

Social Security Wealth, Inequality, and Lifecycle Savings

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Background and Motivation

- U.S top wealth inequality is increasing
 - Capitalization method ([Saez and Zucman, 2016](#); [Smith, Zidar, Zwick, 2019](#)) or wealth surveys ([Bricker, Henriques, Krimmel, Sabelhaus, 2016](#))
 - Wealth measures include allocated DB, but not Social Security
- Retirement accounts (DB and DC) unequally held, but not *as unequally* as closely-held businesses, financial assets
 - Declining DB coverage per se not driving rising inequality ([Sabelhaus and Volz, 2019](#)) but poor coverage always an issue for many ([Jacobs, Llanes, Moore, Thompson, and Volz, 2019](#))
- Analysis of lifecycle saving patterns usually ignores accumulation and decumulation in retirement accounts
 - Proper accounting of DB and DC helps reconcile observed wealth patterns with lifecycle principles ([Feiveson and Sabelhaus, 2019](#))

Why Construct Comprehensive Wealth?

Three Key Questions

- How does building a comprehensive wealth measure affect the estimated wealth distribution of near-retirees?
- How does incorporating Social Security wealth accrual affect estimated lifecycle savings patterns?
- How do accrual patterns for DB and Social Security retirement benefits affect retirement incentives?

Measuring Retirement Wealth

- Decision to move to a comprehensive wealth measure raises conceptual question: **What is retirement wealth?**
- Seems simple, just construct discounted present values for DB and Social Security benefits (PDV-DB, PDV-SS)
 - PDV is discounted mortality-adjusted stream of future benefits
 - Estimates here use differential mortality, real discount rate = 3%
- Big Question: Is the stream of benefits in PDV what has been legally earned as of given age (**termination value**) or what is expected to be earned under reasonable set of assumptions about future work (**continuation value**)?

Measuring PDV-DB

- Our wealth inequality papers use DB termination values
 - If plan shuts down today, that is what workers are owed
 - What workers are owed equals total assets in Financial Accounts
 - Funding imbalance shows up as liability of plan sponsor
- Other studies have used DB continuation values to measure retirement resources and gauge preparedness
 - Overstated wealth of participants in plans that later shut down
 - Sum of PDV-DB is higher than Financial Accounts totals
- Termination versus continuation value is also at the heart of measuring retirement incentives (Coile and Gruber, 2007)
 - Models compare PDV of retiring today versus PDV of working an additional year or until “peak value”

Measuring PDV-SS

- Social Security wealth has no underlying marketable assets to anchor distributional estimates, but every person still has PDV of future benefits less future taxes
- Aggregate PDV-SS is zero by definition
 - Actuarial deficit = Trust Fund + PDV(taxes) – PDV(benefits)
 - Deficit now roughly 2 percent of total payroll
 - Resolve by lowering future benefits or raising future taxes?
- Assuming no near-term benefit cuts, near-retirees have large positive PDV-SS, so others (including unborn) must have offsetting negative PDV-SS
- Conceptual framework suggests that PDV-SS starts out negative, becomes increasingly positive over lifecycle

Why Study Retirement Wealth *Accrual*?

- Estimated PDV-DB and PDV-SS at given age informative about lifecycle stage, but understanding behavior involves *how they got there* and *where they are going*
- First behavior of interest is saving: Total saving is net acquisition of marketable wealth plus DB and SS accruals
 - Only rich people accumulate and then draw down wealth?
- Second behavior of interest is retirement: Incentive to retire based on net accrual (change in PDV benefits less taxes) from working another year (or until “peak value”)
- Working on accrual measures to answer these questions, balance of presentation is focused on implications of adding PDV-DB and PDV-SS for near-retirees

Survey of Consumer Finances (SCF)

- Choice of SCF based on extensive balance sheet information, high wealth oversample, long time period
 - SCF also has fail-safes built into instrument, extensive interview notes and post-processing, connects income and balance sheets
- SCFs are cross-sections, how to study lifecycle wealth?
 - Theoretically impossible
 - Empirically challenging
- Use detailed labor force recall and expectations modules
 - Extensive questions about current job, including the usual details, but also job start and expected stop ages
 - Work history module, number of years full and part time, start and stop ages, specific questions vary by current work status
 - Work expectations module, questions also vary by work status

