Is Retirement More Unequal Than We Think?
Estimates from the Survey of Income and Program Participation Linked to Administrative Records

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Disclaimer

This work is released to inform interested parties of ongoing research and to encourage discussion of work in progress. Any views or opinions expressed in the paper are the author's own and do not necessarily reflect the views or opinions of the U.S. Census Bureau.

Overview

- Existing research has found severe underreporting of pension and retirement account income, which affluent households are more likely to receive.

- For 65+ households, I match the 2014 SIPP at the individual level with administrative records from the Social Security Administration (SSA) and Internal Revenue Service (IRS).

- Household income increases 27.2% and 21.5% at the 90th and 50th percentiles, but only 8.7% at the 10th percentile.

- The 90/10 ratio of household income increases from 6.7 to 8.2.

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Background

- Growing body of evidence that household surveys may not capture income well
  - Kim and Tamborini 2012a, 2012b; Tamborini and Kim 2013; Meyer, Mok, and Sullivan 2015; Bollinger et al. 2018; Parolin 2019
- Sources of error
  - Item and unit non-response
  - Misreporting
  - Proxy interviews
  - Sampling error
  - Data entry errors
  - Imputations
  - Disclosure avoidance protections and other processing error

Pension and retirement account income is among the most poorly captured income sources.

- Comparisons of total income in surveys against national accounts or tax records (Coder and Scoon-Rogers 1996, Roemer 2000, Rothbaum 2015)
  - Aggregate survey-reported retirement income falls far short of IRS and national accounts benchmarks.

- Bee and Mitchell (2017): Current Population Survey Annual Social and Economic Supplement (CPS ASEC) individually linked with SSA and IRS administrative records
  - CPS ASEC captures less than half of pension and retirement account income.
  - Using administrative data, **median total household income is 30% higher and the poverty rate is 30% lower** for households headed by respondents 65+.

Retirement income in SIPP

- SIPP's estimates of pension and retirement account income are considerably lower than IRS and National Income and Product Accounts (NIPA) benchmarks.
  - Roemer 2000; Bee and Mitchell 2017; Chen, Munnell, and Sanzenbacher 2018; Thompson 2020

The substantive significance of pension and retirement account income undermeasurement

- Inequality among older households
  - More affluent retirees are more likely to receive pension and retirement income.
    - If surveys fail to capture this income, inequality among older households may be higher than we think.

- Broader considerations
  - Pension and retirement account income is a large and growing share of household-sector capital income (Piketty, Saez, and Zucman 2018).
  - Tax advantages for retirement saving are part of a "hidden welfare state" (Howard 1997; also Hacker 2002, Prasad 2016).

