Who Benefits from Retirement Saving Incentives in the U.S.? Evidence on Racial Gaps in Retirement Wealth Accumulation

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Outline

Disclaimer

This report is released to inform interested parties of ongoing research and to encourage discussion. Any views expressed on statistical, methodological, technical, or operational issues are those of the authors and not necessarily those of the U.S. Census Bureau. The data in this paper has been cleared by the Census Bureau's Disclosure Review Board release authorization number CBDRB-FY22-SEHSD003-001, CBDRB-FY22-SEHSD003-017 and CBDRB-FY22-SEHSD003-033.

Introduction

- **1.5% of US GDP** dedicated to encouraging contributions to retirement savings plans
  - Employers: contribute \$180bn to DC plans
  - Government: \$120bn tax expenditure on DC plans
- This institutional design rewards those who can and do save more for retirement
- We use a new data set to study the distributional impact of these retirement saving incentives across racial groups.

Introduction

Racial wealth gaps are large & persistent (e.g., White-Black wealth ratio $\approx$ 6-to-1 from 1980, Derenoncourt et al, '21), in part b/c of retirement assets (Hou & Sanzenbacher, '21; Francis & Weller '21)

Q: Do retirement incentives contribute to these racial gaps and why?

Important channel for wealth inequality:

- Retirement wealth is households' 2nd largest asset class (and largest for Blacks) - SCF '22
- One of the best investment going (avg. match $\approx$ 4% annualized risk-free return) ...
- ... yet many employees do not take full advantage of the incentives

Main Findings

1. **There are large gaps in retirement saving across racial groups**
   - White workers contribute >40% more than Black and Hispanic workers
   - Individual characteristics (inc. income) only explain 1/3 of this gap
2. **Liquidity needs and family background help explain these gaps**
   - Black retirement savers twice as likely as Whites to take an early withdrawal
   - Controlling for differences in family structure and parents' resources reduces the gap
3. **Tax and employer matching incentives amplify these disparities**
   - System is regressive along multiple dimensions (race, education, family background, etc.)
   - Equalizing matching contributions can raise median black retirement wealth by 18%

Outline

Data: This paper brings together

- Administrative **employee** data on earnings, retirement saving decisions
  - American Community Survey: race, education, location, occupation
  - Our sample is 10 percent random draw of individuals ever observed in 2001-2019
  - W2 data: wages, contributions to DC plans
  - Form 1099R data: withdrawals
- New **employer** data on retirement plan characteristics
  - Firms must submit narrative description of their retirement plan with regulatory Form 5500
  - We codified these for the largest 5,000 US DC plans over the period 2003-2018
  - Matching schedules, vesting schedules, auto-features, etc...

Form 5500 has *narrative* descriptions of:

- Eligibility
- Matching schedule
- Vesting schedule
- Auto-features

Contributions - Each year, participants may contribute from 1% to 50% of their pre-tax annual compensation, as defined by the Plan, subject to the Internal Revenue Code limitations. Eligible employees are automatically enrolled as participants at a contribution rate of 1% of their pre-tax annual compensation unless they elect otherwise. Participants age 50 and older, or who reach age 50 during the Plan year, are eligible to contribute an additional pre-tax dollar amount per year in addition to the deferral contribution. For 2011, the maximum annual amount of catch up that could be contributed was $5,500. The Company makes contributions to the Plan each payroll period, based upon a matching formula applied to employee deferrals (the Company Match). The Company Match formula is as follows: the first 3% of contributions are matched by the Plan Sponsor at the rate of 100%; the next 2% of contributions are matched at the rate of 50%; and the next 1% of contributions are matched at the rate of 25%. Participants are eligible to receive the Company Match pursuant to the terms of the Plan. Participants may also contribute amounts representing eligible rollover distributions from other qualified plans.

Participant Accounts - Individual accounts are maintained for each Plan participant. Each participant's account is credited with the participant's contribution, the Company Match, and an allocation of Plan earnings, and charged with benefit payments and allocations of Plan losses and investment expenses. Allocations are based on participant earnings or account balances. The benefit to which a participant is entitled to is the benefit that can be provided from the participant's vested account balance.

Vesting - All participants are 100% vested in the Plan at all times.

2011

Lowe's 401(k) Plan
Notes to Financial Statements

Note 1 - Description of the Plan

The following description of the Lowe's 401(k) Plan (the Plan) provides only general information. Participants should refer to the Plan document and summary plan description for more complete descriptions of the Plan's provisions.

General - The Plan, adopted effective February 1, 1984, is a defined contribution plan covering substantially all employees of Lowe's Companies, Inc. and subsidiaries (the Plan Sponsor or the Company). An employee of the Plan Sponsor is eligible to participate in the Plan six months after the employee's original hire date. The Administrative Committee of Lowe's Companies, Inc. (the Administrative Committee), as appointed by the Board of Directors, controls the management and administration of the Plan. The Plan's trustee and recordkeeper is Wells Fargo Bank, N.A. (Wells Fargo). The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA) and is a safe harbor-designed plan.

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Vesting - All participants are 100% vested in the Plan at all times.

Investments – During Plan Year 2011, the 22 investment options to which participants could direct their contributions included one investment contract (stable value) fund, 11 target retirement date funds (collective trusts), nine mutual funds consisting of two small-cap funds, two mid-cap funds, three large-cap funds, one intermediate-term bond fund, and one international fund, and Lowe's Companies, Inc. common stock. Excess cash is held in a non-interest bearing cash account.

Payment of Benefits - Subsequent to termination of service, a participant with a vested account value of $1,000 or less will receive a lump-sum distribution equal to the participant's vested account balance. If the vested account value is greater than $1,000, a participant may elect to receive a lump-sum distribution equal to the participant's vested account balance. If the participant does not make such an election and the vested account value is $5,000 or less, the Plan performs a direct rollover to an individual retirement account designated by the participant or, if the participant has not designated an individual retirement account, to an individual retirement account designated by the Administrative Committee. If the vested account value is greater than $5,000, the participant's vested account balance remains in the Plan and is not distributed without the participant's consent until the participant reaches age 62.

The Plan allows for in-service withdrawals to participants under age 59½ only in cases of financial hardship. Such withdrawals must total at least $1,000 and be approved by the Plan's recordkeeper or the Administrative Committee. Participants who have attained age 59½ are entitled to a one-time in-service withdrawal of their accumulated balances.

The Plan allows for a one-time in-service withdrawal to participants in the former Lowe's Companies Employee Stock Ownership Plan (the ESOP) who have attained 20 or more years of service with the Plan Sponsor. The ESOP was merged into the Plan effective September 13, 2002. Eligible participants may withdraw up to 50% of their former

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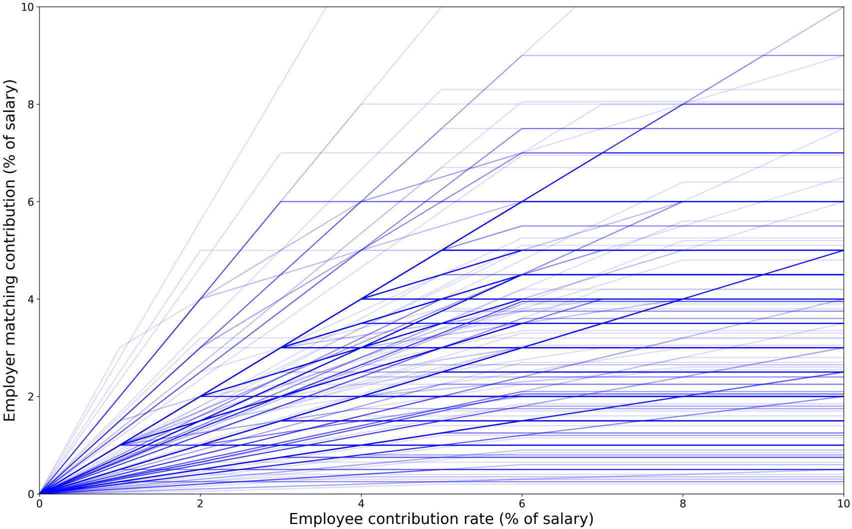
Matching Schedules



