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Panel 6: Retirement Finances

Retirement and Disability Research Consortium
22nd Annual Meeting
August 6, 2020

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The Evolution of Late-Life Income and Assets: Measurement in IRS Tax Data and Three Household Surveys

James J. Choi

Lucas Goodman

Justin Katz

David Laibson

Shanthi Ramnath

Standard disclaimer

The findings and conclusions expressed are solely those of the authors and do not represent the views of SSA, the U.S. Department of the Treasury, the Office of Tax Analysis, the Federal Reserve Bank of Chicago, the Federal Reserve System, or any agency of the federal government, Harvard, Yale, or the authors' RDRC affiliation.

Motivation

- How well do widely used household surveys (HRS, SIPP, and CPS) capture late-life income and assets?
- This paper: Benchmark these surveys against 5% random sample of IRS tax data
 - 1933-1952 birth cohorts in 2001-2017 tax records

Definition of income

- Wage income
- Pension income
 - Sum of distributions from DB and DC plans
- Social Security income, including OASI and DI
- Capital income
 - Taxable + tax-exempt interest, taxable dividends, realized capital gains
 - Exclude realized capital gains for comparisons to surveys
- Other income
 - Rent, royalties, partnerships and S-corporations, estates, trusts, sole-proprietorships, unemployment insurance, net alimony

Excluded income categories

Missing from tax data:

- Supplemental Security Income (SSI)
- Private insurance payouts
- SNAP, WIC, TANF, VA benefits

Asset balance information

- IRA balances
 - Both traditional and Roth
- Presence of capital income
 - Used for test of whether tax unit has near-zero financial assets

Household size adjustment

In tax data

- Link sampled individual with spouse through joint tax filings

In survey data

- Group two survey respondents if identify as being married

Divide income and balances by square root of tax unit size

Targeted population

Civilian non-institutionalized population living in 50 U.S. states or Washington DC

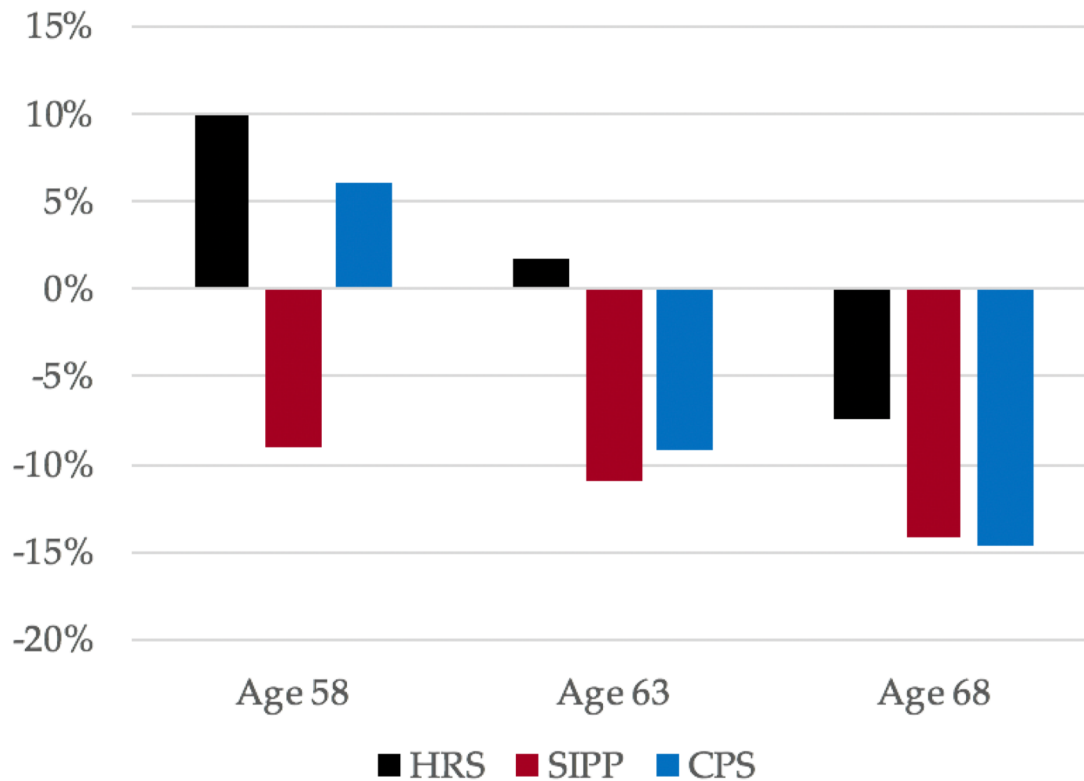
Requires adjustment of tax data population

- Details in paper

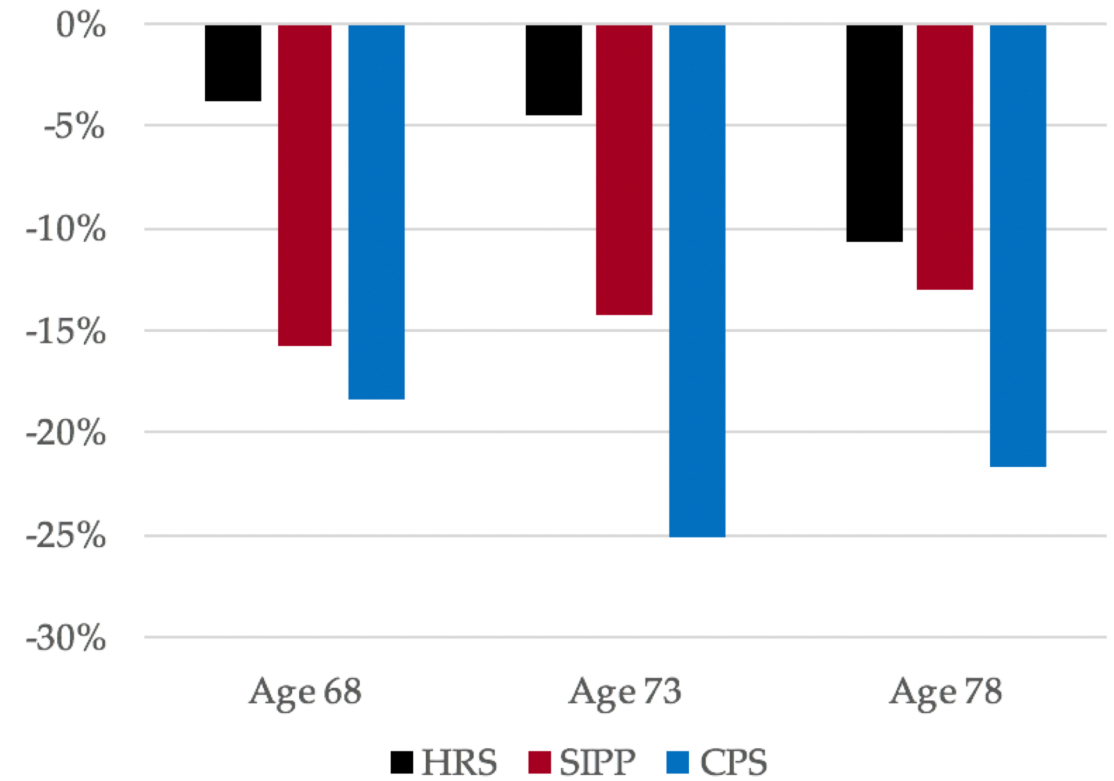
Drop from HRS institutionalized individuals and those who move abroad

