

Impacts of Aging and Health Risks on the Asset Holdings of Chinese Old Individuals

- Jeff Yang, Department of Economics
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- Supervised by Dr. Ke Xu, Department of Economics

1. INTRODUCTION

Old people **dislike** losses from investments:

- Have low income and insufficient investment budget.
- May get various diseases easier if they suffer losses from investment.

Also, different assets have different features. How these old people invest in different assets appropriately to achieve best result is an important issue.

I analyze how aging and health risks affect the percentage of different asset classes held by Chinese old individuals.

2. LITERATURE REVIEW

Aging Effect:

Coile and Milligan (2006) estimate models of both dollar value and share of different assets held. They find that the investments in principal residence, vehicles, and IRAs/Stocks/Bonds **decrease** with aging.

Health Effect:

Edwards (2008) analyzes the effects of self-perceived health risk on asset shares. He finds people with health problems prefer investing in **safe** assets.

Coile and Milligan (2006) include health fixed effects. They find that the holdings of house, vehicles, businesses, and real estates **drop**, on average, if an older person becomes isolated.

3. METHODOLOGY

Asset Classes:

- (1) **Cash/Bank Deposits**: cash, bank deposits
- (2) **Financial Risky Assets**: stocks, bonds, funds
- (3) **Transportation**: motor vehicles, bikes, motorcycles
- (4) **Durables**: televisions, closets, chairs, etc.
- (5) **Principal Residence**: ownership of housing equity
- (6) **Land/Production**: processing equipment, ownership of real estate

Model (1): Aging Effect

$$AssetShare_i = \beta_1 + \beta_2 age_i + \beta_3 X_i + \varepsilon_i$$

- $AssetShare_i$: % of an asset held by individual i

- Age_i : Age level of individual i

- X_i : A set of control variables such as education, marital status, living area, employment status, gender.

Model (2): Health Effect

$$AssetShare_i = \beta_1 + \beta_2 age_i + \beta_3 X_i + \beta_4 H_i + \varepsilon_i$$

- H_i : It is a set of five health dummy variables: *Disability, Fearful, Depression, Bad Concentration, Chronic Disease*. They equal to 1 if people have that problem.