Research questions

1. Does measurement error in SIPP affect income estimates for older households?

2. Does this measurement error vary across the income distribution?

3. Does measurement error affect inequality estimates?

Data

- 2014 SIPP Wave 1 (reference year 2013)
- SSA records of earnings, Social Security payments, and Supplemental Security Income (SSI) payments
- IRS Form 1040 records of interest and dividends
- IRS 1099-R records of pension and retirement account income
  - Income from pension annuities, defined contribution retirement accounts (401(k), 403(b), etc.), IRAs, life insurance contracts, and disability or survivor income from these sources
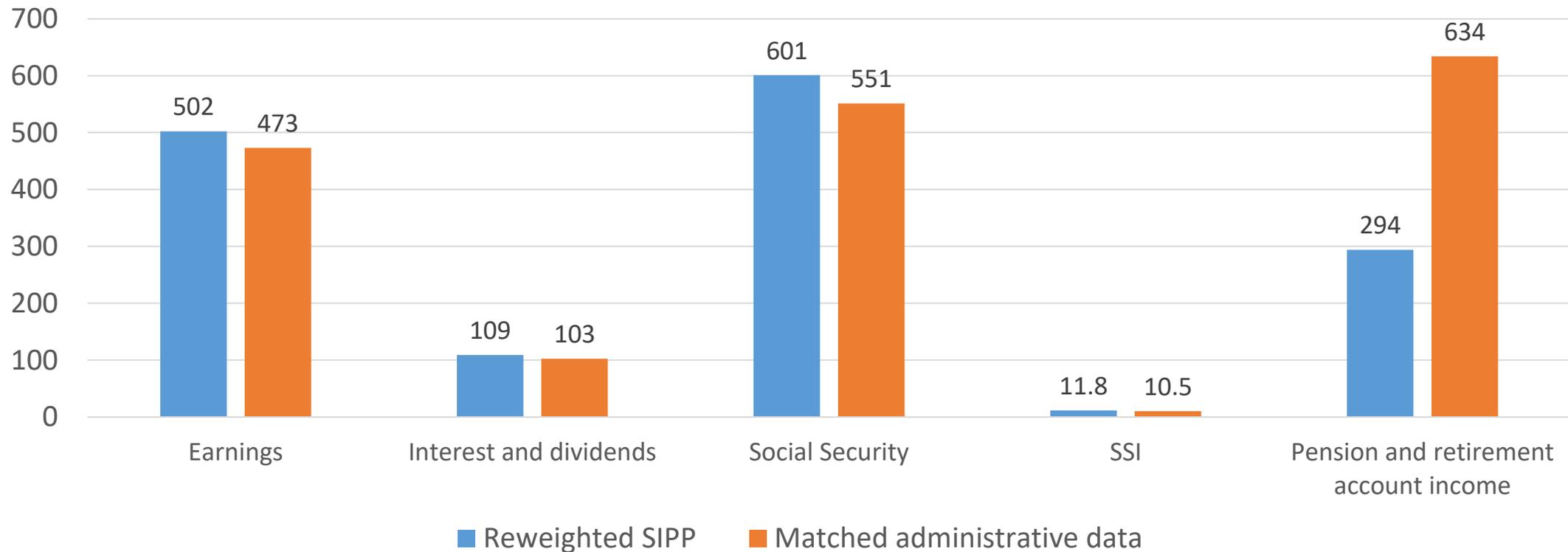 - Rollovers are excluded.

Linkage and reweighting

- SIPP respondents are liked with a Protected Identification Key (PIK)
  - Probabilistic record linkage based on name, age, and address
  - 97.6% match rate

- Reweighted using inverse probability weighting to account for differential rates of record linkage

Equivalence-adjusted households

- The analysis examines households headed by a respondent 65 or over.

  - Non-householders under 65 are included.

- I equivalence-adjust households with the method used for the Supplemental Poverty Measure.

