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

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

\[ AssetShare_i = \beta_1 + \beta_2 \text{age}_i + \beta_3 \text{X}_i + \epsilon_i \]

- \( \text{share} \): % of asset held by individual
- \( \text{age} \): Age level of individual
- \( \text{X} \): A set of control variables such as education, marital status, living area, employment status, gender

Model (2): Health Effect

\[ AssetShare_i = \beta_1 + \beta_2 \text{age}_i + \beta_3 \text{X}_i + \beta_4 \text{H}_i + \epsilon_i \]

4. OVERVIEW

5. KET RESULTS: AGING EFFECTS

<table>
<thead>
<tr>
<th>age</th>
<th>%CasDep</th>
<th>%Financ</th>
<th>%Trans</th>
<th>%Durable</th>
<th>%PrinRes</th>
<th>%L/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0004**</td>
<td>-0.0014***</td>
<td>-0.0009***</td>
<td>0.0022*</td>
<td>0.0023***</td>
<td>-0.0005***</td>
<td>(0.0002)</td>
</tr>
</tbody>
</table>

Observations: 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. [It’s 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

<table>
<thead>
<tr>
<th>Disability</th>
<th>%CasDep</th>
<th>%Financ</th>
<th>%Trans</th>
<th>%Durable</th>
<th>%PrinRes</th>
<th>%L/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.0118***</td>
<td>-0.0051*</td>
<td>-0.0036*</td>
<td>0.0007***</td>
<td>0.0019**</td>
<td>0.0019</td>
<td></td>
</tr>
<tr>
<td>(0.0049)</td>
<td>(0.0027)</td>
<td>(0.0022)</td>
<td>(0.0019)</td>
<td>(0.0065)</td>
<td>(0.0023)</td>
<td></td>
</tr>
</tbody>
</table>

Fears:
- Fearful:
  - %CasDep decreases with a small magnitude change. The fears effect is very significant. [They cannot move, and they spend money]
  - %Financ increases with a moderate magnitude change. The fears effect is significant. [Health supports and comfortable environment]

<table>
<thead>
<tr>
<th>BadConcen</th>
<th>%CasDep</th>
<th>%Financ</th>
<th>%Trans</th>
<th>%Durable</th>
<th>%PrinRes</th>
<th>%L/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.0041*</td>
<td>-0.0023</td>
<td>-0.0075***</td>
<td>0.0004</td>
<td>0.0110*</td>
<td>0.0022</td>
<td></td>
</tr>
<tr>
<td>(0.0045)</td>
<td>(0.0026)</td>
<td>(0.0021)</td>
<td>(0.0018)</td>
<td>(0.0061)</td>
<td>(0.0022)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chronic</th>
<th>%CasDep</th>
<th>%Financ</th>
<th>%Trans</th>
<th>%Durable</th>
<th>%PrinRes</th>
<th>%L/P</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.0064</td>
<td>0.0010</td>
<td>0.0014</td>
<td>0.0032</td>
<td>-0.0046</td>
<td>0.0056*</td>
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</tr>
<tr>
<td>(0.0069)</td>
<td>(0.0038)</td>
<td>(0.0031)</td>
<td>(0.0027)</td>
<td>(0.0092)</td>
<td>(0.0003)</td>
<td></td>
</tr>
</tbody>
</table>

Observations: 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

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