

# 14.472 Public Finance II

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Fall 2020

- Two Broad Topics
  - Social Insurance
  - Redistribution
- Course Emphasizes:
  - Normative as well as descriptive - Welfare Analysis and Optimal Policy Design
  - Complementarities between theory and empirics
  - Complementarities across empirical methods

# (Some) course goals

- Key economic concepts
- (Some of the) highlights of (some of the) literature
  - (Some of) what we know
  - Will also emphasize what we don't know (i.e. good research topics!)
- Exposure to a range of empirical techniques
  - Including: RCTs, "reduced form" quasi-experimental work; sufficient statistics; "structural estimation"; calibrated life cycle models

# Institutional background

- Will spend minimal time on key institutional details
  - Not an efficient use of limited class time
  - Have tried to focus course around economic issues rather than programs per se
    - In practice a given economic issue has often have been studied in the context of a particular program
    - Good strategy for students: can you apply these ideas / tools to a different program?
- A deep understanding of institutional details essential for own research
  - You should also familiarize yourself with the basics on any topic we are discussing
  - Good sources (listed on syllabus)
    - For general orientation: Gruber textbook
    - For more details: Moffit 2016

- Reading list
  - Read a small number of papers carefully
    - **For maximal learning: read the bolded papers before class**
    - Read actively / critically.
    - Keep a list of research ideas that occur to you!
  - Additional listing hopefully a useful reference when a topic sparks your interest
- Strongly recommended
  - Attend public finance lunch (Mondays 12 – 1)
  - Attend applied micro seminar (Mondays 4 – 5:30)

- Will cover some essential topics that I will assume knowledge of
  - e.g. this week will cover Rothschild-Stiglitz model (emphasizing its public finance implications)
- Will also cover (as needed / useful):
  - Review (or introduction) of techniques that I assume knowledge of in class
  - Sorting out confusions I introduce in class
- Attendance strongly advised (if time conflicts with another section we can re-optimize)

# Course Requirements

- Class participation (cold calling)
- Written comments (10-12)
- Additional required readings
  - upload one paragraph prior to class
- One problem set
- Research proposal
  - Pose a question motivated by class and a randomized evaluation that could answer it
  - Will have section(s) to discuss aspects of design of randomized evaluation
- Final exam (closed book, 3 hours)

- Assignment: Provide two "big picture" comments on the assigned paper
  - At least one must at least attempt to be constructive
- No more than 1 page (double spaced).
- Due: by 9am of day they are due

# Written comments

- Assignment: "Big picture" comments
- Examples:
  - Suggestions for future research
  - Important question related to paper that paper does not address or leave unanswered
  - Alternative interpretation for paper's findings
  - Major substantive concern with analysis (ideally with suggestions for investigating / addressing)
- What is the objective?
  - Ensure you read paper carefully so we can have a more informed discussion in class
  - Get you to think actively, critically, and **constructively** about research
- If you have specific / narrow questions / concerns about paper please write them down and bring them up in class when we discuss the paper

# Zoom rules

- Keep your video on
- No private chats
- Please turn off your internet browsers!
- Let's try to make this as interactive as possible!

