Theory and Evidence

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Heterogeneity in the returns to wealth

Fagereng, A., Guiso, L., Malacrino, D. and Pistaferri, L. (2020), Heterogeneity and Persistence in Returns to Wealth. Econometrica, 88: 115-170. https://doi.org/10.3982/ECTA14835

- How do realized returns to wealth look like?
- Is there an idiosyncratic component?
- Can differences in returns to wealth and the correlation between returns to wealth and wealth explain the thick tail of the wealth distribution?
- Is there an intergenerational component to returns to wealth?

➔ requires availability of long, well measured panel data on capital income and assets covering several generations

Fagereng et al. (2020) - Data

Data base:

- 12 years of administrative tax records of capital income and wealth stocks for all taxpayers in Norway (2004–2015
- measurement error and underreporting of wealth information are much less severe than in survey data, since wealth data are generally collected through third parties (banks, employers,…) and not top/bottom coded
- universal coverage (exhaustive information about the assets owned and incomes earned by *all* individuals, including those at the very top and at the bottom of the wealth distribution)
- information on financial assets, housing and debt, wealth held in private businesses
- Rich data allows studying persistence of returns over time and intergenerational relations

Fagereng et al (2020) - results

- During the sample period (2005–2015) the (value-weighted) average real return on net worth is 3.8%
- Substantial variation across individuals (standard deviation 8.6%)
- The return is positively correlated with wealth.
  - For individuals with negative net worth, the cost of debt and the high leverage values produce negative returns on average.
  - For those with positive net worth, the average return rises monotonically with the position in the net worth distribution and it accelerates at the very top.
  - The difference between the average return at the 90th and 10th percentiles of net worth is substantial (about 18 percentage points) (lower after taxes).

Fagereng et al (2020) - results

TABLE 1A

PORTFOLIO COMPOSITION OF NET WORTH, BY SELECTED FRACTILES[a]

	Gross Wealth Shares				Leverage Ratios			
	Safe	Risky	Housing	Private Equity	Consumer Debt	Student Debt	Long-Term Debt	Gross Wealth (Logs)
Bottom 10%	0.51	0.03	0.43	0.02	0.50	2.47	9.08	10.73
10–20%	0.78	0.03	0.18	0.01	0.42	3.08	3.39	9.06
20–50%	0.31	0.02	0.66	0.01	0.01	0.05	0.40	11.89
50–90%	0.11	0.02	0.86	0.02	0.00	0.01	0.21	13.42
90–95%	0.12	0.02	0.81	0.05	0.00	0.00	0.12	14.12
95–99%	0.13	0.03	0.73	0.11	0.00	0.00	0.10	14.55
99–99.9%	0.15	0.04	0.44	0.36	0.00	0.00	0.07	15.41
99.9–99.99%	0.14	0.04	0.11	0.71	0.00	0.00	0.04	16.94
Top 0.01%	0.08	0.04	0.03	0.85	0.00	0.00	0.02	18.78

[a]The table reports the share of gross wealth in safe assets (cash/deposits, bonds, outstanding claims and receivables), risky assets (foreign assets, mutual funds, directly held listed stocks), housing, private business wealth, consumer debt, student debt, and long-term debt (mortgages and personal loans) for Norwegian taxpayers against selected fractiles of the net worth distribution. Debt leverage values are winsorized at the top 1%. In the last column, we report the logarithm of real gross wealth. Data are for 2005–2015.

Fagereng et al (2020) - results

TABLE 3

RETURNS TO WEALTH: SUMMARY STATISTICS[a]