Pre-tax income deviations from IRS at median

1943-1949 birth cohorts

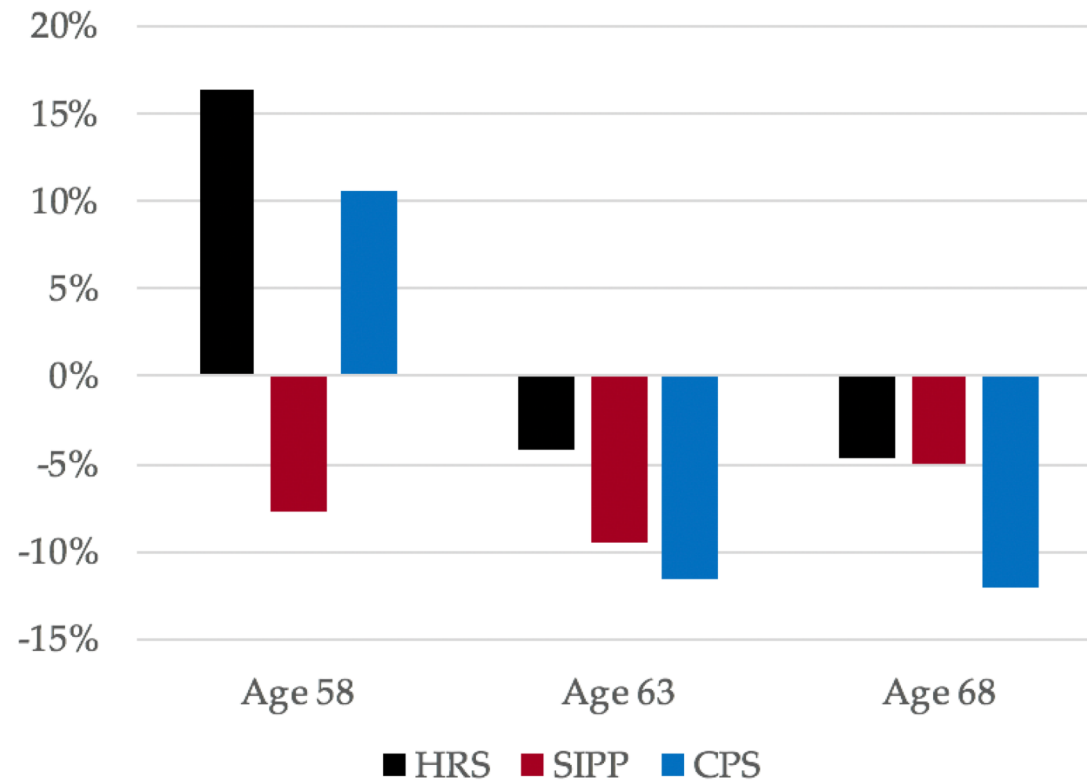


1933-1939 birth cohorts

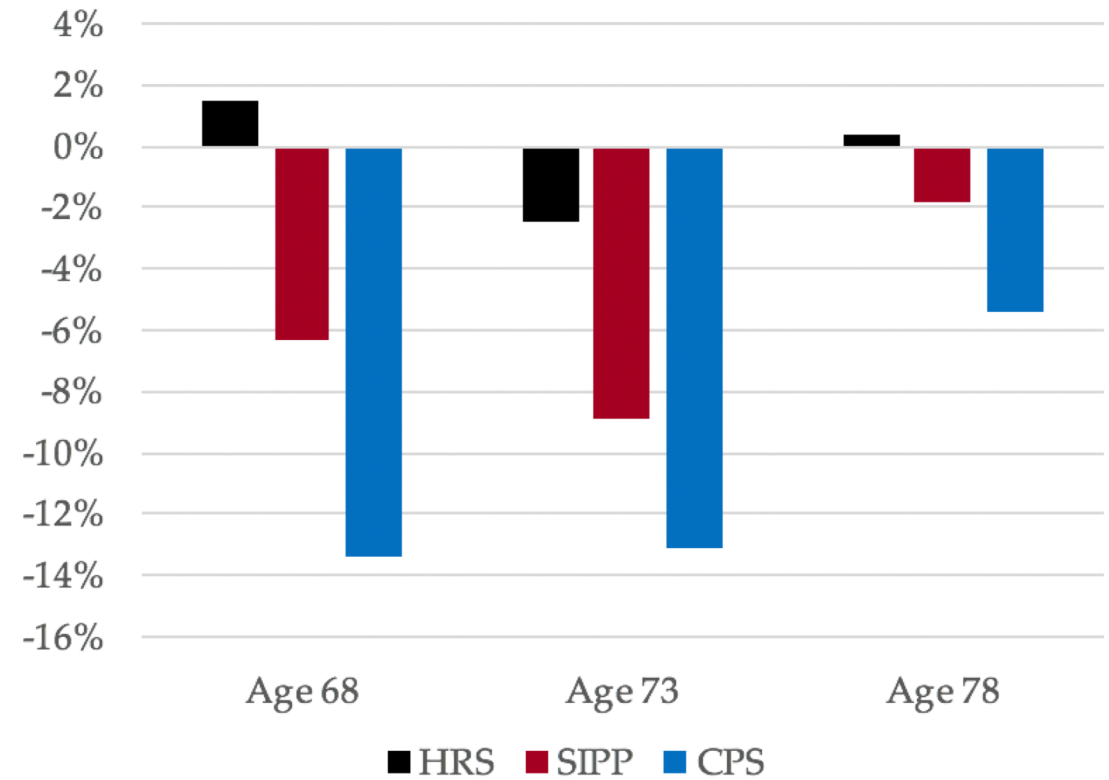


Pre-tax income deviations from IRS at 25th percentile

1943-1949 birth cohorts

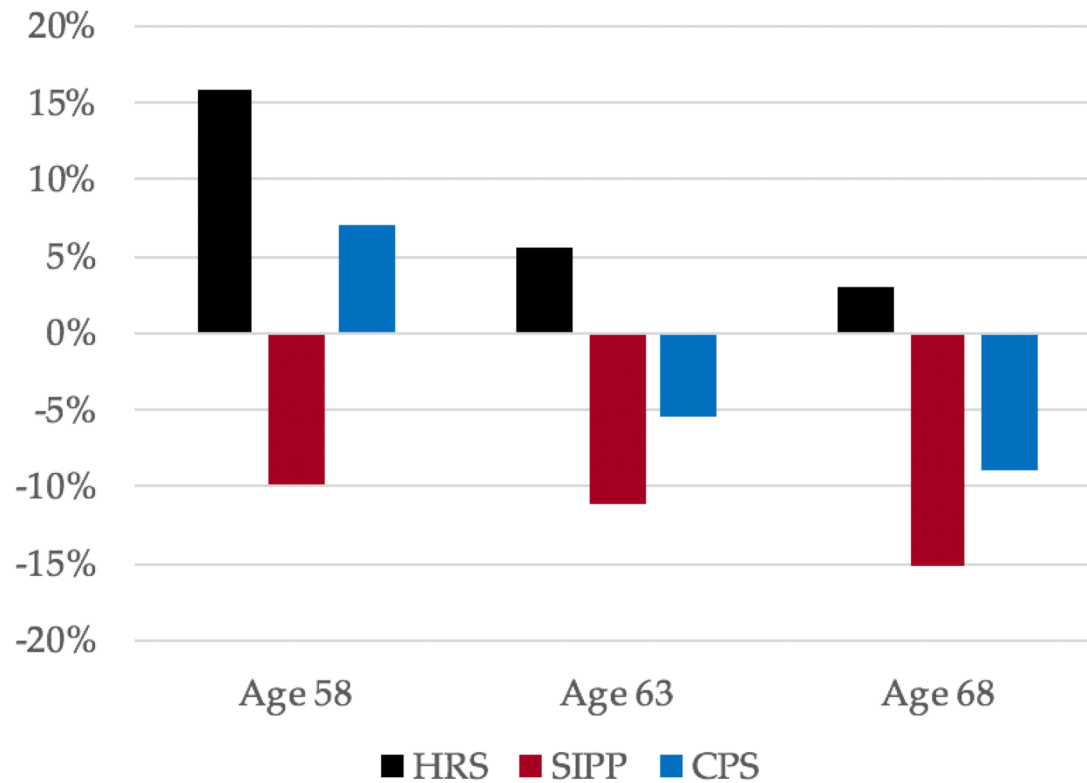


1933-1939 birth cohorts

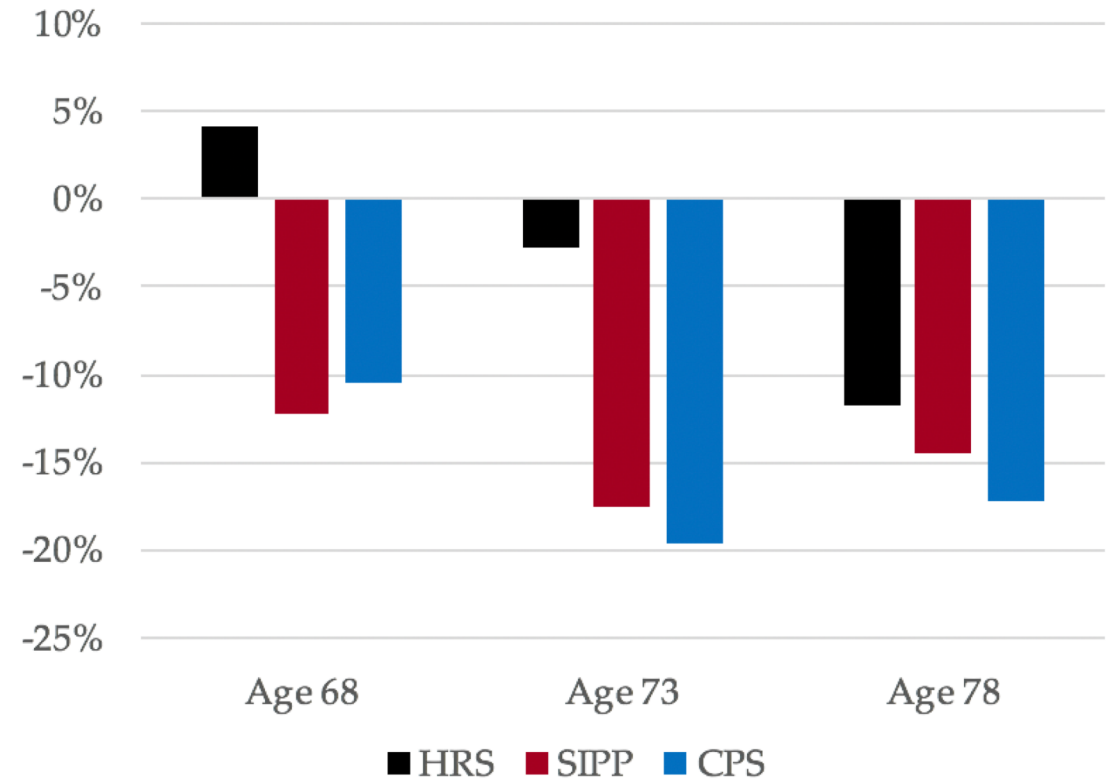


Pre-tax income deviations from IRS at 75th percentile

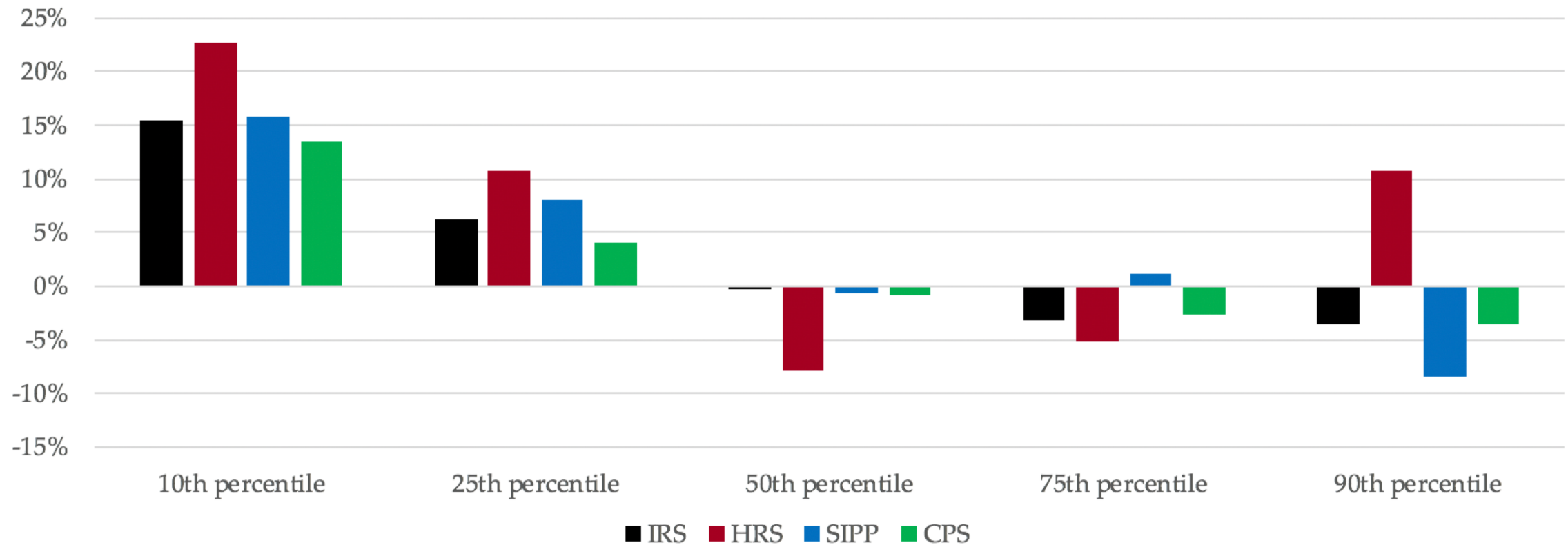
1943-1949 birth cohorts



