Discussion of
Social Insurance, Information Revelation, and Lack of Commitment

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Introduction

- Basic principle of social insurance: balance insurance and incentive
  - requires great deal of commitment/information revelation to the government
  - ex-post and ex-ante preferences might differ

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  - very elegant characterization
  - high promised utility: reveal information; low promised utility: no information

Introduction

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  - requires great deal of commitment/information revelation to the government
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- This paper: tools to analyze social insurance without commitment
  - very elegant characterization
  - high promised utility: reveal information; low promised utility: no information

- My discussion:
  - Focus on the basic model to understand the results
  - Some more thoughts on the results

Basic Model

- unit continuum of individuals
- preferences over two goods: $\theta \log c_0 + \log c_1$
  - $\theta \in \{\theta_1 < \theta_2\}$; $\Pr(\theta_j) = \pi_j$
- promised utility: $v \sim \psi(v)$
- endowment: 1 unit of each good

First Best Problem

$$\max \int \sum_j \pi_j \left[\theta_j \log c_0(j,v) + \log c_1(j,v)\right] d\psi(v)$$

subject to

$$\begin{aligned} \sum_j \pi_j \left[\theta_j \log c_0(j,v) + \log c_1(j,v)\right] &= v \\ \int c_t(j,v) d\psi(v) &= 1 \end{aligned}$$

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- more c_0 to θ_2: $c_0(2,v) > c_0(1,v)$,
- equal c_1: $c_1(2,v) = c_1(1,v)$

Second Best Problem

$$\max \int \sum_j \pi_j \left[\theta_j \log c_0(j,v) + \log c_1(j,v)\right] d\psi(v)$$

subject to

$$\sum_j \pi_j \left[\theta_j \log c_0(j,v) + \log c_1(j,v)\right] = v$$

$$\int c_t(j,v) d\psi(v) = 1$$

$$\theta_j \log c_0(j,v) + \log c_1(j,v) \geqslant \theta_j \log c_0(j',v) + \log c_1(j',v)$$

- more c_0 to θ_2: $c_0(2,v) > c_0(1,v)$,
- more c_1 to θ_1: $c_1(2,v) < c_1(1,v)$

Lack of Commitment

- If government optimizes after agents announce their types it tries to implement first best
- θ_1 does not want to reveal their types
- Direct mechanisms do not work
- Two alternatives to confuse the government
  - use mixed strategies over messages: this paper
  - use scrambler

Lack of Commitment

$$\max \int \sum_j \pi_j \sum_{j'} \sigma_{j'}(v) \left[\theta_j \log c_0(j', v) + \log c_1(j', v)\right] d\psi(v)$$

subject to

$$\sum_j \pi_j \sum_{j'} \sigma_{j'}(v) \left[\theta_j \log c_0(j', v) + \log c_1(j', v)\right] = v$$

$$\int \sum_{j'} \sigma_{j'} c_t(j', v) d\psi(v) = 1$$

Incentive Constraint

Lack of Commitment

$$\max \int \sum_j \pi_j \sum_{j'} \sigma_{j'}(v) \left[\theta_j \log c_0(j', v) + \log c_1(j', v)\right] d\psi(v)$$

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Incentive Constraint

$$\int \sum_j \pi_j \sum_{j'} \sigma_{j'} \left[\theta_j \log c_0(j', v) + \log c_1(j', v)\right] d\psi(v) \geqslant$$

$$\int W(\sigma(v)) d\psi(v) - \Upsilon$$

Information Revelation

- Lagrangian method: problem is equivalent to

$$\max_{\sigma} \int [k(\nu, \sigma(\nu)) - W(\sigma(\nu)] \, d\psi(\nu)$$

- Since the value of insurance is higher for higher ν: optimal information revelation increases with ν
- Why important: ν is typically used for incentives in dynamic settings
  - How information revelation and incentives evolve over time
- Question: how do information revelation and provision of incentives interact over time?

Alternative Environment

- Suppose alternatively: $\log(c_0 + \theta) + \log c_1$
  - income shocks as opposed to taste shocks

- Value of insurance is higher for lower ν's: information revelation could be reversed
  - Perhaps it can explain the increased information revelation involved in social insurance programs for poor people: asset testing, income requirements, etc

- More generally: information revelation depends on the complementarity between ν and σ

Conclusion

- Elegant method to analyze social insurance and information revelation without commitment
- Complementarity between information revelation and incentives drives the results
- Could be applied to other settings: Mirrleesian, income shocks, etc.