Outline

Results

1. Gaps in retirement saving by race are large
2. Employer matching contributions amplify the effect on wealth of these gaps
3. Gaps remain after controlling for a large set of individual characteristics
4. Mechanism I: Liquidity constraints are playing a role and further amplify wealth differences
5. Mechanism II: Household and extended family characteristics

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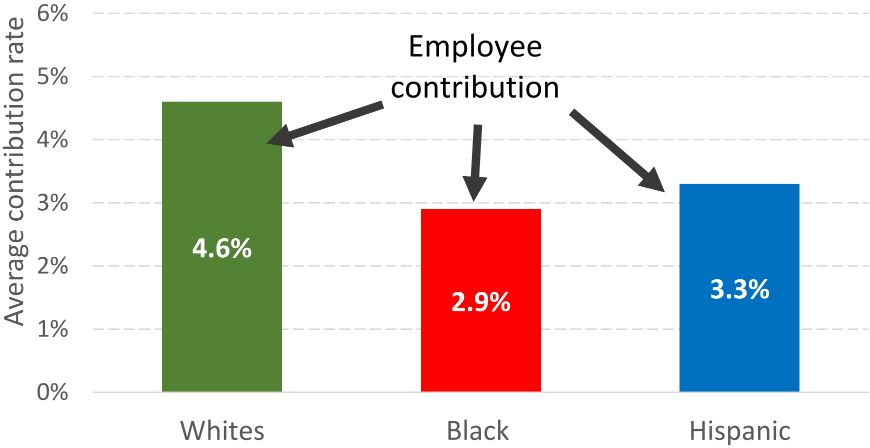

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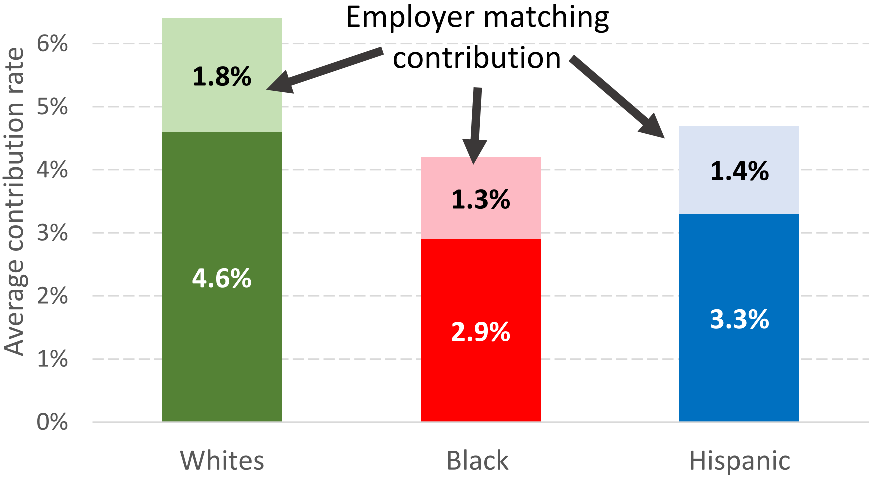
2. Employer matching contributions amplify the effect of gaps



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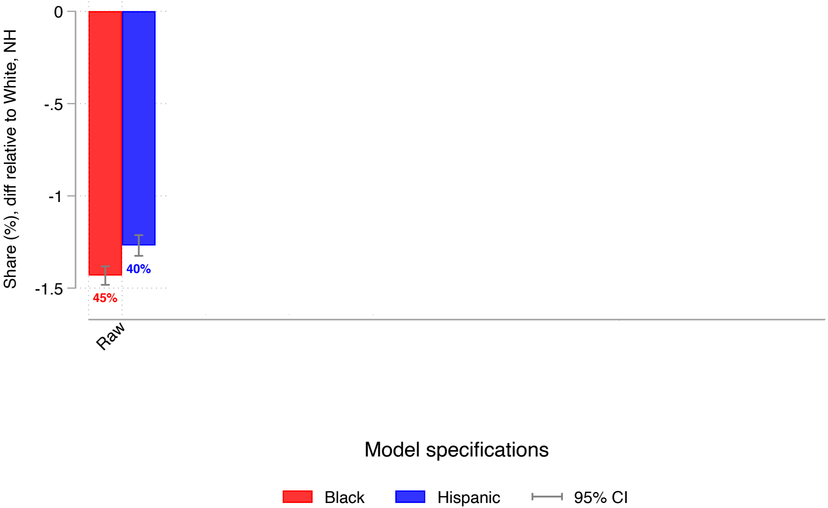
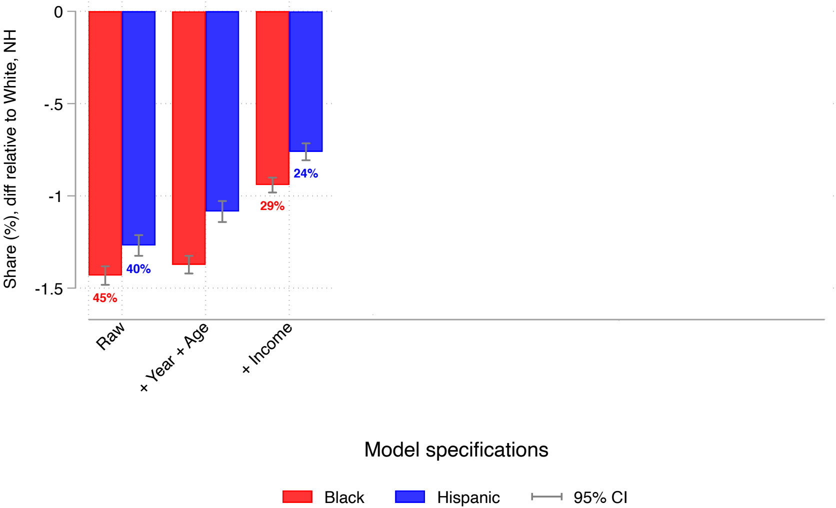
3. Gaps remain after controlling for individual characteristics



Dependent Variable: Contribution rate ≡ DC employee contribution / Total W2 income

3. Gaps remain after controlling for individual characteristics



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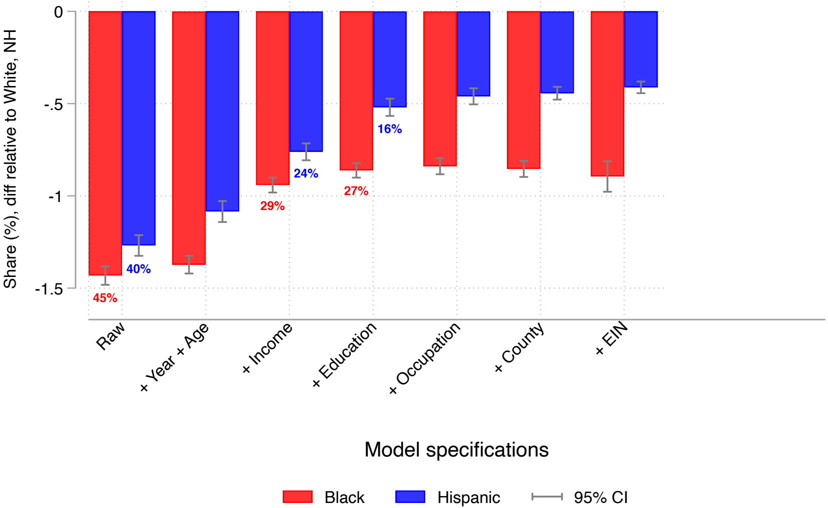

