How Cognitive Ability and Financial Literacy Shape the Demand for Financial Advice at Older Ages

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Motivation/Research Question

Individuals are increasingly in charge of their retirement savings.

- In the past, most pension plans were **employer-provided defined benefit** plans where people did not have to manager their own retirement savings.
- Over years, **defined contribution** plans have been replacing the defined benefit plans.
- Disintermediation of savings and investment.

The old have more wealth but also declining cognitive ability.
- Burden of managing one's wealth gets greater as one gets old.
- Institutional complexity adds more burden: social security filing, withdrawal plans.

Will "money doctors" solve the problem?
- Gennaioli N, Shleifer A, Vishny R (2015)
- Trust helps to hire financial advisors, but how much can we trust them?
- Hiring advisors requires careful filtering and monitoring of information.

Motivation/Research Question

Research Question:

- How does cognitive ability and financial literacy affect the demand for financial advice in old ages?
- Quantity vs. quality of financial advice?

Why it matters?

- Education cannot solve the problem of mismanaging finances (Choi, Laibson, and Madrian, 2005)
- Policy implication: how to lower barriers to receiving high-quality financial advices?

Literature Review

Limited attention and demand for financial advice

- Declining cognitive ability in old ages leads to more delegation of financial management (Kim, Maurer, and Mitchell, 2016)

Financial literacy and demand for financial advice.

- Older people are financially illiterate, leading them to undersave and underinvest (Lusardi and Mitchell, 2014; Lusardi, Michaud, and Mitchell, 2017)

Institutional complexity people must confront when planning for retirement

- Rules regarding when to claim one's Social Security benefits are extremely complicated (Kotlikoff, Moeller, and Solman, 2016)
- Regulations on how much to save in tax-qualified retirement saving accounts, when someone can make penalty-free payouts

Hypothesis

Hypothesis 1 (Likelihood of seeking financial advice): *Cognitive ability and financial literacy will not be significantly related to the likelihood of seeking financial advice.*

- Declining cognitive ability + financial literacy → more demand for financial advice.
- Hiring financial advisors also requires careful screening and monitoring the behavior of advisors, which will reduce demand for financial advice.
- These two effects can be countervailing.

Hypothesis

Hypothesis 2 (Quality of financial advice received): *Among those receiving financial advice, cognitive ability and financial literacy will increase the likelihood of seeking financial advice from professionals.*

- Receiving high-quality but potentially biased advice from professional financial advisors with commission-based payment structure requires high level of sophistication on the customer's side (Inderst and Ottaviani, 2012)
- Cognitive ability can be positively related to "free-consultation" with potential conflicts of interests.

Data

We designed and fielded an experimental module in the **2016 Health and Retirement Studies (HRS)** to explore how people age 50+ manage their financial affairs.

- 1,614 age-eligible respondents (age 50+) who responded to our questions on their financial behaviors.
- We asked respondents whether they received any type of financial advice, and if so, what types of financial advice they received and from whom the financial advice was provided.
- We asked persons who did not seek financial advice why they did not.
- Core module: demographic information, cognition score, financial literacy score.

Descriptive Statistics

A. Financial Behaviors

Variable	Mean	St Dev	Respondent Group
Any Financial Help			
Help w/ financial mgmt (0/1)	0.35	0.48	Full sample
Types of Financial Advice			
Help w/ invst (0/1)	0.52	0.50	Those receiving financial advice
Help from profl/other non-family advisors (0/1)	0.74	0.44	Those receiving financial advice
'Free' profl help (0/1)	0.13	0.33	Those receiving financial advice
Reasons for Not Seeking Advice			
No money help: Self-confidence (0/1)	0.51	0.50	Those not receiving financial advice
No money help: Distrust (0/1)	0.03	0.17	Those not receiving financial advice
No money help: DK whom to ask (0/1)	0.04	0.19	Those not receiving financial advice

