HAS COMMUNITY RATING BEEN OPTIMAL?

Taurayi Chinowona

Momentum Group

What is Optimal?

- Classical Economic Efficiency

- Pareto Optimality

- Size of membership

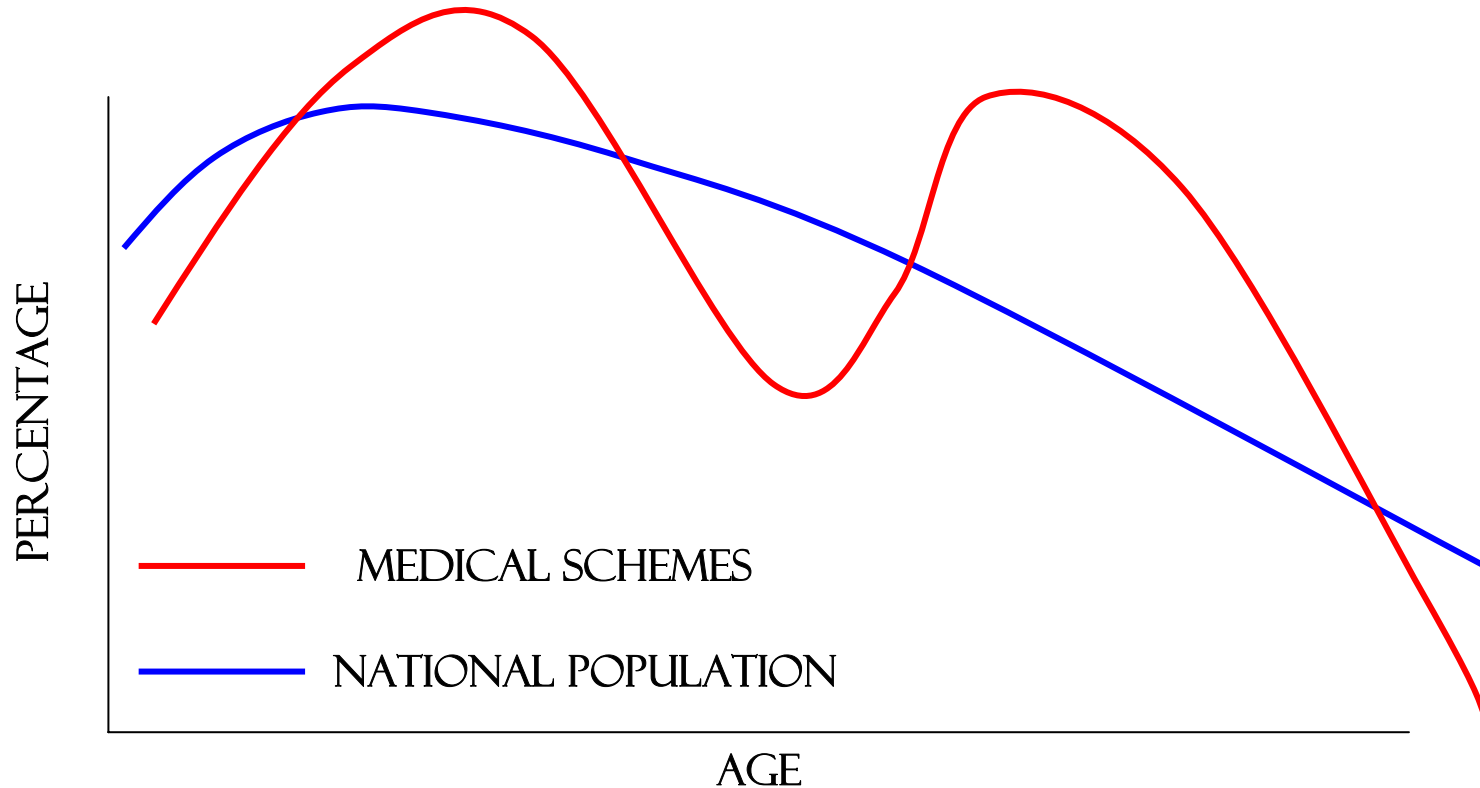*The Business of Change: 2010 and Beyond*