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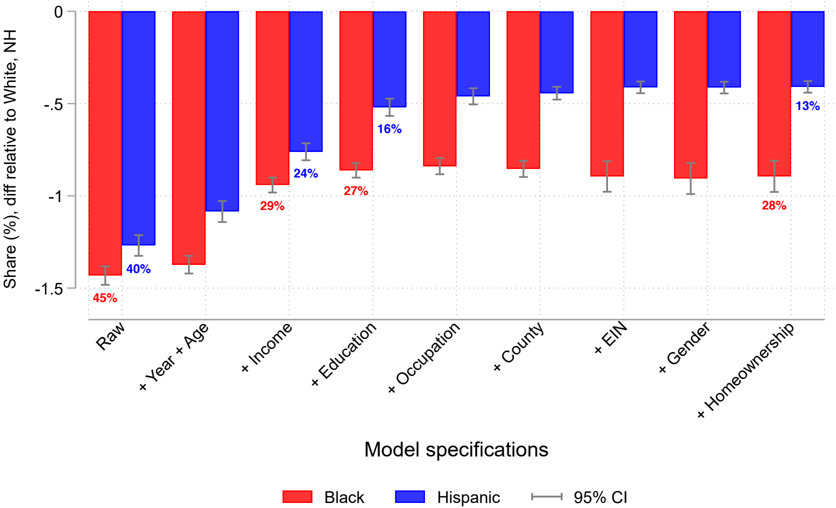

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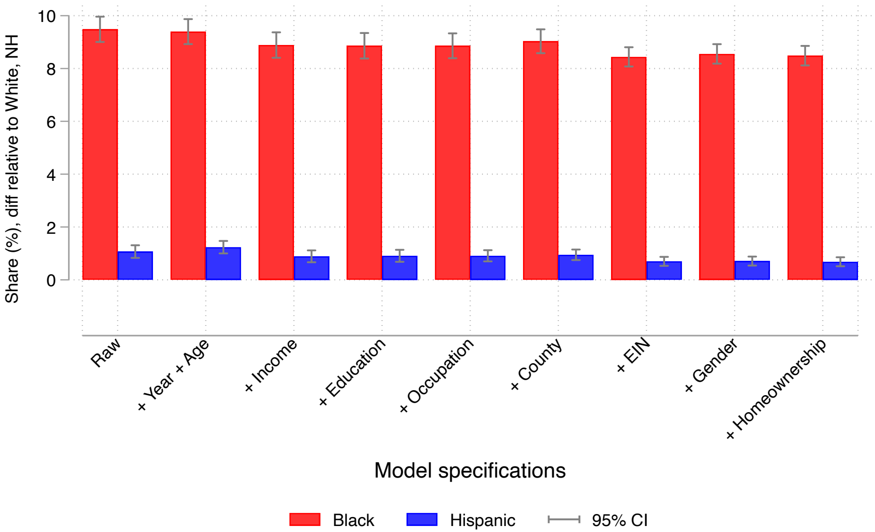
Mechanism I: Liquidity constraints

Conceptual Framework

- Coyne, Fadlon, Porzio (2022): penalized withdrawals **reveal a preference for liquidity**
- Early withdrawals are often penalized ...
  - Potential tax penalties
  - Six-month suspension (rule rescinded in 2020)
- ... thus taking withdrawals despite penalty signals high liquidity needs

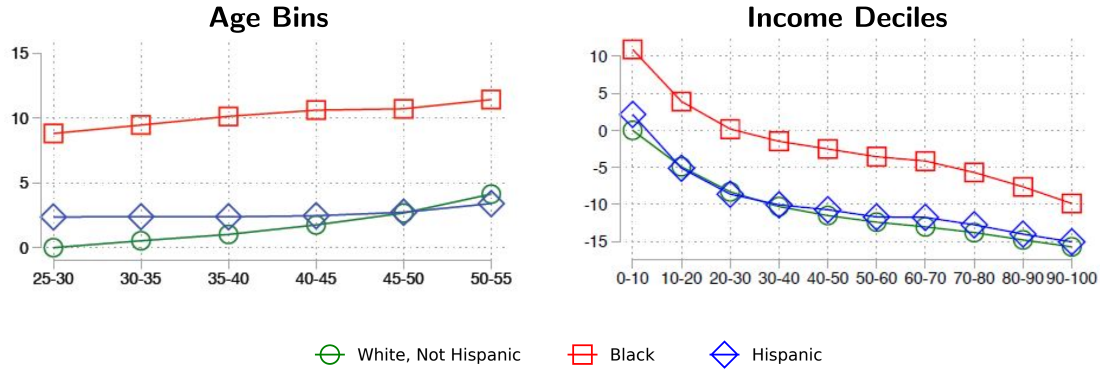
Mechanism I: Liquidity constraints

Probability of Early Withdrawal



Mechanism I: Liquidity constraints

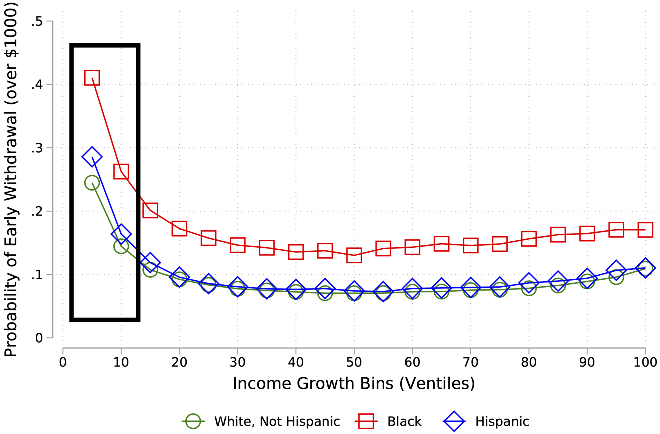
Probability of Early Withdrawal (%), by Age and Income



Figures present the implied age and income profiles of contributions for non-Hispanic White, Black, and Hispanic survey respondents. These numbers were obtained using the estimated coefficients from saturated models which include heterogeneous effects by income and race, as well as year, age, occupation, county, education, and EIN fixed effects. Sample is restricted to subset of individuals who contributed at least $1,000 to DC accounts prior to year t.

Mechanism I: Liquidity constraints

Probability of Early Withdrawal, by income growth



Notes: Figure plots the fraction of workers, by race and 20 ventile bins formed on contemporaneous arc W2 income growth rates from year $t-1$ to t. Sample is restricted to subset of individuals who contributed at least $1,000 to DC accounts prior to year t.

