Who Benefits from Retirement Saving Incentives in the U.S.? Evidence on Gaps in Retirement Wealth Accumulation by Race and Parental Income

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> > October 2024

Disclaimer

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- We link newly-collected data on employer retirement plans to administrative data to study the distributional impact of these incentives
- Focus on difference in receipt of saving incentives by i) race ii) parental background
 - Mostly focus on differences holding income (and therefore pprox Social Security) constant

Q: How do retirement incentives contribute to wealth inequality by **race** and **parental income**?

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Important channel for wealth inequality:

- 1. Retirement wealth is households' 2nd largest asset class (FRB '22)
- 2. One of best investments going (mean match on first dollar of saving is over 60 cents)...
- 3. ... yet many do not take full advantage of this incentive (avg. forego pprox 1.7% of salary)

Subsidies for DC retirement saving have two effects:

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• Behavioral responses:

• Mechanical effect:

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• Mechanical effect:

- Large transfer of > \$400bn annually ...
- ... yet has received less attention in the literature

• Wealth and Race in the U.S. Oliver & Shapiro (1989), Barsky et al. (2002), Darity & Nicholson (2005), Ganong et al. (2020), Sabelhaus and Thompson (2021), Viceisza et al. (2022), Derenoncourt et al. (2022)

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• Saving Incentives Engen et al. (1996), Poterba et al. (1996), Duflo et al. (2006), Engelhardt & Kumar (2006), Mitchell et al. (2007), Chetty et al. (2014), Friedman (2015), Briere et al. (2022)

Distributional analysis of mechanical effect of retirement incentives

Outline

1 Data

2 Contribution Gaps

3 Early Withdrawal Gaps

4 Lifetime Effect & Policy Counterfactuals

5 Conclusion

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2011_ Lowe's 4010b) Plan

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

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Contributions - Each year, participants may contribute from 1% to 50% of their pre-tax manal compensation, as defined by the Plan, subject to the internal Revenue Code immittions. Eligible employees *rese* transmitting thermolied as participants at a contribution rate of 1% of their pre-tax manal compensation unless they elect otherwise. Participants are 50 and older, or who reach age 50 douing the Flan year, are seligible to contribute an additional pre-tax dollar amount pre-year in addition to the deferral contribution. For 2011, the maximum annual amount of each up that could formula applied to employee deferrals (the Company Match). The Company fland formula is as followy: the first 30 attest of 50%, and the new 1% of contributions to the Plane each parcell particle. Second upon a motivant formula applied to employee deferrals (the Company Match). The Company fland formula is as followy: the first 30 attest of 50%, and the new 1% of contributions for the Plane. Pattecipants may also contribute amounts representing eligible rollower distributions from offer qualified plan.

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Matching Schedules



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- ▶ We codified these for the largest 5,000 U.S. DC plans over the period 2003-2018
- Matching schedules, vesting schedules, auto features, etc...

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- Extended family sample: individuals under 42 in 2020

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(a) Average DC Contrib. Rate, by race



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(a) Average DC Contrib. Rate, by race

(b) Average DC Contrib. Rate, by parental income



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Employer matching amplifies these gaps



(b) Average Employee + Match DC Contrib. Rate, by parental income



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Implication: Gaps in Matching Comp. > than in Labor Earnings



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Sample: workers near median of group earnings dist'n in firms w/ matching data available.

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Around half of the gap can be explained by age and income





Around half of the gap can be explained by age and income

(a) Employee + Match Contrib. Rate, by race

(b) Employee + Match Contrib. Rate, by parent income



Lighter shading: component coming from employer match

Gaps remain after controlling for rich set of characteristics



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Differences by race in parental income



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The role of parental income



Figure: Parental Income Coefficient



Figure: Parental Income by Race

Household and parental income further mediate savings gaps



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Household and parental income further mediate savings gaps



Why might parental income be a driver of saving in this illiquid form?

- Richer parents insure their kids' shocks(Fagereng et al. (2023))
- Kids of poorer parents use wealth to insure their parents (Francis and Weller (2022))

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- Forego the long-term tax benefit of tax-free growth
- Often subject to tax penalties
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- Early withdrawals are very common:
 - ▶ Coyne et al. (2022): 10% aged 40-59 take a penalized withdrawal in a given year
 - ▶ Goodman et al. (2021): Between 2003 and 2015 early withdrawals \approx 22% of contributions

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 - ▶ Goodman et al. (2021): Between 2003 and 2015 early withdrawals \approx 22% of contributions
- Note in following, we do not know whether withdrawals were penalized
 - Unpenalized hardship withdrawals permitted in some circumstances

Early withdrawals gaps are large ...

Probability of Early Withdrawal (%), by race and parental income

(a) Early withdrawal rates, by race



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Early withdrawals gaps are large ...

Probability of Early Withdrawal (%), by race and parental income



(b) Early withdrawal rates, by parent income



- Dependent variable = 1 if observe a 1099-R withdrawal above 1,000 in year t+1.
- Sample: subset of individuals who contributed \geq \$1,000 to DC accounts prior to year t.

... and largest for those with big income falls

Probability of Early Withdrawal (%), by income growth

(a) Early withdrawal rates, by race



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Probability of Early Withdrawal (%), by income growth

(a) Early withdrawal rates, by race

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• Penalized withdrawals reveal a preference for liquidity Coyne, Fadlon, Porzio (2022)

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Suggestive of liquidity constraints binding more for Black Americans than White and Hispanic Americans see also Ganong et al. (2020) ...

