Choice of Instrument

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Fall 2025

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Social Insurance Takes Many Forms

- Publicly provided (uniform) program
  - Medicare Parts A and B
  - Unemployment Insurance
  - Social Security Disability Insurance, Old Age Assistance
- Mandated employer-provided provision: Worker's Compensation
- Publicly subsidized and regulated, privately provided
  - Medicare Part D (prescription drugs)
  - Health Insurance Exchanges under ACA
- Private option to compete with publicly provided insurance
  - Medicare Advantage

Choice of Instrument Question

- Conditional on intervention
  - Consequences of different instruments (Positive)
  - What form should intervention take (Normative)
- Vastly understudied
  - Conceptual and empirical work needed
- Some increasing attention to "choice of instrument" given proliferation of (private) instruments
  - Will discuss some of what we have learned
  - But huge scope for more work here, both within sectors where work is underway and in other sectors

Outline of Unit

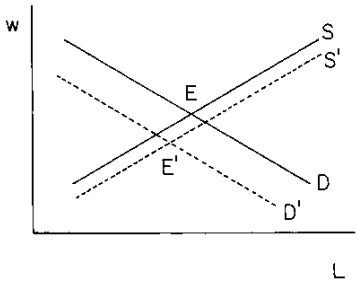
1. Public provision vs. Mandated Employer Provided Benefits ("Benefit-tax linkage")
2. Choice in Social Insurance
3. Public vs. Private Provision
4. Regulation of Privately Provided Social Insurance

Part I: Benefits-Tax Linkage

Public provision vs. Mandated Employer Provided Benefits

- Summers (1989 AER P&P) "Some Simple Economics of Mandated Benefits"
- Thinks about choice of publicly providing a good (e.g. health insurance, pension etc) vs mandating that employers provide it to their employees
- Efficiency cost of public provision is the DWL of taxation needed to finance the good
- Key claim of paper: Employer mandates are more efficient than public provision
  - Efficiency cost of mandated employer benefit is LESS than DWL of taxation required to publicly provide benefit
- Idea: Efficiency cost of mandate is equivalent to the distortionary cost of a tax where the tax rate is the employer cost of providing the benefit *minus the employee valuation of the benefit*
  - Therefore as long as employee valuation is non negative [and employer cost not higher than public provision cost] efficiency cost of mandate is lower

Summers 1989



- Imagine mandating a benefit (e.g. health insurance) at cost to employer of $1.00 per employee hour
- Labor demand shifts down by cost of provision ($1)
- What happens to Labor Supply?
  - Shifts out by amount = value of benefits
- New equilibrium: low L, low w, but in general L reduced by less than if just $1.00 of tax

Summers (1989)

- Case I: Mandated benefits worthless to employees
  - From employer and employee perspective, just like a tax on labor
  - Cost is same DWL as pure tax (same wedge)
- Case II: Valuation of mandated benefit arbitrarily close to $1.00
  - No change in employment
  - No change in employer total costs or employee utility
  - Full incidence on wages
- Case III: More than full valuation
  - Is this possible?

Another example: Social Security Old Age Benefits

- Public Pension
- Pay payroll taxes while you are working (capped / regressive)
- Receive pension benefits when retired
  - Benefit formula a function of taxes paid (progressive)
  - Benefits paid as an annuity (survival contingent stream of payments)
- Example of benefits-tax linkage
  - If people recognize that taxes paid today are for benefits tomorrow (and there was no redistribution and benefits were fully valued relative to cost) there would be no distortionary effect of the SS payroll tax

Key questions

1. Are workers aware of benefits-tax linkage in Social Security?
   - If not, payroll tax functions like a distortionary tax (no outward shift of labor supply)
   - One argument for "private accounts" is to make the tax-benefit linkage more salient
2. How high is worker demand for illiquid saving?

Another example: Rising health care costs

- Claim: rising health care costs are decreasing employment in US because employers provide (and pay employee premiums for) health insurance in US
  - Thus rising health care costs increase employer costs and decrease employment
  - Contrast often drawn to other countries where health insurance not provided by employer
    - Concern of decreased US competitiveness

- Discussion q – how would you analyze the claim: rising health care costs will decrease employment?

Some caveats (in the paper)

- Equity-efficiency tradeoff
  - The very thing that makes the benefit-tax linkage efficient may make it have poor redistributive properties
    - People with higher costs of e.g. health insurance pay more in the form of larger cut in wages
    - vs. public provision of health insurance which can redistribute from e.g. healthy to sick
- Labor market rigidities may impair ability to shift onto workers
  - Binding minimum wage, regulation against e.g. paying differently based on gender or age

Some comments (not in the paper)

- Paper is really not about mandated benefits so much as about benefit-tax linkage ("benefits tax")
  - When there is a direct return (benefit) to the tax being paid
- How provide benefits to those without jobs?
  - Separate public program for them would break link between benefit and employment $\rightarrow$ don't get shift out of labor supply
- Perhaps the economics are not so simple:
  - e.g. What if firms have heterogeneous costs of provision? What if firms have market power? etc.

