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 $P_i = \text{proba}[Ass\_i=1]=F(Z_i,\beta)$

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

	Social Insurance	Business Insurance
Pros	1. Relatively higher equity and welfare level 2. Stimulating the development of relevant industries	1. Relatively higher flexibility and diversity 2. More effective risk management 3. A competitive market of long-term care insurance
Cons	1. Rigid. Hardly meet the needs of high-income population 2. Demand fluctuation leads to volatile cost 3. The amount of insurance pay only depends on the health status	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. 2. The exclusion effect on different income groups which confronting the challenge of fairness. 3. Too expensive. Pressure on public finance.
Government's Responsibilities	1.Building law system to support LTC insurance 2.Joining in the operation process of LTC insurance: design, financing, management. 3.Governance and regulation 4.Policy stimulation	1.Each state has already conducted its rules on LTC insurance. 2.Government offers tax benefit for LTC industry. 3.Government is unable to pay for the poors' LTC insurance sustainably.

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'.

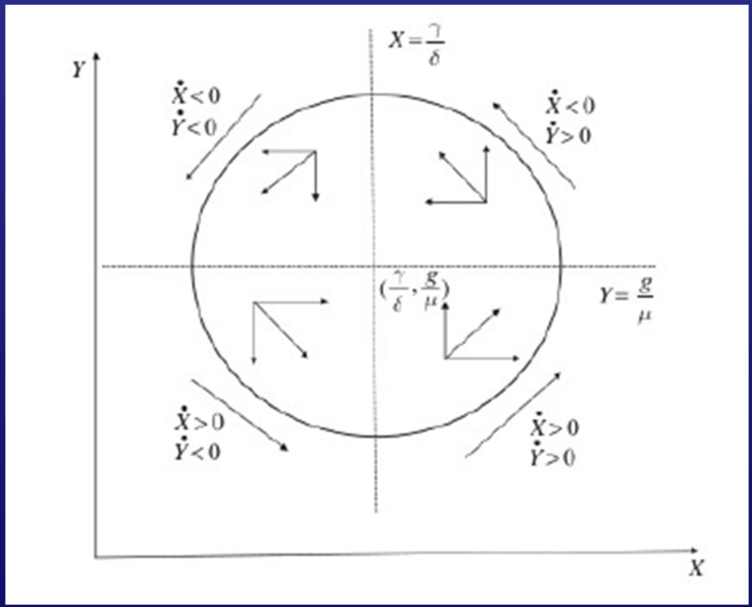


Figure: The phase diagram of Basic Predator Pray model

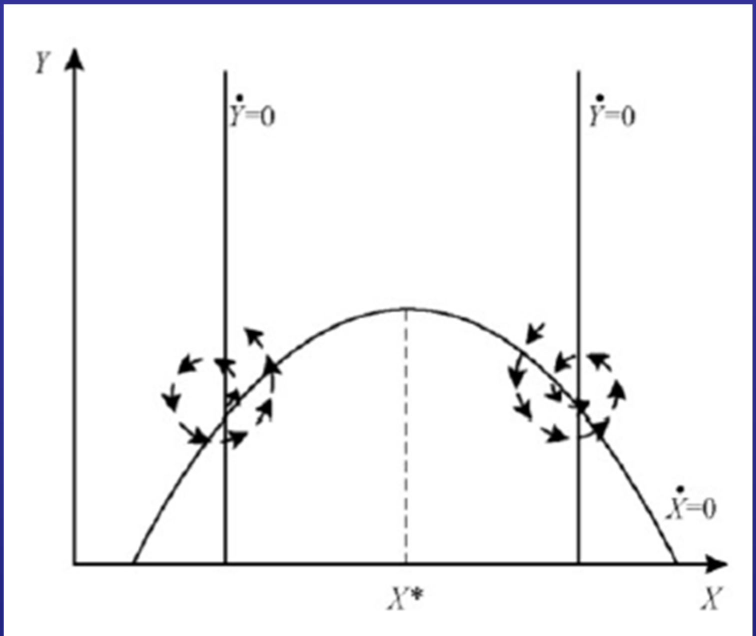
$$\dot{X} = gX(1 - \frac{X}{K}) - \mu \frac{X}{S+X} T$$

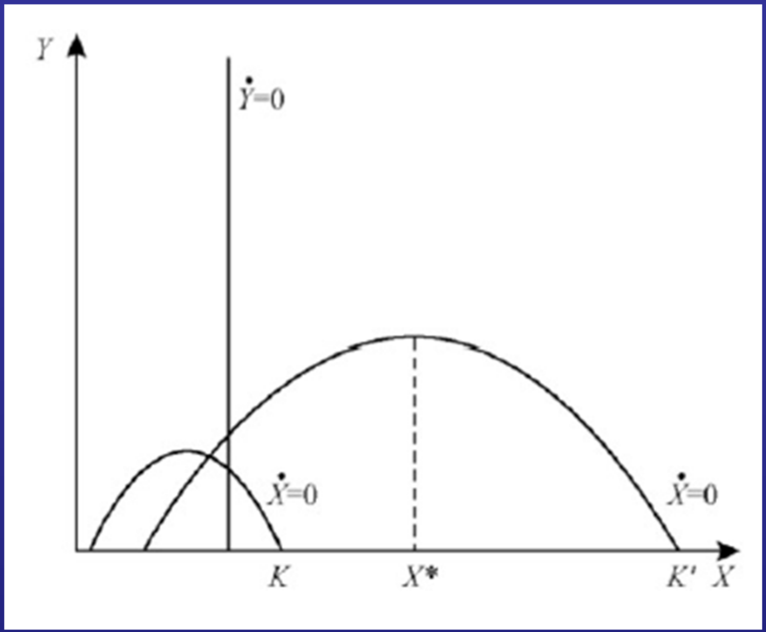
$$\dot{T} = \delta \frac{X}{S+X} T - \gamma T$$

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.

μ is the coeffcient of predation rate.
δ 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.
γ 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 !