

Do the Wealthy Earn Higher Returns?

Evidence from U.S. Survey Data

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1. Introduction

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Existing U.S. estimates of the return gradient differ by **36.5 points**.

- The return gradient is the return of the top wealth decile minus the return of a lower reference wealth decile, in percentage points
- A leading explanation for the concentration of wealth at the top is that richer households earn higher returns: Benhabib et al. (2011), Gabaix et al. (2016), Benhabib et al. (2019)
- **PSID**. Daminato and Pistaferri (2024) +30.0, Gaillard and Wangner (2023) +9.6, Sundram (2025) +4.0, Snudden (2024) −6.5
- **SCF**. Xavier (2021) +4.7 and Hayati (2026) +1.7 after 1980

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I recompute the return gradient on PSID and SCF data under 880,317 specifications.

Each combines one of four return types with thirteen measurement choices. A return type is gross or net of debt, and on gross assets or wealth.

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3. **Within a return type**, the reference wealth decile moves the return gradient most on the median. On the mean the largest single effect is the outlier trim's
4. **At the baseline** the median return gradient on the gross return on assets is only $+2.8$ in the PSID and 0.0 in the SCF. The other three return types diverge because the middle wealth deciles carry the household debt

1. Introduction

Four strands of literature.

- **Seven PSID and SCF studies.** The six with a numeric headline sit on one specification curve with the specifications, Simonsohn, Simmons and Nelson (2020)
- **The very top of the U.S. distribution.** Balloch and Richers (2023), Smith et al. (2023) and Wolff (2025) find a return premium
- **Norwegian and Swedish registers.** Fagereng et al. (2020), Bach et al. (2020): a within-class premium the two surveys cannot detect
- **Heterogeneous-agent models.** The long upper tail of wealth built from return heterogeneity, Hubmer et al. (2021)

2. Return concepts and data

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Two decisions give four return types: the cost of debt and the denominator.

$$g = \bar{r}_{10} - \bar{r}_m$$

Gross return on assets: $r_A^g = \frac{Y + G}{A}$

Net return on assets: $r_A^n = \frac{Y + G - C}{A}$

Gross return on equity: $r_E^g = \frac{Y + G}{E}$

Net return on equity: $r_E^n = \frac{Y + G - C}{E}$

- Y is capital income, G capital gains, C the cost of debt, A gross assets, E wealth and D debt. C/A is debt service per dollar of assets and D/E the debt-to-equity ratio
- The four coincide only for a household with no debt. The wealth-concentration models carry no household debt, so the return they require is the gross return on assets

2. Return concepts and data

Two U.S. surveys, neither observing the household return directly.

- **The PSID.** A biennial panel: 12 waves, 2001 to 2023, heads aged 20 to 80, 27,482 household-year returns. Realized wave returns
- **The SCF.** A triennial cross-section that oversamples wealthy households: 12 waves, 1989 to 2022, 223,068 observations. Synthetic returns: each asset class earns its market capital-gain rate, so a within-class premium is undetectable by construction
- I impute capital gains and the cost of debt in both. Returns are before tax and in real terms

3. Measurement choices

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Thirteen measurement choices: eight common to both surveys, five PSID only.

Common to both	Common value
1. Cost of debt: which debts	All debt
2. Cost of debt: rate	Flat benchmark
3. Imputed rent	5%
4. Summary statistic	Mean
5. Reference wealth decile	Fifth
6. Wealth floor	\$1,000
7. Outlier trim per tail	No clear default
8. Vehicle scope	Include

Specific to the PSID	Common value
9. Horizon	Single wave
10. Denominator timing	Midpoint
11. Ranking timing	Start
12. Vehicle cost of debt	Exclude
13. Business income	Full

Ranking households at the wave's end counts the wave's capital gains in the wealth that ranks, which steepens the return gradient.

4. Return gradient estimates and their drivers

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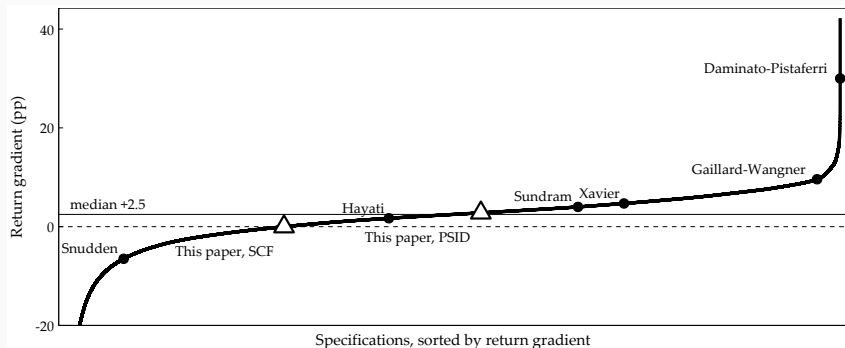
Replicated on the same data, the spread narrows from 36.5 to 13.3 points.