Little empirical evidence

- Seminal Gruber (1994 AER) paper on incidence of mandated maternity benefits
  - Health insurance must now cover maternity
  - Compares effects for groups with different expected costs (married women < 40 vs. older women or single men)
  - DD paper finds substantial decline in wages, little change in labor inputs
  - Consistent with "full shifting" by group

- Very little otherwise
  - Gruber (1997) and Saez et al. (2012) on incidence of payroll tax
  - Would be great to have more work

- Additional questions of interest:
  - How finely can/ does shifting happen (variation in costs within groups)?
  - Summers paper assumes rationale for government intervention and addresses question of form
    - But is there adverse selection into firms based on benefit provision?!

New paper: Mandated Maternity Leave in India

- Ghosh, Hao, Ho, Sharma, Tandon (2025)
  - 2017 Indian law that increased duration of paid maternity leave from 12 to 26 weeks (making India fourth most generous country for maternity leave)
  - Variation: firms previously offering 12 weeks (treatment group) vs those already offering 26 weeks (comparison group)
- Findings I: Employment and wages: full shifting onto employment, no impact on wages (opposite of Gruber 1994)
  - Reductions in female employment among women 18-35 (no impact on older women)
  - No reduction in female wages
- Possible explanations:
  - Women do not value longer leaves or rigidities that prevent wage declines
  - Does not appear to be former: women take full duration after reform and WTP for leave (estimated via incentivized surveys) appears high

Findings II: Rationale for government intervention?

- Testing for adverse selection: compare control firms in markets where many firms already offered longer leaves to markets where most firms offered 12 weeks
  - No evidence of change in share of workers who are female or female quit rate
  - Some evidence of decline in rate of female maternity leave
- But find evidence that employers over-estimate probability of female leave taking
  - Back of envelope calculation to rationalize the employment decline
  - Also survey of HR managers reveals misperceptions at about the level required to rationalize employment declines
- Estimate costs of providing longer leave across firms based on employment declines
- Combine into welfare analysis

Part II: Choice in Social Insurance

Choice in Social Insurance

- In US, historically social insurance had uniform plan / no choice
  - UI, DI, Medicare Parts A and B
- Increasing choice in social insurance in US health insurance
  - Medicare Part D
  - ACA Exchanges
- Sweden:
  - Choice in UI; no choice in HI

Choice can be offered by public or private sector

- Swedish UI: Public insurance with (public) choice
- Medicare Part D and ACA exchanges: subsidized (and regulated) choice within private markets
- The 'public option': Medicare Advantage, UK HI and Australian HI:
  - public uniform benefit
  - option to buy additional private

Choice in Social Insurance: Outline

1. Pigouvian Approach (Hendren, Landais and Spinnewijn Annual Review 2021)
2. Pricing of supplemental insurance: top up vs. no top up
3. Impact of supplemental insurance on basic coverage

Pigouvian Approach

- Value of Choice (from social planner perspective)
  - Increasing in variation of individual valuations
    - That can come from preference or risk heterogeneity
  - Decreasing to extent that variation comes from selection on risk or selection on moral hazard
- Challenges for private market offering choice:
  - Externalities: adverse selection, fiscal externalities
  - Internalities: choice frictions

Value of Choice: Setup

- Charactierize people by their type θ
  - face a binary risk that occurs with probability π_θ
  - WTP for insurance: $v_\theta(b)$
- risk premium (WTP for extra coverage relative to risk):

$$\eta_\theta(b) = \frac{v'_\theta(b) - \pi_\theta(b)}{\pi_\theta(b)}$$

- moral hazard (percentage increase in likelihood of event occuring in response to percentage increase in b):

$$\varepsilon_\theta(b) = \frac{\pi'_\theta(b)}{\pi_\theta(b)} b.$$

Value of Choice

- Start with some uniform benefit b_o
  - Optimal uniform benefit b^*(a la Baily- Chetty)
- What is welfare impact is of offering individuals option to buy extra coverage Δ at price p?
- People will buy iff $v'_\theta(b_o) \geq p$ and their welfare gain is:

$$\frac{d}{d\Delta} W_\theta(b_0, \Delta, p)|_{\Delta=0} = 1\{v'_\theta(b_0) \geq p\} \pi_\theta(b_0) [\eta_\theta(b_0) - \varepsilon_\theta(b_0)].$$