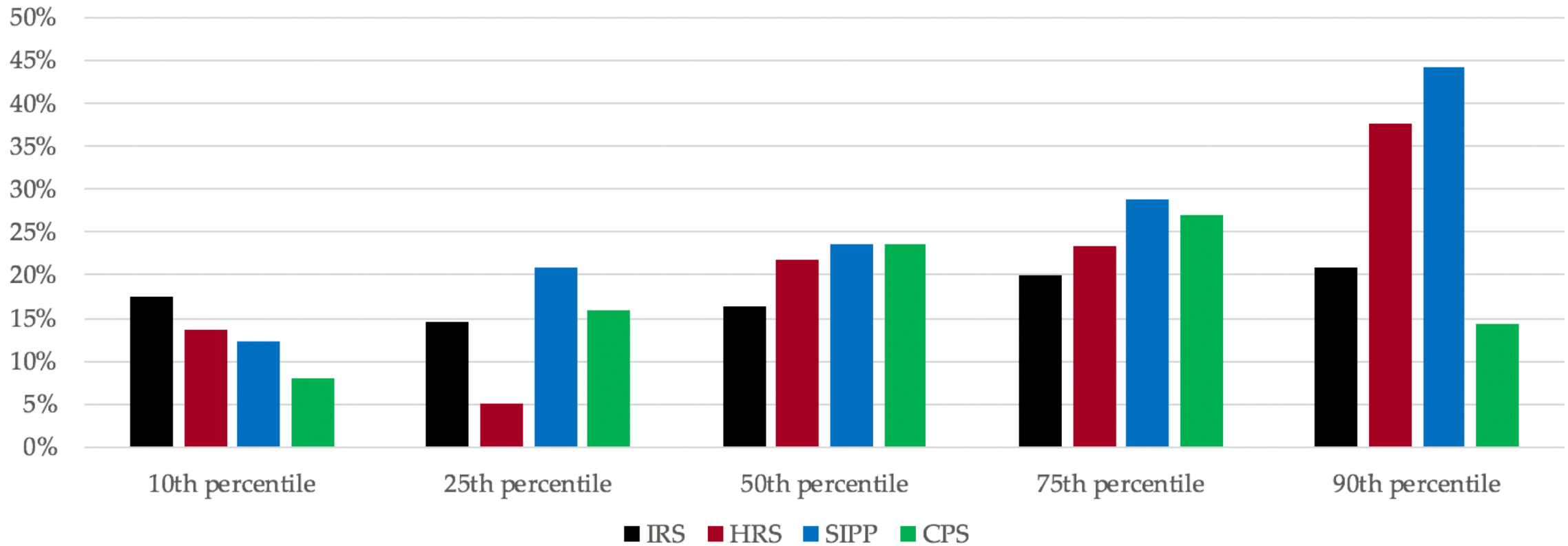
1933-1939 birth cohorts



Pre-tax income changes from 1944 to 1950 birth cohorts, ages 58-67

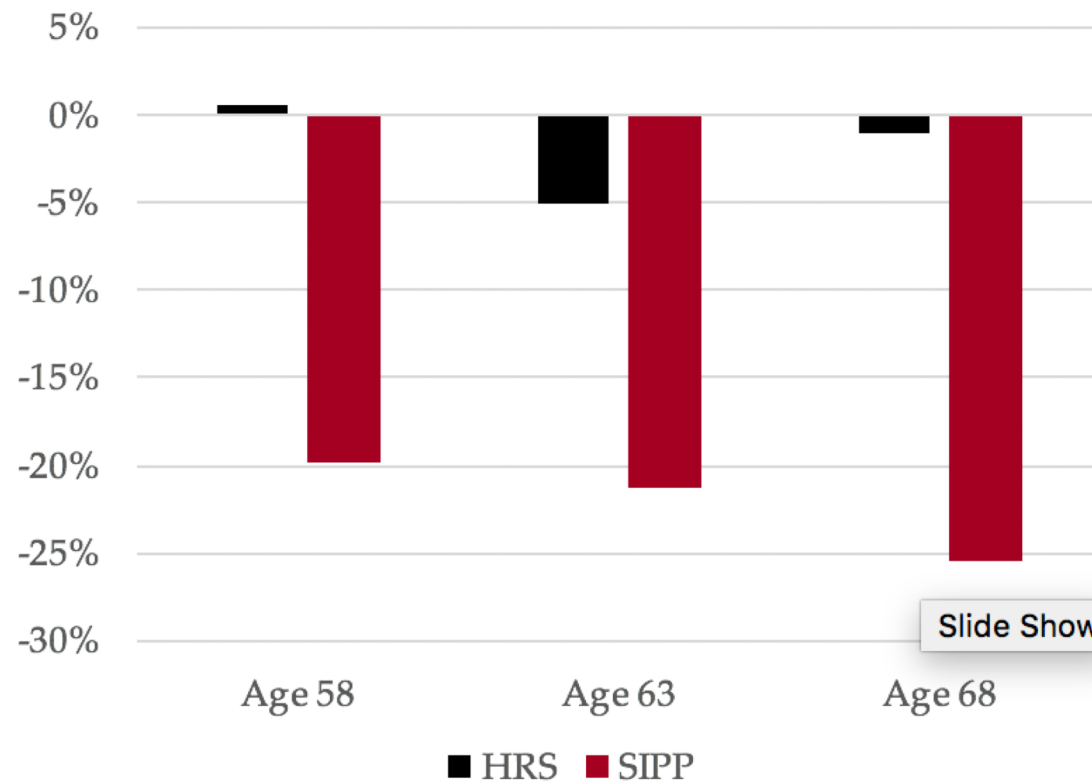


Pre-tax income changes from 1933 to 1943 birth cohorts, ages 68-74

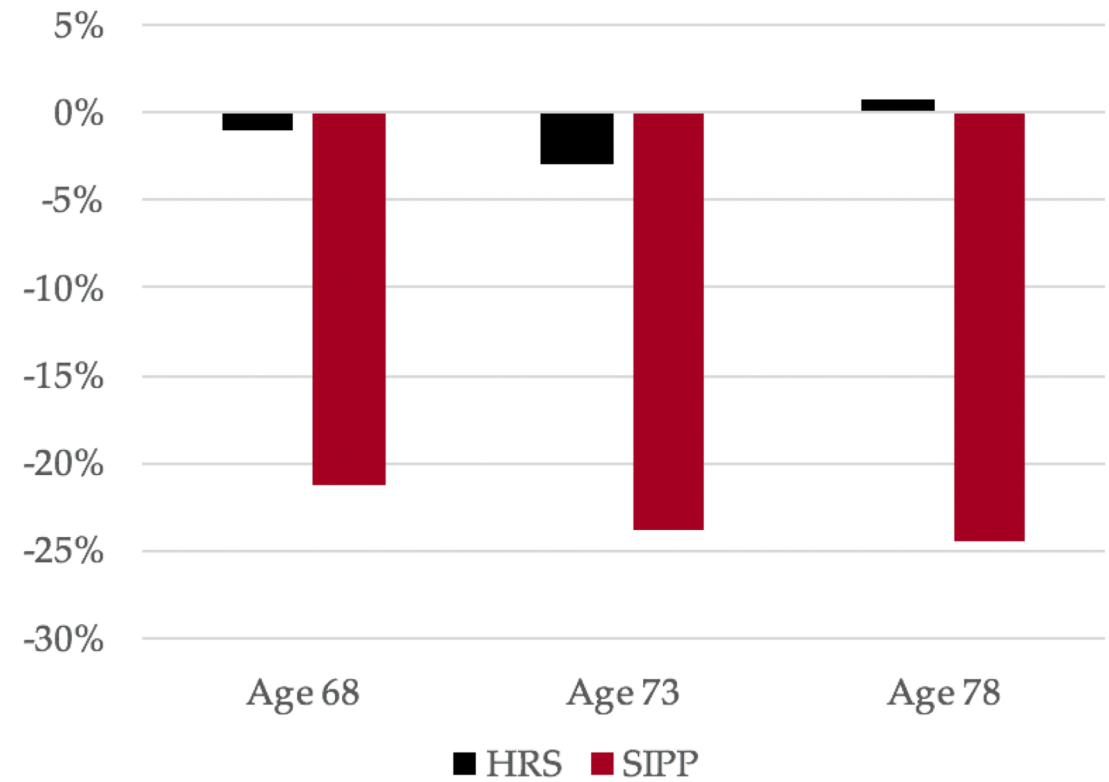


Having positive IRA balance: deviations from IRS data

1943-1949 birth cohorts



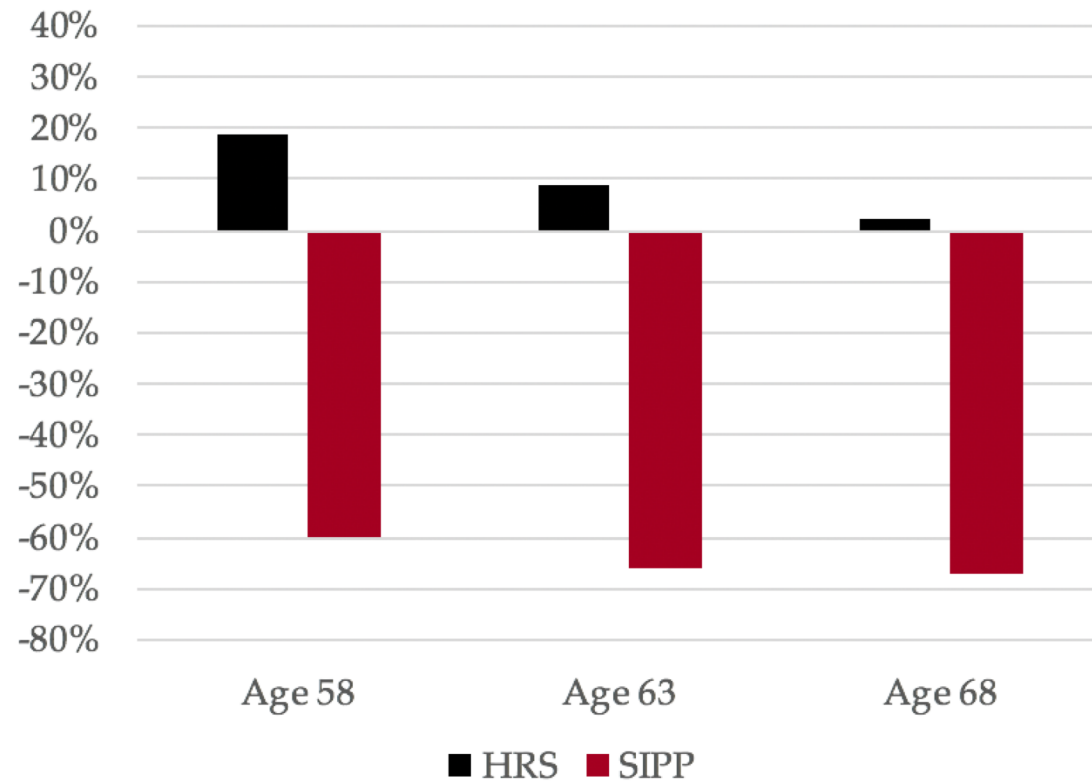
1933-1939 birth cohorts



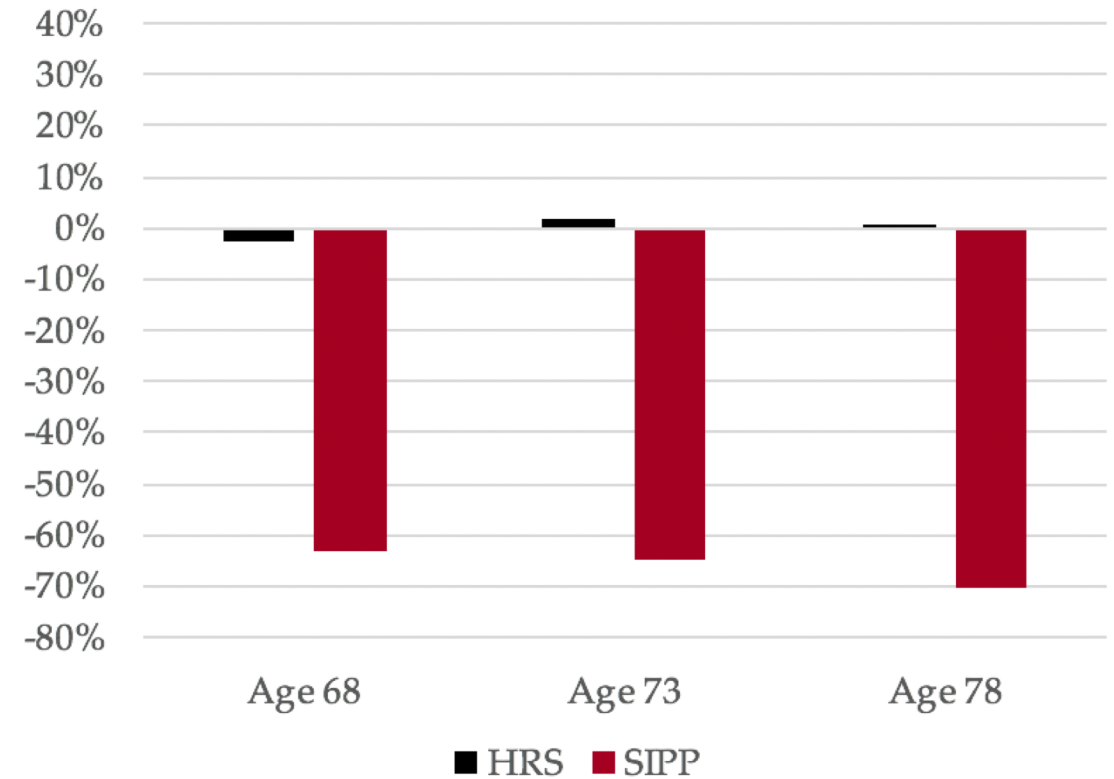
Slide Show

IRA balance deviations from IRS data, 75th percentile