4. OVERVIEW

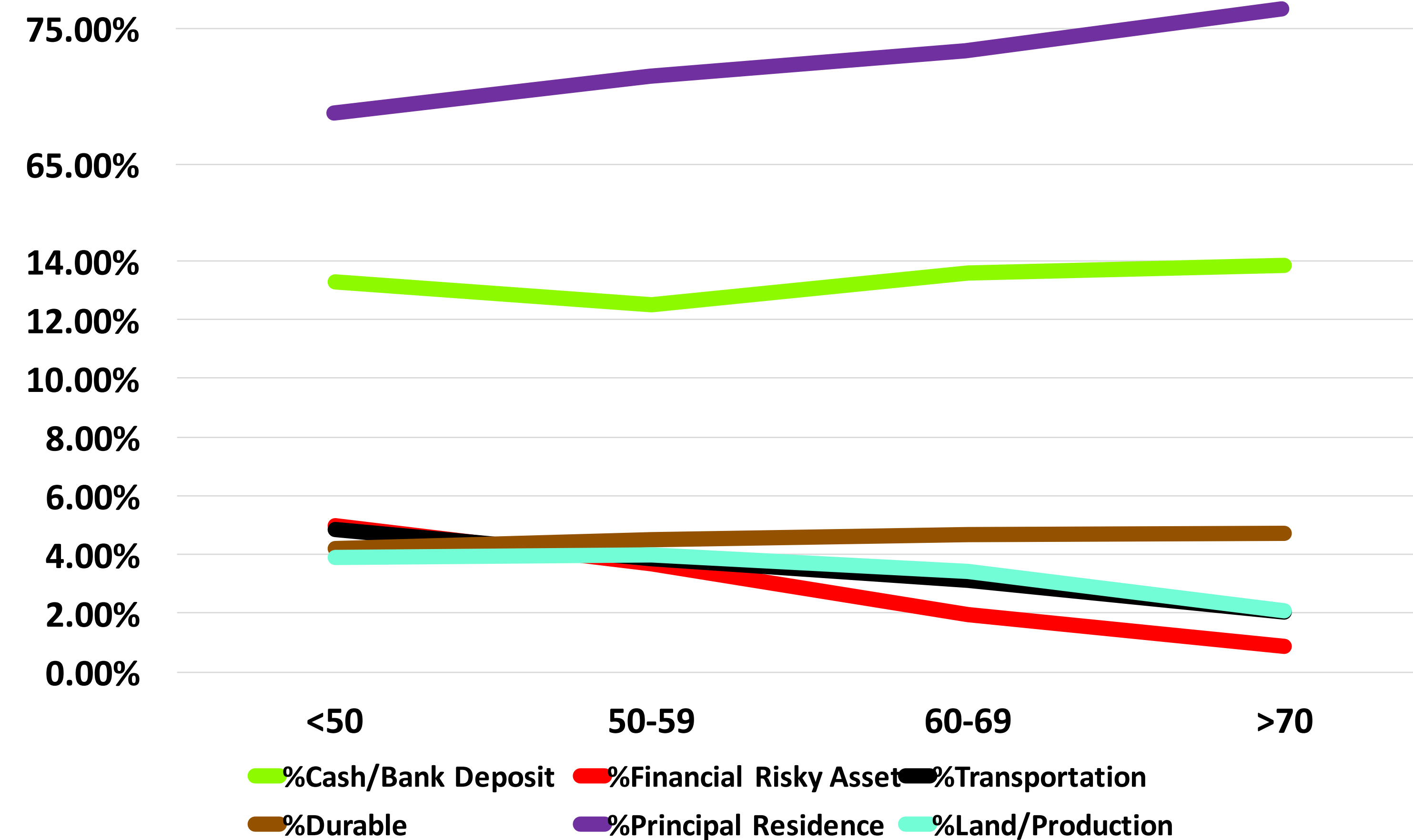


Chart: Variations of Asset Shares Across Age Groups

5. KET RESULTS: AGING EFFECTS

	%CasDep	%Financ	%Trans	%Durable	%PrinRes	%L/P
age	0.0004*	-0.0014***	-0.0009***	0.0002**	0.0023***	-0.0005***
	(0.0002)	(0.0001)	(0.0001)	(0.0001)	(0.0003)	(0.0001)
Observations	8,211	8,211	8,211	8,211	8,211	8,211

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 1: Partial Estimation Output for Model (1)

When Age Increases:

- (1) **%Cash/Bank Deposits** increases with a very small magnitude change. The aging effect is weakly significant. [*It's safe because it provides stable returns*]
- (2) **%Financial Risky Assets** decreases with a relatively large magnitude change. The aging effect is strongly significant. [*Its returns are highly uncertain*]
- (3) **%Transportation** decreases with a moderate magnitude change. The aging effect is strongly significant. [*Older people have less ability to drive cars*]
- (4) **%Durable** increases with the smallest magnitude change. The aging effect is moderately significant. [*Older people need more health support products*]
- (5) **%Principal Residence** increases with the largest magnitude change. The aging effect is strongly significant. [*Older people want more comfortable living environment*]
- (6) **%Land/Production** decreases with a very small magnitude change. The aging effect is strongly significant. [*Older people have less ability to operate production tools*]

6. KEY RESULTS: HEALTH EFFECT

	%CasDep	%Financ	%Trans	%Durable	%PrinRes	%L/P
Disability	-0.0118**	-0.0051*	-0.0036*	0.0057***	0.0129**	0.0019
	(0.0049)	(0.0027)	(0.0022)	(0.0019)	(0.0065)	(0.0023)
Fearful	-0.0039	-0.0061**	-0.0042**	0.0054***	0.0091	-0.0003
	(0.0046)	(0.0025)	(0.0020)	(0.0018)	(0.0061)	(0.0022)
Depression	-0.0114**	0.0029	0.0003	-0.0026	0.0100	0.0008
	(0.0047)	(0.0026)	(0.0021)	(0.0018)	(0.0063)	(0.0022)
BadConcen	-0.0041	-0.0023	-0.0073***	0.0004	0.0110*	0.0022
	(0.0048)	(0.0026)	(0.0021)	(0.0019)	(0.0064)	(0.0023)
Chronic	-0.0064	0.0010	0.0014	0.0032	-0.0046	0.0056*
	(0.0069)	(0.0038)	(0.0031)	(0.0027)	(0.0092)	(0.0033)
Observations	8,211	8,211	8,211	8,211	8,211	8,211

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Table 2: Partial Estimation Output for Model (2)

People with Disabilities:

- (1) **%Cash/Bank Deposit, %Financial Risky Assets, %Transportation** decrease [*They cannot move and drive, or they spend money*]
- (2) **%Durable, %Principal Residence** increase [*Health supports and comfortable environment*]

People who Feel Fearful about Future:

- (1) **%Financial Risky Assets, %Transportation** decrease [*Worries about losses and health condition*]
- (2) **%Durable** increases [*Buy health supports if worry future health*]

People with Depression:

%Cash/Bank Deposit decreases [*Consumption for enjoyment*]

People have Bad Concentration:

- (1) **%Transportation** decreases [*Can't concentrate on road condition*]
- (2) **%Principal Residence** increases [*Comfortable environment*]

People with Chronic Diseases:

%Land/Production increases [*Need to hire more workers thus purchase more production tools*]

REFERENCES

1. Coile, C., & Milligan, K. (2006). How Household Portfolio Evolve After Retirement: The Effect of Aging and Health Shocks (NBER Working Paper No. 12391). Retrieved from National Bureau of Economic Research website: <http://www.nber.org/papers/w12391>
2. Edwards, R. D. (2008). Health Risk and Portfolio Choice. *Journal of Business & Economic Statistics*, 26(4), 472-485. doi:10.1198/073500107000000287



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