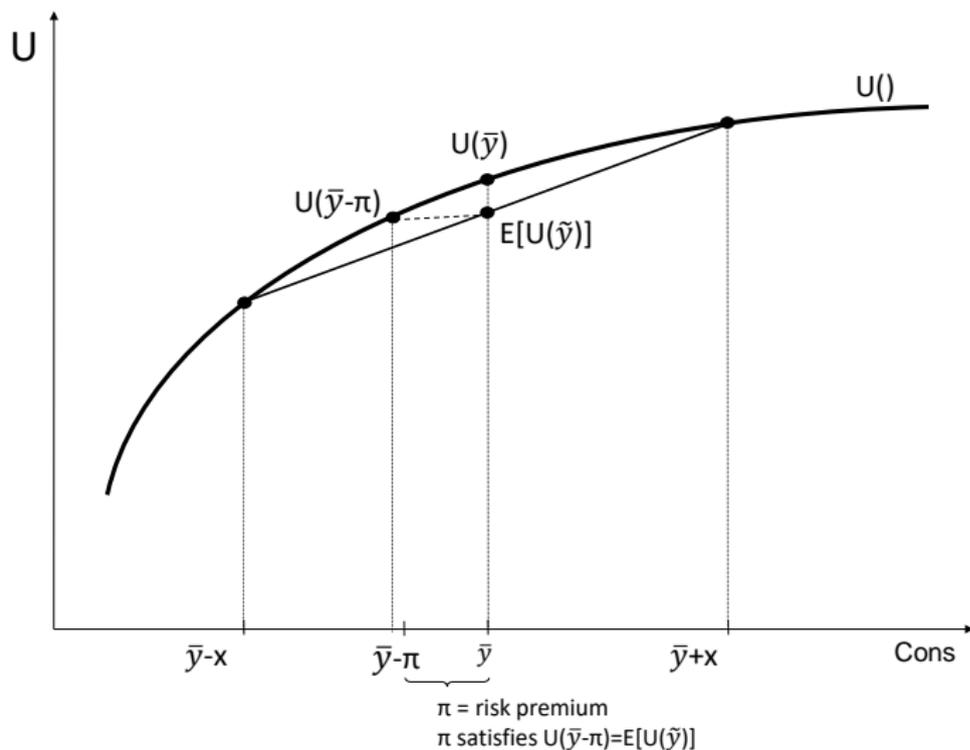
# Lecture 1: Why have Social Insurance?

- What is Social Insurance?
- Potential Rationales for Social Insurance
- What can government do?
- Should government intervene?

# What is insurance?

- Insurance transfers resources from states of the world with low marginal utility of consumption to those with high MU of consumption
  - Goal: equate (smooth) marginal utility of consumption across states of the world
  - States of world: e.g. sick vs. healthy; car accident vs. not
- Key point: risk averse individual prefers to pay \$10 for sure than face a one in ten thousand risk of having to pay \$100,000
  - By pooling idiosyncratic risk, can make everyone better off

# Insurance: A Free Lunch!

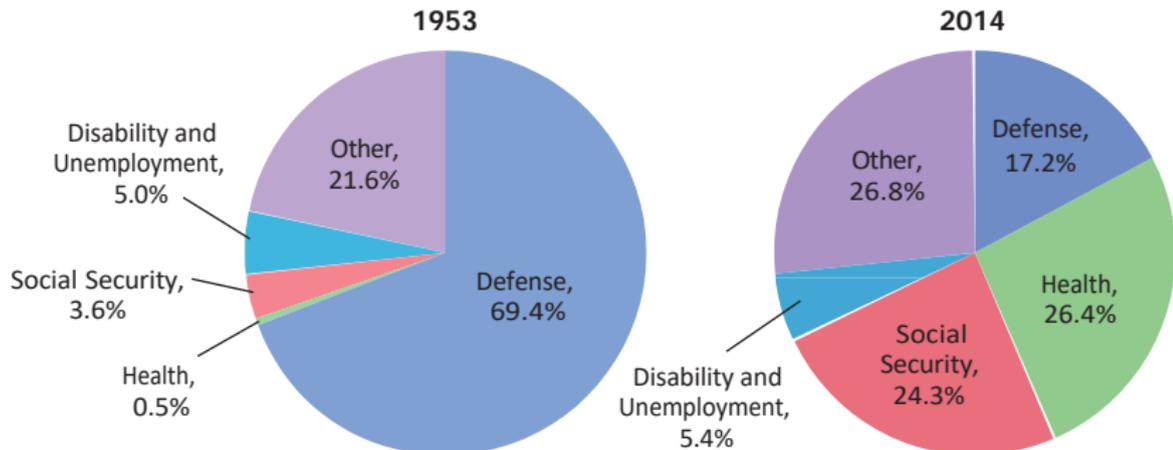


# What is Social Insurance?

- Government intervention in provision of insurance
  - E.g: unemployment, disability, health, death
  - Motivation: insurance against shocks to individual
    - Consumption smoothing value to risk averse individuals (recall graph: free lunch!!)
- Is it different from means-tested redistribution (e.g. cash welfare, food stamps, subsidized housing, subsidized health insurance)
  - Yes: Redistribution based on “permanent” differences (vs smoothing shocks)
  - Note: Redistribution can be thought of as as insurance behind the Rawlsian veil of ignorance
  - Some programs explicitly involve both insurance and redistribution (e.g. Social Security / public pensions)

