

The Wealth of Wealthholders

December 2014

Appendix D. Estimating Retirement/Wealth Relationship

HRS sample. Table A-D1 shows how many observations we lose in the HRS by imposing each additional condition on samples used. As we have seen from Table 5, the majority of the HRS samples are older than 65. Among those households in which the main breadwinner satisfies the age condition, some are retired while some have dual main breadwinners. In addition, for many households that are not retired, responses for the expected retirement age are missing.¹ All of these conditions account for the small sample size used in the HRS.

LOESS curve and scatter plots including outliers. In Figure A-D1, we show the estimated relationship between retirement plan and wealth from the VRI (Panel A) and the HRS (Panel B) for the full range.

Estimation with future DB pension and Social Security income included in the normalized wealth. In the LOESS estimation in Section 5, expected DB pension and Social Security income are included as a control (Y_i^R). Here, we estimate another version of the model where we define the normalized wealth as the sum of the replacement rate from the annuitizable financial wealth and that from the expected annuity income (Y_i^R). Figure A-D2 shows the distribution of newly defined normalized wealth and Figure A-D3 shows the new LOESS estimates. For both figures, Panel A is for the entire sample used in Section 5. Panel B is for the employer-sponsored subsets.

¹ Some breadwinners who are not retired report that they are not currently working, leading to missing responses for expected retirement age. In addition, questions about retirement age are asked only when the respondents said that they plan to retire or stop working.

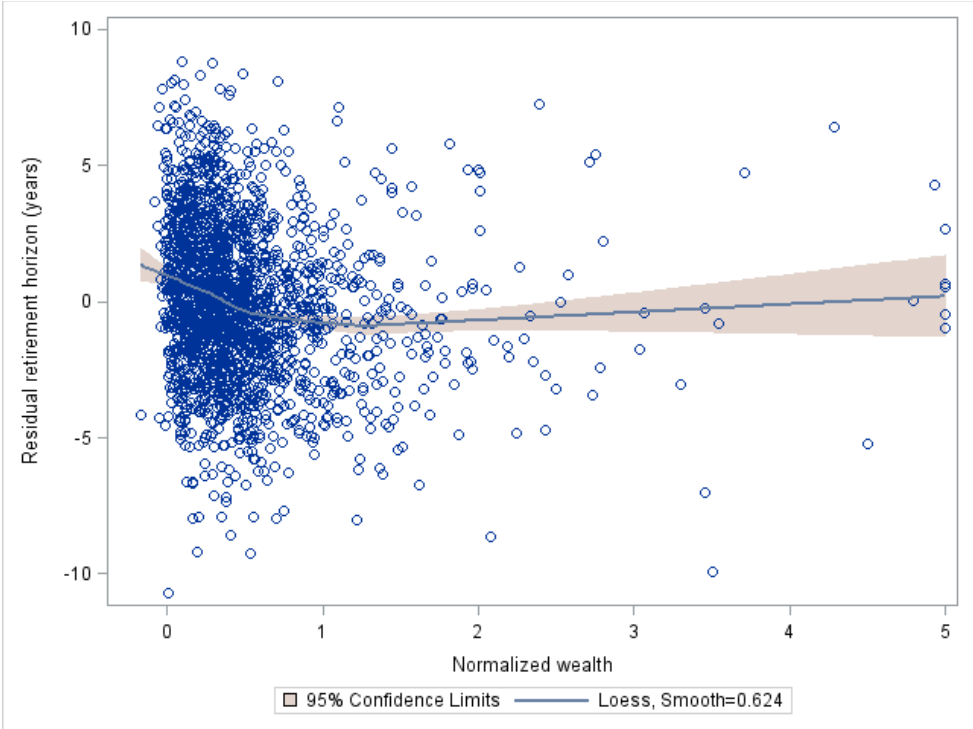
Figure A-D2A shows that the VRI sample still has higher replacement rates, though the gap is less stark than in Figure 3A. The VRI has many observations in the range between 1 and 2, while for the HRS, most of the observations have normalized wealth smaller than 1. The LOESS estimate (Figure A-D3A) shows basically the same relationship as the baseline model (Figure 4A). With the VRI sample, we can estimate a negative and statistically significant relationship for a wider range (between 0 and 2), while the HRS sample shows a steeper slope up to about 0.5 but then becomes flat and statistically insignificant. With the employer-sponsored subset, the distributions of normalized wealth are pretty similar across the VRI and HRS (Figure A-D2B). Figure A-D3B shows that conditioning on this subset does not affect the estimated relationship between wealth and retirement plan for the VRI, while for the HRS, the estimates get very noisy due to the small number of observations.