1943-1949 birth cohorts

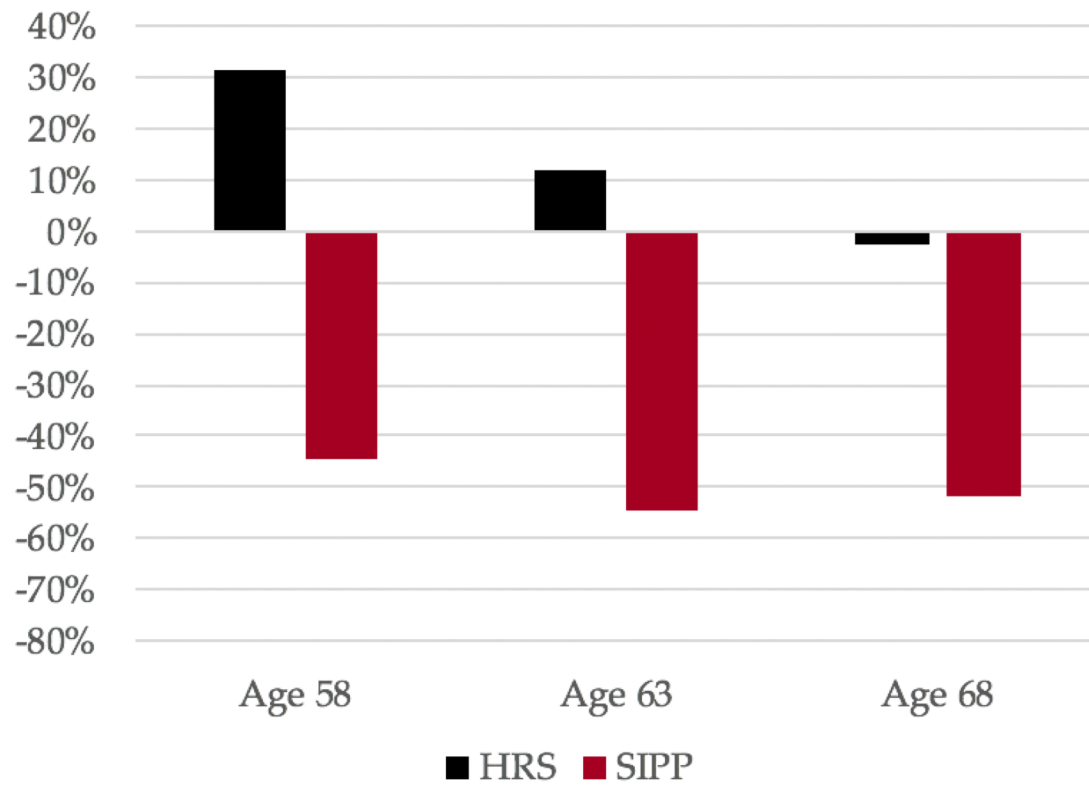


1933-1939 birth cohorts

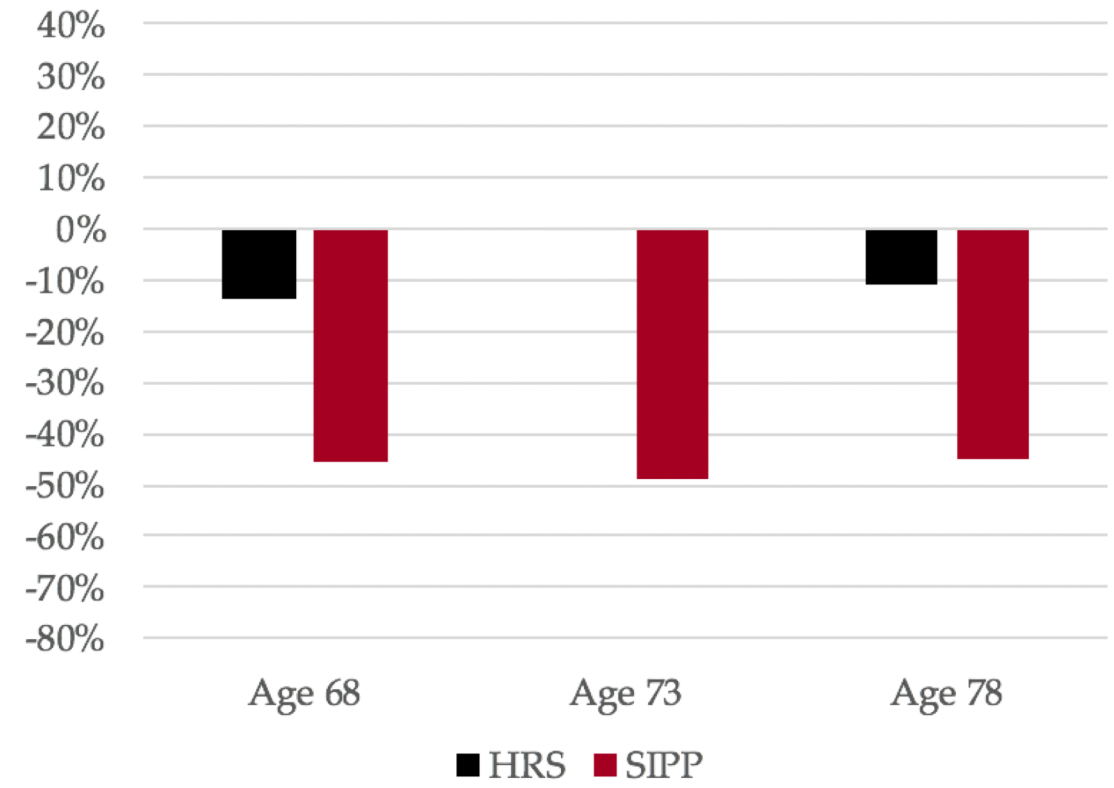


IRA balance deviations from IRS data, 90th percentile

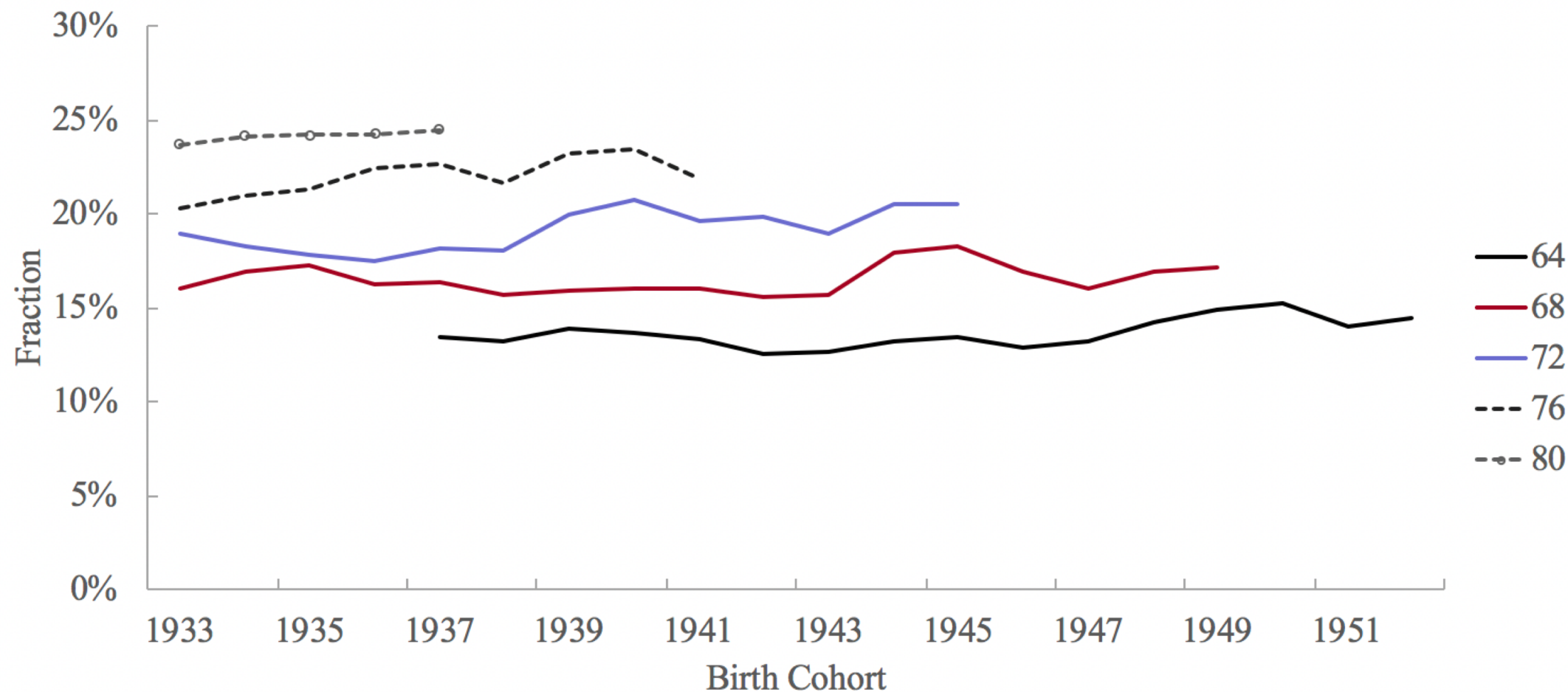
1943-1949 birth cohorts



1933-1939 birth cohorts



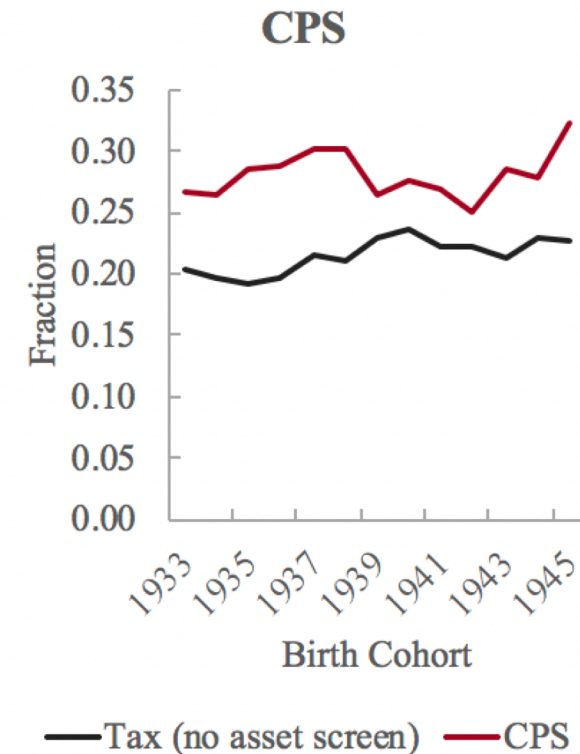
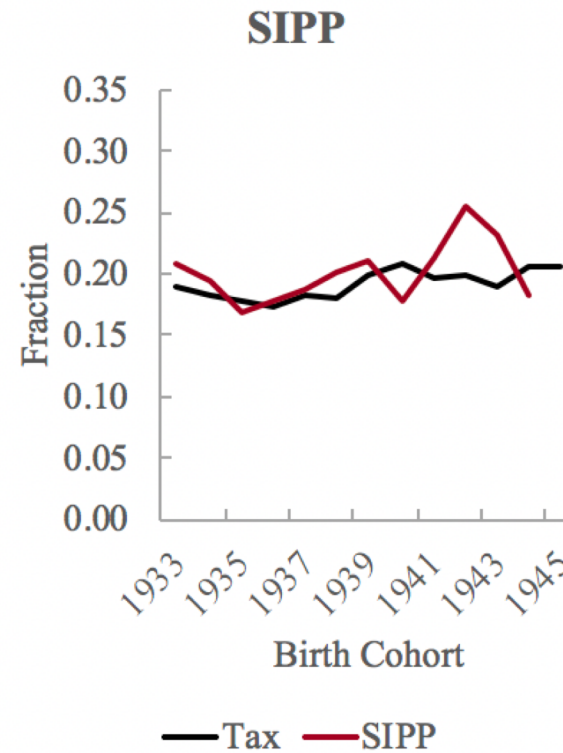
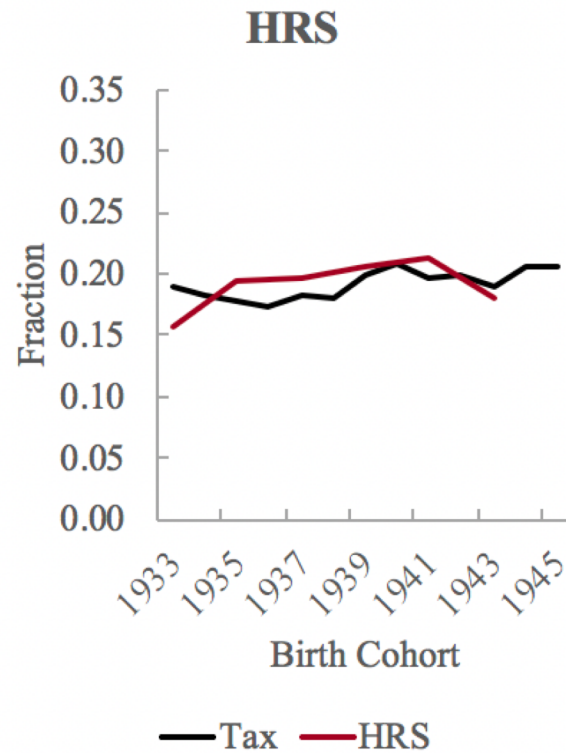
Households with no non-Social Security income and no IRA balances, tax data