Agenda slides look like this

1. Economic Efficiency of Community-rated Market

2. Pareto efficiency

3. Results from simulations

4. Estimates of medical insurance price elasticity

5. Merits of normative case for community rating

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Age Distributions
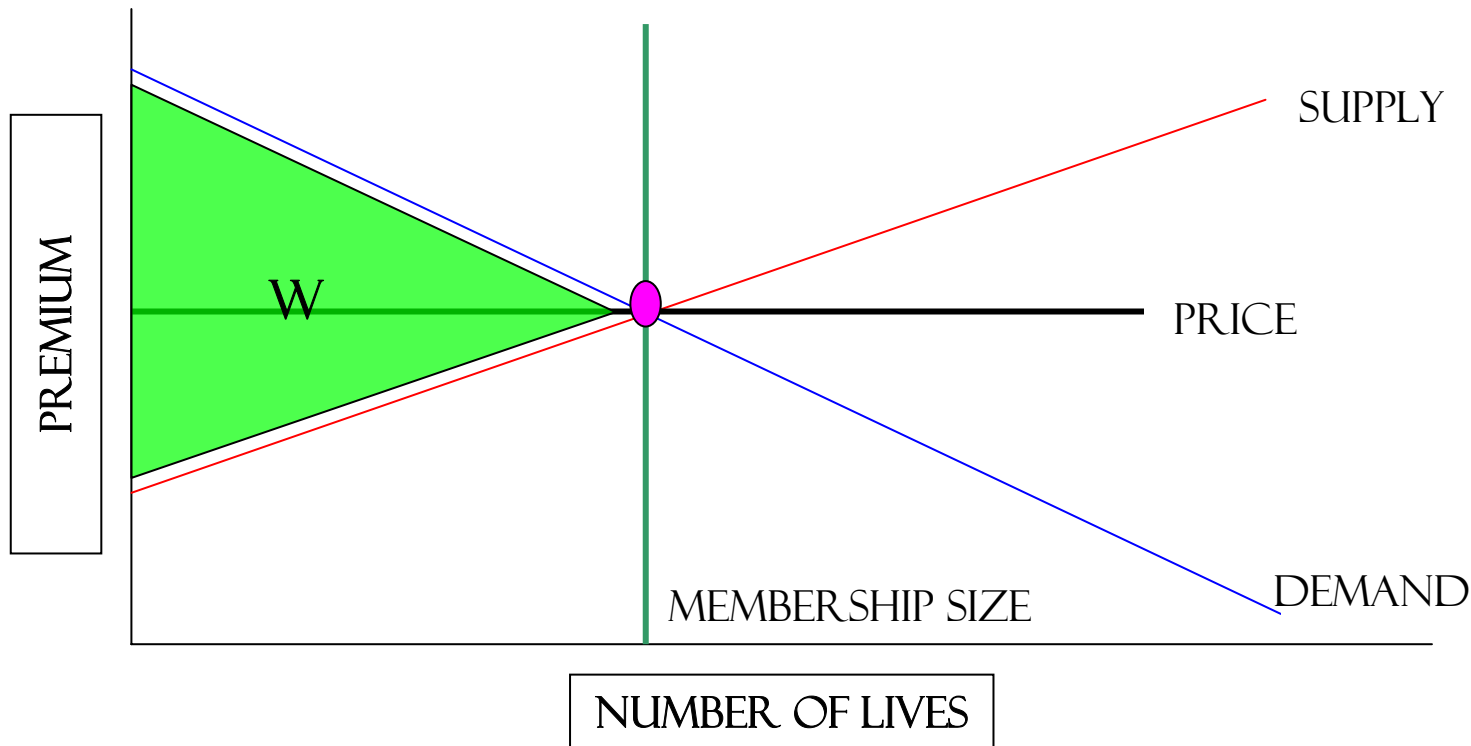
Price Structure and Economic Efficiency

- Price discrimination vs Uniform prices

  - Uniform prices are not efficient unless individuals' preferences are identical

  - Especially if cost of supply is non-uniform

  - Welfare is optimised when prices are discriminatory

  - Generally such markets cannot be in equilibrium due to secondary market arbitrage

  - Goods that do not have secondary markets can be in equilibrium under price discrimination