Study	Return type	Reported	Replicated	
		Return gradient	Return gradient	95% interval
Xavier (2021)	r_E^n	+4.7	+4.9	(+4.0, +5.7)
Gaillard and Wangner (2023)	r_A^n	+9.6	+4.7	(+1.2, +8.3)
Daminato and Pistaferri (2024)	r_E^n	+30.0	+6.6	(+2.4, +10.9)
Snudden (2024)	r_E^n	-6.5	-6.7	(-8.9, -4.6)
Hayati (2026), after 1980	r_A^n	+1.7	+4.2	(+4.0, +4.3)
Sundram (2025)	r_A^g	+4.0	+3.5	(+2.7, +4.2)

On one common comparison, the mean return of the top wealth decile against the fifth with a \$10,000 wealth floor and a 0.5 percent outlier trim, they differ by 11.5. 3 of the 6 headlines fall inside their replication's interval, and Daminato and Pistaferri's +30.0 reproduces only under an end-of-wave ranking.

4. Return gradient estimates and their drivers

The return gradient ranges from -100.0 to $+42.2$ points, but its median is $+2.5$.



The range contains every existing headline, and only 2.4 percent of the 880,317 specifications exceed ten points. The steepest combine a low reference wealth decile, an end-of-wave ranking, a single wave, and no imputed rent.

4. Return gradient estimates and their drivers

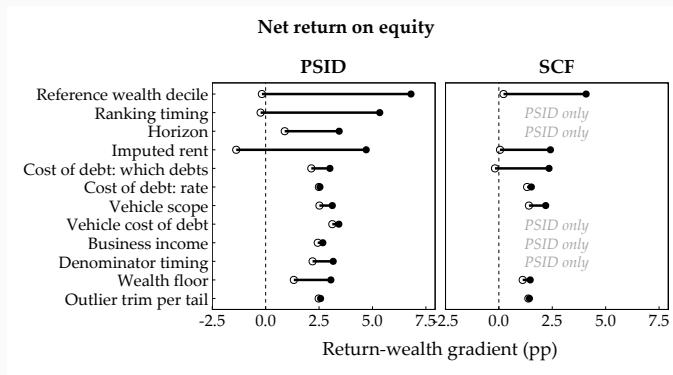
The return types on gross assets vary less across specifications than those on wealth.

Return type	Mean	Median	SD	Range
PSID				
Gross return on assets (r_A^g)	+1.9	+1.8	4.6	[−97.4, +21.0]
Net return on assets (r_A^n)	+3.4	+3.4	4.2	[−94.9, +22.8]
Gross return on equity (r_E^g)	−5.8	−4.3	12.0	[−100.0, +18.4]
Net return on equity (r_E^n)	+0.3	+1.2	8.6	[−99.9, +26.1]
SCF				
Gross return on assets (r_A^g)	+2.1	+1.9	1.4	[−0.1, +6.0]
Net return on assets (r_A^n)	+3.6	+3.5	1.5	[+0.5, +8.0]
Gross return on equity (r_E^g)	−2.7	−1.9	6.4	[−64.2, +6.4]
Net return on equity (r_E^n)	+2.1	+1.9	3.4	[−30.1, +42.2]

The PSID and the SCF give means of +1.3 and +2.2 points.

4. Return gradient estimates and their drivers

The reference wealth decile and imputed rent move the median return gradient most.



On the PSID's net return on equity they move it by up to **7.3** and 6.3 points. Ranking at the wave's end moves it by up to 5.7.

5. A baseline return gradient

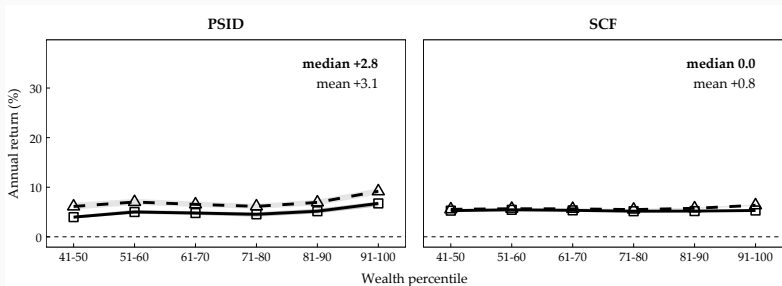
5. A baseline return gradient

The baseline takes each measurement choice at its common value, with four exceptions.