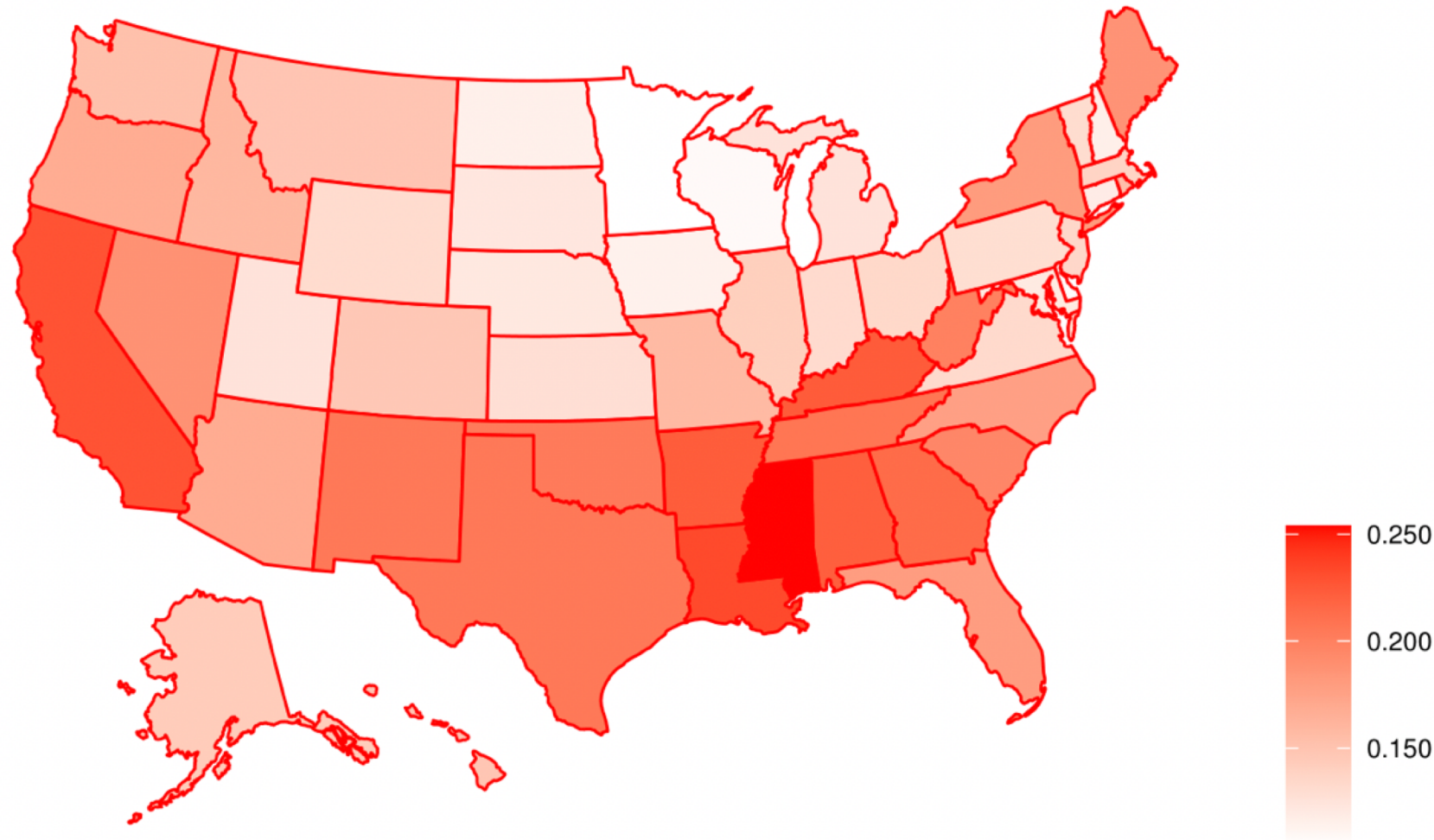
Growth in complete Social Security dependence

- 1937 to 1952 birth cohorts, age 64: +1.1 pp (+7.9%)
- 1933 to 1949 birth cohorts, age 68: +1.1 pp (+7.1%)
- 1933 to 1945 birth cohorts, age 72: +1.6 pp (+8.5%)
- 1933 to 1941 birth cohorts, age 76: +1.5 pp (+7.5%)
- 1933 to 1937 birth cohorts, age 80: +0.8 pp (+3.4%)

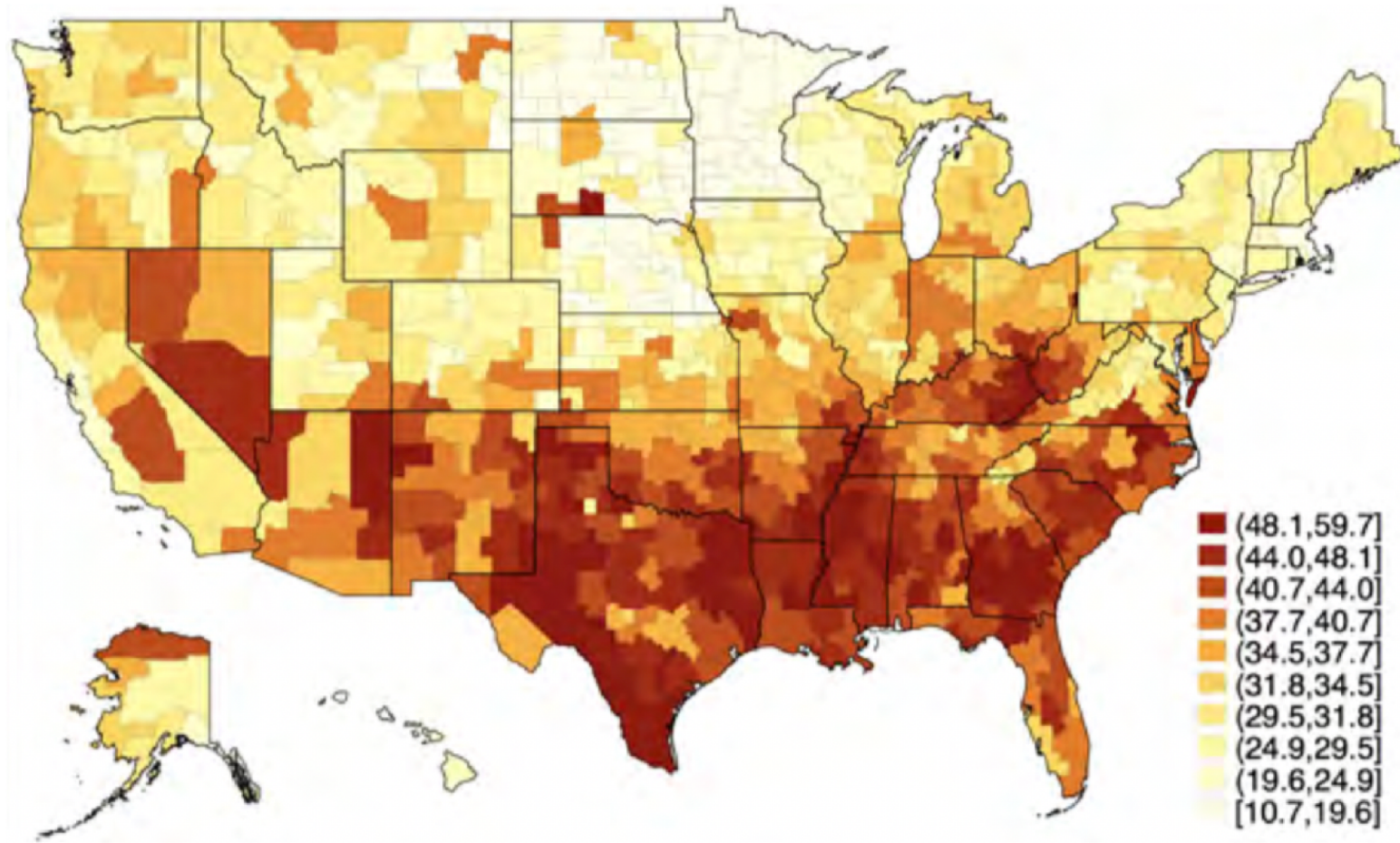
Complete dependence on Social Security at age 72



Complete dependence on Social Security by state at age 72, 1943 cohort



% with debt in collections, 2015



Benjamin Keys, Neale Mahoney, and Hanbin Yang, 2020. "What determines consumer financial distress? Place- and person-based factors." Working paper.

Summary

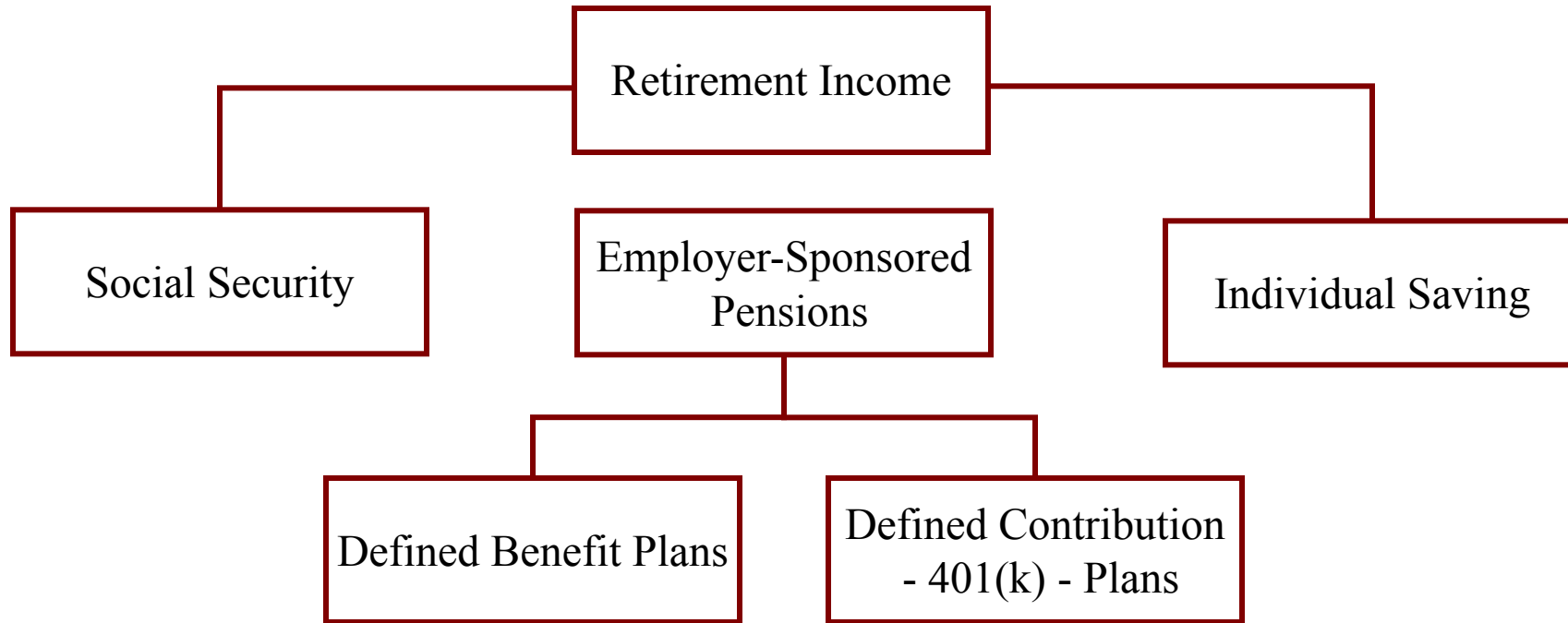
- Survey data tends to understate late-life income levels
 - HRS is most accurate, CPS is least accurate
- Survey data accurately captures changes across 1944-1950 cohorts in age 58-67 income, overstates changes across 1933-1943 cohorts in age 68-74 income
- IRA balances reasonably well captured by HRS, greatly underreported by SIPP
- HRS and SIPP accurately capture prevalence of complete dependence on Social Security at age 72, CPS overstates

How Much Taxes Will Retirees Owe on Their Retirement Income?

Anqi Chen and Alicia H. Munnell
Center for Retirement Research at Boston College

22nd Annual Meeting of the Retirement and Disability Research Consortium
Online Event
August 6, 2020

When households evaluate their retirement resources, they may forget that a portion will be taxed.



Social Security is the largest source of retirement income and roughly half of households pay taxes on benefits.

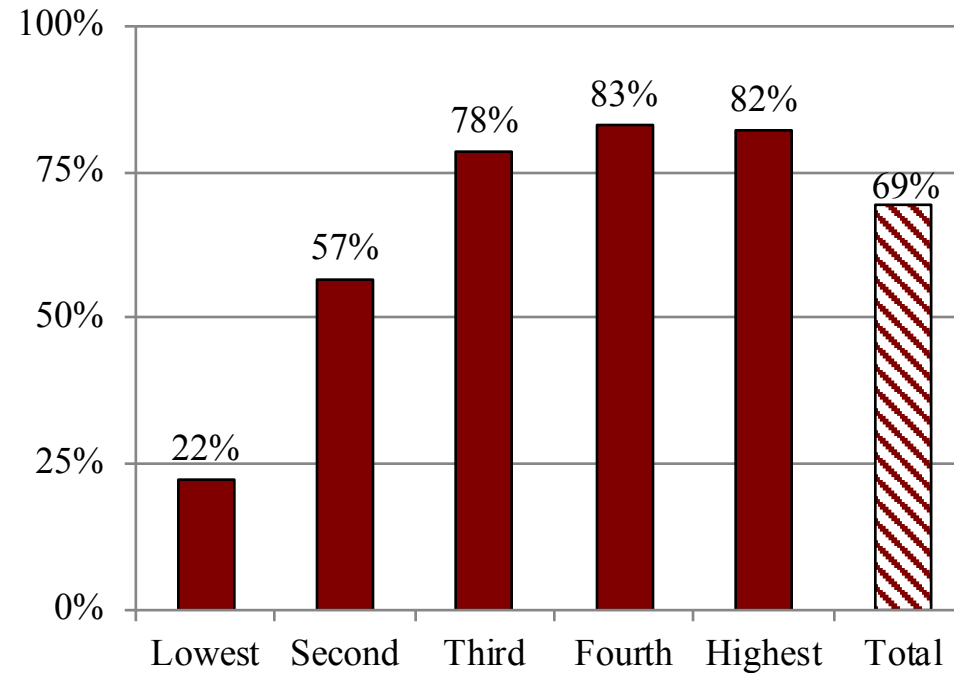
Calculation of Taxable Social Security Benefits

Modified AGI thresholds		Taxable portion
<i>Individual</i>		
A	Less than \$25,000	None
B	\$25,000-\$34,000	Lesser of: (1) 50% of benefits or (2) 50% of modified income above \$25,000 (maximum of \$4,500)
C	Above \$34,000	Lesser of: (1) 85% of benefits or (2) 85% of modified income above \$34,000 plus amount from line B
<i>Married filing jointly</i>		
D	Less than \$32,000	None
E	\$32,000-\$44,000	Lesser of: (1) 50% of benefits or (2) 50% of modified income above \$32,000 (maximum of \$6,000)
F	Above \$44,000	Lesser of: (1) 85% of benefits or (2) 85% of modified income above \$44,000 plus amount from line E

Source: Congressional Research Service 2020. “Social Security: Taxation of Benefits.”