Wealth Component	Mean	St. Dev.	Skewness	Kurtosis	P10	Median	P90
Net worth (before tax)	0.0379	0.0859	−0.79	47.75	−0.0308	0.0321	0.1109
Net worth (after tax)	0.0365	0.0781	−0.71	36.88	−0.0283	0.0316	0.1067
Net worth (before tax, unweighted)	0.0004	0.2205	−6.73	68.46	−0.0600	0.0230	0.1037
Net worth (after tax, unweighted)	0.0155	0.1546	−5.28	56.42	−0.0449	0.0247	0.1040
Financial wealth	0.0105	0.0596	−1.78	22.17	−0.0171	0.0084	0.0530
Safe fin. assets	0.0078	0.0188	4.38	53.52	−0.0106	0.0059	0.0268
Risky fin. assets	0.0425	0.2473	−0.08	6.22	−0.2443	0.0418	0.3037
Non-financial wealth	0.0511	0.0786	1.80	15.47	−0.0215	0.0429	0.1275
Housing	0.0485	0.0653	0.73	9.95	−0.0209	0.0441	0.1165
Private equity	0.1040	0.5169	18.01	836.79	−0.0531	0.0052	0.3616
Debt	0.0236	0.0216	2.51	29.50	0.0030	0.0215	0.0461
Long-term debt	0.0230	0.0209	3.54	56.92	0.0038	0.0209	0.0446
Consumer debt	0.0961	0.1086	4.60	82.60	−0.0124	0.0741	0.2119
Student debt	0.0078	0.0260	0.68	4.14	−0.0213	0.0074	0.0399

[a]The table reports summary statistics for various measures of real returns to wealth, pooling data for 2005–2015. Except when noted, all returns are value-weighted.

Fagereng et al (2020) - results

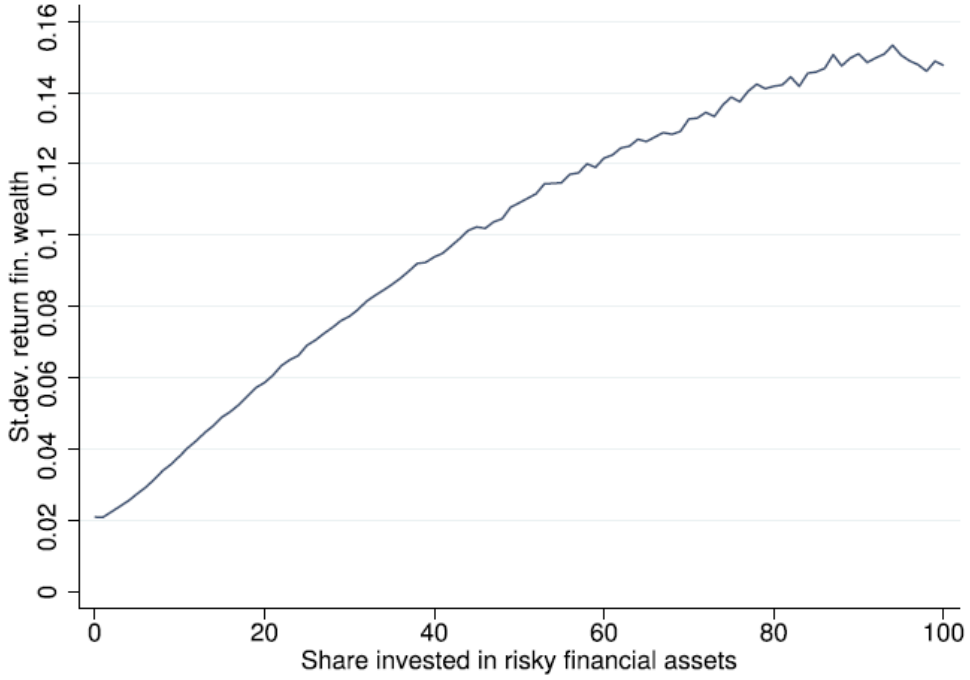
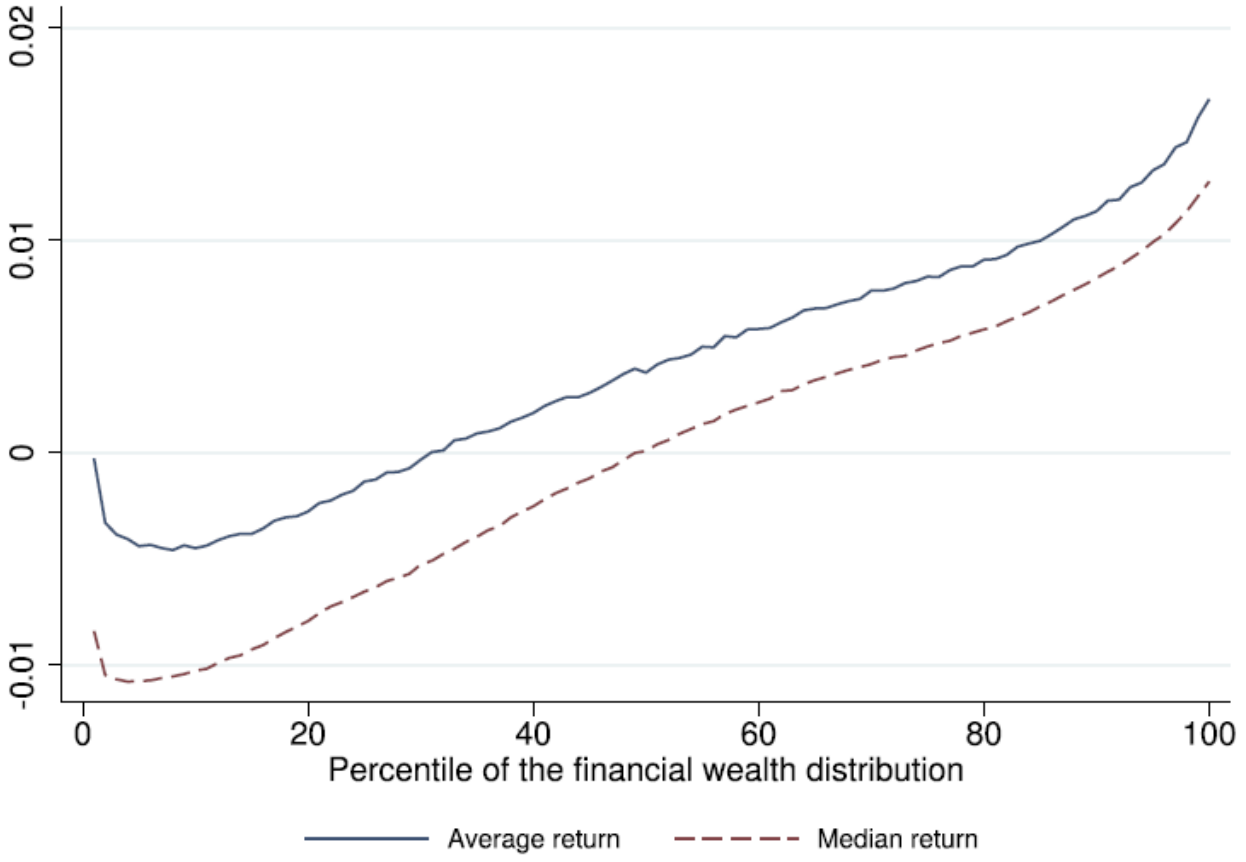