- All racial groups much more likely to take early withdrawals in years w/ large income declines
- Black-White gaps: sizable throughout income growth dist., **especially for those w/ biggest income declines**
- $>$ **40%** of Black workers who had previously contributed to DC accounts in bottom ventile take an early withdrawal

Mechanism I: Liquidity constraints

- Evidence of early withdrawals suggestive of liquidity constraints binding more for Black Americans than White and Hispanic Americans see also Ganong et al. (2020)
- Illiquidity of DC plans may **deter participation and lower contribution rates** ex-ante, preventing HHs from capturing lucrative match Briere, Poterba & Szafarz, 2022
  - "It takes money to make money"
    - ★ Access to liquidity can raise take-up of attractive investments & **perpetuate wealth inequality**
  - Potential gains from simple plan design changes:
    - ★ Better loan policies, especially post-separation (Mitchell, Utkus, & Yang, 2007 $\Rightarrow$ loans linked w/ $\Uparrow$ contribution rates)
    - ★ Reviewing list of qualifying events to avoid tax penalty

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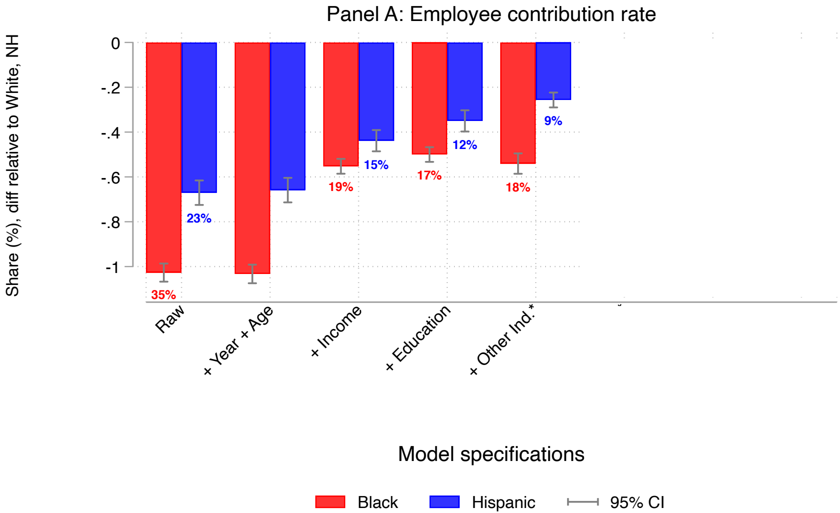
5. Household and extended family characteristics

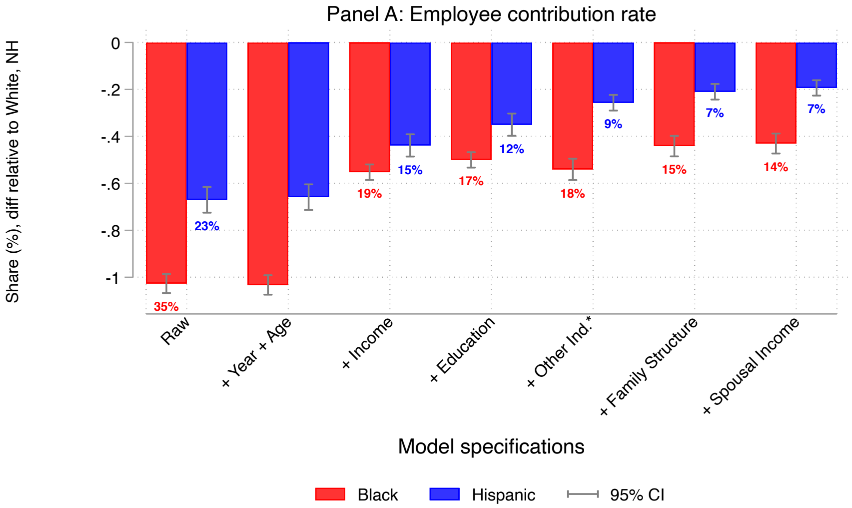
Cohorts born after 1978



Other Ind.* (i.e., Other Individual Controls):
occupation, county of residence, EIN, gender, and homeownership

5. Household and extended family characteristics

Cohorts born after 1978



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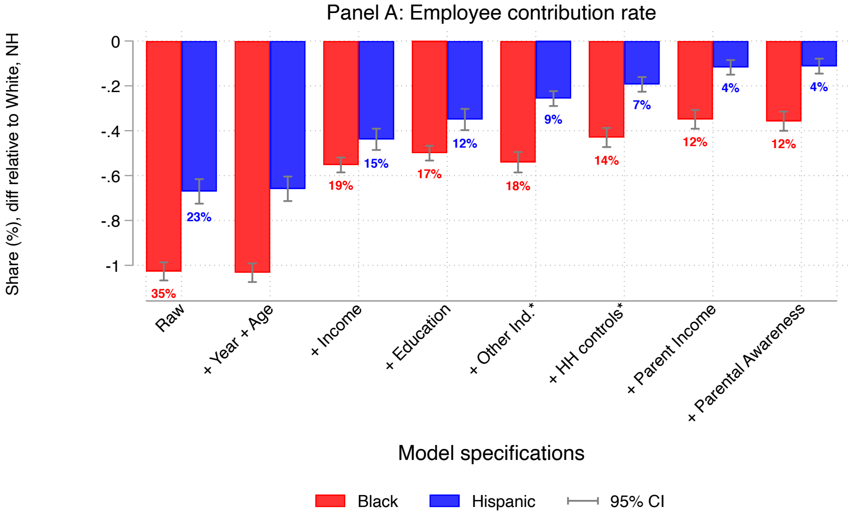
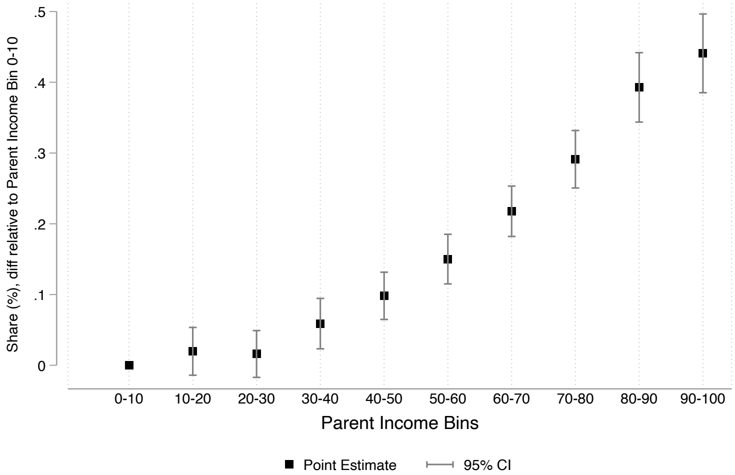


Other Ind.* (i.e., Other Individual Controls): occupation, county of residence, EIN, gender, and homeownership

HH controls*: family structuare and spousal income

The role of parental income

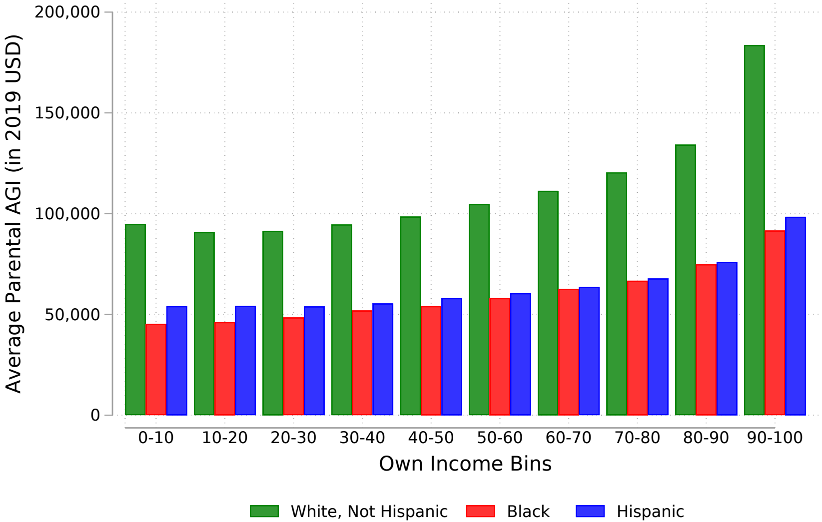
Holding own-characteristics constant, those with richer parents contribute more