And up to two-thirds may be taxed on their defined benefit income or withdrawals from 401(k)s/IRAs.

Percentage of Households (Head Ages 63-73) with Employer-Sponsored Plan, by Income Quintile 2012



Determining withdrawals requires some assumptions.

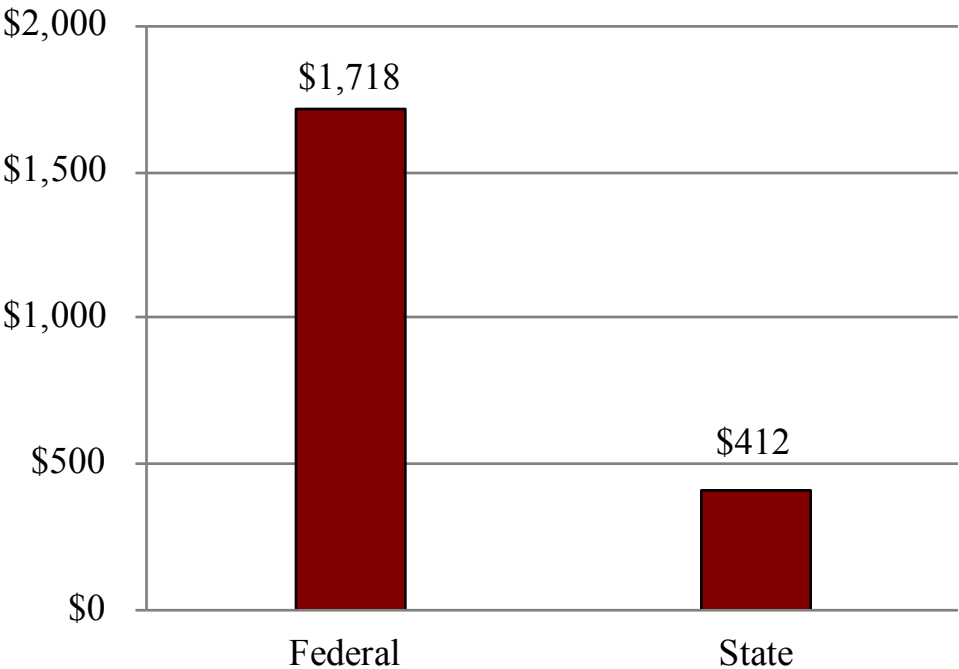
- All households with defined contribution assets are required to take the RMD, which starts at age 70½ (or 72 in 2020).
- Assumptions have to be made about their withdrawals before the RMD kicks in.
- And if any withdrawals are made beyond the RMD.

Higher-income households may also have financial assets, where taxes depend on withdrawal pattern.

- Unlike assets in retirement plans, these financial assets are not subject to any IRS distribution.
- They all have to pay taxes on dividends and interest.
- And if they sell their stocks/bonds to support consumption, they may also have to pay capital gains tax.

While not included in current results, retirees pay state taxes equal to about 25 percent of federal and are progressive.

Federal and State Revenue from Personal Income Tax, 2019



Average Personal Income Tax, by Income Quintile

Income quintile	Average state effective tax rates
Lowest	1.0%
Second	2.3
Middle	2.8
Fourth	3.5
Highest	3.9
Total	2.7%

Sources: Left: Congressional Budget Office. 2019. “Monthly Budget Review: Summary for Fiscal Year 2019.”; and Census of Governments. 2020. “2019 State Government Tax Dataset.” Right: Authors’ calculations using the RAND Corporation. 2014. “HRS Tax Calculation.”

Many retirees will likely face taxes, but it is unclear how large the tax burden is for the typical household.

- This project aims to shed light on the tax burden that retirees face by estimating lifetime taxes for recently retired households across income groups.
- The data is from the *Health and Retirement Study* (HRS) and will eventually be linked to administrative earnings and restricted state of residence.
- Federal and state taxes on reported and projected income are estimated using NBER's TAXSIM model.

A note on TAXSIM for other researchers.

- TAXSIM, even the Stata add-on, requires an internet/FTP connection, which is not available on restricted data computers.
- There is a solution: TAXSIM can be installed on restricted data computers but it requires approval, help from Dan Feinberg at NBER, and the IT staff in charge of the restricted computer.
- For public datasets, adjustments to your system or code may be needed to run TAXSIM efficiently.
- The CRR has written up documents and is happy to share them.

Data

- Our sample includes households where at least one earner has claimed Social Security benefits from 2010 to 2018 in the *Health and Retirement Study*.
- The results presented in this version use self-reported earnings and do not include state tax burdens.

Methodology

- Step 1: Project income streams from Social Security, employer-sponsored retirement plans, and financial assets to get lifetime income in retirement.
- Step 2: Adjust income streams to reflect AIME-specific life expectancy.
- Step 3: Run income streams through TAXSIM to estimate lifetime tax liability in retirement.
- Step 4: Discount tax liabilities and income in retirement back to claiming year.

Based on self-reported data, taxes in retirement are only consequential for the top quintile of households.

Retirement Taxes as a Percentage of Retirement Income, Households Follow RMD and Consume Only Interest and Dividends from Financial Assets, by AIME Quintile and Marital Status

AIME quintile	All	Single	Married
Lowest	0.0%	0.0%	0.0%
Second	0.0	0.1	0.0
Middle	0.3	1.1	0.1
Fourth	1.5	5.0	0.8
Highest	10.5	13.6	9.8
Top 5%	15.4	18.8	15.0
Top 1%	20.9	20.7	21.0
All	5.7%	6.5%	5.4%

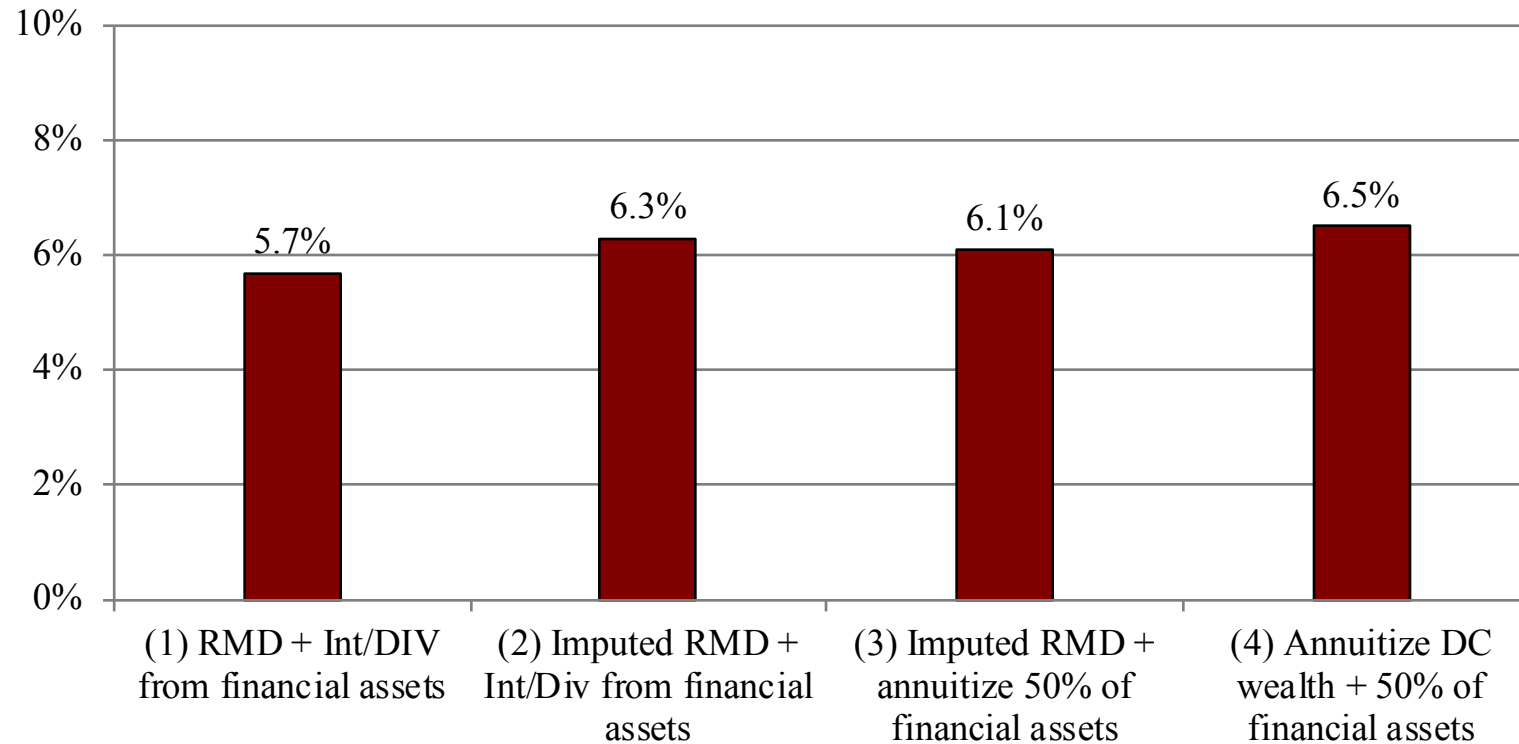
However, the highest quintile are not the extremely wealthy.

Marital Status and Average Retirement Resources in Year of Retirement in 2018 Dollars, by AIME Quintile

AIME quintile	Percentage married	Social Security	DB pensions	DC balances	Financial wealth
Lowest	35.5%	\$10,606	\$2,919	\$7,670	\$29,078
Second	60.3	19,948	3,769	16,222	58,196
Middle	75.7	32,289	4,444	49,666	82,601
Fourth	82.7	32,289	6,887	132,548	113,446
Highest	82.2	33,130	21,325	423,710	511,112
Top 5%	81.8	36,183	35,996	839,023	803,133
Top 1%	86.2	36,498	38,563	2,119,252	1,842,177

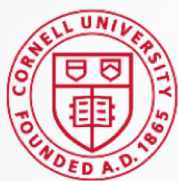
And different drawdown strategies do not matter for tax liability.

Average Tax Liability by Different Drawdown Strategies



Conclusion

- The results, based on self-reported data, show the tax burden on retirement income is negligible for the vast majority of households and only relevant for top quintile.
- However this is not just about the really wealthy, average 401(k)/IRA balances for these households are \$400,000 and financial assets are \$500,000, yet face tax liabilities of about 11 percent.
- Moreover, these results are preliminary and partial. They are based on self-reported Social Security benefits and do not include the impact of state taxes.



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Broad Framing in Retirement Income Decision Making

Hal E. Hershfield (UCLA), Suzanne B. Shu (Cornell and NBER),
Stephen A. Spiller (UCLA), and David Zimmerman (UCLA)

The research reported herein was pursuant to a grant from the U.S. Social Security Administration (SSA), funded as part of the Retirement and Disability Research Consortium. The findings and conclusions expressed are solely those of the authors and do not represent the views of SSA, any agency of the Federal Government, UCLA, Cornell University, or the NBER Retirement Research Center..