FIGURE 1.—Heterogeneity in returns to financial wealth by share of risky assets. *Notes*: The figure plots the cross-sectional standard deviation of individual returns to wealth in the 2005–2015 period against the share of financial wealth in risky assets (directly and indirectly held stocks, and foreign assets). The shares are in percentage terms.

Fagereng et al (2020) - results



Panel A: Return to financial wealth

Fagereng et al (2020) - results

- What are the drivers of the positive correlation between retruns to wealth and wealth?
  - Higher share inveted in risky assets with higher wealth, but correlation also holds within asset classes and correlation is present for volatility-adjusted returns to assets
- Do individual returns to wealth have a permanent component after controlling for risk exposure, scale and demographics?
- High correlation between education and returns to investments conditional portfolio composition => financial sophistication of the investors
- Substantial share of the variation in returns is explained by individual fixed effects
- Results are also present for individual components of net wealth, especially **private equity and debt**

Fagereng et al (2020) - results

Influenced by

- Portfolio composition (compensation for risk taking)
- Scale
- Financial sophistication

„persistent heterogeneity in returns reflects also differences in ability to generate returns and superior information about investment opportunities"

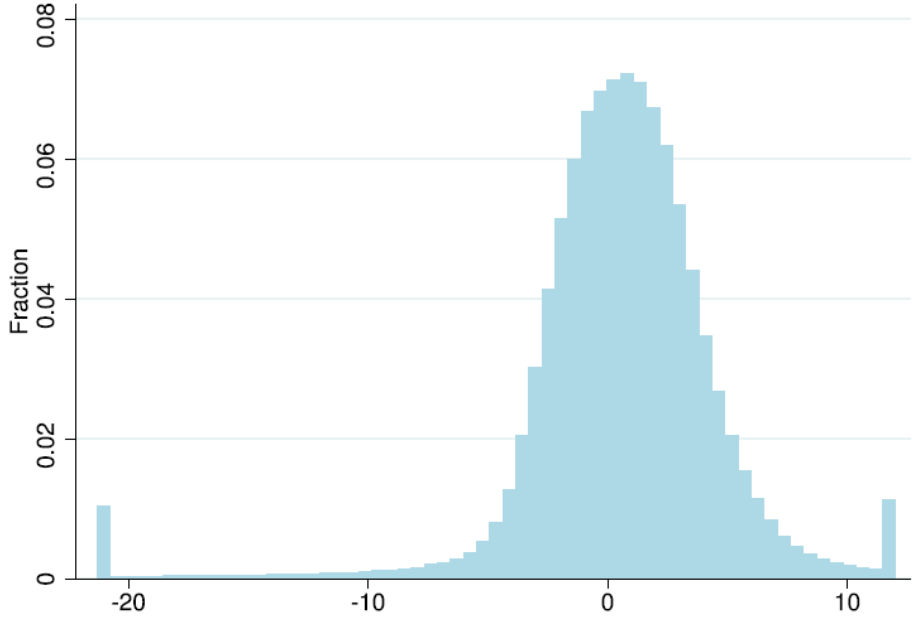
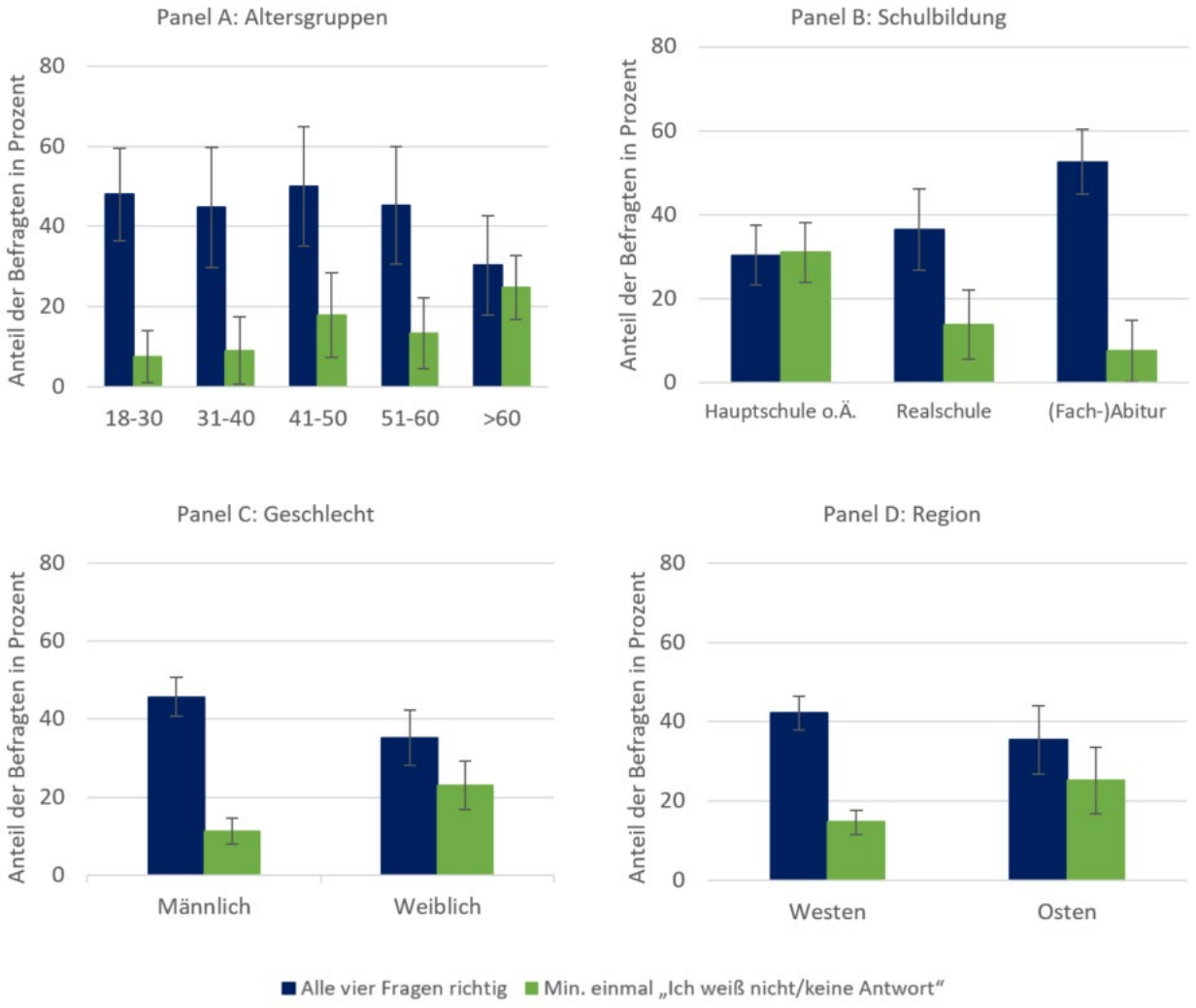