# The changing function of government

FIGURE 12-1



**Government Spending by Function, 1953 and 2014** • Government today devotes a much larger portion of its budget to social insurance than it did 50 years ago.

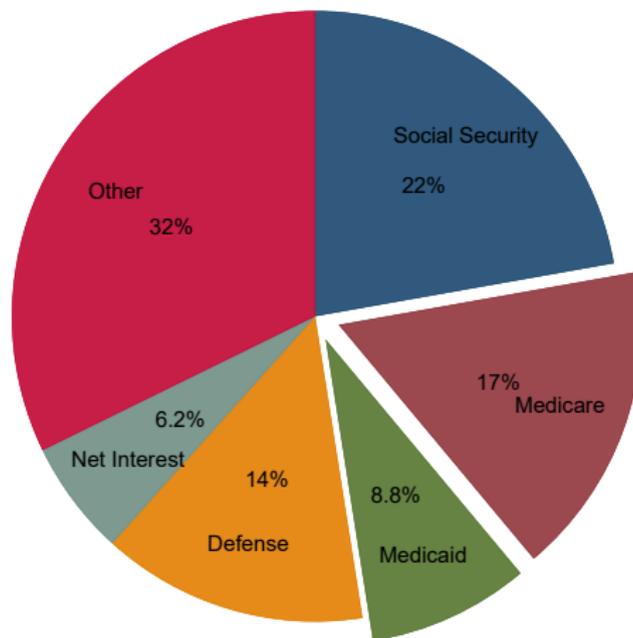
Data from: Office of Budget and Management (2014); Bureau of Economic Analysis, nIPA Table 3.16.

# Social Insurance: The changing function of government

- SI share of federal expenditures has increased from ~9% (1953) to ~55% (2014)
- “Loosly speaking, the post-cold-war federal government is a big pension fund that also happens to have an army” (Krugman 2001)

# Social Security + Medicare and Medicaid in 2017

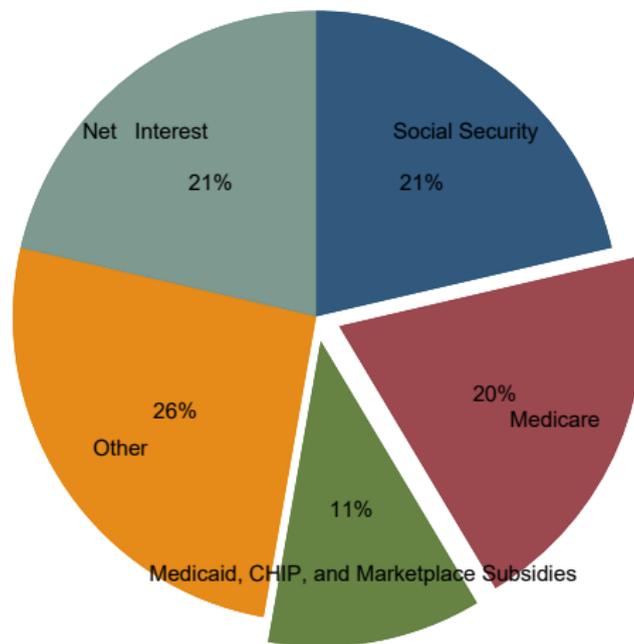
## Federal Outlays by Major Category 2017