- Let $F_\Delta(b_0, p) = \Pr\{v'_\theta(b_0) \geq p\}$ denote the fraction of the population purchasing additional coverage at prices p when b_0 and $E_\Delta[\circ] = E[\circ | v'_\theta(b_0) \geq p]$ denote the conditional expectation over the set of people taking up top-up insurance when prices are p

Value of Choice (con't)

- Value of choice:

$$\frac{d}{d\Delta} W_\theta(b_0, \Delta, p)\,|_{\Delta=0} = 1\{v'_\theta(b_0) \geq p\}\,\pi_\theta(b_0)\,[\eta_\theta(b_0) - \varepsilon_\theta(b_0)]$$

$$\frac{d}{d\Delta} E[W_\theta(b_0, \Delta, p)]\,|_{\Delta=0} = F_\Delta(b_0, p)\,E_\Delta[\pi_\theta(b_0)\,[\eta_\theta(b_0) - \varepsilon_\theta(b_0)]]$$

- starting from optimal universal coverage point $b_0 = b^*$ we know that $\frac{d}{db} E[W_\theta(b^*)] = 0$ when averaging over the entire population
  - But we do not know sign of $\frac{d}{db} E_\Delta[W_\theta(b^*)]$when restricting to the set of people who purchase the additional Δ units of insurance

Value of Choice (con't)

- Value of choice:

$$\frac{d}{d\Delta} E\left[W_\theta\left(b_0, \Delta, p\right)\right]|_{\Delta=0} = F_\Delta\left(b_0, p\right) E_\Delta\left[\pi_\theta\left(b_0\right)\left[\eta_\theta\left(b_0\right) - \varepsilon_\theta\left(b_0\right)\right]\right]$$

$$\frac{\frac{d}{d\Delta} E\left[W_\theta\left(b^*, \Delta, p\right)\right]|_{\Delta=0}}{F_\Delta\left(b^*, p\right)} = \underbrace{E_\Delta\left[\pi_\theta\left(b^*\right)\eta_\theta\left(b^*\right)\right] - E\left[\pi_\theta\left(b^*\right)\eta_\theta\left(b^*\right)\right]}_{\text{Selection on Risk Premium}} - \underbrace{\left(E_\Delta\left[\pi_\theta\left(b^*\right)\varepsilon_\theta\left(b^*\right)\right] - E\left[\pi_\theta\left(b^*\right)\varepsilon_\theta\left(b^*\right)\right]\right)}_{\text{Selection on MH}}$$

$$\underbrace{E_\Delta\left[\pi_\theta\left(b_0\right)\eta_\theta\left(b_0\right)\right] - E\left[\pi_\theta\left(b_0\right)\eta_\theta\left(b_0\right)\right]}_{\text{Selection on Risk Premium}} = \underbrace{E_\Delta\left[v'_\theta\left(b_0\right)\right] - E\left[v'_\theta\left(b_0\right)\right]}_{\text{Selection on WTP}} - \underbrace{E_\Delta\left[\pi_\theta\left(b_0\right)\right] - E\left[\pi_\theta\left(b_0\right)\right]}_{\text{Selection on Risk}}.$$

Value of Choice (con't)

$$\frac{\frac{d}{d\Delta} E\left[W_\theta\left(b^*, \Delta, p\right)\right]|_{\Delta=0}}{F_\Delta\left(b^*, p\right)} = \underbrace{E_\Delta\left[\pi_\theta\left(b^*\right)\eta_\theta\left(b^*\right)\right] - E\left[\pi_\theta\left(b^*\right)\eta_\theta\left(b^*\right)\right]}_{\text{Selection on Risk Premium}}$$

$$- \underbrace{\left(E_\Delta\left[\pi_\theta\left(b^*\right)\varepsilon_\theta\left(b^*\right)\right] - E\left[\pi_\theta\left(b^*\right)\varepsilon_\theta\left(b^*\right)\right]\right)}_{\text{Selection on MH}}$$

$$\underbrace{E_\Delta\left[\pi_\theta\left(b_0\right)\eta_\theta\left(b_0\right)\right] - E\left[\pi_\theta\left(b_0\right)\eta_\theta\left(b_0\right)\right]}_{\text{Selection on Risk Premium}} = \underbrace{E_\Delta\left[v'_\theta\left(b_0\right)\right] - E\left[v'_\theta\left(b_0\right)\right]}_{\text{Selection on WTP}} - \underbrace{E_\Delta\left[\pi_\theta\left(b_0\right)\right] - E\left[\pi_\theta\left(b_0\right)\right]}_{\text{Selection on Risk}}.$$

