Government’s Role in Meeting the Long-Term Care Needs in Developing Aging China: A Public-Private Partnership Pathway

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Introduction: why LTC is needed?

- Socio-demographic changes
- Family structure changes
- "Go old before being rich"
- Increasing health care expenditure

- LTC insurance is an option

- China Insurance Regulatory Commission (CIRC) - Health Care System Reform Plan during the Period of Twelfth Five-Year Plan
LTC insurance demand: an empirical study

Demand: Active demand vs. Latent demand

Categories of Factors: Demography, Health, Economic, Value, Policy

Methodology: Logistic Model  \[ \text{Pi=proba[Ass}_i=1] = F(Zi,\beta) \]

Results:

- Elderly people insure themselves more than young people.
- Wealthier people are willing to buy LTC insurance than poorer people.
- Living arrangement is also a significant factor affected people’s behavior.
- People with LTC experience whether from their family members or friends are willing to buy LTC insurance to better alleviate their pressures.
### Cross-national Comparison: Japan, Korea, Singapore and United States

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<tr>
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<th>Social Insurance</th>
<th>Business Insurance</th>
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<tr>
<td><strong>Pros</strong></td>
<td>1. Relatively higher equity and welfare level</td>
<td>1. Relatively higher flexibility and diversity</td>
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<td>2. Stimulating the development of relevant industries</td>
<td>2. More effective risk management</td>
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<td>3. A competitive market of long-term care insurance</td>
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<td><strong>Cons</strong></td>
<td>1. Rigid. Hardly meet the needs of high-income population</td>
<td>1. Moral hazard and information asymmetry in the market make it becomes more difficult to ensure fee control. The expanding cost brings lost and burden on insurance company.</td>
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<td>2. Demand fluctuation leads to volatile cost</td>
<td>2. The exclusion effect on different income groups which confronting the challenge of fairness.</td>
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<td>3. The amount of insurance pay only depends on the health status</td>
<td>3. Too expensive. Pressure on public finance.</td>
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<td><strong>Government’s Responsibilities</strong></td>
<td>1. Building law system to support LTC insurance</td>
<td>1. Each state has already conducted its rules on LTC insurance.</td>
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<td>2. Joining in the operation process of LTC insurance: design, financing, management.</td>
<td>2. Government offers tax benefit for LTC industry.</td>
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<td>4. Policy stimulation</td>
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The Choice of Ways

- If we treat potential clients of LTC insurance as prey while the premium of TLC insurance as predator, we may build a Predator-Prey model.
- The basic Predator-Prey model has this endogenous relationship with a cycle of flows: ‘higher prey population - more predator - lower density of prey - less predation - higher prey population’.

Figure: The phase diagram of Basic Predator Pray model
In these equations,

- \( X \): the number of the potential buyers, and it has a logistic growth rate.
- \( T \): the premium of LTC insurance
- \( XT \): interaction term, which indicates the encounter rate of a random prey with a random predator.
- The density of buyers grow at a natural rate.

\[
\begin{align*}
\dot{X} &= gX(1 - \frac{X}{K}) - \mu \frac{X}{S+X} T \\
\dot{T} &= \delta \frac{X}{S+X} T - \gamma T
\end{align*}
\]

- \( \mu \) is the coefficient of predation rate.
- \( \delta \) is the amount of resources gained when the predator executes the predation.
- \( K \) is the maximum just-maintainable density of prey.
- \( S \) measures the saturation rate.
- \( \gamma \) measures how competitive within the LTC market, more competitive less premium will be charged. It also measure how much government-provided social security plan can replace private LTC insurance.
• This model suggests a mix of market and government-oriented LTC strategy is more desirable than a purely market strategy.

• The market liberation and economic growth will enhance the ability of consumption, which as a result, increase the carrying capacity $K$.

• This will lead a stable situation to an unstable one, which implies some level of government controlled of LTC insurance is necessary.
Policy Implication

• System Design (Financing, Operation, and Benefits)

• Financial Support

• Governance and Regulation
Thanks for your listening!