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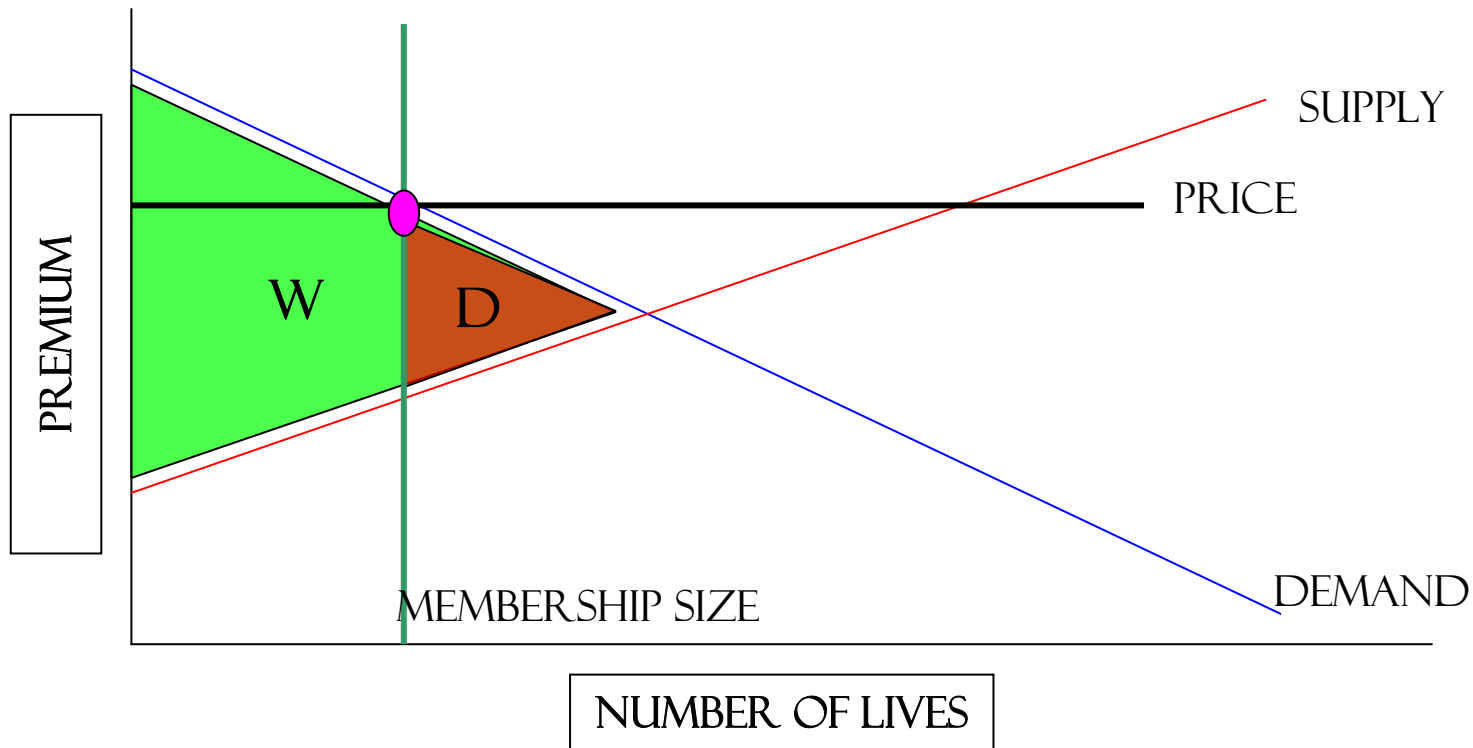# Price Structure and Economic Efficiency

- **YOUNGER MEMBERS**

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Price Structure and Economic Efficiency