Source: CBO 2018

# Social Security + Medicare and Medicaid in 2048

## Share of Federal Spending (Projected for 2048)



Source: CBO 2018

# Main Social Insurance Programs in the US

Program	People Receiving Benefits (Millions)	Annual Federal Spending (Billion \$)	Year	Source
<b>Medical Care</b>				
Medicare	57	583	2016	HHS 2016 budget-in-brief
Medicaid	72.6	344	2016	HHS 2016 budget-in-brief
Old Age Assistance	50	765.6	2016	SSA monthly statistical snapshot, June 2016
<b>Workplace Insurance</b>				
Unemployment Compensation	?	32.3	2016	Congressional Research Service Report 33362
Workers Compensation	?	61.9	2015	Congressional Research Service Report 44580
Disability Insurance	10.7	132	2016	SSA monthly statistical snapshot, June 2016
EITC	62.9	54.9	2012	Congressional Research Service Report 44327
<b>Welfare</b>				
SSI	8.3	56.4	2016	SSA monthly statistical snapshot, June 2016
TANF	5.8	6.7	2012	Congressional Research Service Report 44327
SNAP	58	77.8	2012	Congressional Research Service Report 44327
WIC	8.1	7.2	2012	Congressional Research Service Report 44327
Housing Assistance	10.8	33.4	2012	Congressional Research Service Report 44327

# Main Social Insurance Programs in US

- Prior slide gives (crude) sense of relative magnitudes (in terms of \$ and "beneficiaries") of different programs (c. 2016)
  - Note: actual "beneficiaries" exceed those who receive benefits ex post (insurance value ex ante; incidence of costs to uninsured)
- In terms of \$ and people, Old Age Assistance and Medical Insurance dominate
- In terms of insurance value?
  - Insurance value is about variance, not mean
- Meta question: How to think about optimal allocation of \$\$ across programs (including those with potentially with different goals - eg insurance vs redistribution)?
  - Stay tuned for lecture on Hendren's "Marginal Value of Public Funds" (MVPF) and Hendren and Sprung-Keyser (2020)

# Rationales for social insurance

- Thus far: insurance can be very valuable and government is very involved
  - Now: why would government be involved?
- 1 Private market failures
  - 2 Redistribution
  - 3 Individual failures of rationality / optimization
  - 4 Paternalism

# Private market failures

- Imperfect competition [go take IO]
- Asymmetric Information
- Aggregate Shocks
- Externalities

# Asymmetric Information

- Adverse selection
  - Individuals have private information about their costs to insurer
  - My favorite private market failure
- Moral hazard
  - Individuals take hidden actions in response to insurance contract
  - In general not something the government has a comparative advantage in addressing.
  - Critical though for optimal design of insurance (public or private)
    - Tradeoff between insurance (risk spreading) and incentives (moral hazard)

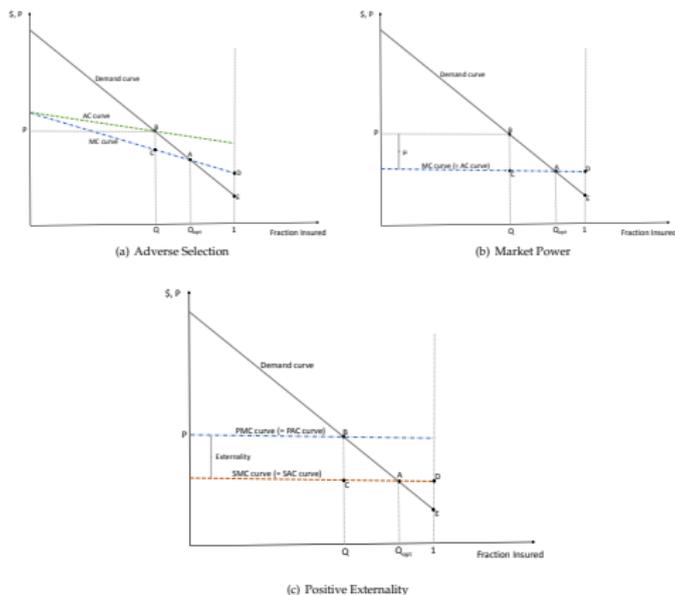
# Aggregate Shocks

- Economic downturn (UI), natural disasters, terrorist attacks
- Private insurance markets can diversify idiosyncratic risk cross sectionally but if want to smooth intergenerationally, government may have comparative advantage.
  - Or perhaps the capital markets ("act of god" bonds)
  - Relatively little work here.