- Social welfare is increasing in choice iff there is a price for which those who are induced to buy have a WTP that covers their marginal cost to the insurer
- Value of choice is
  - increasing in heterogeneity in WTP
  - decreasing in selection on risk or selection on moral hazard

Value of Choice (con't)

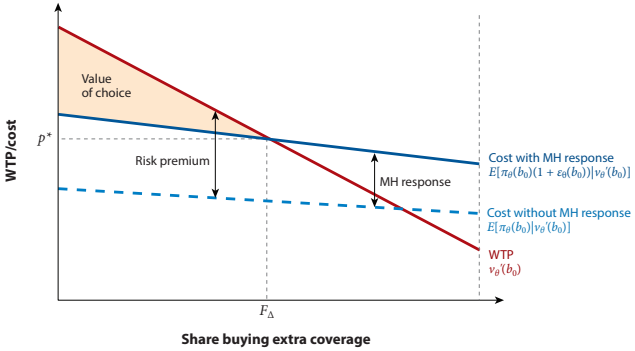


Figure 1

Schematic representation of demand and cost curves for extra coverage in the presence of moral hazard (MH) and risk-based selection. The figure offers a graphical representation of Proposition 2. The value of offering choice is captured by the area between the demand and cost curves for those with willingness to pay (WTP) higher than the price.

Some empirical applications

- Marone and Sabety (2022 AER): value of choice in US health insurance
- Hendren, Landais, Spinnewijn (2021 AR): value of choice in Swedish UI
- Need for more work!

Challenges in market for choice

- Value of choice is
  - increasing in heterogeneity in WTP
  - decreasing in selection on risk and selection on moral hazard
- Can market efficiently provide choice?
- Challenges: Externalities and internalities that distort price of supplement
  - Suggests role for Pigouvian pricing in these markets

Internalities

- Behavioral frictions
  - individual now buy extra coverage IFF $v'_\theta(b) + f_\theta(b) \geq p$

$$\underbrace{E_\Delta[\pi_\theta(b_0)\eta_\theta(b_0)] - E[\pi_\theta(b_0)\eta_\theta(b_0)]}_{\text{Selection on Risk Premium}} = \underbrace{E_\Delta\left[\hat{v}'_\theta(b_0)\right] - E\left[\hat{v}'_\theta(b_0)\right]}_{\text{Selection on WTP}}$$
$$- \underbrace{E_\Delta[\pi_\theta(b_0)] - E[\pi_\theta(b_0)]}_{\text{Selection on Risk}} - \underbrace{E_\Delta[f_\theta(b_0)] - E[f_\theta(b_0)]}_{\text{Selection on Frictions}}.$$

- Presence of choice frictions can prevent individuals with high valuation $v'_\theta(b)$from buying supplemental coverage and vice versa
- When considering corrective pricing a la Pigou, it is the average friction among the marginal buyers that is relevant.
- Efficient price:

$$p^* = E_{p^*}[\pi_\theta(b_0)[1 + \varepsilon_\theta(b_0)] + f_\theta(b_0)]$$

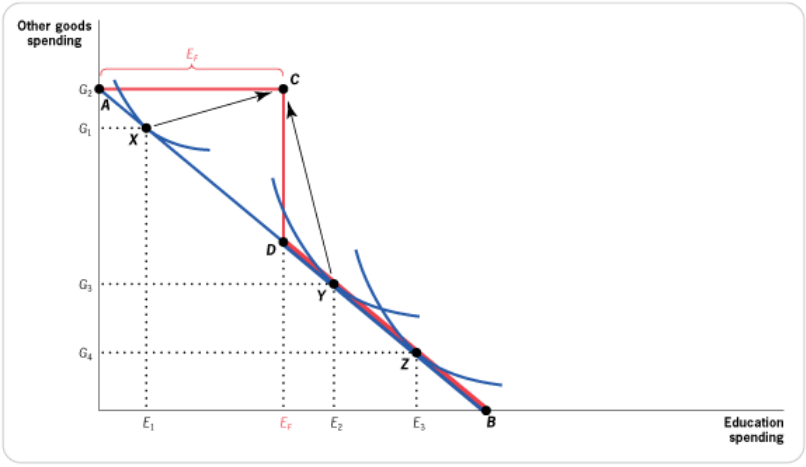
Externalities

- Externalities:
  - Adverse selection: higher risk impose negative externality on others (increased price)
    - {question: how does existing uniform benefit b^*affect selection in residual supplemental market?}
  - Fiscal externality from supplementary coverage: sign depends on design
    - Negative externality (increased costs) onto uniform basic coverage - e.g. Medigap - Cabral and Mahoney 2019
    - Positive externality onto uniform basic coverage - e.g. UK supplemental health insurance (top up not allowed)
- Standard Pigovian subsidy / tax response