- **YOUNGER MEMBERS**

PREMIUM

W

D

SUPPLY

PRICE

DEMAND

MEMBERSHIP SIZE

NUMBER OF LIVES

Price Structure and Economic Efficiency

- **OLDER MEMBERS**

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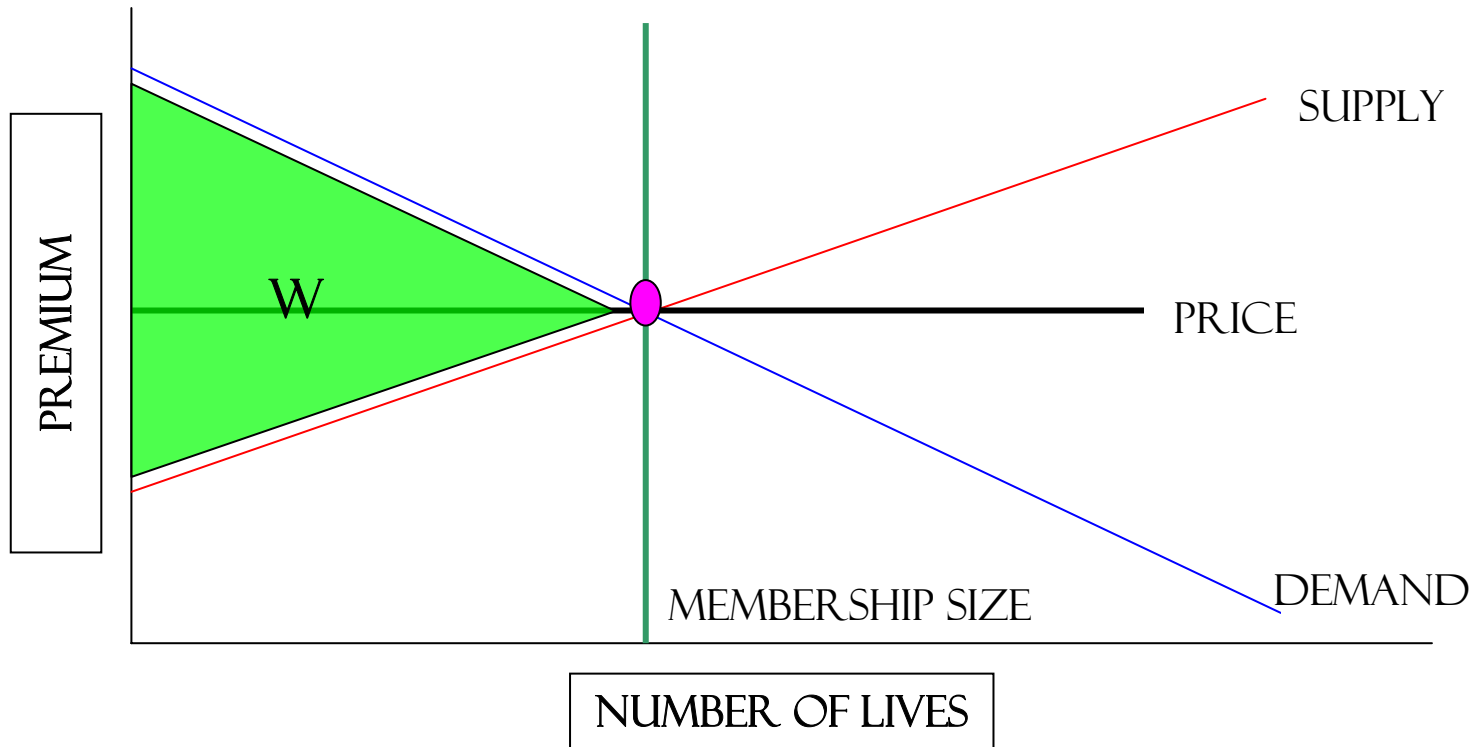
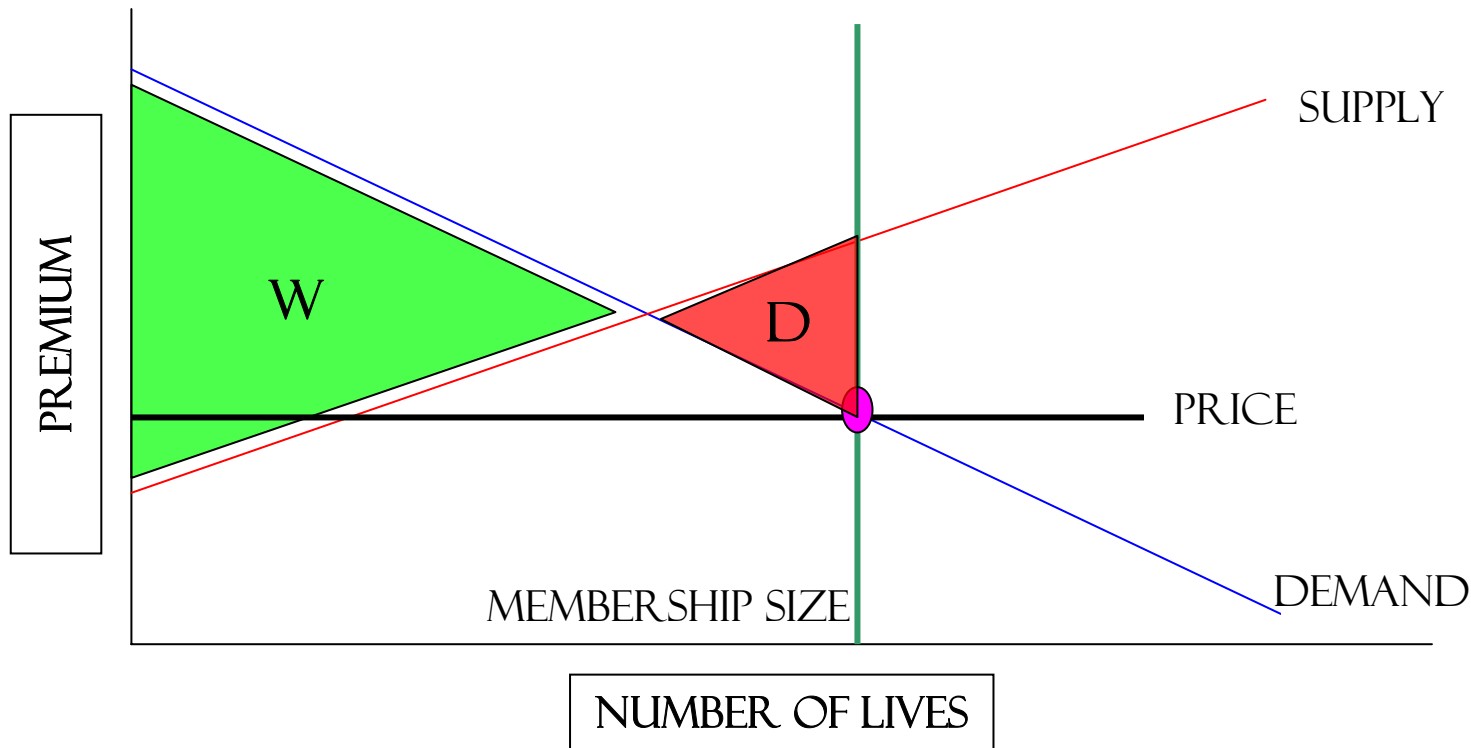# Price Structure and Economic Efficiency