Wealth of Well-Attached Near-Retirees

- “Near-retiree” sample is age 50 to 59 in survey year
 - SCF household “head” in micro data is always male, override that by choosing primary earner as of survey year
- “Well-attached” primary earners only, meaning they have 30 or more years of full-time work by age 60 and still expect to be working at age 60
 - Roughly 50 percent of heads and spouses well-attached
- PDV-SS measured as of age 60, other wealth components (including PDV-DB) measured as of survey year
- Pool SCF samples for 1995 through 2016, inflation adjust to 2019, per-capita, sorted by permanent income

Income and Wealth by Permanent Income Percentile Group

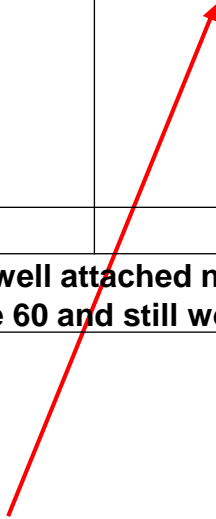
| Permanent Income Percentile Group | Per Adult Averages | | Ratio of Wealth to Permanent Income |
|-----------------------------------|--------------------|--------------|-------------------------------------|
| | Permanent Income | Total Wealth | |
| 1 to 10 | 17,328 | 208,293 | 12.0 |
| 11 to 20 | 27,486 | 294,348 | 10.7 |
| 21 to 30 | 34,739 | 359,084 | 10.3 |
| 31 to 40 | 41,811 | 470,762 | 11.3 |
| 41 to 50 | 50,031 | 551,148 | 11.0 |
| 51 to 60 | 58,649 | 651,651 | 11.1 |
| 61 to 70 | 69,744 | 738,141 | 10.6 |
| 71 to 80 | 85,127 | 949,171 | 11.2 |
| 81 to 90 | 114,136 | 1,314,635 | 11.5 |
| 91 to 100 | 354,001 | 3,634,211 | 10.3 |
| All | 85,305 | 917,144 | 10.8 |

Notes: Based on SCF "well attached near retirees" sample which includes primary earner ages 50-59 with 30+ years full time as of age 60 and still working full-time at age 60.

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Sort "well attached" sample by SCF permanent income measure

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Measure average total wealth by permanent income group

