share gap	8.2 p.p.	7.6 p.p.	7.0 p.p.

Results: Data vs. Model

▶ SMP

▶ Equity share

▶ Other simulations

Data vs. Model: White-to-Black equity gaps

	Data	Benchmark	Without UI gap
W-B SMP gap	22.6 p.p.	4.7 p.p.	3.8 p.p.
W-B equity share gap	8.2 p.p.	7.6 p.p.	7.0 p.p.

- ▶ U risk explains $\approx 20\%$ of the SMP gap & $\approx 90\%$ of the equity share gap!

Unemployment risk, portfolio choice, and the racial wealth gap

Counterfactual exercise

If Black Americans had the same cyclical unemployment risk as white in 1983 and were able to invest more of their financial wealth FW^b in stocks, how much more capital gains would they have accumulated?

Counterfactual exercise

If Black Americans had the same cyclical unemployment risk as white in 1983 and were able to invest more of their financial wealth FW^b in stocks, how much more capital gains would they have accumulated?

- ▶ Counterfactual Black equity wealth $\hat{A}_t^{equity,b}$

$$\hat{A}_t^{equity,b} = \left[A_{1983}^{equity,b} + (\alpha^w - \alpha^b) \cdot FW_{1983}^b \right] \cdot \prod_{t=1984}^{2019} (1 + q_{t,t-1}^{equity})$$

Counterfactual exercise

If Black Americans had the same cyclical unemployment risk as white in 1983 and were able to invest more of their financial wealth FW^b in stocks, how much more capital gains would they have accumulated?

- ▶ Counterfactual Black equity wealth $\hat{A}_t^{equity,b}$

$$\hat{A}_t^{equity,b} = \left[A_{1983}^{equity,b} + (\alpha^w - \alpha^b) \cdot FW_{1983}^b \right] \cdot \prod_{t=1984}^{2019} (1 + q_{t,t-1}^{equity})$$

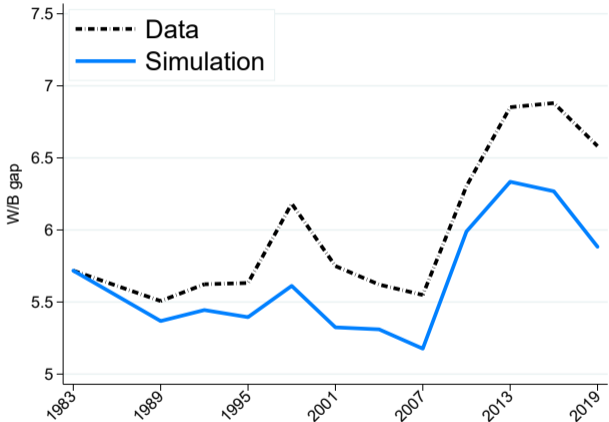
- ▶ Counterfactual Black wealth series \hat{W}_t^b :

$$\hat{W}_t^b = W_t^b + \sum_{t=1984}^{2019} q_{t,t-1}^{equity} \cdot \hat{A}_{t-1}^{equity,b}$$

Racial wealth gap under equal cyclical unemployment risk

- ▶ Our counterfactual wealth gap: W^w / \hat{W}^b
- ▶ Compare with the actual wealth gap: W^w / W^b
- ▶ Time period: 1983-2019

Simulation results



► Without racial difference in U risk: divergence only by 3% (vs 15% in reality)

Conclusion

- ▶ Significant racial differences in unemployment risk dynamics
 - ▶ Stronger response of Black unemployment risk during recessions
 - ▶ High probability of long-term unemployment
- ▶ Unemployment risk is an important driver of the racial equity gap
 - ▶ 20% of the SMP gap and 90% of equity share gap
 - ▶ Without unemployment risk: racial wealth gap ↓
- ▶ Important: Address labor market frictions when addressing the racial wealth gap

Thank you for your attention!
ckim@uni-bonn.de