# Medical Expenditures over the Life-Cycle: Persistent Risks and Insurance by Fukai, Ichimura, Kitao, and Mikoshiba

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# What does this paper do? Three main contributions

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2. Calibrates rich structural model of savings with medical expense risk
3. Provides new findings on the effects of medical expenses and government insurance on
   - Aggregate savings
   - Savings by gender, marital status, and education
   - Welfare

# Contribution 1: Japan and measuring medical expenses

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  - Individual's co-pays are low and decrease with age. In addition, there is a maximum co-pay amount that depends on one's income
  - Administrative data on the universe of Japanese people receiving medical services in a given year, filing an insurance claim, and not on welfare

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  - First paper also modeling education heterogeneity in this context

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- Utility from bequests affect households' costs of self-insurance (De Nardi, French, Jones, McGee, 2021)
- Suggestion: Evaluate the role of risks and bequest motives in affecting both model fit and policy

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- Suggestion: better discuss the effects of means-tested insurance vs. co-pays (including by age) and mechanisms

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- Suggestion: provide more intuition about the model's mechanisms, results, and policy implications

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- Solution: Acknowledge. Check other sources. Perform appropriate robustness/corrections on model inputs to assess importance of the missing link between medical expenses and life expectancy with marital status and education

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- Solution b: For those who go in and out of the sample, use a small medical expenditure amount instead of dropping them from the sample and recompute persistence

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- But medical expenses are the sum of a persistent and transitory component
- Estimating the persistence of the sum of these two shocks underestimates the persistence of persistent shocks
- Solution: estimate medical expenses as persistent and transitory shocks. Allow the persistent shocks to depend on age, cohort (important), and previous medical expenses. Then model the various pieces separately

# Contribution 1. The data. Overall assessment

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- Data limitations affect key aspects of the model (medical expenses persistence and differences between married and single people that are important in this context)
- More analysis/robustness needs to be performed to overcome data limitations

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  - Solution: model medical expenses as a function of past medical expenses (and other relevant variables) in a standard way and avoid talking about "health"

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- Income risk generates precautionary savings that can also be used to cover medical expenses and leave bequests
- Potentially important to model this risk
  - Solution: paper can save one state variable (Medical expenses modeled as a Markov(2) as opposed as a Markov(1) give the same results). Drop second order Markov and better model income risk

# Contribution 2. Rich model. Overall assessment

- State of the art, ambitious model
- Can be improved by better
  - Modeling the role of marriage and education in affecting medical expenses and life expectancy
  - Modeling labor income shocks, including as a function of medical needs

# Contribution 3. Novel findings. Comment 1

- Too many policy experiments which are not connected by the intuition of the key driving forces (self-insurance vs. government insurance, vs. taxation distortions vs. redistribution)
- Policy experiments should speaks to the strengths of data and the model
- Interesting questions that can be addressed with this framework:

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  - The effects of bequest motives
  - Means-tested and age-dependent insurance vs. copays

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  - How do income-tested medical expenditure caps affect welfare and for whom?
  - What is the most efficient way of providing insurance through co-pays and income-based caps?
  - Long-term care insurance co-pay rate is only 10%. That of medical expenses is 30-40% but with ceilings. Why do we want to different degree of insurance for these two programs?

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- Too many experiments, but none of them particularly suited to the strengths of data, model, and institutional environment
- Perform different decompositions and policy experiments. Better connect results across experiments
- Provide much more intuition of how the model works and why, and how that affects its policy implications

# Paper's overall assessment

- Excellent and ambitious paper, both computationally and empirically
- Can become even more ambitious with some additional work on both model and data
- Better discuss model fit to aspects not matched by construction and perform robustness to key parameters (patience, risk aversion, bequest motives)
- I learned a lot from it and I recommend reading it