Total pension and retirement income in SIPP is less than half of IRS 1099-R records.
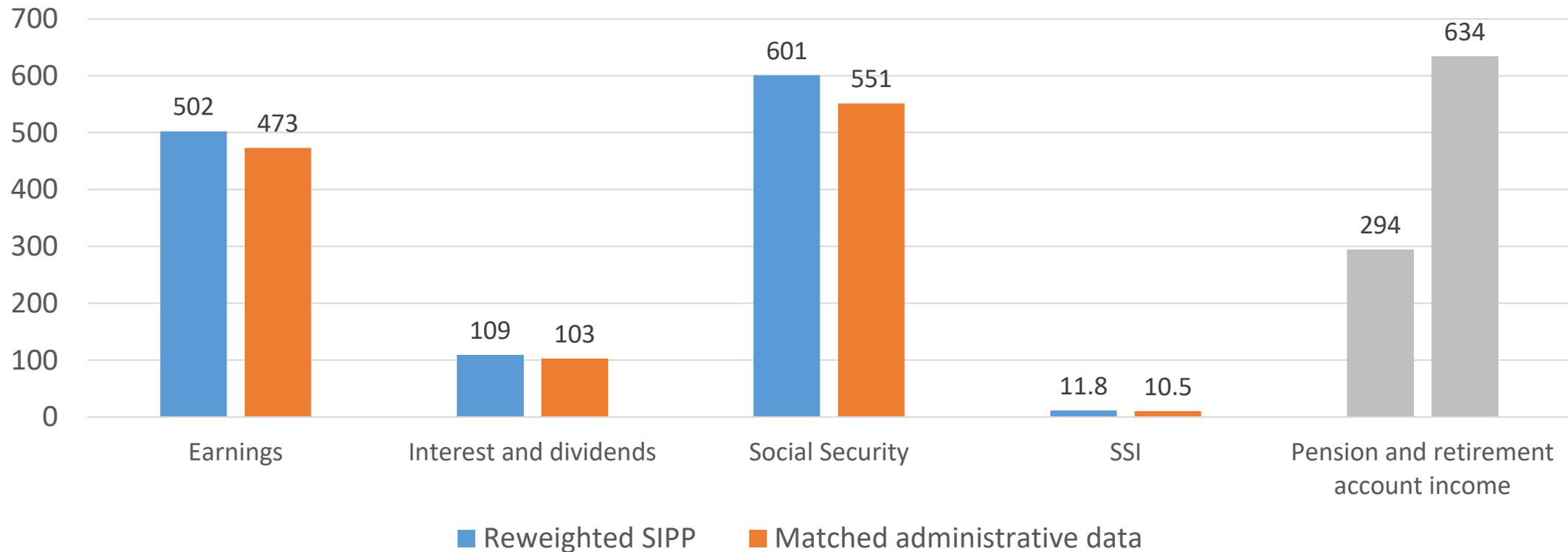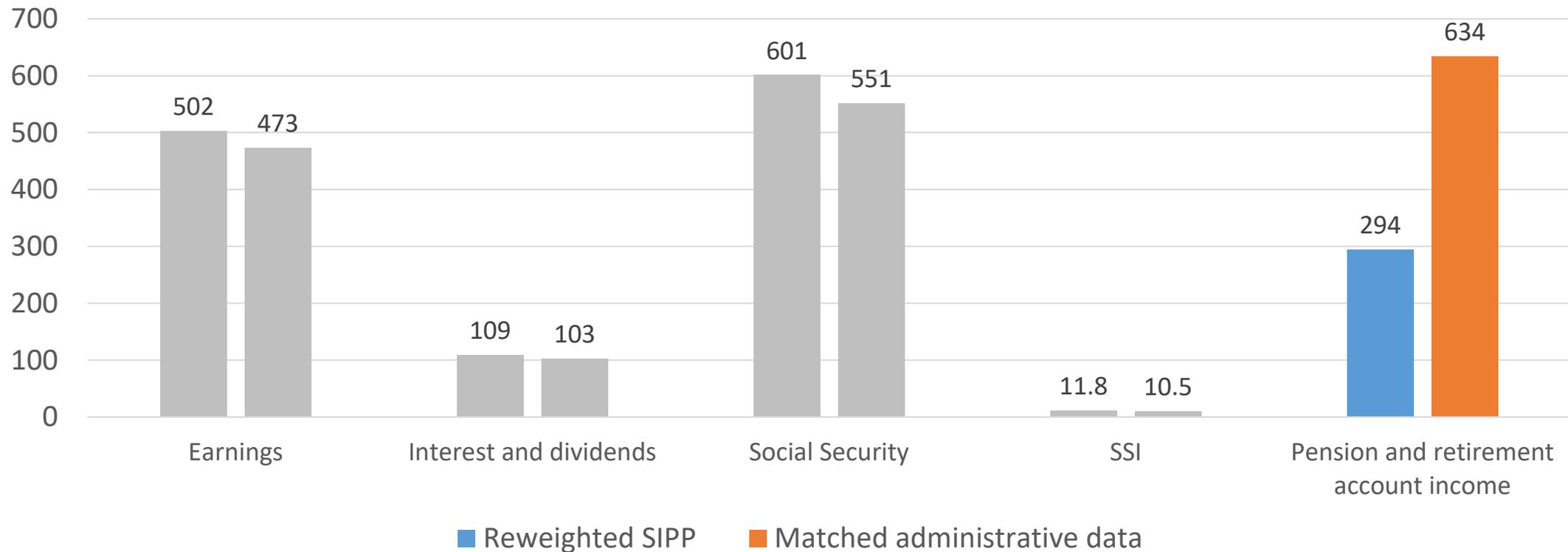
Total income by source, in billions of USD

