Are Older People Aware of Their Cognitive Decline? Misperception and Financial Decision Making

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Description of the data files and the code files

1. Data files

Our empirical analysis relies on public data from the Health and Retirement Study (HRS), Refinitiv, and Statista. We are not allowed to make these data directly available, but you can easily access them following the instructions provided below.

1.1. How to obtain the public data from the HRS, Refinitiv, and Statista

The HRS is a bi-annual longitudinal survey of people aged 50+ conducted since 1992. We use data from 1998 (wave 4) to 2014 (wave 12). These data are produced and distributed by the University of Michigan with funding from the National Institute on Aging (grant number NIA U01AG009740).

The HRS data can be downloaded from https://hrs.isr.umich.edu/data-products upon registration. To register for an account that enables data download, just follow the link https://hrsdata.isr.umich.edu/user/register

More detailed information and contacts are available at https://hrs.isr.umich.edu.

We combine the HRS data with data on financial returns obtained from Refinitiv Datastream (formerly, Thomson Reuters Datastream) and from Statista. These data can be downloaded after registering at the following websites:

- Refinitiv: https://www.refinitiv.com/en/products/datastream-macroeconomic-analysis
- Statista: https://www.statista.com/accounts/pa

1.2. List of the HRS, Refinitiv, and Statista public files used as inputs to our analysis

Our analysis is based on the following files:

a) RAND-HRS Longitudinal File, Version P, released August 2016, available among archived datasets at the following link: https://hrsdata.isr.umich.edu/data-products/rand-hrs-archived-data-products

b) RAND-HRS CAMS Data – File 2015 v1, latest version available at: https://hrsdata.isr.umich.edu/data-products/rand-hrs-cams-data-2019

c) Cognition Data: *Health and Retirement Study Imputation of Cognitive Functioning Measures: 1992 – 2014 (Final Release Version),* latest version available at: https://hrsdata.isr.umich.edu/data-products/cross-wave-imputation-cognitive-functioning-measures-1992-2020

d) HRS Tracker 2014 File, Final version 1.0, latest version available at: https://hrsdata.isr.umich.edu/data-products/cross-wave-tracker-file

e) Polygenic scores: *HRS Polygenic Scores – Release 4.3 2006-2012 Genetic Data,* available at: https://hrsdata.isr.umich.edu/data-products/polygenic-score-data-pgs

f) HRS Core Modules to add variables not included in the RAND longitudinal file, available at: https://hrsdata.isr.umich.edu/data-products/public-survey-data

The HRS-CORE datasets used in this paper (by year) are the following:

- **1996**: H96D_TC; H96N_H; H96N_R
- **1998**: H98D_TC; H98N_H; H98N_R
- **2000**: H00D_TC; H00N_H; H00N_R
- **2002**: H02E_TC; H02D_r; H02R_H; H02U_H
- **2004**: H04E_TC; H04D_r; H04R_H; H04U_H; H04LB_R
- **2006**: H06E_TC; H06D_r; H06R_H; H06U_H; H06LB_R
- **2008**: H08E_TC; H08D_r; H08R_H; H08U_H; H08LB_R
- **2010**: H10E_TC; H10D_r; H10R_H; H10U_H; H10LB_R
- **2012**: H12E_TC; H12D_r; H12R_H; H12U_H; H12LB_R
- **2014**: H14E_TC; H14D_r; H14R_H; H14U_H; H14LB_R

g) These data are complemented by the following variables downloaded from Refinitive Datastream (with mnemonics in parentheses):

- S&P 1500 Super Composite Index (***SP5EIND***)
- Dow Jones Industrial Average Index (***USSHRPRCF***)
- U.S. Treasury 10 Year Government Bond Yield (***USOIR080R***)
- Bloomberg Barclays United States Corporate 7-10 Years United States Dollar (***LHUSC71***)
- Interest rate of 90-day deposit certificate (***USOIR073R*)**
- Treasury Bill Rate - 3 Months (***USGBILL3***)
- 24-month interest rates at commercial banks **(*USYLPDC***)

h) In addition, the following variable is added from Statista:

- Average interest rate on checking account in the United States (https://www.statista.com/statistics/325600/average-interest-rate-checking-account-usa/)

1.3. Unrestricted data

We use the CPI as deflator to convert all monetary values to 2014 U.S. dollars. This variable is included in CPI_v13.dta within the replication folder but can also be downloaded directly from the BLS website.

1.4. Procedures through which HRS files were incorporated into our analysis files

The RAND-HRS Longitudinal File, RAND-HRS CAMS Data, Cognition Data, Tracker File, and Polygenic Scores are directly available in Stata format (.dta).

For the HRS Core Modules, three files are provided to build the dataset in Stata format:

- a data file (suffix .DA), which contains the raw data that must be read in Stata
- a dictionary file (suffix .dct), which contains information used by Stata to describe the data (i.e., to generate labels)
- a do-file (suffix .do), which reads the data and generates the dataset in Stata.

For example, the H02D_r.dta file is generated by loading and running the H02D_r.do file. If the H02D_r.do and the H02D_r.dct files are both located in "c:\hrs2014\STATA" and the data file is located in "c:\hrs2014\data", then the H02D_r.do file can be run as is. Otherwise, you must first edit the H02D_r.do and H02D_r.dct files to substitute the proper path names. For more information, see the HRS Core – Data Description (e.g., for the year 2014, see https://hrsdata.isr.umich.edu/sites/default/files/documentation/data-descriptions/h14dd.pdf, page 10, paragraph 6C).

2. Code files

Below we provide a list of all the Stata .do files used for data management and analysis which are included in the replication package. Once all the required data have been downloaded, it is enough to place all datasets in a folder named “original” and run the master .do file described below.
There are five Stata contributed commands that are required to run the analysis: *coefplot*, *egenmore*, *estout*, *reghdfe*, and *tabout*. They can be downloaded from the Boston College Statistical Software Components (SSC) archive.

- **0_master.do** runs the entire replication package and provides explanations on its structure

Data management files:

- **1_sample_selection.do** selects variables from RAND-HRS version p. It calls the .do files listed below:
  - **1a_cognitive.do** adds variables on cognitive abilities (HRS Imputation of Cognitive Functioning Measures)
  - **1b_numeracy.do** adds HRS-Core variables on numeracy tests
  - **1c_wellbeing.do** adds HRS-Core variables on life satisfaction, optimism, financial strain, and well-being

    - **1d_thomreut_returns.do** uploads variables on stock market returns from Datastrem and Statista
    - **1e_tracker.do** uploads the tracker file needed to add financial data from other HRS-Core modules
    - **1f_transfers.do** adds HRS-Core variables on transfers to children
    - **1g_camsrand.do** adds RAND-CAMS consumption variables
    - **1h_capgain.do** adds HRS-Core variables needed to measure financial activity
    - **1i_assetverif.do** adds HRS-Core variables on assets verification

- **2_working_samples.do** recodes and relabels variables and generates the two working samples (static for the main tables and dynamic for the DID)

Analysis files:

- **3_main_tables.do** generates all tables in the main text
- **4_tables_appendix.do** generates all tables in the Appendix
- **5_figures.do** generates all figures (main text+appendix). It includes the following sub-do file:
    - **5_1_stock_market_returns.do** generates Figure A.1 in the Appendix.