Study Goals

- Do pre-retirees make different retirement income decisions when seeing the outcomes aggregated versus separated?
 - Decisions about SSA claiming, annuities, and wealth decumulation are often completed independently
 - Narrow framing leads to less risk taking, lower value choices (Read, Loewenstein, and Rabin 1999; Benartzi and Thaler 1999)
- We propose that a decision aid showing aggregated impact of these decisions may make it easier for individuals to reason through tradeoffs and may change retirement income choices

Study Design and Methods

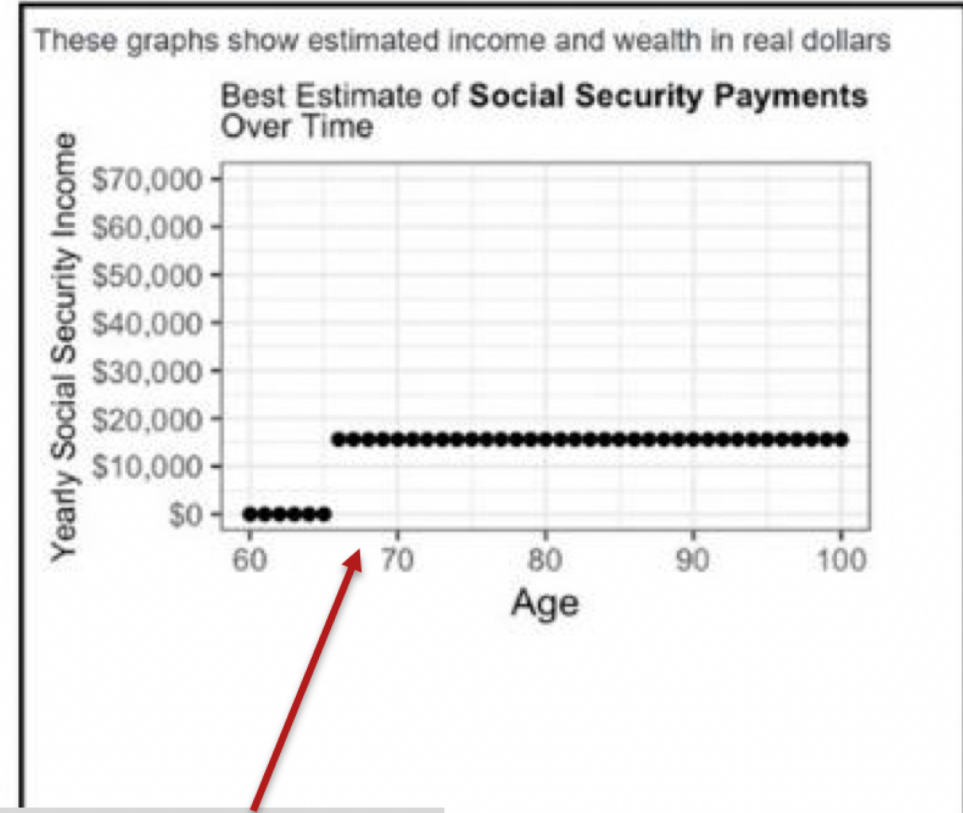
- Sample of 399 (ages 40-63) drawn from Amazon Mechanical Turk
 - Experimental effects on AMT are similar to those with representative samples (Coppock 2018; Mullinix et al. 2015; Snowberg & Yariv 2018)
- Interact with custom retirement income and wealth decision tool
- Conditions: separate and aggregate decision making
- Decisions about sources of retirement income
 - Selections for Social Security claiming age, retirement savings (withdrawal pattern and risk level), and guaranteed income (% wealth, starting age)
 - Also measure discount rate, loss aversion, confidence, demographics

Screenshot: Claiming decision, separate condition

Please select what options create your preferred projected income and wealth over time. You can make selections about each asset by first clicking on the three buttons at the top: Social Security, Retirement Savings, and Guaranteed Income. Below you will see specific questions appear about each financial product. The income and wealth graphs should be on the right of your screen. If you cannot see them you may need to zoom out (Command and minus on a Mac or Control and minus on a PC). When you are done you can find the advance button (>) at the bottom right of the screen. Click the Scenario Description button at the bottom of the page to show and hide the scenario information.

These graphs show estimated income and wealth over time in real dollars where each graph only shows the information about the currently selected financial resource.

When would you like to claim Social Security Income?



Participant selects intended claiming age and sees income dynamically appear on graph

Screenshot: Investment decision, separate condition

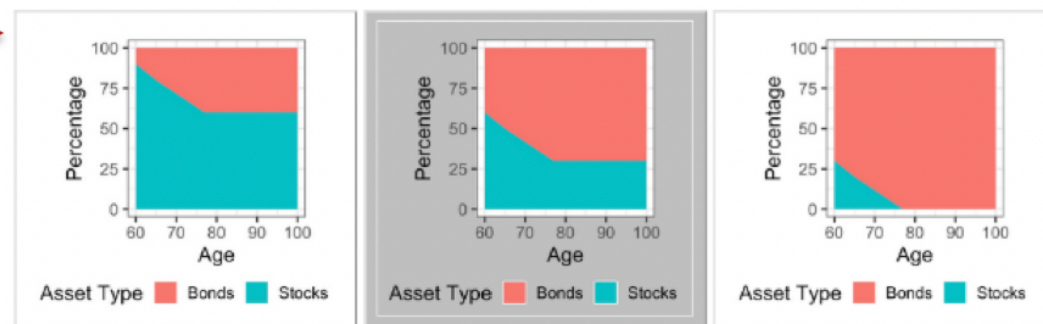
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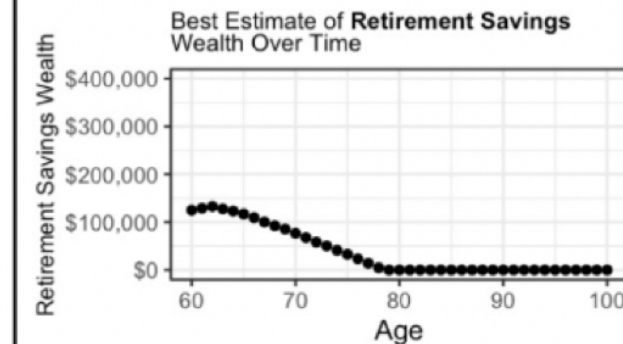
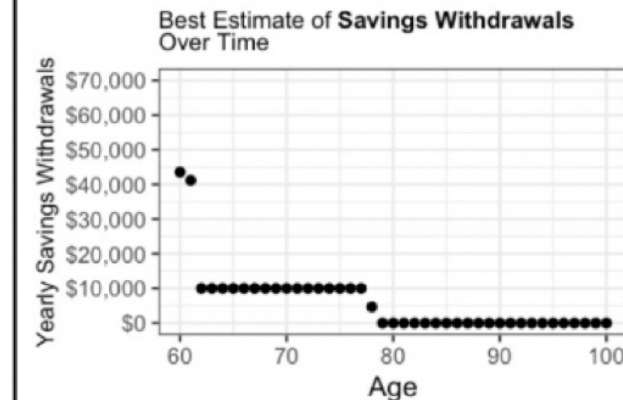
What strategy would you like to use for withdrawing your retirement savings?

Would you like to withdraw additional money from your savings prior to claiming Social Security benefits?

What investment strategy would you like for your retirement savings? Each graph represents the percentage of your retirement savings invested in stocks and bonds each year. Retirement savings will fluctuate more year to year if you select options with more stock.



These graphs show estimated income and wealth in real dollars



The black dots represent the middle outcome you might experience. You personally could experience something better or worse than the black dots.

The chance you still have retirement savings at 85 is 16.7%

Participant selects withdrawal path and risk level and sees income and wealth dynamically appear on graph

Screenshot: Annuity decision, separate condition

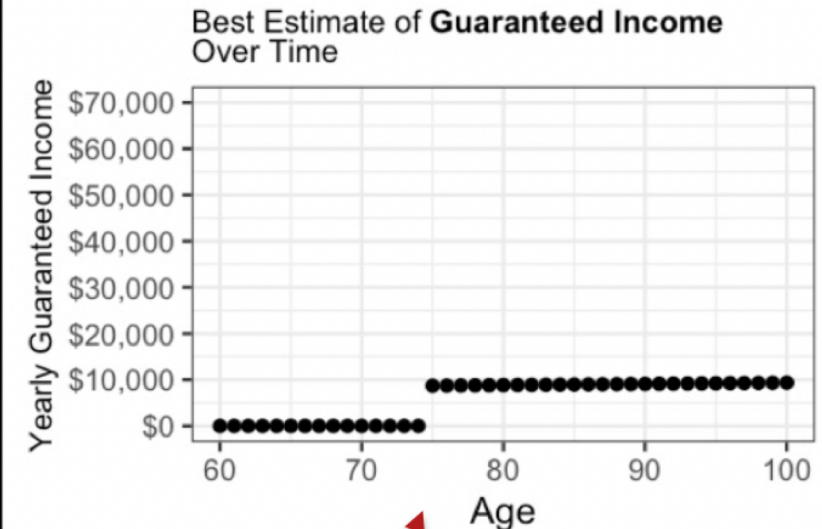
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These graphs show estimated income and wealth over time in real dollars where each graph only shows the information about the currently selected financial resource.

What percentage of your retirement savings would you like to use to purchase guaranteed income?

What age would you like to start receiving payments?

These graphs show estimated income and wealth in real dollars



Participant selects % of wealth to annuity and starting age, and sees income dynamically appear on graph

Screenshot: Claiming decision, aggregate condition

In aggregate condition, impact of all three sources is shown simultaneously for all decisions

Please select what options create your preferred projected income and wealth over time. You can make selections about each asset by first clicking on the three buttons at the top: Social Security, Retirement Savings, and Guaranteed Income. Below you will see specific questions appear about each financial product. The income and wealth graphs should be on the right of your screen. If you cannot see them you may need to zoom out (Command and minus on a Mac or Control and minus on a PC). When you are done you can find the advance button (>) at the bottom right of the screen. Click the Scenario Description button at the bottom of the page to show and hide the scenario information. These graphs show estimated income and wealth over time in real dollars combining all of the financial resources.

Social Security

Retirement Savings

Guaranteed Income

When would you like to claim Social Security Income?

62

63

64

65

66

67

68

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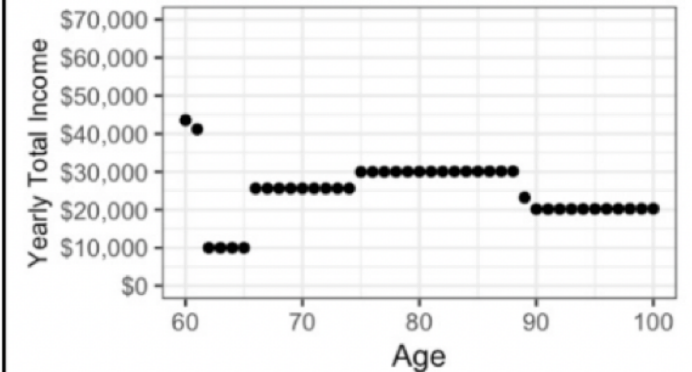
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Scenario Description

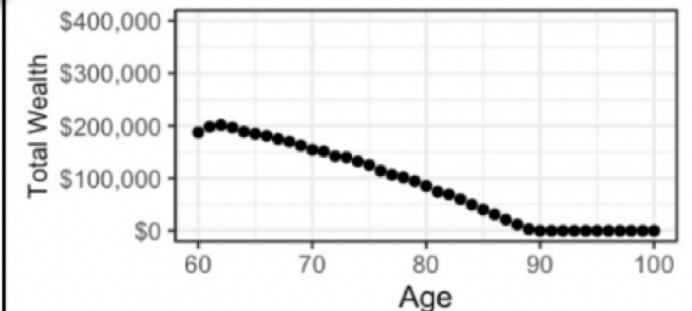
Participant selects intended claiming age and sees aggregate income and all wealth dynamically appear on graph