Source: 2014 SIPP Wave 1 (reference year 2013); SSA earnings and payment records, IRS Form 1040, IRS 1099-R. Household income is equivalence-adjusted for household size and composition. The SIPP replicate weights are adjusted for differential probability of record linkage.

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Total pension and retirement income in SIPP is less than half of IRS 1099-R records.

Total income by source, in billions of USD

Legend: ■ Reweighted SIPP ■ Matched administrative data

Source	Reweighted SIPP	Matched administrative data	(grey)
Earnings	502	473	
Interest and dividends	109	103	
Social Security	601	551	
SSI	11.8	10.5	
Pension and retirement account income	294		634

Source: 2014 SIPP Wave 1 (reference year 2013); SSA earnings and payment records, IRS Form 1040, IRS 1099-R. Household income is equivalence-adjusted for household size and composition. The SIPP replicate weights are adjusted for differential probability of record linkage.

Total pension and retirement income in SIPP is less than half of IRS 1099-R records.
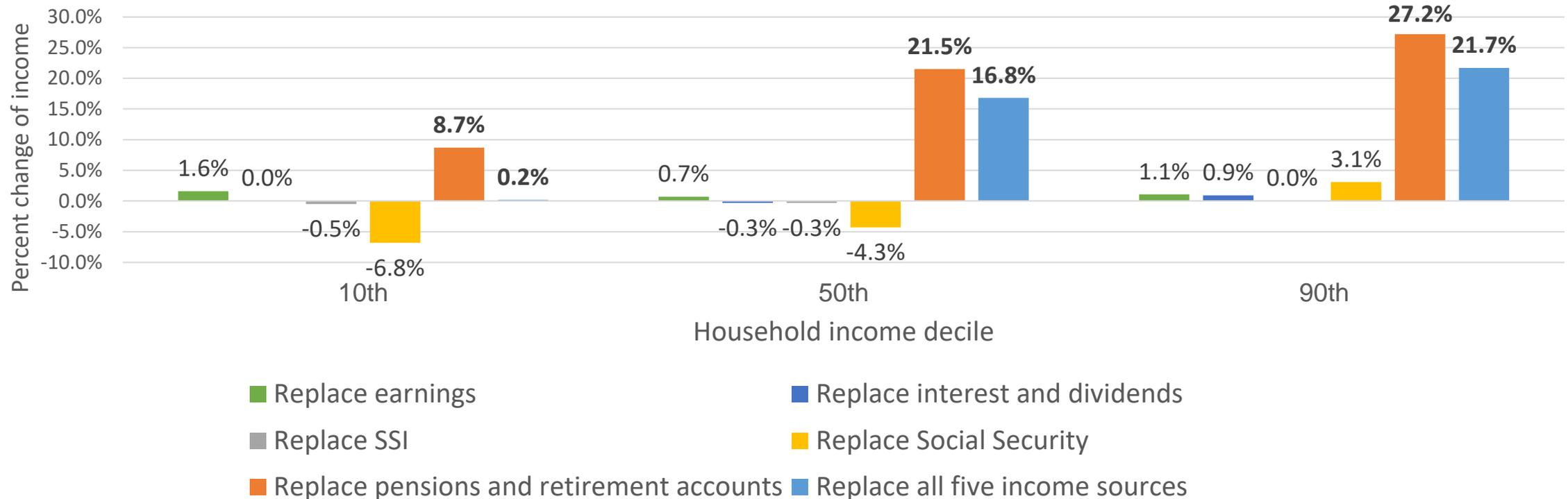
Total income by source, in billions of USD