Dependent Variable: Contribution rate ≡ DC employee contribution / Total W2 income

The role of parental income

Conditional on own-income, White Americans have richer parents than Black or Hispanic Americans



Family Structure and Parental Income

- Family structure and parental income together explain approximately between one third and half of the gap in saving remaining after controlling for individual characteristics
- This adds to evidence that immediate needs/liquidity constraints are driving some of the gaps that we document

Alternative Mechanisms that Had Little Impact on Racial Gaps

Perhaps surprisingly, we found little impact on gaps from the following exercises:

1. **Access / generosity of DC plan**: given income & other indiv. characteristics ...
   - ... small differences in availability of DC plans across racial groups ✗
   - ... employer FE have little impact on racial contribution gaps ✗

2. **Auto-enrollment** matters for level of contributions but does not change size of gaps ✗

3. **Proxies for financial literacy / awareness**
   - Occupation FE ✗
   - Parental Participation in 401(k) ✗
   - Further, contribution gaps **increase over most of income/educ distribution**

Outline

Magnitudes and Broader Distributional Features

Long tradition of optimal policy/distributional analysis of the U.S. retirement system

(Diamond,'77, Kotlikoff et al., '82; Moser and Olea de Souza '19)

Regressive subsidies for private saving...

... balanced by **progressive social security**
& income-based **non-discrimination testing**

Problem: focus only on income may **underestimate the system's regressivity**
Other dimensions matter for subsidies take-up and are not undone by Social Security

Magnitudes and Distributional Features

Estimates for employee + employer contrib. in saturated model (inc. income, race, EIN, individual/family attributes)

Traditional focus:

Moving from 2nd to 9th decile of labor income = +1.1% higher total contrib.

Magnitudes and Distributional Features

Estimates for employee + employer contrib. in saturated model (inc. income, race, EIN, individual/family attributes)

Traditional focus:

Moving from 2nd to 9th decile of labor income = +1.1% higher total contrib.

Controlling for income and other attributes:

- **Race:** Black (Hispanic) workers contribute 1.1% (0.4%) less than Whites
- **Education:** College degree = +1.4% higher contrib.
- **Family Structure:** Two-person households save up to 0.37%, and couples (singles) without kids save up to 1.2% (1.1%) more.
- **Spousal Support:** spouse in top decile of labor income = +2.9%
- **Parental Support:** parents previously in top decile of income = +0.44% employee contrib

▸ education ▸ income ▸ family ▸ spouse ▸ parent

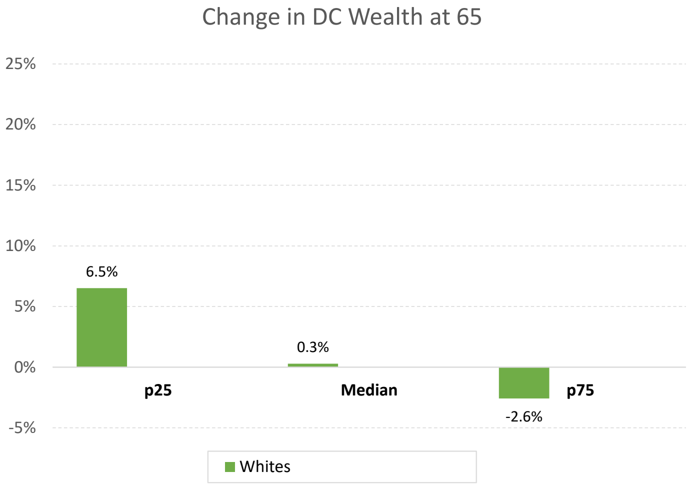
Policy counterfactuals

Reallocate **matching and tax** incentives assuming **no behavioral response**

- **Counterfactual I: Within-firm redistribution**
  Equalizing employer contributions (as % of salary) across all employees in each DC plan
- **Counterfactual II: Across-firms redistribution**
  Equalizing employer matching contributions (as % of salary) in the population
- **Counterfactual III: Tax equalization**
  Equalizing net tax benefit for contributions (deferred taxation + exemption from capital earnings taxation)

Counterfactual I: Within-firm Redistribution

Equalizing employer contributions (as % of salary) across all employees in each DC plan



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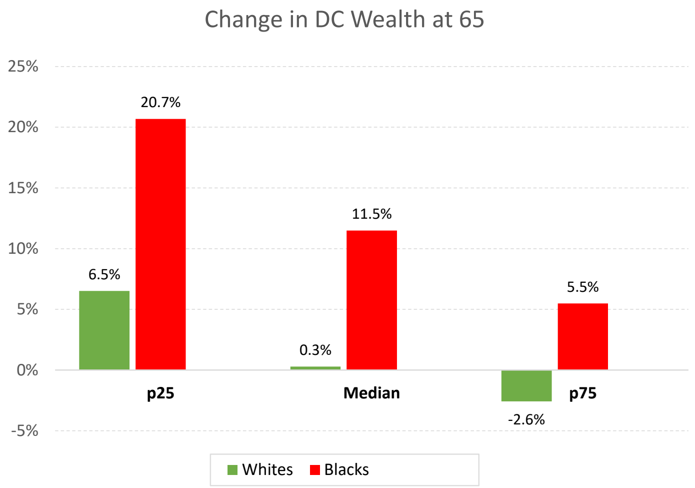

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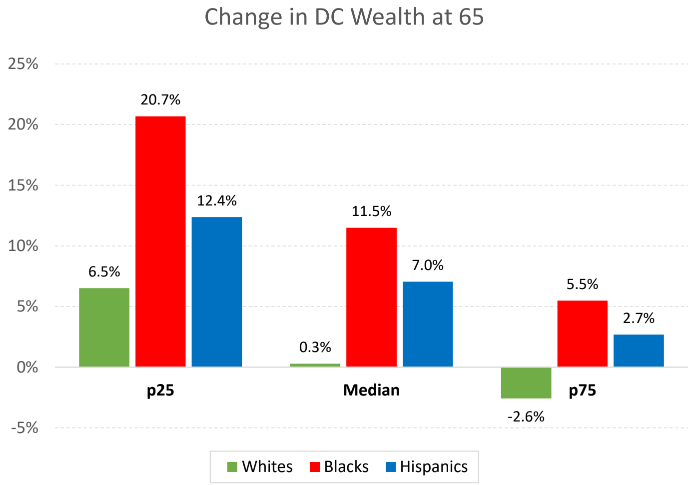
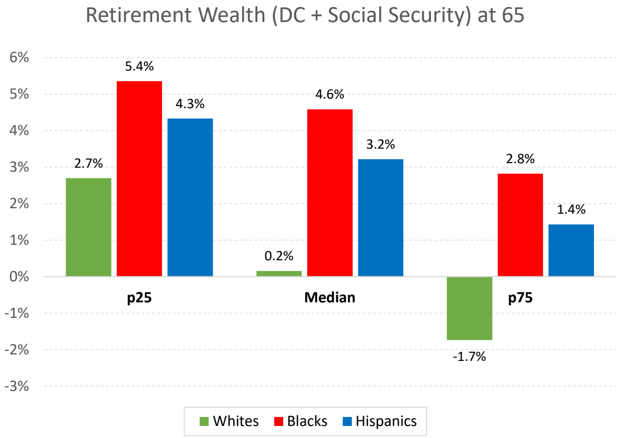