These graphs show estimated income and wealth in real dollars

Best Estimate of Yearly Income Over Time



Best Estimate of Total Wealth Over Time

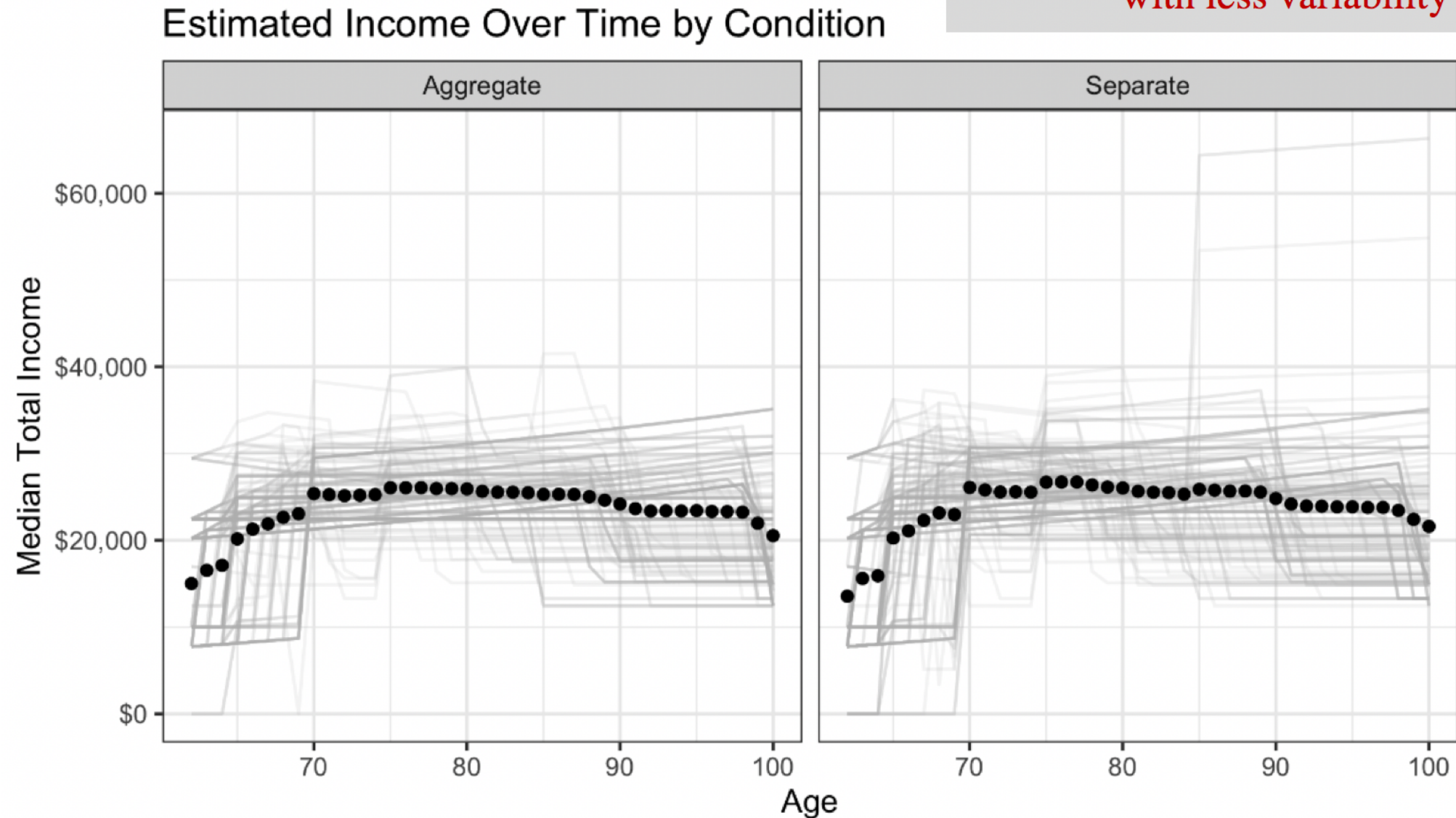


The black dots represent the middle outcome you might experience. You personally could experience something better or worse than the black dots.

The chance you still have retirement savings at 85 is 65.3%

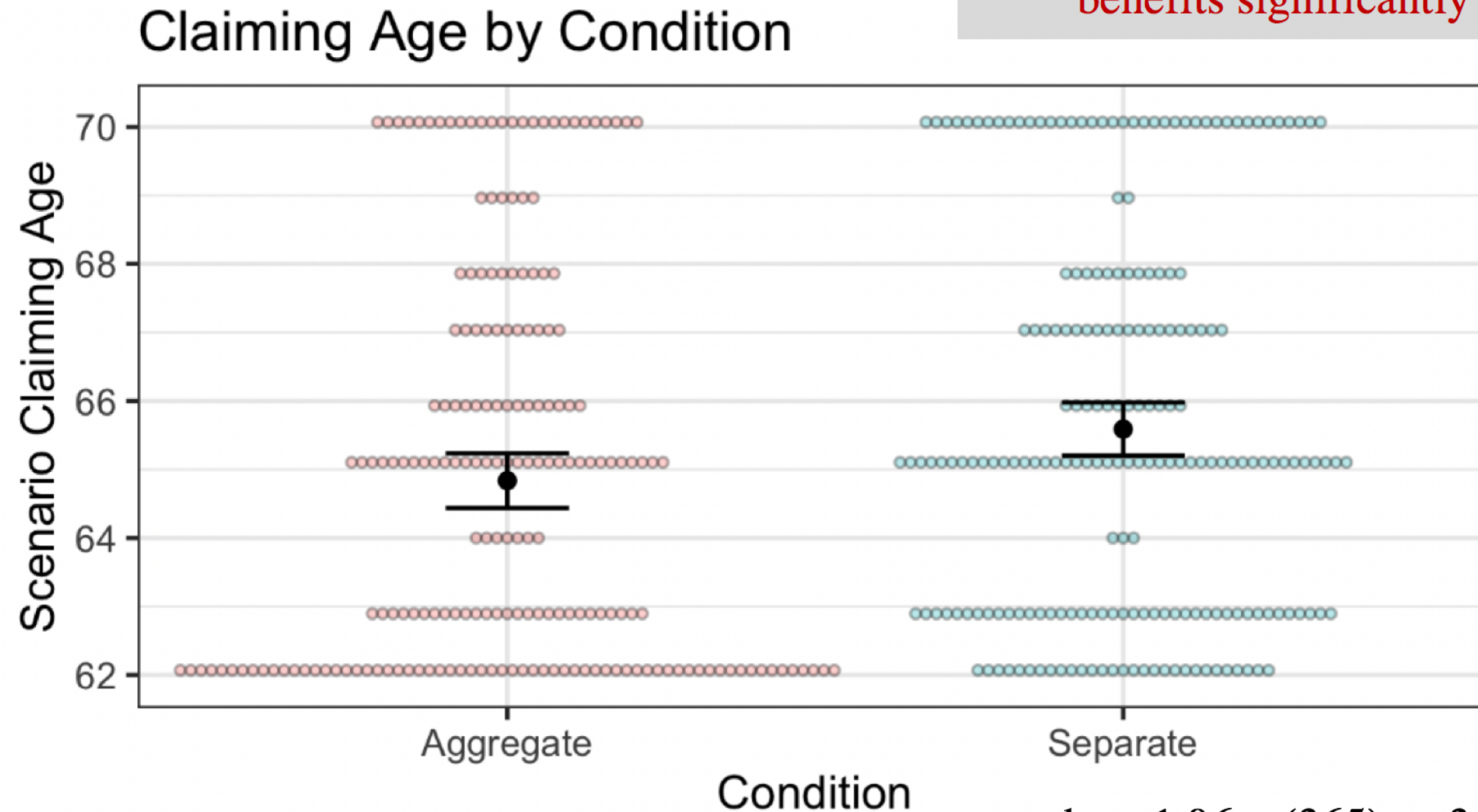
Results: Annual income paths

In aggregate condition, participants were able to build an income path with less variability



Results: Claiming Decisions

In aggregate condition, participants indicated intention to claim OASI benefits significantly earlier



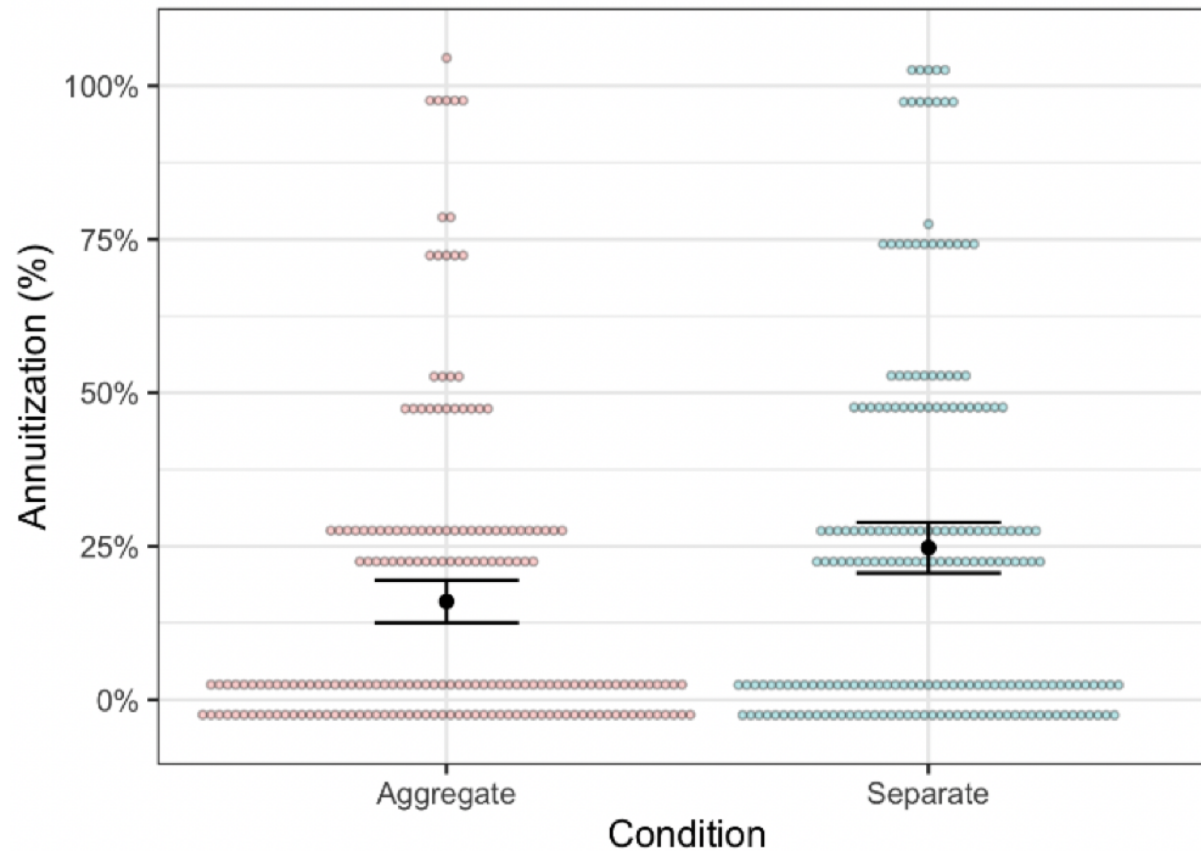
Note: Error bars represent 95% confidence intervals

Results: Investment Decisions

- No difference in withdrawal strategies ($\chi^2(2) = 4.2, p = 0.123$)
 - Majority select an increasing withdrawal strategy: 51% (separate condition) vs. 49% (aggregate condition)
- Aggregate condition participants less likely to select option to take extra withdrawals from savings in the years before claiming Social Security ($b = -0.092, t(365) = -2.13, p = 0.034$)
- No difference in risk allocation choices ($\chi^2(2) = 2.43, p = 0.297$)
 - Majority select middle risk allocation option: 75% (separate condition) vs. 77% (aggregate condition)

Results: Annuity Decisions

Annuity Decision by Condition

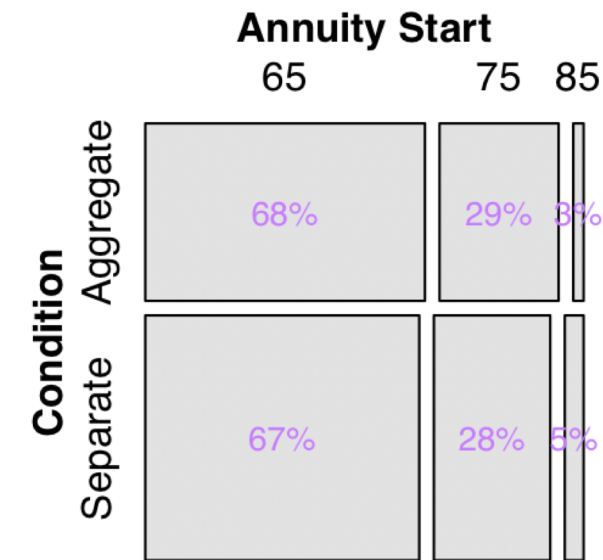


Note: Error Bars represent 95% confidence intervals

$$b = -9.84, t(365) = -3.53, p < 0.001$$

In aggregate condition, participants showed significantly less interest in buying a guaranteed income product

No significant difference in choice of annuity starting year ($\chi^2(2) = 0.54, p = 0.763$)



Summary

- Broad framing (aggregating decision feedback) led to less predicted variability in retirement income over time
 - Lifecycle model of consumption (Modigliani 1966)
 - Better match of retirement income to overall preferences
 - More confidence in selections
- Aggregate condition also led to earlier OASI claiming, less interest in annuities
 - But no differences in retirement savings withdrawal strategies