Descriptive Statistics

B. Controls

Variable	Mean	St Dev
Cognition score	23.61	4.61
FinLit score	2.12	0.89
Age	64.11	10.18
Male	0.45	0.50
White	0.80	0.40
Hispanic	0.10	0.30
Married	0.62	0.49
Education (yrs)	13.60	2.74
Good health	0.76	0.43
Non-housing wealth (/100k, 2014$)	1.36	4.31
Housing wealth (/100k, 2014$)	1.57	9.69
Vision problem	0.21	0.41
Economic class	0.35	0.48

Empirical Model

Probit regressions

$$\Pr(Y_i = 1 | X_i) = \Phi(\beta_1 \times Cognition_i + \beta_2 \times FinLit_i + \delta' X_i),$$

- The dependent variable measures the probability of respondent *i* indicating that he or she engaged in this the behavior of interest (e.g., receiving financial advice, hiring professional advisors).
- Controls: Ages, sex, race, education, wealth, health.

Empirical Model

Instrumental variable analysis (IVProbit model)

- *Cognition* and *FinLit* can also affect the financial portfolio of the respondent, not observed in the survey, which could also influence the quantity and quality of financial advice.

- **Instrumental variable for *Cognition*: vision dysfunction** (Chen, Bhattacharya, and Pershing, 2017). Controlling for overall health and wealth level, we posit that the exclusion restriction condition is satisfied.

- **Instrumental variable for *FiinLt*:** the respondent self-reported having taken an **economics/finance class** in school (van Rooij, Lusardi, and Alessie, 2012)

First Stage Regression

	Cognition	FinLit
Vision problem	-0.941 **	-0.249 **
	(0.333)	(0.082)
Economics class	0.125	0.249 **
	(0.283)	(0.058)
Age	-0.126 **	-0.010 **
	(0.013)	(0.003)
Male	-0.578 *	0.294 **
	(0.257)	(0.051)
White	1.785 **	0.251 **
	(0.300)	(0.067)
Hispanic	-0.206	-0.266 *
	(0.430)	(0.111)
Married	0.949 **	0.071
	(0.256)	(0.053)
Education (yrs)	0.509 **	0.050 **
	(0.056)	(0.012)
Good health	0.857 *	0.128
	(0.335)	(0.072)
Non-housing wealth (/100k, 2014$)	0.075 **	0.015 **
	(0.025)	(0.004)
Housing wealth (/100k, 2014$)	0.005	0.002 **
	(0.006)	(0.001)

- *Vision problem* and *Econ class* are correlated with Cognition and FinLit score, **satisfying the Relevance condition of IVs**.

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Regression Analysis: Determinants of Receiving Financial Advice

	Full sample		Those receiving financial advice					
	Help w/ financial mgmt (0/1)		Help w/ invst (0/1)		Help from profl/other non		'Free' profl help (0/1)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Probit	IVProbit	Probit	IVProbit	Probit	IVProbit	Probit	IVProbit
Cognition score	-0.008	-0.008	0.015	0.012	0.022 **	0.019 **	0.007 *	0.004 **
	(0.004)	(0.058)	(0.009)	(0.074)	(0.006)	(0.031)	(0.003)	(0.052)
FinLit score	0.031	0.023	-0.009	0.001	0.050	0.054 **	-0.006	-0.013
	(0.021)	(0.176)	(0.041)	(0.280)	(0.034)	(0.519)	(0.020)	(0.005)
Age	-0.002	-0.002	0.000	0.000	-0.001	-0.001 **	0.001	0.000 **
	(0.002)	(0.007)	(0.003)	(0.008)	(0.002)	(0.005)	(0.001)	(0.008)
Male	-0.035	-0.032	-0.039	-0.041	-0.016	-0.012 *	-0.008	-0.008 *
	(0.034)	(0.090)	(0.072)	(0.160)	(0.051)	(0.172)	(0.032)	(0.058)
White	0.115 **	0.138	0.207 *	0.141	0.122	0.071 **	-0.031	-0.009 **
	(0.041)	(0.117)	(0.094)	(0.263)	(0.077)	(0.116)	(0.062)	(0.136)
Hispanic	-0.060	-0.077	0.074	0.063	-0.006	0.010	-0.077 **	-0.207
	(0.057)	(0.066)	(0.118)	(0.128)	(0.075)	(0.154)	(0.020)	(0.098)
Married	-0.001	-0.004	0.103	0.099	0.177 **	0.144	-0.011	-0.023
	(0.036)	(0.058)	(0.075)	(0.139)	(0.058)	(0.082)	(0.036)	(0.055)
Education (yrs)	0.037 **	0.034	0.031	0.026	0.013	0.017 **	-0.006	-0.002 **
	(0.008)	(0.031)	(0.017)	(0.072)	(0.010)	(0.027)	(0.007)	(0.040)
Good health	0.094 *	0.080	0.191 *	0.163	0.087	0.076	0.038	0.083
	(0.038)	(0.076)	(0.083)	(0.224)	(0.063)	(0.084)	(0.030)	(0.085)