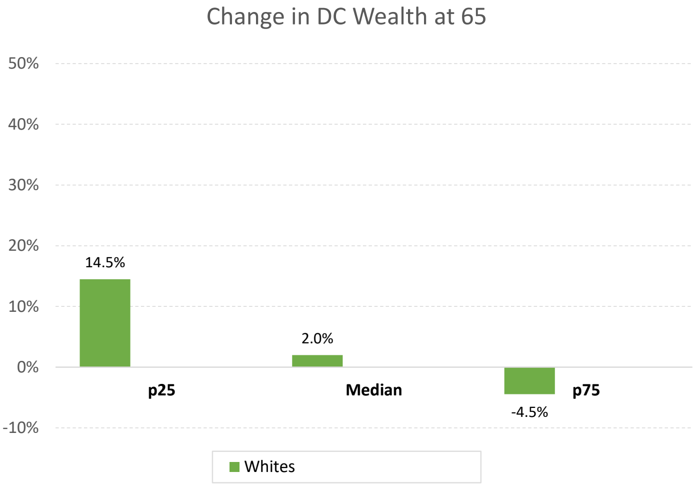
Counterfactual I: Within-firm Redistribution (DC + Social Security Wealth)

Equalizing employer contributions (as % of salary) across all employees in each DC plan



Counterfactual II: Across-firms Redistribution

Equalizing employer matching contributions (as % of salary) in the population



w/ Social Security wealth

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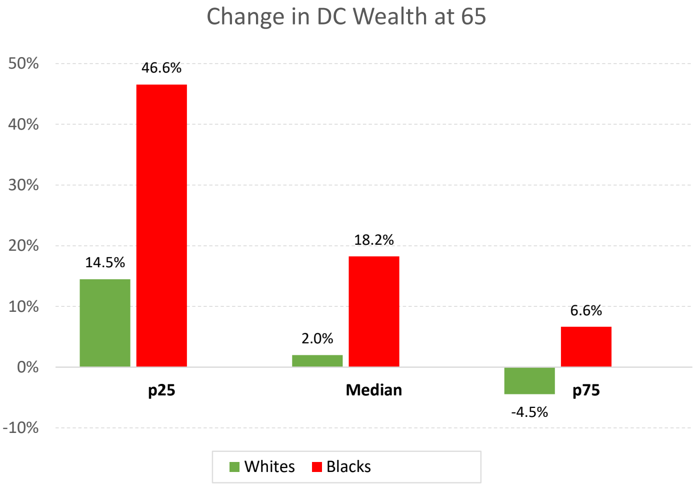

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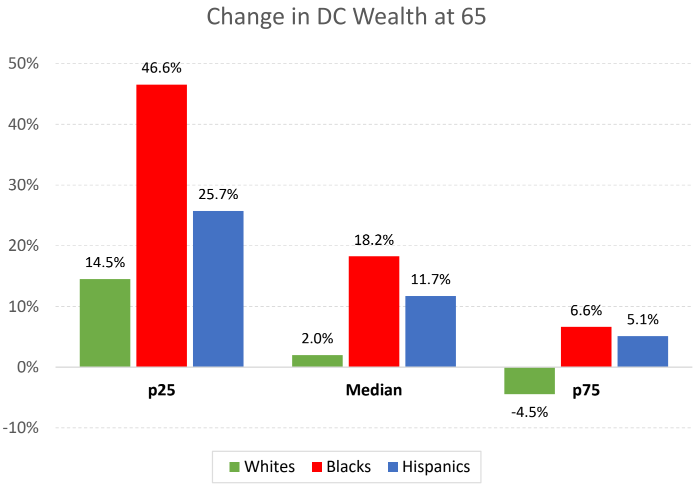
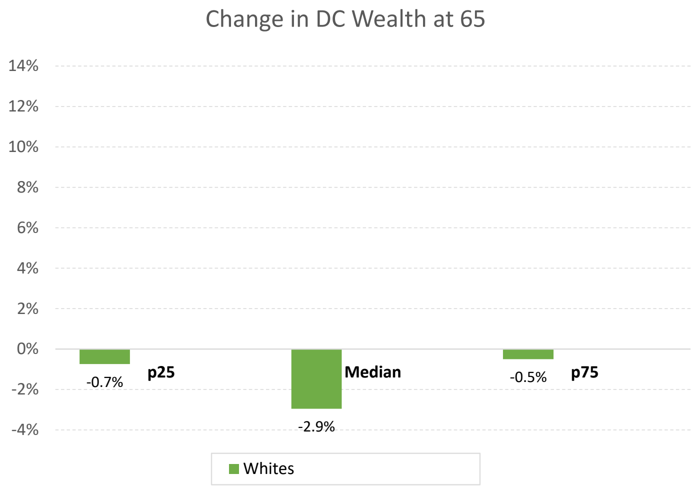


▸ w/ Social Security wealth

Counterfactual III: Tax Benefits Equalization

Equalizing net tax benefit for contributions (as % of lifetime income) in the population



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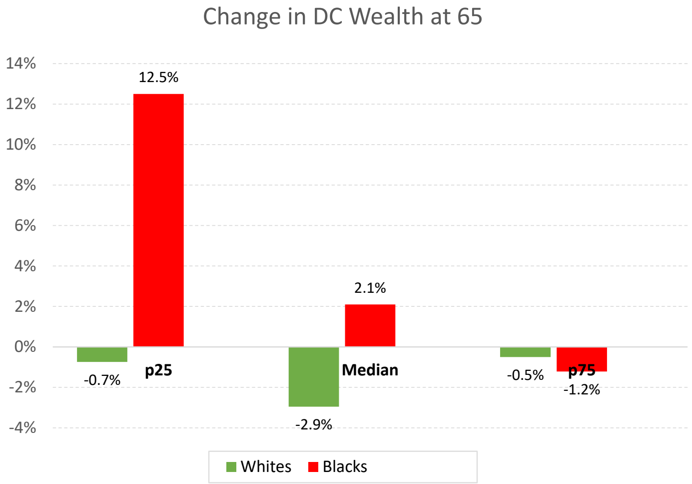

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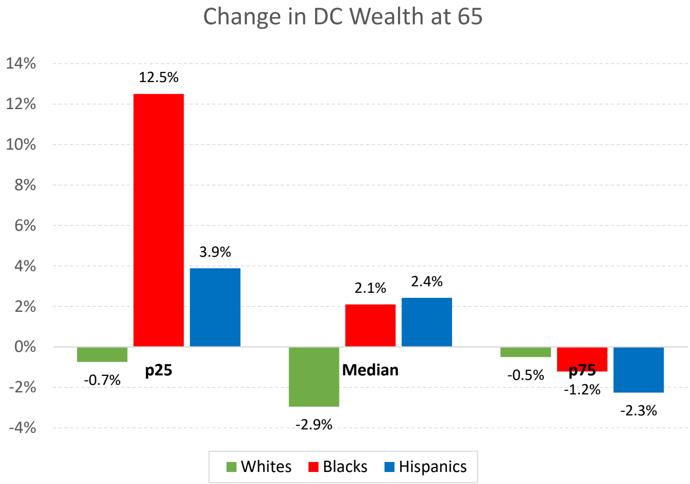