FIGURE 8.—The distribution of fixed effects in the return to net worth. *Notes*: The figure shows the histogram of the estimated fixed effects in the net worth return regressions using estimates in Table 4, column (3). The distribution has been demeaned and winsorized at the top and bottom 1%.

What do we know? => striking and stable patterns



What happens over age?

Fabrizio Mazzonna and Franco Peracchi (2024), Are Older People Aware of Their Cognitive Decline? Misperception and Financial Decision-Making, Journal of Political Economy 132:6, 1793-1830

- Cognitive decline influences individuals' decision making abilities when older.
- At the same time the responsibility for managing ones finances in retirement has increased.
- Are people likely making mistakes?
- Do people recognize cognitive decline?
- How do they prevent financial mistakes? Do they delegate financial decisions?

Mazzonna and Peracchi (2024) - predictions

Predictions from LMM(2017):

- above the investment threshold, the optimal levels of savings and cognitive investment both increase with income
- cognitive decline => exogenous random shock that hits a consumer before she chooses the amount of savings and cognitive investment and turns the productivity of cognitive investment from positive to negative
- consumer is aware of own cognitive decline => no cognitive investment and earn the basic return.
- Consumer is unaware => positive investments and obtains lower returns than a passive investor

Mazzonna and Peracchi (2024) - data

HRS data 1998 – 2014

- Self-rated memory and change in memory
- Memory tests (word recall)

TABLE 1
SELF-RATED VERSUS ASSESSED MEMORY

Self-Rated Memory Change	No	Yes	Total
	A. Severe Relative Memory Loss		
Better now	.020	.006	.026
About the same	.590	.181	.771
Worse now	.148	.056	.204
Total	.757	.243	1.00
	B. Severe Absolute Memory Loss		
Better now	.021	.006	.026
About the same	.600	.171	.771
Worse now	.153	.050	.204
Total	.773	.227	1.00

NOTE.—The table compares self-rated memory changes across waves with two different measures of memory loss: severe relative memory loss (panel A), defined as a decline of 20% or more in the memory score, and severe absolute memory loss (panel B), defined as a memory score change of 1 standard deviation or more.