Two kinds of choice: Top up vs. no top up

- **Top up**: Individuals pay incremental cost of the additional insurance
  - Efficient pricing on the margin
  - examples: Health insurance in Singapore, Netherlands, Germany, Israel, US Medicare, US health insurance exchanges
- **No top up**: uniform benefit; if want anything else must buy everything (including inframarginal) on private market
  - Health insurance in UK (examples: cataract surgery with standard vs special lens; injectible vs oral MS drugs)
  - US Medicaid
  - public schools vs private schools

No top up – crowd out: Peltzman 1973



Public Education Spending Crowds Out Private Spending • When the government introduces free public education in the amount of E_F, the budget constraint changes from *AB* to *ACDB*. This leads families such as *X* to increase the amount of education they obtain from E_1 to E_F and families such as *Z* to maintain their educational spending of E_3. Families such as *Y*, however, reduce their educational spending from E_2 to E_F.

No top up: Crowd Out

- **No top up**: Publicly provided uniform benefit; if want anything else must buy everything (including inframarginal) on private market
  - Examples: Medicaid; UK NHS; public schools vs private schools
- Concern: if buy insurance (or care directly) have to pay all the inframarginal costs that would have been covered by public insurance
  - Inefficiency arises because WTP on margin for more of good may exceed cost but cannot purchase that without paying for inframarginal
- Conjecture: positive fiscal externality from buying private good
- In health insurance:
  - Medicaid and private acute health insurance: Cutler and Gruber (QJE 1996); Gruber and Simon (JHE 2008)
  - Medicaid and private long-term care insurance: Brown and Finkelstein (AER 2008)

Application: Medicaid and long term care insurance

- Medicaid and private long-term care insurance: Brown and Finkelstein (AER 2008)
  - Medicaid will pay after a deductible (of essentially all of one's wealth and income) and after any private insurance benefits
  - No top up
- Key finding:
  - Medicaid offers very incomplete insurance (deductible of essentially all one's wealth) but substantially crowds out demand for private insurance
  - Why? Medicaid imposes a big implicit tax on private insurance because of combination of means tested eligibility and role as secondary payer to private insurance
- Comments:
  - Method for estimating WTP: calibrate a utility-based model of a 65-year old risk averese individual who chooses an optimal intertemporal path in the presence of uncertainty about long term care expenditures. WHY?
  - How to reduce the Medicaid implicit tax? (Brown vs. Finkelstein)

Top up

- Gets the pricing right on the margin
- But also:
  - Possible negative fiscal externalities (e.g. if cover complements like co pays and deductibles in Medigap or France)
  - Higher government spending (often on the higher income who are more likely to top up)

Impact of Supplemental Insurance on Basic Coverage

- Concern that supplemental health insurance (or school) system can erode adequacy of basic system
- Economic: upward sloping supply curves
  - Recruit more / better doctors to supplemental insurance –> increased wait times, decreased quality in basic option
- Political economy: if more and more of the high income are in the supplemental system, can erode political support for requisite funding of the basic system
- Varied responses
  - Some countries seem to have been able to deal with concern successfully (Israel, Australia, Singapore)
  - Others have not (Argentina, Brazil...)
  - Some Canadian provinces so concerned that they outlaw the provision of duplicative private insurance

Part III: Public vs. Private Provision

Public vs. Private Provision

- Hart, Shleifer, Vishny (HSV) "The Proper Scope of Government: Theory and An Application to Prisons" (QJE 1997)
  - Consider the provision of services "in house" (i.e. public provision) vs "contracted out" (private provision)
  - Examples: defense procurement, garbage collection, police, armed forces, education, health care, prisons...
  - Emphasize distinctions that arise because of incomplete contracts and who is allocated residual control rights

- Key distinction between public and private provision: allocation of residual control rights to government or private manager

Model Sketch

- Benevolent bureaucrat or politician G
- A facility - public or private - is run by a single manager M.
  - M can invest effort in improving quality (at some cost) or reducing cost (with adverse effect on quality)
- Incomplete contracts: Neither cost nor quality innovations are contractible ex ante.
  - Both require approval of owner of asset (i.e. person with residual control rights)
  - Residual control rights are with G for public provision and M for private provision.