- Cognitive ability and financial literacy are not related to receiving more advice.

- Cognitive ability → receiving advice from professional advisors & "free advice"

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Regression Analysis: Why Not Receiving financial Advice

	No money help: Self-confidence (0/1)		No money help: Distrust (0/1)		No money help: DK whom to ask (0/1)	
	(1) Probit	(2) IVProbit	(3) Probit	(4) IVProbit	(5) Probit	(6) IVProbit
Cognition score	-0.014 **	-0.013	0.000	0.002 **	0.003	0.004
	(0.005)	(0.051)	(0.000)	(0.010)	(0.002)	(0.018)
FinLit score	0.017	0.014	0.001	0.007	-0.007	-0.013
	(0.024)	(0.160)	(0.002)	(0.056)	(0.006)	(0.039)
Age	0.008 **	0.007	0.000	0.000 **	0.000	0.000
	(0.002)	(0.009)	(0.000)	(0.002)	(0.000)	(0.002)
Male	0.051	0.045	0.006 *	0.031 *	0.013	0.016
	(0.042)	(0.096)	(0.003)	(0.061)	(0.011)	(0.019)
White	0.073	0.055	-0.001	-0.009 *	-0.047 **	-0.044
	(0.048)	(0.085)	(0.003)	(0.035)	(0.018)	(0.024)
Hispanic	-0.019	0.000	-0.004 *	-0.048	-0.017 **	-0.042
	(0.066)	(0.071)	(0.002)	(0.085)	(0.006)	(0.031)
Married	0.045	0.044	0.002	0.014	0.015	0.021
	(0.043)	(0.056)	(0.002)	(0.022)	(0.009)	(0.029)
Education (yrs)	0.005	0.003	0.000	-0.001 *	-0.002	-0.003

- Cognitive ability is related to electing trust as a main reason for not receiving financial advisors.

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Policy Implication

- **Barrier to money doctors**

  - Low cognitive ability and financial literacy can be a barrier to receiving financial advice from professionals.

- **Identifying those with declining cognitive ability**

  - More wealth + low cognitive ability/financial literacy → target of financial fraud

  - a program in U.S. (AARP public policy institute) teaching bank tellers how to recognize when customers show signs of declining mental capacity or are being financially exploited (Gunther, 2015)

Conclusion

- We study the impact of cognitive ability and financial literacy on the demand for financial advice.

- **Finding 1**: Cognitive ability and financial literacy does not affect the likelihood to any receive advice (***quantity of advice***).

- **Finding 2**: Cognitive ability and financial literacy increase the likelihood to receive help from professional advisors (***quality of advice***).

- **Finding 3**: People with high cognitive ability raise issues of "trust" when hiring financial advisors.

- **Policy implication**: Cognitive ability and financial literacy can be a barrier to receiving help from professional financial advisors.