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Main Findings

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   - Black retirement savers twice as likely as Whites to take an early withdrawal
   - Controlling for differences in family structure and parents' resources reduces the gap
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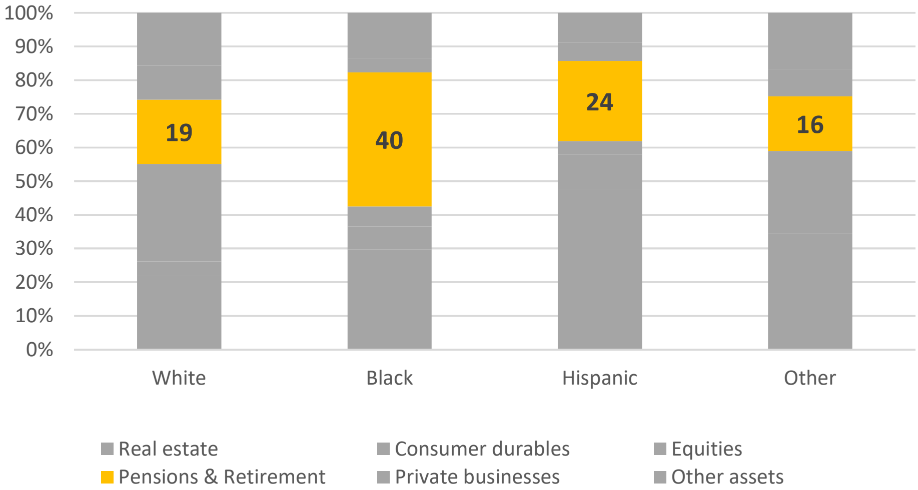
   - System is regressive along multiple dimensions (race, education, family background, etc.)
   - Equalizing matching contributions can raise median black retirement wealth by 18%

Conclusion

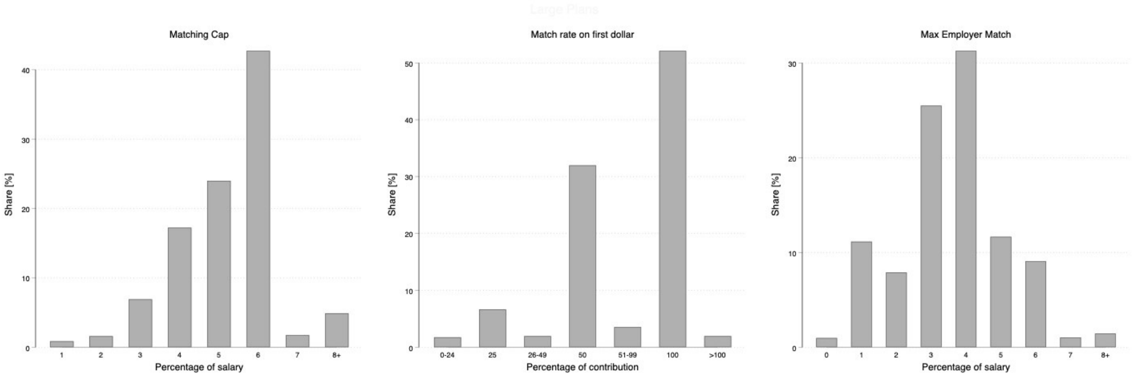
- Current system relies on **incentives** for saving and **disincentives** for early withdrawals
  - Limited evidence that these incentives work as intended (Choi, 2015; Friedman, 2016)
- **This paper:** overlooked distributional impact of this system
  - differences across **income groups understate system's regressivity:** disparities remain (after controlling for income) by race, parents background, family structure, education, etc.
  - **system amplifies racial wealth gaps** and intergenerational persistence
    - ★ "It takes money to make money"
- Broader take-aways for retirement policy reform:
  - more broadly, distributional policy analysis should look beyond income
  - detaching subsidies from contribution amounts may narrow the racial wealth gap
  - likely to be benefits from increasing liquidity (changing loan & withdrawal penalty policies)

Retirement accounts are a large share of household wealth



Source: Federal Reserve Board (2022), Distributional Accounts Back

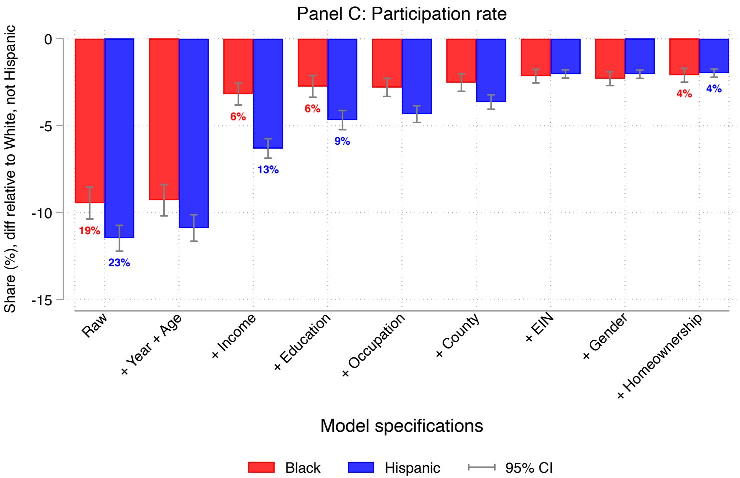
Distribution of Matches



Back

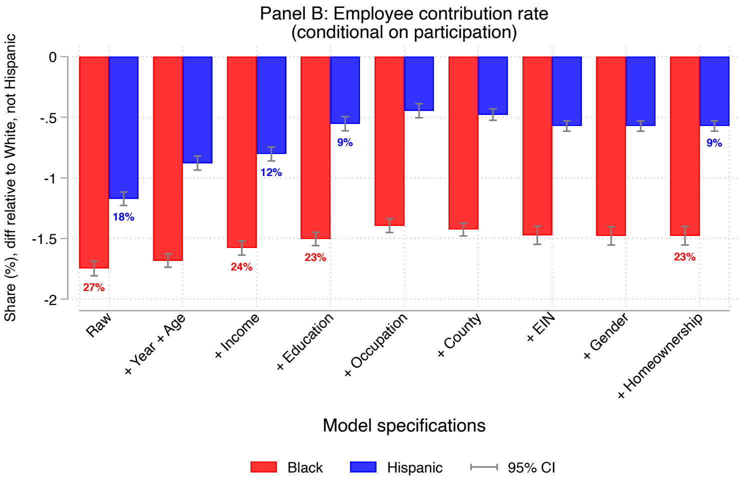
3. Gaps remain after controlling for individual characteristics