HSV 1997 (con't)

- Consequences of public vs private provision

- Public: G retains residual control rights
  - M needs approval of G for cost or quality investments and can (Nash) bargain for some share of surplus (e.g. via higher wages).
  - Because M gets only a fraction of returns, underinvests in both quality improvement and cost reduction relative to first best

- Private: M retains residual control rights
  - Does not need approval from G for cost reduction and does not internalize adverse impact on quality - therefore over-invests in cost reduction relative to first best
  - Bargains with G for higher price before investing in quality improvement and presumably only gets a fraction of returns so suboptimally low quality improvement relative to first best

- Conclusion: neither achieves first best and empirical question which is preferable

Applications - some potential examples

- Use public funds to finance private schools (vouchers):
  - Greater incentives for cost reductions (perhaps too great)?
  - Might underinvest in quality (e.g. hire less expensive teachers' aides vs high quality teachers)
  - Incentive to cream skim against expensive to educate children (e.g. special ed)

- Private vs. public hospitals
  - Greater incentives for cost reductions (perhaps too great)?
  - Underinvest in quality of care?
  - Incentive to cream skim against expensive to treat patients

- Prisons.
  - HSV application - qualitative discussion (no empirical work per se)
  - Question: Is 'quality shirking' undesirable in case of prisons? What is role of prisons? (incapacitate; deter; deliver justice)

Comments

- Potential argument for public sector provision from "preference for universality" / everyone getting served. Concern that private providers cream skimming off expensive consumers
  - Special ed kids
  - Very sick patients
  - Postal service delivery in rural areas
- Could give private sector incentives or mandates to service these populations but with incomplete contracts and private sector overly incentivized on cost reductions relative to first best, expect gaming here
- Two sides of same coin: exactly what makes private sector appealing (high powered incentives to reduce costs as residual claimant) raises concerns about quality shirking - nature of service provided or types of customers served
- Non-profits as the solution?
  - Might they be as high-powered / rapacious in terms of incentives to reduce costs but less so on quality - i.e. quality enters their objective function in addition to profits?

Public vs Private Provision - Other considerations

- HSV emphasize efficiency considerations of public vs private when there are incomplete contracts
- Another potential efficiency consideration: more competition when privatized?
  - HSV argue (how convincingly?) that can have competition through government-owned firms and no competition through private monopoly
- Non-benevolent principal (politicians / bureaucrats or CEOs)
  - Private benefits to principals from residual control rights
    - Privatization of public enterprises raise costs to politicians of influencing them
  - Citizen discontent or tight budgets will force politicians to privatize
    - analogy to private sector: shareholders disciplining private managers

Empirical work

- Key point: Huge scope for more work

- Will briefly discuss some work out there:
  - "Testing" HSV: Levin and Tadelis (2010); Banerjee et al. (2017)
  - (even more briefly) Some other comparisons of public vs private
    - private vs public provision of prisons
    - public vs private provision of health care
    - for profit vs public (or non profit) post secondary education
    - private vs public provision of health insurance (Part D; exchanges; Medicare Advantage)

Levin and Tadelis (2010)

- "Contracting for government services: theory and evidence from US cities" (Journal of Industrial Economics, 2010)
- "Make or buy" decision of cities
  - street cleaning, garbage collection, fire departments, parks and recreation etc
  - Produce in house or contract with private sector firms?

- Tradeoff:
  - in house (public provision) suffers from productive inefficiency due to weak incentives of employees
    - but low contracting costs
  - private contracting produces productive efficiency (performance contracts / requirements)
    - but costs of writing, monitoring and enforcing performance standards

- Politically motivated city administrator may care more about quality (or public sector employment) than about costs

Evidence from Cities (con't)

- Data
  - International City / County Management Association (ICMA) data
    - public service provision (in house vs private contract) for 1,000 cities and a range of services (street cleaning, parks and recreation, emergency etc).
  - Census and other data on city demographics, form of governance, political leanings etc
  - Survey of city managers to measure 'performance contracting difficulty' across 29 services (cool!)
    - Key theoretical prediction that performance contracting difficulty will reduce privatization probability

- Key cross-sectional findings:
  - Services for which it is harder to write and administer performance contracts are less likely to be privatized (and especially in larger cities)
  - Services ranked lower in terms of residential sensitivity to quality are more likely to be privatized
  - Political effects: cities run by an appointed manager (vs elected mayor) are more likely to contract for service provision

Banerjee et al. (2017)

- "The Role of Competition in Effective Outsourcing: Subsidized Food Distribution in Indonesia"

- Large-scale subsidized rice program ("Raskin") serving 17.5 million low income households
  - Subsidy is about 4% of household consumption
  - National program, but "last mile" delivery from central distribution point handled by local governments
  - Concerns about theft (missing rice), markups (forced payment above intended copay),
    - May not be malfeasance - divert to more deserving; higher copays to cover transport costs etc
  - Concerns about poor quality rice (mold, pests)