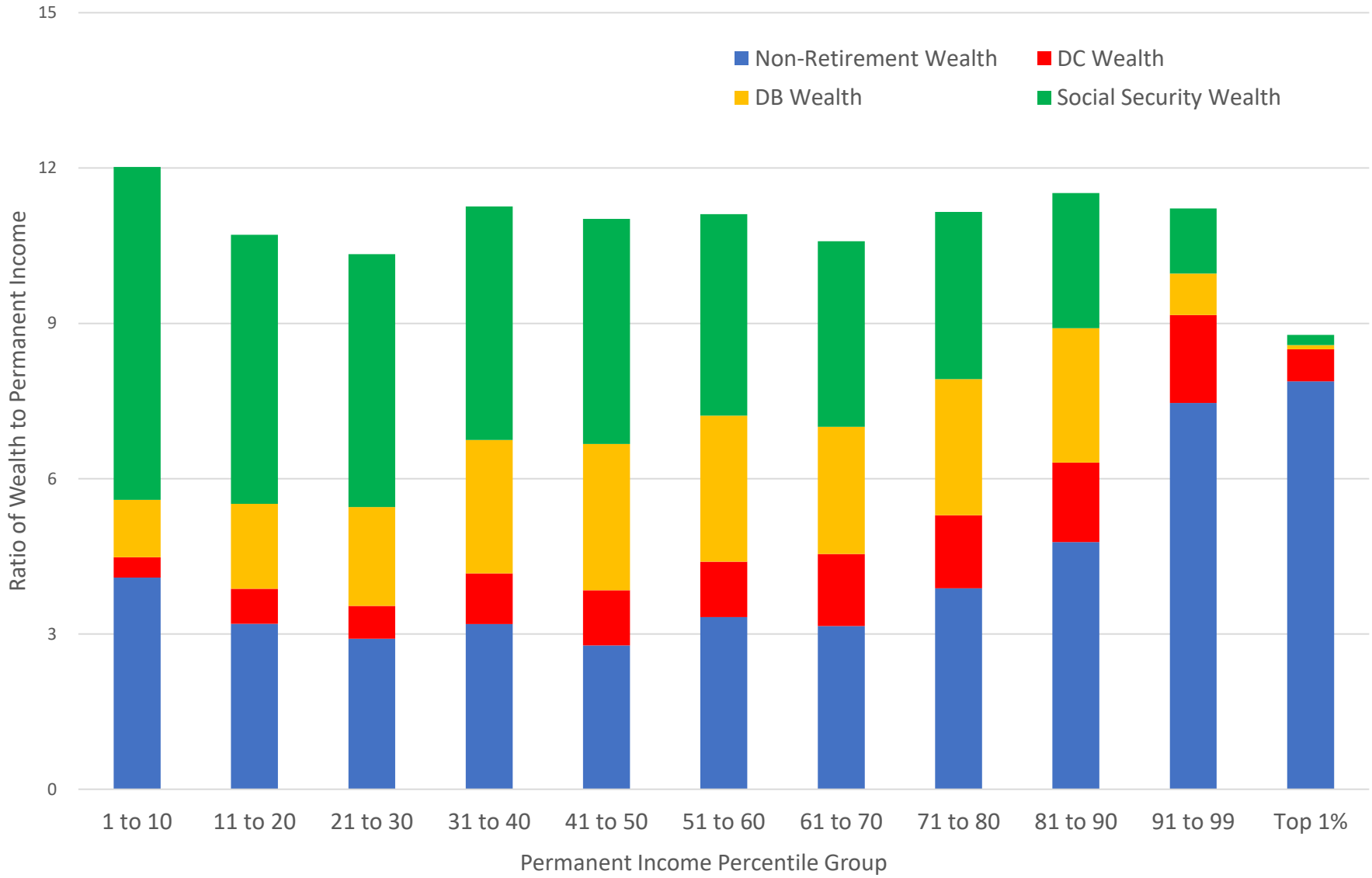
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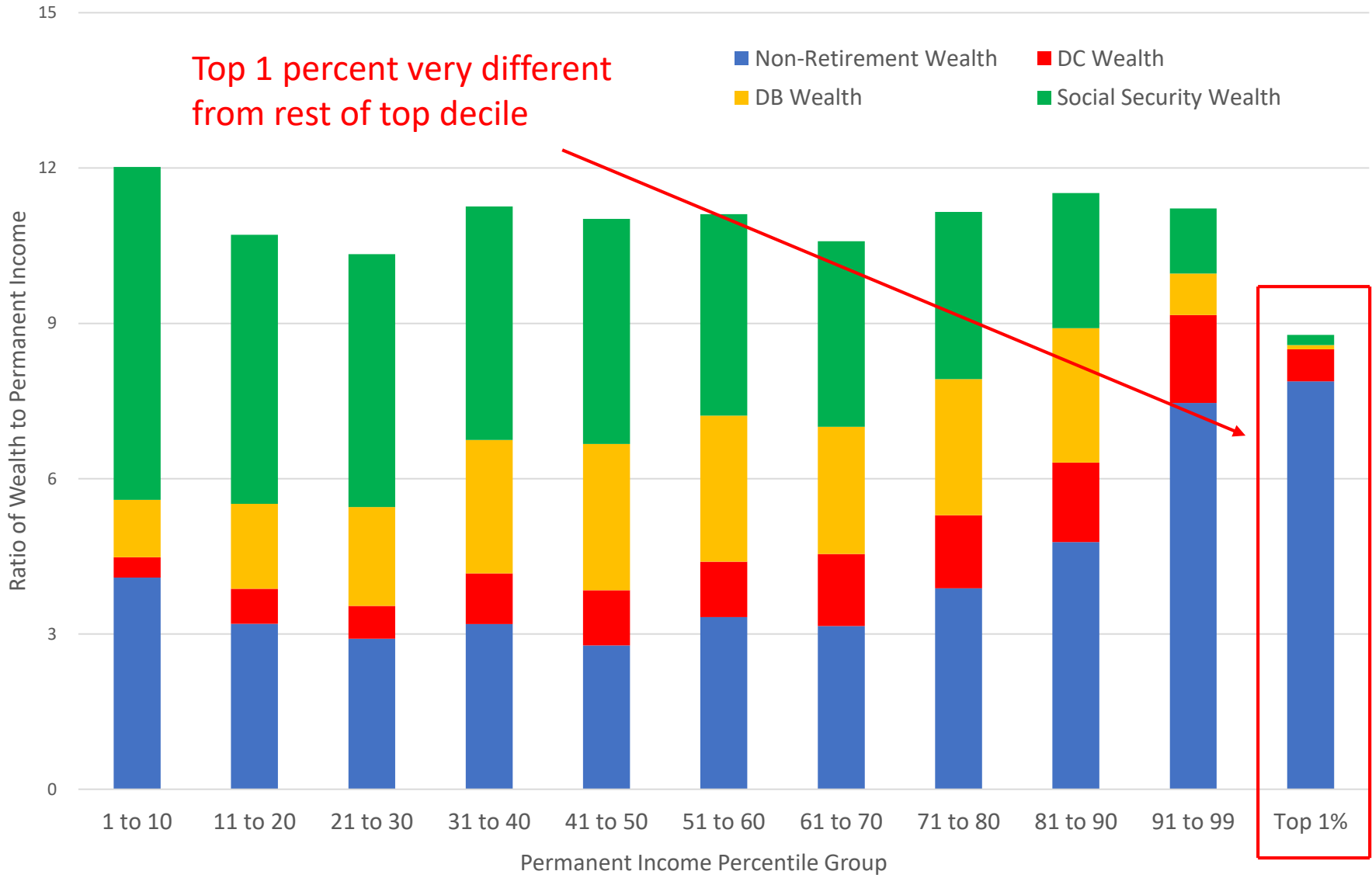
Average total wealth/permanent income does not vary much by permanent income