Table A-D1. HRS Sample Size for Retirement Horizon Analysis: Effect of Each Condition

Condition	Number of observations
(1) None	11,595
(2) Main breadwinner age ≤ 65	5,206
(3) (2) + Main breadwinner not retired, No dual breadwinner	2,442
(4) (3) + Have expected retirement age	1,053

Figure A-D1. Retirement horizon versus normalized financial wealth: LOESS (full range of data)

A. VRI



B. HRS

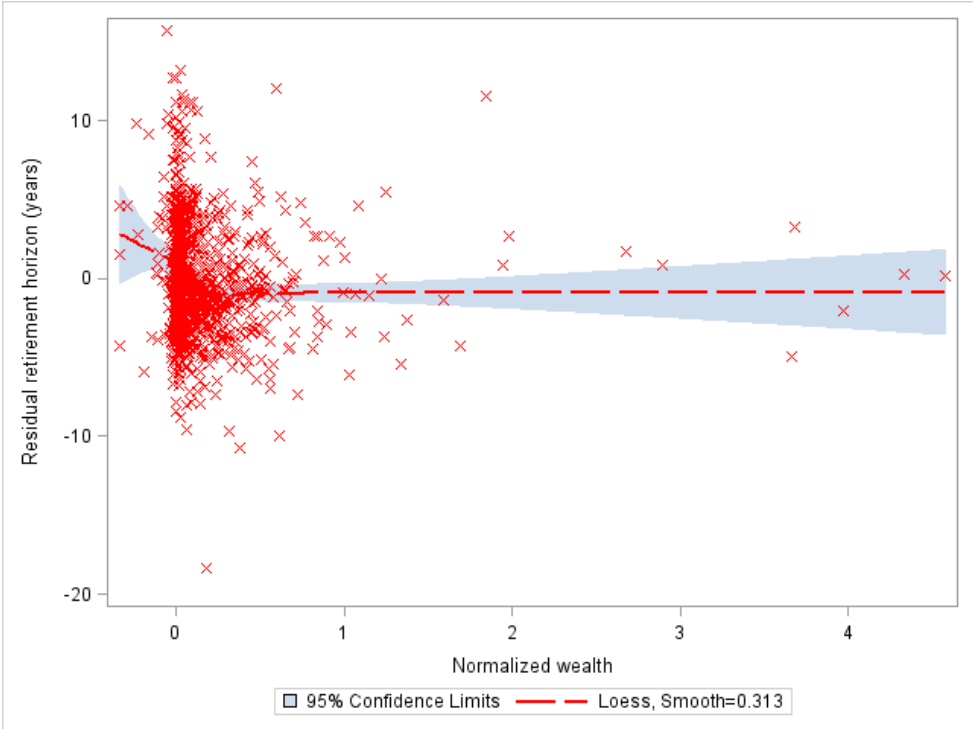
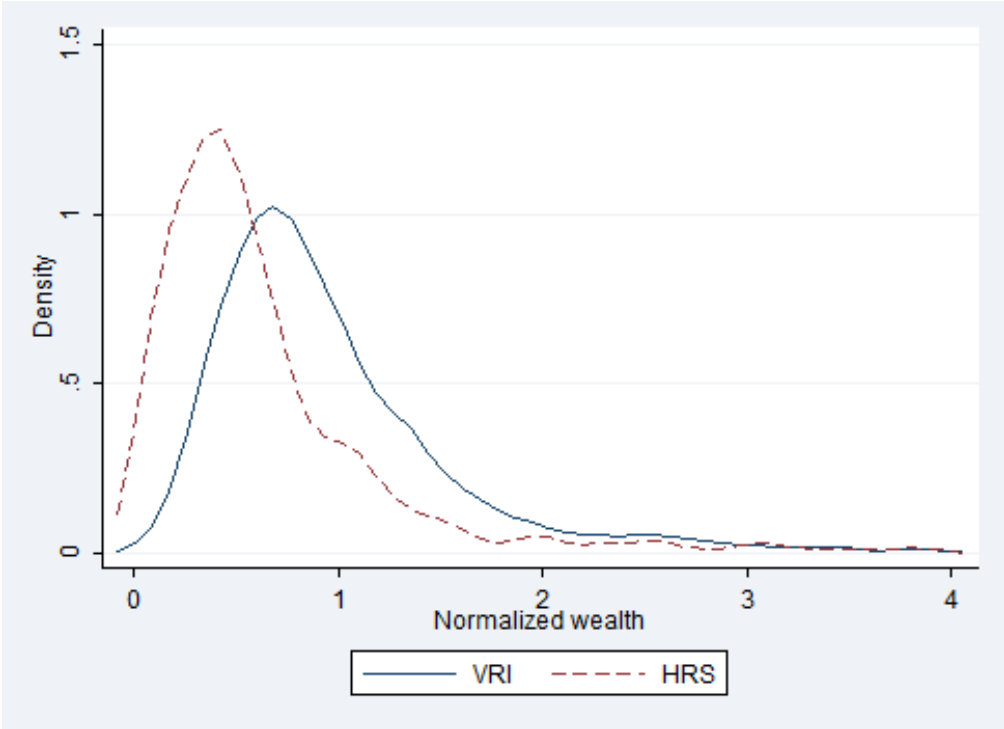