Mazzonna and Peracchi (2024) - results

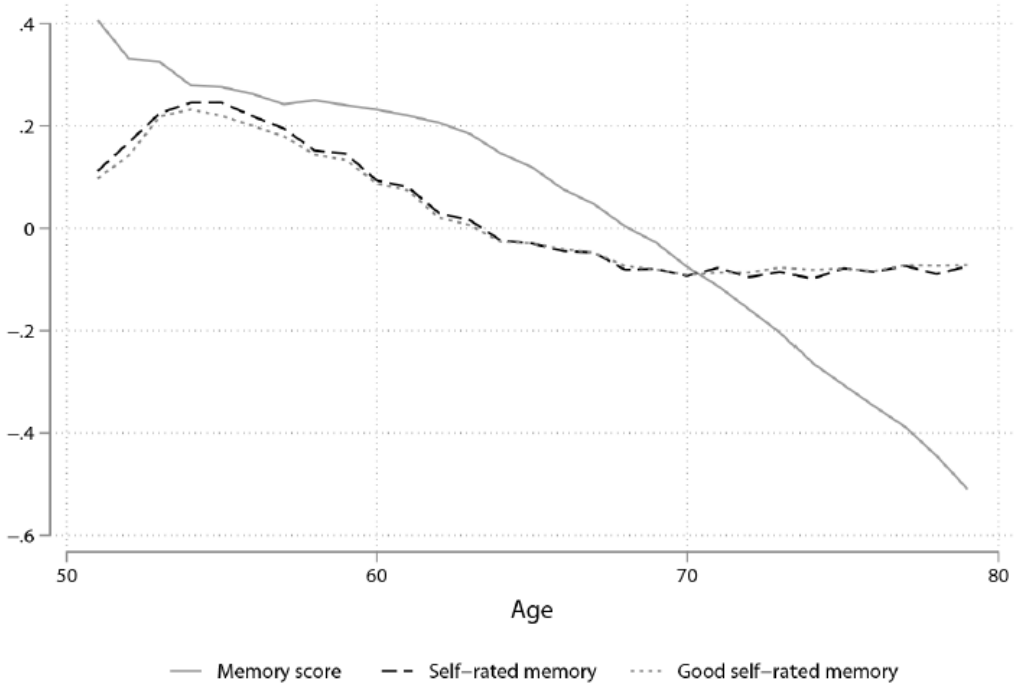


FIG. 2.—Assessed versus self-rated memory by age. The figure presents the average age profile of three indexes: the total score in the immediate and delayed recall tasks (gray line), the self-rated memory score (dashed line), and the share of respondents rating their memory as excellent, very good, or good (dotted line). We standardize each index using its mean and standard deviation over the entire period 1998–2014 and compute age-specific averages of the standardized index using the HRS respondent-level weights. We then smooth each profile using a 3-year moving average.

Mazzonna and Peracchi (2024) - results

- Memory loss comes early both for the aware and the unaware
- The unaware have better initial health and memory => maybe that is why they are still confident about their skills
- Women are less likely to suffer from memory loss and less likely to be unaware of it.