Ratio of Various Wealth Components to Permanent Income



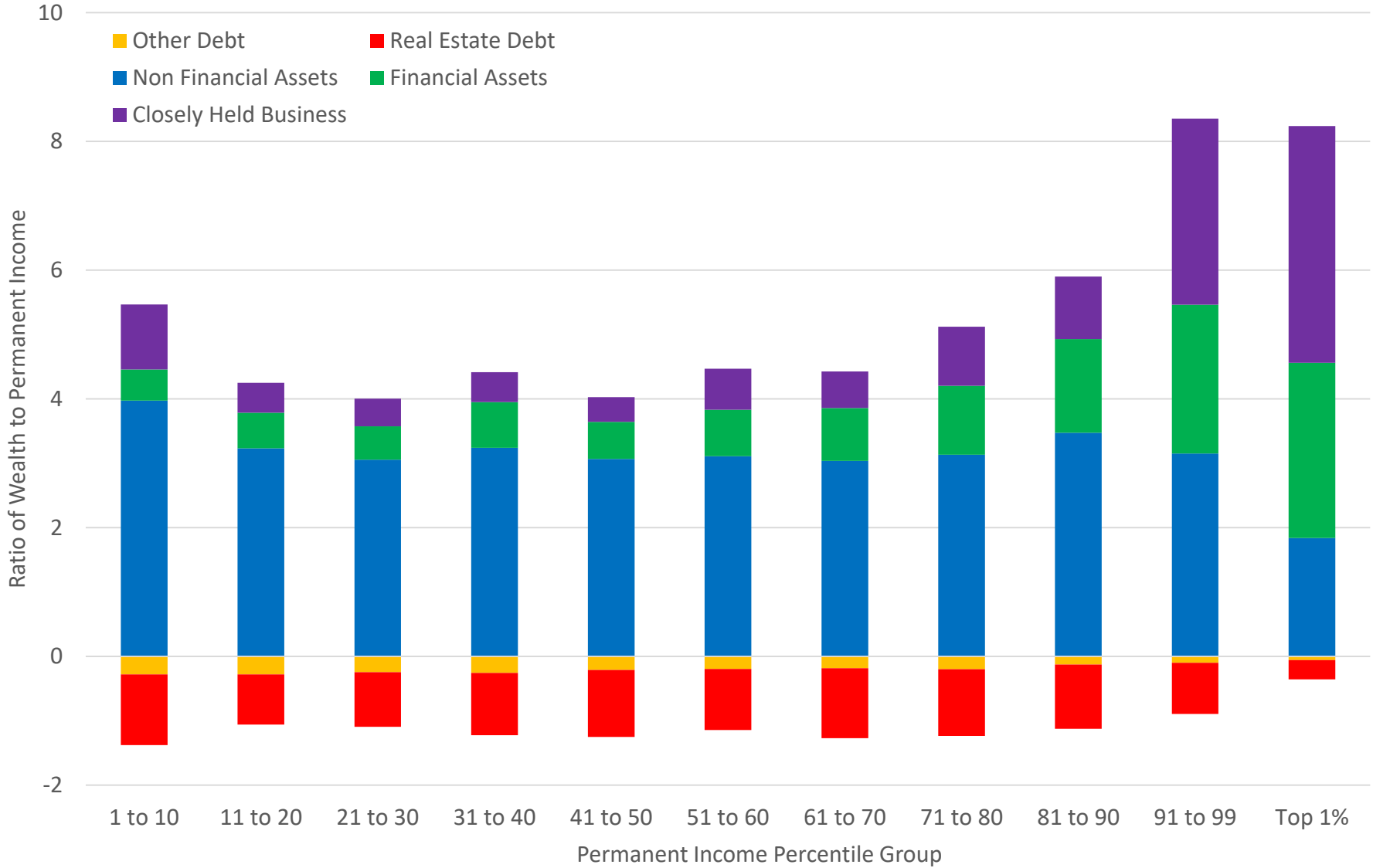
Notes: SCF "well-attached" sample, ages 50-59 with 30 or more years of full time work and still working full time at age 60.