Legend: ■ Reweighted SIPP ■ Matched administrative data

Categories and values:
- Earnings: 502, 473
- Interest and dividends: 109, 103
- Social Security: 601, 551
- SSI: 11.8, 10.5
- Pension and retirement account income: 294 (Reweighted SIPP), 634 (Matched administrative data)

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Substituting administrative records increases income to a greater extent at higher points of the income distribution.

Percent change of household income when survey responses are replaced with administrative records

Legend:
- Replace earnings
- Replace interest and dividends
- Replace SSI
- Replace Social Security
- Replace pensions and retirement accounts
- Replace all five income sources

Substituting administrative records increases income to a greater extent at higher points of the income distribution.

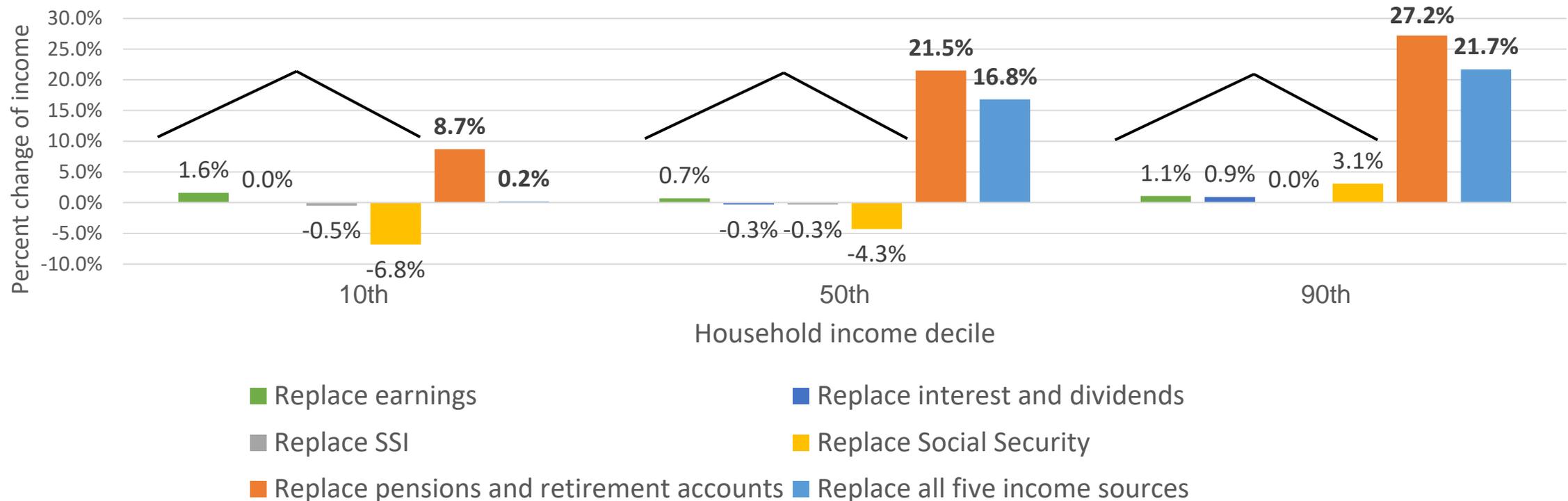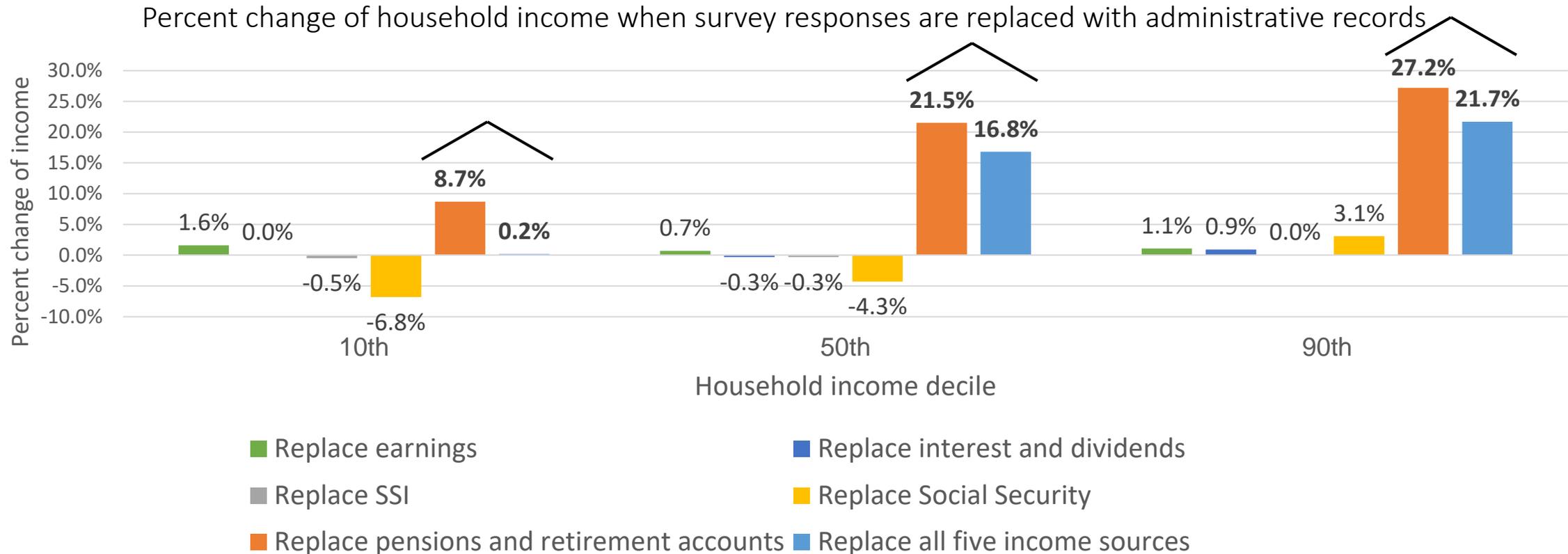Percent change of household income when survey responses are replaced with administrative records