- **OLDER MEMBERS**

Simulating the market

- The Model

Simulating The Market

- **Claims vs Age**

Simulating the market

- The Model

  - The only unknown in the model is the price elasticity of demand, upon which the relationship between contributions and demographic profile depends
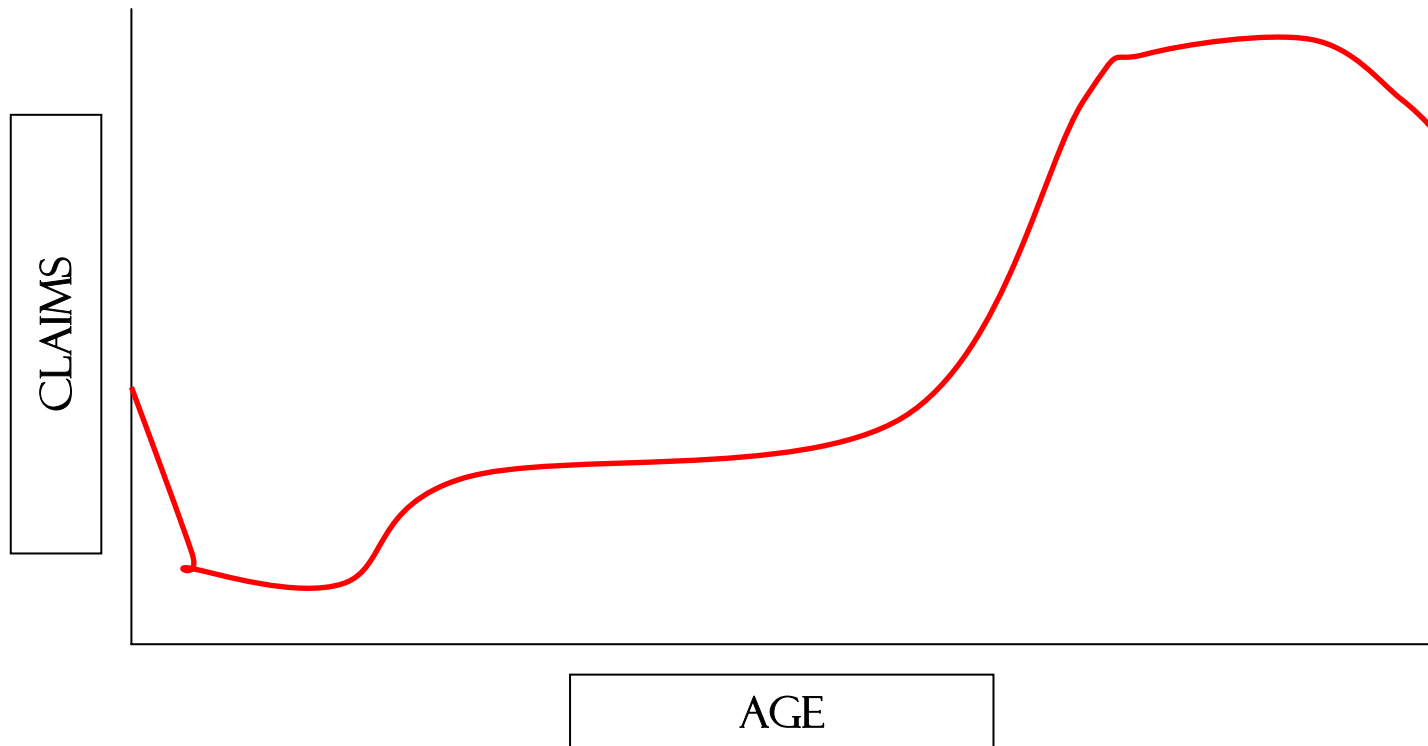
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Simulating the market