Ratio of Various Wealth Components to Permanent Income



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Detailed Non-Retirement Wealth Relative to Permanent Income



Notes: SCF "well-attached" sample, ages 50-59 with 30 or more years of full time work and still working full time at age 60.

Next Steps: Lifecycle Analysis

- PDV-DB and PDV-SS vary systematically with age and retirement age, construct conditional wealth measures
 - For example, at a given age, what is PDV at that age conditional on no more work, one more year of work, two more years, ...
- Improve inputs to PDV calculations using additional SCF earnings details and external data such as linked HRS
- Map reconstructed lifecycle variables (from cross-section recall/expectations, supplemental data) into panel frame
- Use panel data to study total saving (total wealth accrual) and effective tax rates/retirement incentives (taxes less change in accrued benefits) over the lifecycle

Thanks!

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| Permanent Income Percentile Group | Per Adult Averages | | Retirement Wealth | | | | Non-Retirement Wealth | | | | | |
|-----------------------------------|--------------------|--------------|-------------------|-----------------|-----------------|----------------------|-----------------------|------------------|---------------------|-----------------------|------------------|------------|
| | Permanent Income | Total Wealth | All | Social Security | Defined Benefit | Defined Contribution | All | Financial Assets | NonFinancial Assets | Closely Held Business | Real Estate Debt | Other Debt |
| 1 to 10 | 17,328 | 208,293 | 137,418 | 111,389 | 19,259 | 6,770 | 70,875 | 8,406 | 68,852 | 17,489 | -19,019 | -4,852 |
| 11 to 20 | 27,486 | 294,348 | 206,529 | 142,714 | 45,219 | 18,596 | 87,820 | 15,120 | 88,900 | 12,846 | -21,411 | -7,635 |
| 21 to 30 | 34,739 | 359,084 | 258,057 | 169,626 | 66,431 | 22,000 | 101,027 | 17,892 | 106,243 | 14,917 | -29,545 | -8,481 |
| 31 to 40 | 41,811 | 470,762 | 337,260 | 188,721 | 107,542 | 40,997 | 133,501 | 29,789 | 135,452 | 19,400 | -40,377 | -10,763 |
| 41 to 50 | 50,031 | 551,148 | 412,167 | 217,333 | 141,370 | 53,465 | 138,980 | 28,933 | 153,416 | 19,086 | -51,892 | -10,563 |
| 51 to 60 | 58,649 | 651,651 | 456,624 | 228,385 | 165,395 | 62,844 | 195,027 | 42,265 | 182,461 | 37,325 | -55,697 | -11,327 |
| 61 to 70 | 69,744 | 738,141 | 518,087 | 249,742 | 171,279 | 97,066 | 220,054 | 57,262 | 211,794 | 39,571 | -75,922 | -12,651 |
| 71 to 80 | 85,127 | 949,171 | 618,491 | 274,612 | 224,109 | 119,770 | 330,680 | 91,223 | 266,703 | 77,913 | -88,411 | -16,748 |
| 81 to 90 | 114,136 | 1,314,635 | 769,331 | 297,966 | 296,272 | 175,093 | 545,304 | 166,247 | 396,485 | 110,702 | -114,007 | -14,123 |
| 91 to 100 | 354,001 | 3,634,211 | 934,966 | 298,748 | 184,074 | 452,144 | 2,699,245 | 874,712 | 934,729 | 1,131,464 | -213,092 | -28,567 |
| Percentiles 90-99 | 239,832 | 2,690,608 | 901,066 | 301,711 | 191,921 | 407,434 | 1,789,542 | 554,551 | 756,012 | 692,788 | -190,578 | -23,231 |
| Top 1 Percent | 1,381,531 | 12,126,641 | 1,240,071 | 272,087 | 113,452 | 854,531 | 10,886,570 | 3,756,154 | 2,543,187 | 5,079,540 | -415,720 | -76,591 |
| All | 85,305 | 917,144 | 464,893 | 217,924 | 142,095 | 104,874 | 452,251 | 133,185 | 254,504 | 148,071 | -70,937 | -12,571 |