Figure A-D2. Distribution of normalized financial wealth (including future DB pension and SS income)

A. VRI vs HRS



B. VRI employer-sponsored versus HRS 401(k) subset

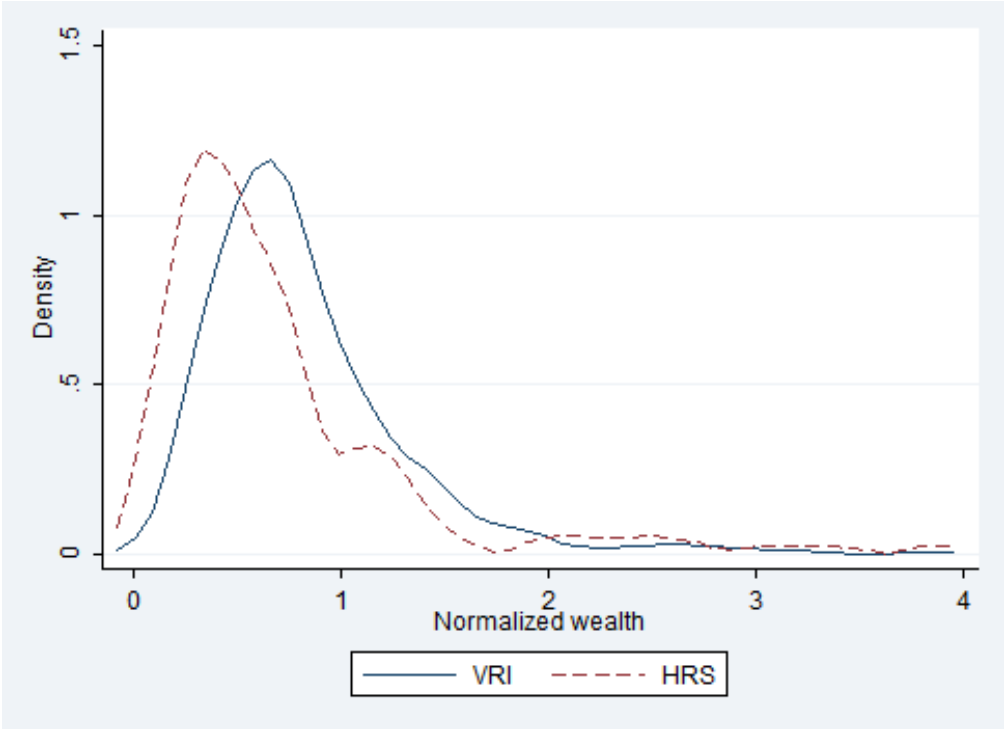
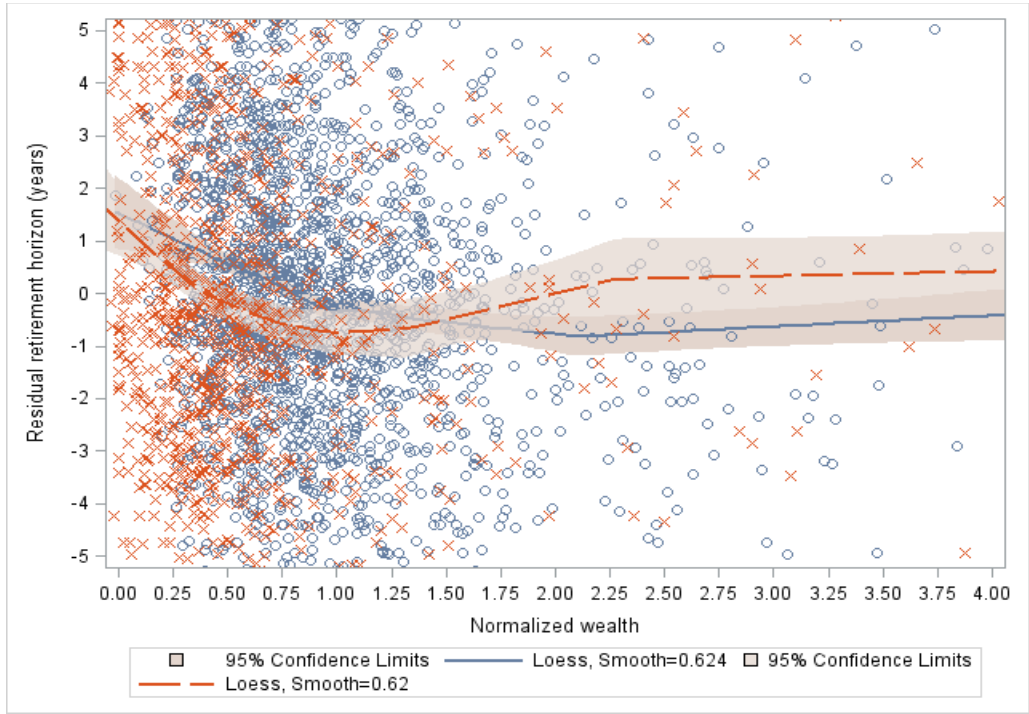