- The Tests

  - Hypothetical medical scheme was constructed

  - Demographic profile identical to that of industry

  - Community rated premium based on average claims

  - Average claims function of demographic profile and variation of claims with age

  - Alternative contribution levels and structure applied to this model to see effect on membership and underwriting performance

Simulating the market

- The Results

  - All uniform contribution reductions tested resulted in worse underwriting results

  - Some uniform contribution reductions at lower ages reduced average claims by more than reduction in average contributions

  - Therefore underwriting result improved

  - Can use resultant surplus to reduce contributions at higher ages

  - So status quo not Kaldor-Hicks efficient & therefore not Pareto efficient either

  - Also membership size not optimal

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Elasticity Estimates

- Methodology

  - Estimated variations in demand with price using regression analysis

  - Total contribution is proxy for quantity demanded

  - Price is contribution minus employer subsidy

  - Different employers offer different subsidy levels

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Elasticity Estimates

- Methodology

    - Controlled for age

    - Ideally should control for income

    - Controlled for medical scheme

    - Considered single lives only

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Elasticity Estimates

- Results

  - Range of values from -.05 to -2.5 depending on age

  - Also dependant on coverage level

  - Elasticity highest in the 'middle-market'

  - Elasticity decreases with age

Credibility of Elasticity Estimates

- Methodological weaknesses

  - These are estimates of price elasticity of demand with respect to level of cover, not w.r.t. decision to enrol

  - Preferences not necessarily rigid so that latter is not necessarily the limit of the former

  - Representativity of sample questionable

  - Considered single lives only, so in that respect not representative, but these lives are significant part of market

  - Income not controlled for

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Credibility of Elasticity Estimates

- Related Literature

  - Most research deals with individual firm price elasticity

  - Buchmueller found elasticity estimates of around i.r.o. retirees in California who worked for the same employer in range of -0.21 to -0.37

  - Other studies amongst Harvard and UC plans found higher elasticities after changes in subsidies over time

  - Van Dijk et al reported individual firm elasticities of -0.1 to -0.38 in Holland

  - Significantly elasticity was also higher at the lower ages

  - Abraham and Voigt also found estimates in the United State in the range -0.1 to -1.54

Normative case for community rating

- Satisfies widely-held notions of 'social justice'

- However, at expense of certain individuals

- E.g. some low income young people subsidise wealth pensioners

- Currently lots of pensioners receive employer subsidies

- So community rating in some cases benefits employers

- In any case social programs ought to be funded from the fiscus

FINAL WORD

"If you think healthcare is expensive now, wait until you see what it costs when it's free": P.J. O'Rourke

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