- Non contractible elements of service delivery as in HSV: quality, theft, delivery costs, etc

Experimental design (across 572 locations)

- Control (status quo): local government picks up and distributes rice
- Bidding treatment: private individuals or firms can bid for right to become official distributor
  - public meeting to describe procurement process and advertise opportunity to bid
  - committee formed at public meeting to oversee bidding process and monitor outcome
  - current distributor (village head / local government staff member) allowed to bid
- Bidding with enhanced competition: if don't get 3 bids within deadline, extend deadline for 10 days
- Information only treatment: bidding treatment provides transparency on process so information treatment has the public meeting to provide some transparency

Results

- Offering localities opportunity to privatize (ie.. bidding treatment) increases efficiency with no detectable declines in quality
  - 37 percent lower transportation costs compared to information placebo
  - But no decline in household payments (markups)

- Encouraging sufficient competition (i.e. bidding with enhanced competition) was critical to ensure efficiency gains were translated into lower markups

- Data suggest process was frequently blocked (didn't run the bidding process or didn't give it to the winner)
  - Implies that privatization gains might be higher if not blocked, but that elite capture can mitigate gains from privatization

Application: prisons

- Recall HSV motivating example was private vs public provision of prisons

- Very little empirical work on prisons
  - US has 5% of world population, 25% of its prisoners
  - 10% of US prisoners in private prisons; higher share in some other countries
- Mukherjee (2017) "Impact of Private Prison Contracting on Inmate Time Served and Recividism"
  - private prisons are paid per diem for occupied beds –> incentive to fill beds
  - staggered timing of private prison exit and entry in Mississippi
  - Finds private prison increases length of time served (via increased use of conduct violations) but no evidence of lower recidivism post release
- More work on prisons would be great!

Application: health care

- Public vs. private ambulance provision: Knutsson and Tyrefos (QJE 2022)
  - publicly vs privately assigned ambulances in Stockholm as good as randomly assigned for patient (in US too!)
  - private ambulances reduce costs and perform better on contracted measures (eg response time) but worse on non contracted measures (eg quality - higher mortality)
- Public vs private provision of health care for veterans in US (Chan, Card and Taylor AER 2023)
  - Ambulances may take VA-eligible patients to VA (public care) or private hospitals financed by Medicare
  - VA reduces mortality and spending
- How does existence of private affect quality / cost of public (and vice versa)
  - Complements or substitutes?
  - Possible application: US ambulances

Application: heath insurance

- Surplus generated by private provision (CS + PS - cost of public funds)
  - Curto et al. (2021 JPE) "Can Health Insurance Competition Work? Evidence from Medicare Advantage"
  - Also work in education or pension space on this
- Inside the black box of private provision: what are they doing differently?
  - Medicare Advantage?
  - In education / charter school literature?

Non-profits vs for profits: application to education

- Can non profits achieve for profit efficiency gains on costs without sacrificing quality (as in HSV)?

- Deming, Goldin and Katz (JEP 2012) "The For-Profit Postsecondary School Sector: Nimble Critters or Agile Predators?"
  - Recent growth in for profit post-secondary education
  - For profits have taken a large burden of increased enrollment in higher education off of public sector.
    - Expanded supply of skilled workers in era of tight state budgets
    - Provide services to underserved, non traditional, and disadvantaged population, including shorter degree programs
  - But charge higher tuition and fees than public sector alternatives and students more likely to end up unemployed and with substantial debt
    - High student default rate on student loans increases costs to taxpayer

- {Also a literature on non-profit vs for-profit health care providers}

Part IV: Regulation of Privately Provided Social Insurance

Regulation of privately provided social insurance

- The "choice of instrument" problem applied to regulated private markets
  - Lots of recent work in health insurance, lots of questions / scope for more work
- Example: risk adjustment vs subsidies (Einav, Finkelstein and Tebaldi forthcoming)

Risk adjustment vs. subsidies

- Health insurance exchanges are increasingly common
  - In US: ACA, Medicare Advantage, Part D
  - Around the world: Netherlands, Switzerland, Chile
- Two key market design features:
  - Government subsidies to consumers - to make insurance more affordable
  - Risk adjustment to insurers - to reduce scope for adverse selection ./ cream skimming
- Typically studied in isolation
  - But often set by same entity
  - One shifts the demand curve, the other shifts the cost curve, and ultimately what we care about is equilibrium