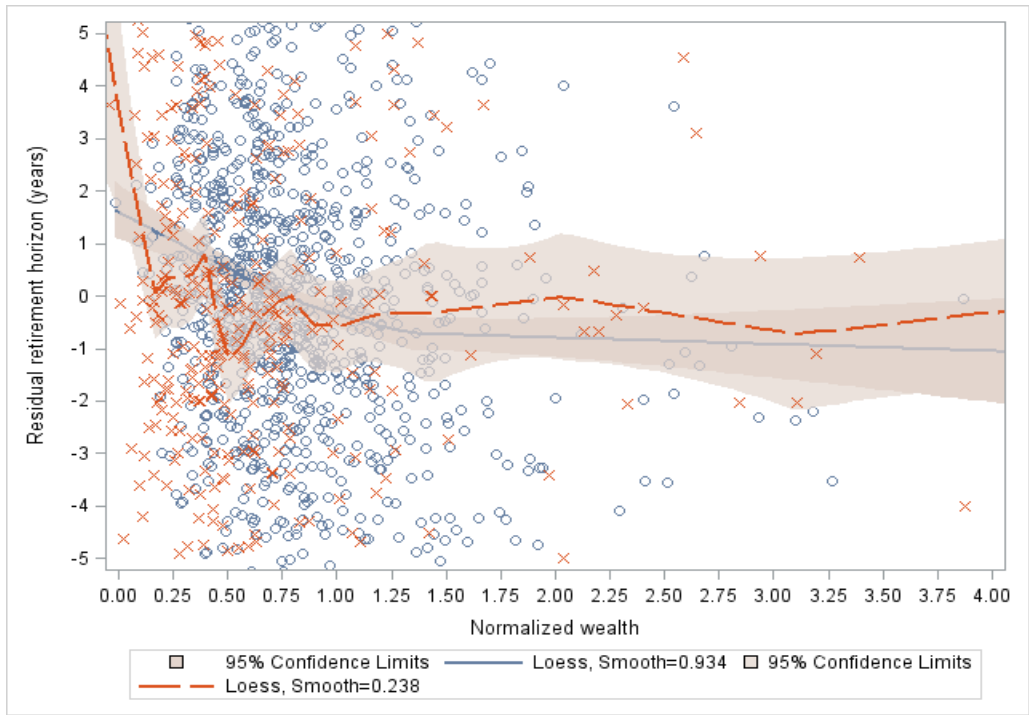
Figure A-D3. Retirement horizon versus normalized financial wealth: LOESS (Normalized wealth including future DB pension and SS income)

A. VRI vs HRS



Note: x denotes HRS (orange) and o denotes VRI (blue).

B. VRI employer-sponsored versus HRS 401(k) subset



Note: x denotes HRS (orange) and o denotes VRI (blue).