Participation

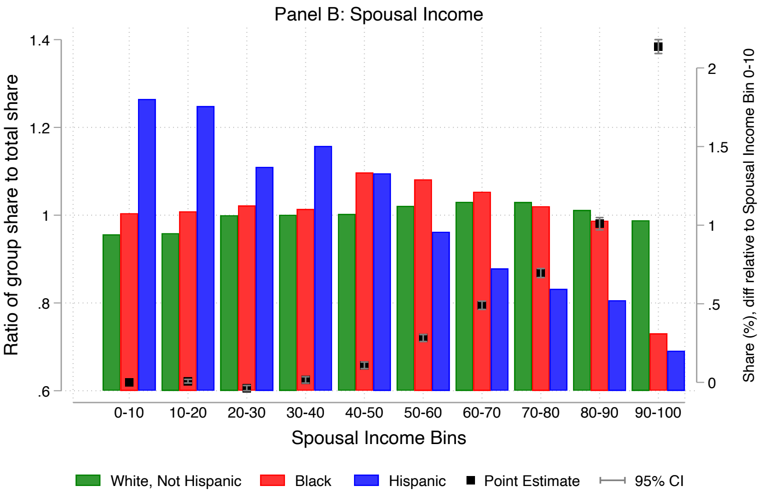


3. Gaps remain after controlling for individual characteristics

Contributions conditional on participating



Spousal Income



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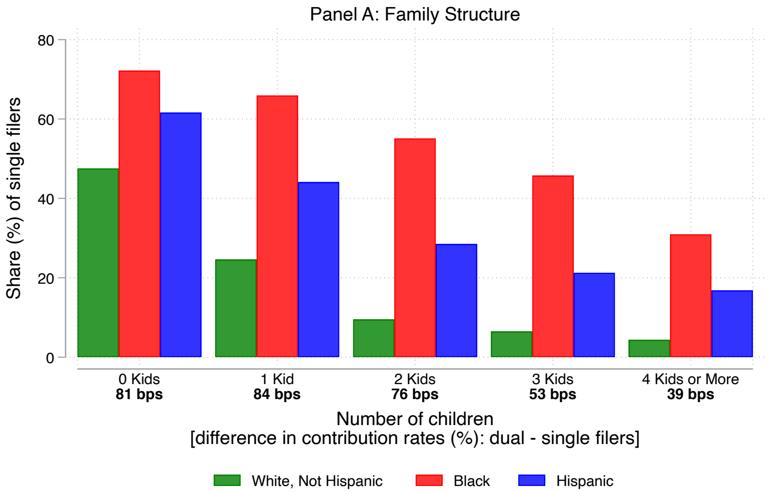
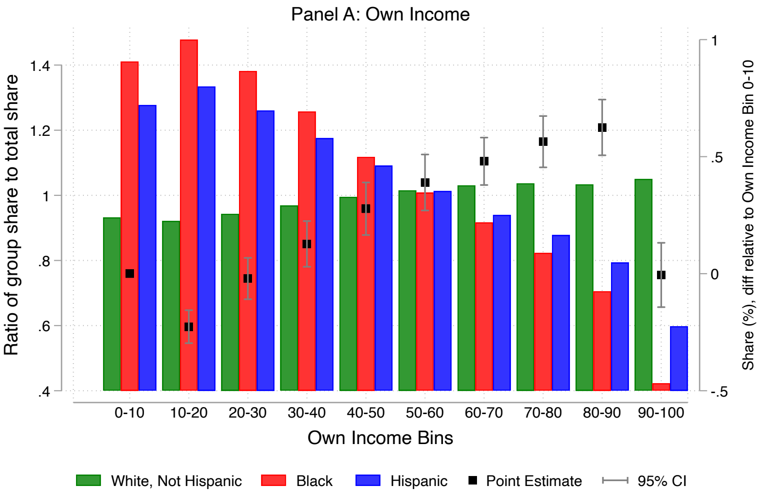
Family Structure



Own Income



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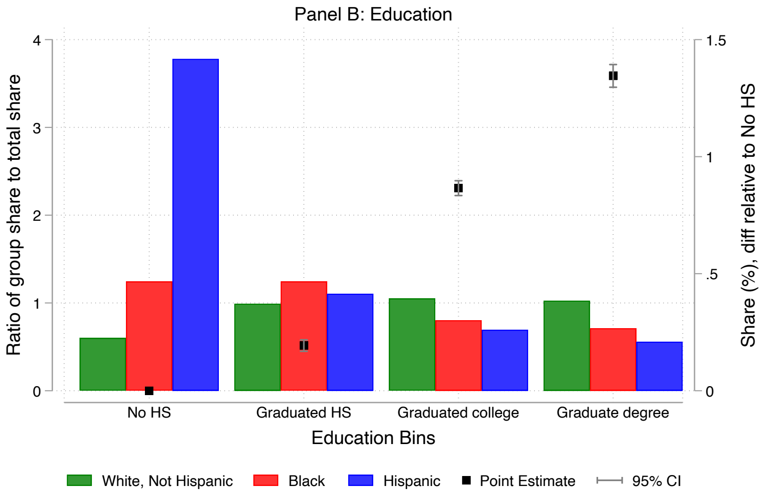
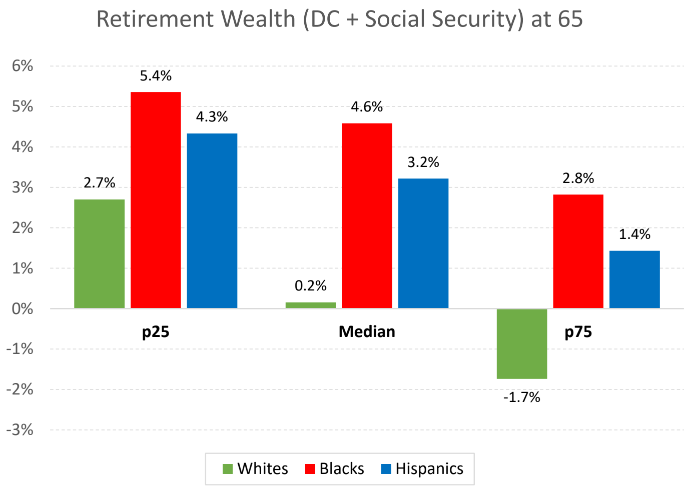
Education



Panel B: Education
Ratio of group share to total share
4
3
2
1
0
1.5
1
.5
0
Share (%), diff relative to No HS
No HS
Graduated HS
Graduated college
Graduate degree
Education Bins
White, Not Hispanic
Black
Hispanic
Point Estimate
95% CI

Counterfactual I: Within-firm Redistribution

Equalizing employer contributions (as % of salary) across all employees in each DC plan



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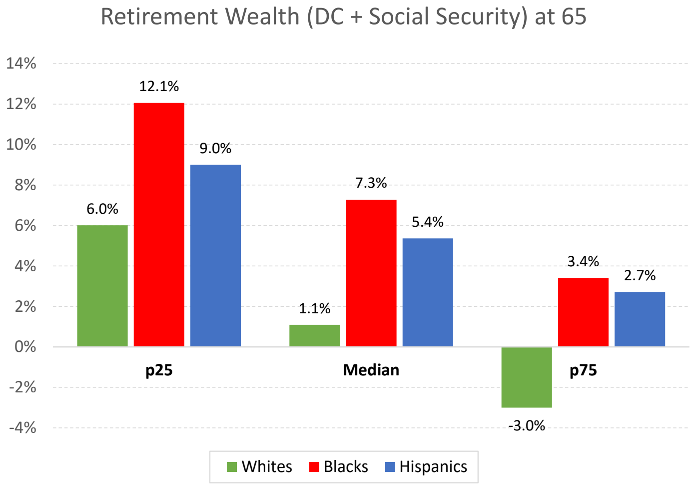
Counterfactual II: Across-firms Redistribution

Equalizing employer matching contributions (as % of salary) in the population



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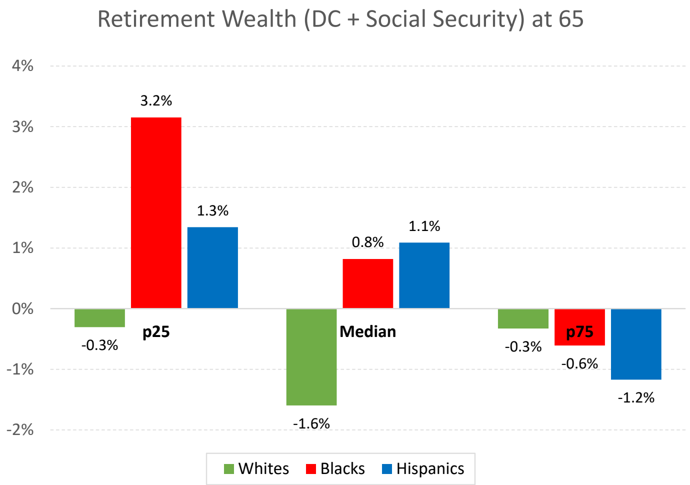
Counterfactual III: Tax Benefits Equalization

Equalizing net tax benefit for contributions (as % of lifetime income) in the population



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