- **Outlier trim.** 0.5 percent per tail, which has no common value. It moves the median return gradient by at most 0.9 points
- **Interest rate on debt.** Falls with wealth, where every existing study imputes a flat rate
- **Ranking timing.** End-of-wave wealth ranks households, where the studies that state a timing rank at the start
- **Vehicle scope.** The asset base excludes vehicles. A vehicle earns no capital income, so counting it only enlarges the denominator

5. A baseline return gradient

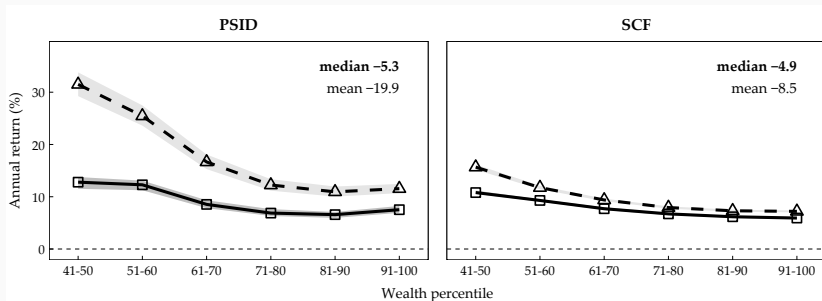
At the baseline the gross return on assets has a small return gradient.



Its median is +2.8 in the PSID and 0.0 in the SCF, which rejects the steep headlines of +9.6, +30.0 and +4.0 at the 5 percent level. Measured to the top wealth percentile, the SCF's mean return gradient is +1.9, portfolio composition by construction.

5. A baseline return gradient

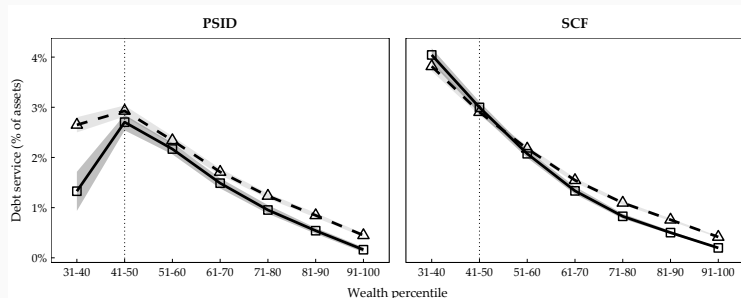
The other three return types diverge from it in both directions.



In the PSID the median is +6.1 on the net return on assets, **-5.3** on the gross return on equity and +3.4 on the net return on equity. In the SCF the three are +2.0, -4.9 and +0.4.

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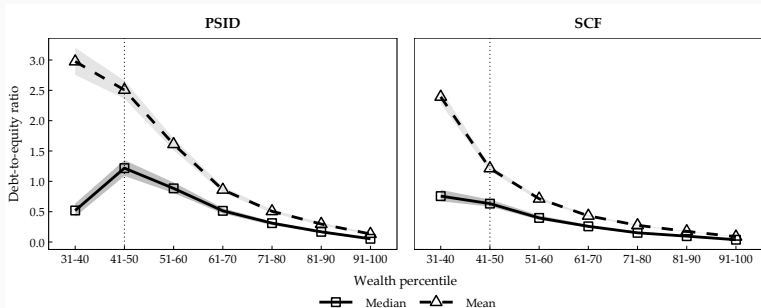
Both net return types rise with wealth because debt service falls with wealth.



Debt service is **2.7%** of assets at the reference wealth decile and 0.2% at the top. $r_A^n = r_A^g - s$ with $s = C/A$, so subtracting debt service lowers the middle's return more than the top's.

5. A baseline return gradient

The gross return on equity falls with wealth because leverage falls with wealth.



The debt-to-equity ratio is 1.22 at the reference wealth decile and 0.05 at the top.

$r_E^g = (1 + \ell) r_A^g$ with $\ell = D/E$, so dividing by wealth doubles the middle's return and leaves the top's unchanged.

6. Conclusion

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- The six existing headline estimates of the return gradient differ by 36.5 points as reported, and by **13.3** replicated on the same PSID and SCF data, each at its own measurement configuration
- The return type determines the range of the return gradient. Within a return type, the reference wealth decile and the imputed rent move it most on the median. On the mean the largest single effect is the outlier trim's
- For the models that build the long upper tail of wealth from a return rising with wealth, the relevant return is the gross return on assets, and its median return gradient is only **+2.8** in the PSID and **0.0** in the SCF
- Neither survey can find a within-class premium at the very top. The U.S. studies with account-level data find returns rising with wealth: Balloch and Richers (2023), Smith et al. (2023)

Thank you.