Legend:
- ■ Replace earnings
- ■ Replace interest and dividends
- ■ Replace SSI
- ■ Replace Social Security
- ■ Replace pensions and retirement accounts
- ■ Replace all five income sources

Values by household income decile:

	10th	50th	90th
Replace earnings	1.6%	0.7%	1.1%
Replace interest and dividends	0.0%	-0.3%	0.9%
Replace SSI	-0.5%	-0.3%	0.0%
Replace Social Security	-6.8%	-4.3%	3.1%
Replace pensions and retirement accounts	8.7%	21.5%	27.2%
Replace all five income sources	0.2%	16.8%	21.7%

Y-axis: Percent change of income (-10.0% to 30.0%)
X-axis: Household income decile

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Substituting administrative records increases income to a greater extent at higher points of the income distribution.

Percent change of household income when survey responses are replaced with administrative records

Legend:
- Replace earnings (green)
- Replace interest and dividends (dark blue)
- Replace SSI (gray)
- Replace Social Security (yellow)
- Replace pensions and retirement accounts (orange)
- Replace all five income sources (light blue)

Y-axis: Percent change of income
X-axis: Household income decile

Data labels:
- 10th: 1.6%, 0.0%, -0.5%, -6.8%, 8.7%, 0.2%
- 50th: 0.7%, -0.3%, -0.3%, -4.3%, 21.5%, 16.8%
- 90th: 1.1%, 0.9%, 0.0%, 3.1%, 27.2%, 21.7%

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Inequality is higher when administrative records are used.