- Examples:
  - Infectious disease (mandatory vaccines)
  - Third-party damages from driving (mandatory automobile liability insurance)
- Good Samaritan's problem
  - Samaritan's dilemma (Buchanan 1975; Coate 1995): we can't commit not to take care of people in certain circumstances, which will distort their private choices (e.g. food pantries; hospital charity care)
- Note: Traditionally, externalities have gotten relatively little attention as motivation for social insurance
  - But are potentially important in some contexts
    - Spoiler Alert: Samaritan's dilemma may be crux to health insurance policy / reform
  - Will return to later in course / a great area for work

# Graphical Depiction

Figure 4: Potential Rationales for Government Intervention



Notes: The above figure depicts potential justifications for government intervention to increase coverage. Panel A depicts a competitive market in which there is adverse selection (characterized by a downward sloping marginal cost curve). Panel B depicts a setting with no selection but with market power, where  $\mu$  represents the per unit profit. Panel C depicts a setting with no selection but with a positive externality associated with insurance; the figure depicts the case of a constant positive externality, where the social marginal curve is represented by shifting the private marginal cost curve downward by the size of the externality.

Source: Cabral et al. (2019)

- Want to redistribute based on hidden information ("ability")
  - Social Insurance as Akerlovian tag (Akerlof 1978)
  - lifetime earnings (SS); health insurance (poor are sicker).
  - (Can think of as a form of ex-ante insurance - insurance against being born a given "type")
- Do we want this type of redistribution (who are the winners?)
- Is this the most efficient way to do redistribution (vs. e.g. progressive income tax)
- Note many models of redistribution share features w models of asymmetric information / adverse selection (e.g. Diamond-Mirrlees and other screening models)

- In purchasing insurance
  - Overconfidence / don't understand probabilities (young think they're invincible)
  - Overweight low probability events (buy flight insurance)
  - Inattention / inertia / confusion...
- In consumption decisions
  - e.g. Myopia: too little savings; under-investment in preventive care

- Social planner wants to encourage behavior individuals would not choose
  - "We as a society don't want access to health care to depend on income" (even if poor would prefer the cash equivalent)
- Why?
  - Non-individualistic social welfare function
    - Consumption of that particular good enters SWF not through individual utilities
  - "Consumption Externalities" My utility depends on your consumption

# What can government do?

- Power to change prices
  - tax/ subsidize
  - regulate pricing (levels, formulas)
- Power to change quantities
  - Mandate purchases or offering
  - Publicly provide
  - Regulate (e.g. minimum standards)

# Choice of Instrument

- SI takes many different forms:
  - Public provision of insurance (Medicare, Social Security, UI)
  - Mandate that firms provide insurance (Worker's Comp)
  - Subsidize / Regulate private insurance markets
    - Tax subsidy to employer provided health insurance
    - Regulate pricing and contracts in health insurance exchanges
    - Provide "public option" (Traditional Medicare or Medicare Advantage) or not (Medicare Part D)
- Choice of Instrument = understudied question
  - Conditional on intervention, what form should it take?
  - {Pay attention to the dog that didn't bark}

# Empirical Analysis of Social Insurance Programs

- Theoretical possibility of market failure per se does not tell us if or how govt should intervene
  - Enter empirical work
- Empirical questions for any given insurance market / social insurance program:
  - Is there a market failure / what are the market failures
  - What is the magnitude of their efficiency costs?
  - What is the optimal policy intervention? (choice of instrument)
  - How large is welfare gain from a given (or optimal policy) intervention?
  - What are costs from policy intervention (vs. benefits)?
    - How to think about costs? (mechanical costs vs fiscal externalities)