Notes: Based on SCF "well attached near retirees" which includes primary earner ages 50-59 with 30+ years full time as of age 60 and still working full-time at age 60.

| Permanent Income Percentile Group | Per Adult Averages | | Retirement Wealth | | | | Non-Retirement Wealth | | | | | |
|-----------------------------------|--------------------|--------------|-------------------|-----------------|-----------------|----------------------|-----------------------|------------------|---------------------|-----------------------|------------------|------------|
| | Permanent Income | Total Wealth | All | Social Security | Defined Benefit | Defined Contribution | All | Financial Assets | NonFinancial Assets | Closely Held Business | Real Estate Debt | Other Debt |
| 1 to 10 | 1.00 | 12.02 | 7.93 | 6.43 | 1.11 | 0.39 | 4.09 | 0.49 | 3.97 | 1.01 | (1.10) | (0.28) |
| 11 to 20 | 1.00 | 10.71 | 7.51 | 5.19 | 1.65 | 0.68 | 3.20 | 0.55 | 3.23 | 0.47 | (0.78) | (0.28) |
| 21 to 30 | 1.00 | 10.34 | 7.43 | 4.88 | 1.91 | 0.63 | 2.91 | 0.52 | 3.06 | 0.43 | (0.85) | (0.24) |
| 31 to 40 | 1.00 | 11.26 | 8.07 | 4.51 | 2.57 | 0.98 | 3.19 | 0.71 | 3.24 | 0.46 | (0.97) | (0.26) |
| 41 to 50 | 1.00 | 11.02 | 8.24 | 4.34 | 2.83 | 1.07 | 2.78 | 0.58 | 3.07 | 0.38 | (1.04) | (0.21) |
| 51 to 60 | 1.00 | 11.11 | 7.79 | 3.89 | 2.82 | 1.07 | 3.33 | 0.72 | 3.11 | 0.64 | (0.95) | (0.19) |
| 61 to 70 | 1.00 | 10.58 | 7.43 | 3.58 | 2.46 | 1.39 | 3.16 | 0.82 | 3.04 | 0.57 | (1.09) | (0.18) |
| 71 to 80 | 1.00 | 11.15 | 7.27 | 3.23 | 2.63 | 1.41 | 3.88 | 1.07 | 3.13 | 0.92 | (1.04) | (0.20) |
| 81 to 90 | 1.00 | 11.52 | 6.74 | 2.61 | 2.60 | 1.53 | 4.78 | 1.46 | 3.47 | 0.97 | (1.00) | (0.12) |
| 91 to 100 | 1.00 | 10.27 | 2.64 | 0.84 | 0.52 | 1.28 | 7.62 | 2.47 | 2.64 | 3.20 | (0.60) | (0.08) |
| Percentiles 90-99 | 1.00 | 11.22 | 3.76 | 1.26 | 0.80 | 1.70 | 7.46 | 2.31 | 3.15 | 2.89 | (0.79) | (0.10) |
| Top 1 Percent | 1.00 | 8.78 | 0.90 | 0.20 | 0.08 | 0.62 | 7.88 | 2.72 | 1.84 | 3.68 | (0.30) | (0.06) |
| All | 1.00 | 10.75 | 5.45 | 2.55 | 1.67 | 1.23 | 5.30 | 1.56 | 2.98 | 1.74 | (0.83) | (0.15) |

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