... and for those with lower-income parents

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- Potential gains from simple plan design changes:
 - ★ Loan policies, especially post-separation (Mitchell, Utkus, & Yang, 2007 ⇒ loans linked w/ ↑ contribution rates)

Outline

1 Data

2 Contribution Gaps

3 Early Withdrawal Gaps

4 Lifetime Effect & Policy Counterfactuals

5 Conclusion

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Distributional Analysis of the Retirement Saving Subsidies

Long tradition of distributional analysis of the retirement systems

(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**

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Regressive subsidies for private saving...

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<u>Problem</u>: focus only on income may **miss important distributional aspects** Other dimensions matter for subsidies take-up and are not undone by Social Security

• Example: gaps by household structure & education

A Microsimulation Model

- What we do:
 - 1. Simulate whole lifecycles by patching together partial lifeycles
 - 2. Bring together data on flows with:
 - * Model of taxation (TAXSIM) and Social Security
 - * Assumptions on portfolio composition, asset returns, withdrawals

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- 3. Tax expenditure

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 - > DC wealth: Discounted value of after-tax withdrawals, divided into shares arising from:
 - 1. Employee contributions
 - 2. Employer matches
 - 3. Tax expenditure
 - Broader measure of consumption in retirement which includes Social Security

Cumulative effects of match and tax are large

Between 40% and 50% of DC wealth



Adding distributional analysis of the tax expenditure

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(a) Income and matching gaps by race



Adding distributional analysis of the tax expenditure





Adding distributional analysis of the tax expenditure

(a) Income and matching gaps by race

(b) Income and matching gaps by parental income



Sample: workers near median of group earnings dist'n in firms w/ matching data available.

A counterfactual reallocation of subsidies for savers

We study a counterfactual reallocation which...

- ... breaks the link between compensation and saving
- ... is budget-neutral for the firm and revenue-neutral for the government

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In this counterfactual:

- 1. Firms re-allocate existing matching dollars in proportion to earnings
- 2. Government allocates tax expenditure in proportion to lifetime earnings

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By population quintiles



By population quintiles



By population quintiles



By population quintiles

Change in DC + Social Security Wealth at age 65



By population quintiles



By population quintiles

Change in DC Wealth Gaps at age 65



Earnings group

Black-White

By population quintiles

Change in DC Wealth Gaps at age 65



Earnings group

Black-White Hispanic-White

By population quintiles

Change in DC Wealth Gaps at age 65



Earnings group

Black-White Hispanic-White Top-Bottom parent group

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Conclusion

If the existing federal asset-promotion budget were allocated in a more progressive manner, federal policies would go a long way toward eliminating racial disparities and building an inclusive economy for all Americans.

Hamilton and Darity (2017)

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- Retirement saving incentives are a large part of the US asset-promotion budget
 - ▶ We find their mechanical effect accounts for > 40% of DC wealth
 - Budget-neutral reforms could close $\sim 1/3$ of DC wealth gaps by race/parental income

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 - ▶ We find their mechanical effect accounts for > 40% of DC wealth
 - Budget-neutral reforms could close $\sim 1/3$ of DC wealth gaps by race/parental income
- More broadly, distributional analysis should look beyond income
 - Differences by income understate the system's regressivity
 - ► Current institutional design amplifies racial wealth inequality & intergenerational persistence

Behavioral Response

Match rates, effect on participation:

- Papke (1995) and Kusko et al. (1998) find close to no response
- Choi et al. (2002) find 3.5pp increase in participation when match \uparrow by 25pp
- Duflo et al (2006): match rate (in RCT) going from 0% to 50% increases take-up by 11pp Plan changes, contributions:
 - Kusko et al. (1998) find very small changes in saving to huge changes in match
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In interpreting these results:

- Choukhmane and Palmer (2023) estimate that two-thirds of increased employee pension contributions after UK reform are crowd out other savings
- Effects in longer run could be larger as role of inertia fades

Also find large gaps by education and family structure

(a) Employee + Match Contrib. Rate, by Education



(b) Employee + Match Contrib. Rate, by Household composition

▲ B I
▲ B II

Also find large gaps by education and family structure



• B I 💽 • B II 🛛

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Distributional Incidence of Subsidies, by Race

By Own Group Quintiles



Distributional Incidence of Subsidies

By Own Group Quntiles



Also find large gaps by education and family structure



Combined counterfactual with behavioral response, by race



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Combined counterfactual with behavioral response, by race





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Combined cf with behavioral response, by parental inc.

Assume for each dollar of incentive removed 10c less employer saving done



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Combined cf with behavioral response, by parental inc.

Assume for each dollar of incentive removed 30c less employer saving done



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Intensive and Extensive Margins by Race

Figure: Participation

0 0 Particip. rate diff. (p.p.) -2% -2% Contrib. rate diff. (p.p.) -5 -6% -1 -10 -14% -15 -18% -20% -17% -2 -20 -25% -25 + Fully Saturated Raw -3 Hispanic ⊡ 95% CI Black + Fully Saturated Raw

Figure: Contributions for Participators



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Intensive and Extensive Margins by Parent Income

Figure: Participation



Figure: Contributions for Participators



Racial Distribution Reweight - Employee + Match Contrib.



Racial Distribution Reweight - Early Withdrawals



Alternative mechanisms that have 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 ...

- \blacktriangleright ... small differences in availability of DC plans across racial groups \bigstar
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- 2. Auto-enrollment matters for level of contributions but does not change size of gaps X

- 3. Proxies for financial literacy / awareness
 - Occupation FE X
 - Parental participation in 401(k) X

Contribution & Early Withdrawal Gaps by Parent Income Deciles



Also find large gaps by education and family structure





Cont. of tax and employer match to wealth, by parent inc. By Group Quintiles





Contributions of tax and employer match to wealth, by race By Race Quintiles





'Combined' Counterfactual, By Race

By race quintiles





'Combined' Counterfactual, By Parental Income

By group quintiles