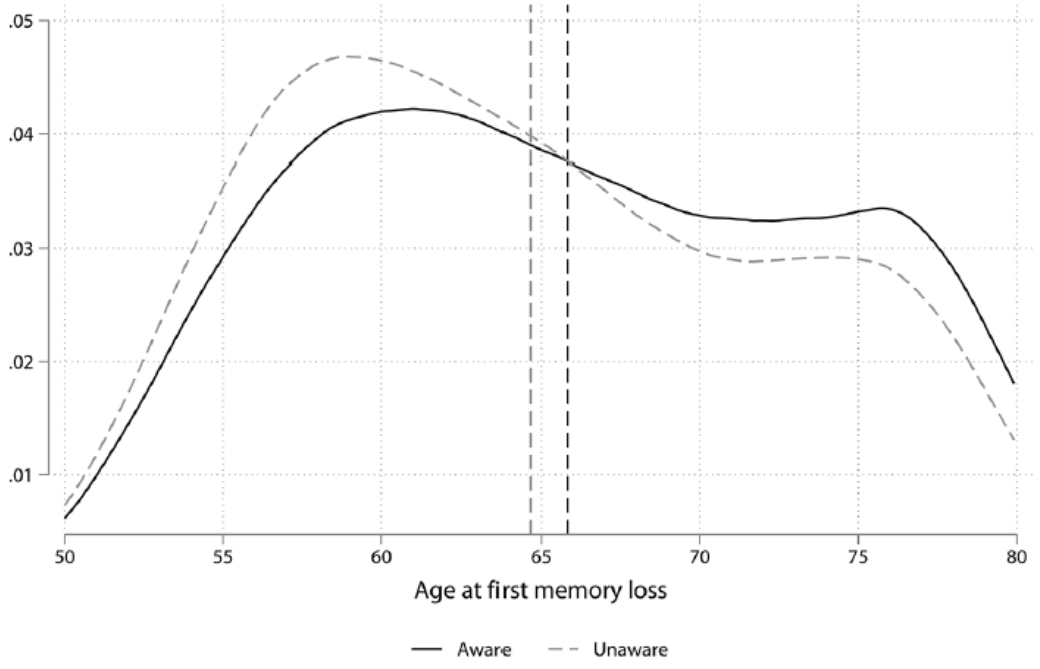


FIG. 3.—Age when first severe memory loss occurs: aware versus unaware respondents. The figure compares the density of the age at which individuals experience their first memory loss event for aware and unaware respondents. The dashed vertical lines correspond to the group mean. The age densities are based on Epanechnikov kernel density estimations with a bandwidth of 2.

Mazzonna and Peracchi (2024) - results

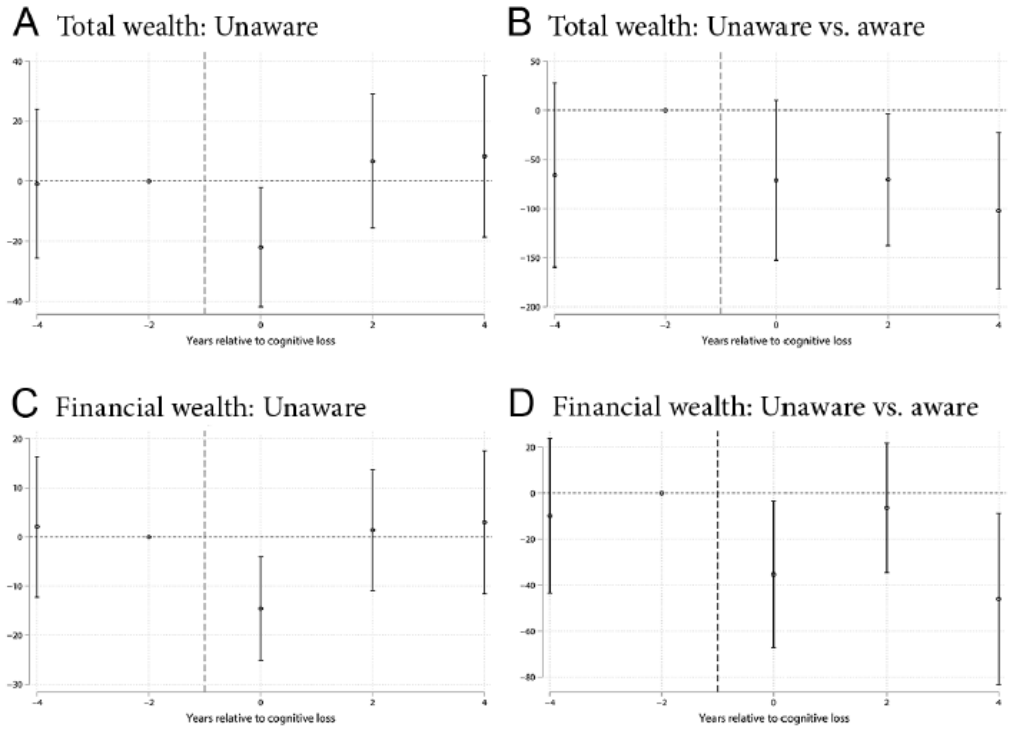


FIG. 4.—Event study coefficients for unaware respondents. The figure shows the estimated wealth changes (US$1,000s in 2014 prices) and the associated 95% confidence intervals with respect to the period immediately before the first severe memory loss event for unaware respondents. *A* and *B* show results for total wealth, and *C* and *D* show results for financial wealth. *A* and *C* show the estimated event study coefficients using only the unaware respondents (and including the never treated at event time −1), while *B* and *D* show the DiD coefficients relative to the aware respondents.

- Losses are larger among the unaware
- Losses are higher among those with higher wealth
- Some of the losses occur before individuals retire
- Losses are more prevalent among males compared to females
- Losses are mostly in financial wealth (some also in IRAs); and predominantly related to repondent who were recently active on the stock market

Conclusion

- Prepare people better for cognitive decline and how to prepare for it. Financial delegation?
- Financial delegation
- Fraud prevention