Equivalized household income: ratio of the 90th to 10th percentile

Source: 2014 SIPP Wave 1 (reference year 2013); SSA earnings and payment records, IRS Form 1040, IRS 1099-R. Household income is equivalence-adjusted for household size and composition. The SIPP replicate weights are adjusted for differential probability of record linkage using inverse probability weighting.
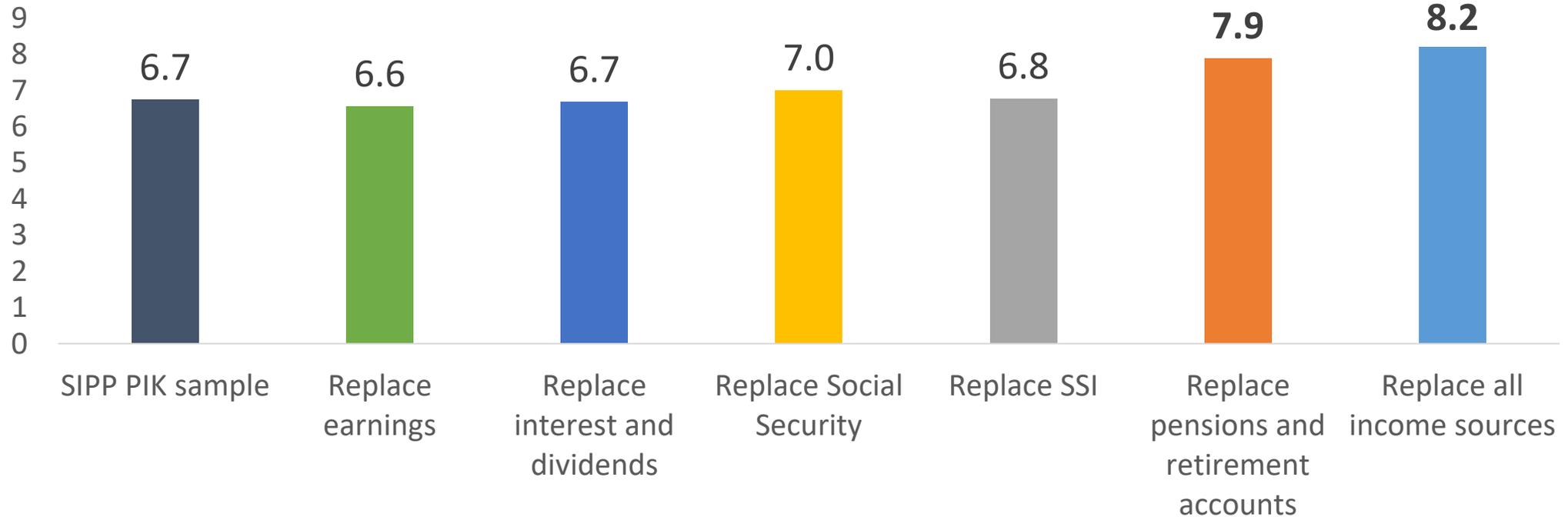
Why doesn't SIPP capture pension and retirement income well?

Evidence of:

- Misreporting – both false negatives and incorrect true positives
  - Some may be data entry errors
- Imputations
  - Incorrect reporting → incorrect hot deck donors

- Pension and retirement income is underreported at all points of the distribution.
  - More affluent households are more likely to receive this income, but more affluent households are not more likely to underreport.

- Bias is not limited to specific subgroups.

Caveats

- Administrative records may also contain error.
  - Data entry error
  - Errors in variables used to link individuals
  - Multiple observations per individual

- Error patterns may be different in other surveys.

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