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Backup

The measurement configuration of each study

	Cao and Luo (2017)	Gaillard and Wangner (2023)	Daminato and Pistaferri (2024)	Snudden (2024)	Sundram (2025)	Xavier (2021)	Hayati (2026)
Survey, period	PSID 1984 to 1999	PSID 1998 to 2019	PSID 1999 to 2019	PSID 1999 to 2019	PSID 1999 to 2019	SCF 1989 to 2019	SCF+ 1949 to 2022
Return type	r_A^g	r_A^n	All but r_E^g	r_A^g and r_E^n	r_A^g	r_E^n	r_A^n
Cost of debt: which debts	None	All debt	All debt	Mortgage only	None	All debt	All debt
Imputed rent	Omitted	5%	Omitted	5%	Actual rent	Rent-to- value ratio	Market yield
Outlier trim per tail	Bound [−100, 300]%	0.5%	None stated	Drop 5/tail, stud. 99%	0.5%	None stated	3%
Ranking timing	Unstated	Unstated	Unstated	Beginning	Beginning	n.a.	n.a.

PSID studies use realized panel returns and SCF studies synthetic returns. SCF+ is the extended SCF of Kuhn et al. (2020).

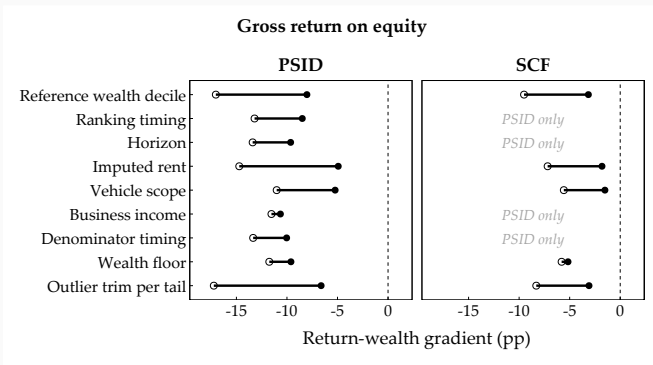
Robustness of the baseline

The return gradient on the gross return on assets stays small under every check.

- It stays below the steep existing headlines
- Across the defensible measurement choices and nine further robustness checks
- In each of four multi-wave PSID subperiods, net of a quadratic in age and year fixed effects, and after risk adjustment
- A household's average return over its odd waves and its average return over its even waves correlate at -0.04 . The wealth-decile means from the same two halves correlate at 0.94 , and the return gradient reproduces in each half

The drivers on the mean

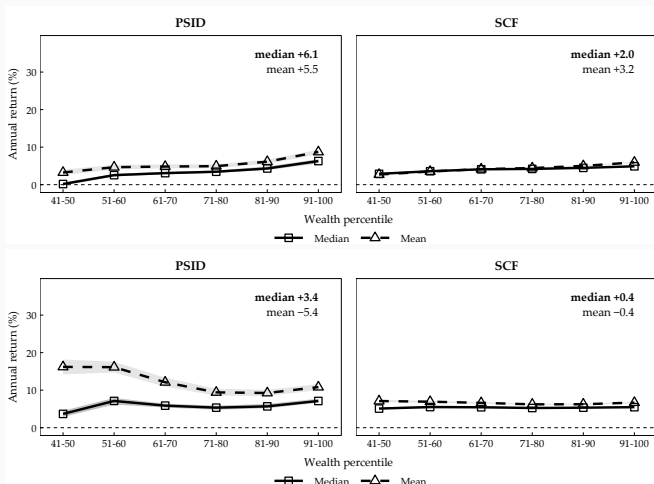
On the mean the outlier trim gives the largest single effect.



It moves the PSID's gross return on equity by up to **11.3** points, because a mean includes the extreme returns of households with near-zero wealth.

The two net return types at the baseline

Both net return types have a positive median return gradient in both surveys.



The top of the distribution

- Measured to the top wealth percentile instead of the top wealth decile, the SCF's mean return gradient on the gross return on assets is $+1.9$, different from zero at the 5 percent level
- That premium is portfolio composition by construction, since the synthetic return gives every household in an asset class the same return
- The PSID's top wealth percentile holds only 25 household-years per wave, against 649 households in the SCF, too few to measure a premium
- Neither survey observes the billionaires above that percentile, Vermeulen (2018), where Balloch and Richers (2023) find returns rising with wealth through private equity and other alternatives