Toy model setup

- A single coverage contract, offered by identical, competing insurers who each need to set a single price p
- Buyer i is defined by a triplet (v, c, w) :
  - WTP: v
  - (expected) cost to insurer if insured: c
  - vector of observables: w
- Subsidy is defined as $s(w)$:
  - Consumer pays $p - s(w)$ (buys IFF $v > p - s(w)$)
  - market sponsor pays $s(w)$
  - insurer receives p
- Risk adjustment defined as $r(w)$
  - market sponsor pays $r(w)$
  - Insurers profit is $p - (c - r(w))$

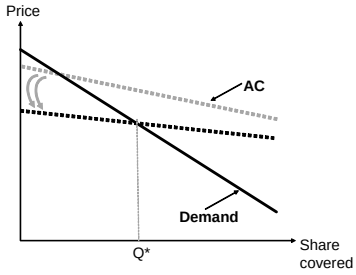
Theory: Subsidies dominate risk adjustment

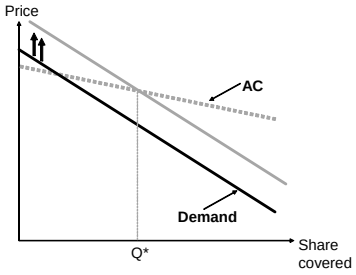
- For any given level of spending by the market sponsor, subsidies can produce higher coverage (and higher consumer surplus) than risk adjustment.
- Two effects:
  - "Targeting effect": non-uniform subsidies (different subsidies to different types of consumers) can be used to induce low-risk types to enter the insurance pool
    - Risk adjustment and uniform subsidies mean insurance allocations are monotone in willingness to pay
  - "Market power effect": uniform subsidies lower insurers' markups (relative to risk adjustment) for any coverage level

Perfect competition: Targeting Effect

- **Proposition:** Under perfect competition, for any Nash Equilibrium that is achievable with risk adjustment, there exists a uniform subsidy design with no risk adjustment that can achieve the same equilibrium, with the same enrollment for all types and the same total spending by the market sponsor
- Intuition:
  - risk adjustment flattens and potentially shifts the AC curve, leading to a new equilibrium.
    - that can also be achieve with the original AC curve through an appropriate parallel shift of the demand curve (i.e. a uniform subsidy)
    - Since equilibrium has zero profits, market sponsor spending must also be the same
  - Note: converse not true: not every equilibrium achieved via a subsidy design can be implemented with risk adjustment
    - Risk adjustment: all buyers paying same price so equilibrium allocation must be monotone in WTP
    - non uniform subsidies can have different consumer types face different prices –> additional instrument / flexibility (can have non-monotone insurance allocations in WTP)

Risk Adjustment vs. Subsidies





Imperfect competition: Adds markup effect

- **Proposition:** Under imperfect competition and adverse selection, for any symmetric Nash Equilibrium that is achievable with regular risk adjustment and no subsidies, in which markups are strictly positive, there is a (uniform) subsidy with no risk adjustment that leads to an equilibrium with the same enrollment for all types, and lower total spending for the market sponsor
- Intuition:
  - Similar to Mahoney and Weyl (2017)
    - Adverse selection means marginal buyer cheaper than average buyer, which exerts downward pressure on prices and markups (good)
    - Risk adjustment flattens the AC curve (because insurers are compensated more generously for covering higher risk individuals) so reduces pressure on prices and produces greater markup
  - Note: Theorem only considers uniform subsidies
    - non-uniform subsidies mean that insurance allocations need not be monotone in willingess to pay. Allows for greater set of equilibrium allocations than risk adjustment (and/or uniform subsidies).

Comments

- Rest of paper is an empirical application to quantify amount by which subsidies can increase enrollment, holding government spending fixed and keeping all consumers weakly better off
  - Reuses demand and cost estimates from first four years (2014-2017) of ACA marketplace in CA in Tebaldi (2025)
- So why do we see risk adjustment "in the wild"?
  - Risk adjustment may be important for reducing insurer cream-skimming efforts through non-price instruments (benefit design or marketing)
    - would be really interesting to look at empirically
  - Political economy:
    - subsidizing the healthy may be a hard sell
    - insurer profits higher under risk adjustment (so they may prefer it!)

Summary

Choice of instrument

- Relatively unexplored question (relative to e.g. optimal level of benefits conditional on public provision)
- The topics covered here are only a subset of the topics that could be explored!
- Increasingly active area of research with increase in private provision of traditionally public goods
  - Public pensions vs. "privatized" Social Security (e.g. Chile, Mexico)
  - Public schools vs "privatized" charter schools
  - Private provision of regulated / subsidized health insurance (MA, Medicare Part D, exchanges)