Course Overview

- 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 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
Course mechanics

- **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!

\[ \pi = \text{risk premium} \]
\[ \pi \text{ satisfies } U(y-\pi) = E[U(y)] \]
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**

<table>
<thead>
<tr>
<th>Year</th>
<th>Disability and Unemployment</th>
<th>Other</th>
<th>Social Security</th>
<th>Health</th>
<th>Defense</th>
</tr>
</thead>
<tbody>
<tr>
<td>1953</td>
<td>5.0%</td>
<td>21.6%</td>
<td>3.6%</td>
<td>0.5%</td>
<td>69.4%</td>
</tr>
<tr>
<td>2014</td>
<td>5.4%</td>
<td>26.8%</td>
<td>24.3%</td>
<td>26.4%</td>
<td>17.2%</td>
</tr>
</tbody>
</table>

**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)
- “Loosely speaking, the post-cold-war federal government is a big pension fund that also happens to have an army” (Krugman 2001)
Federal Outlays by Major Category 2017

- Social Security: 22%
- Medicare: 17%
- Medicaid: 8.8%
- Defense: 14%
- Net Interest: 6.2%
- Other: 32%

Source: CBO 2018
Share of Federal Spending (Projected for 2048)

- **Social Security**: 21%
- **Medicare**: 21%
- **Medicaid, CHIP, and Marketplace Subsidies**: 26%
- **Other**: 20%
- **Net Interest**: 11%

Source: CBO 2018
# Main Social Insurance Programs in the US

<table>
<thead>
<tr>
<th>Program</th>
<th>People Receiving Benefits (Millions)</th>
<th>Annual Federal Spending (Billion $)</th>
<th>Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical Care</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicare</td>
<td>57</td>
<td>583</td>
<td>2016</td>
<td>HHS 2016 budget-in-brief</td>
</tr>
<tr>
<td>Medicaid</td>
<td>72.6</td>
<td>344</td>
<td>2016</td>
<td>HHS 2016 budget-in-brief</td>
</tr>
<tr>
<td>Old Age Assistance</td>
<td>50</td>
<td>765.6</td>
<td>2016</td>
<td>SSA monthly statistical snapshot, June 2016</td>
</tr>
<tr>
<td>Workplace Insurance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployment Compensation</td>
<td>?</td>
<td>32.3</td>
<td>2016</td>
<td>Congressional Research Service Report 33362</td>
</tr>
<tr>
<td>Workers Compensation</td>
<td>?</td>
<td>61.9</td>
<td>2015</td>
<td>Congressional Research Service Report 44580</td>
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<tr>
<td>Disability Insurance</td>
<td>10.7</td>
<td>132</td>
<td>2016</td>
<td>SSA monthly statistical snapshot, June 2016</td>
</tr>
<tr>
<td>EITC</td>
<td>62.9</td>
<td>54.9</td>
<td>2012</td>
<td>Congressional Research Service Report 44327</td>
</tr>
<tr>
<td>Welfare</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSI</td>
<td>8.3</td>
<td>56.4</td>
<td>2016</td>
<td>SSA monthly statistical snapshot, June 2016</td>
</tr>
<tr>
<td>TANF</td>
<td>5.8</td>
<td>6.7</td>
<td>2012</td>
<td>Congressional Research Service Report 44327</td>
</tr>
<tr>
<td>SNAP</td>
<td>58</td>
<td>77.8</td>
<td>2012</td>
<td>Congressional Research Service Report 44327</td>
</tr>
<tr>
<td>WIC</td>
<td>8.1</td>
<td>7.2</td>
<td>2012</td>
<td>Congressional Research Service Report 44327</td>
</tr>
<tr>
<td>Housing Assistance</td>
<td>10.8</td>
<td>33.4</td>
<td>2012</td>
<td>Congressional Research Service Report 44327</td>
</tr>
</tbody>
</table>
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
- Externalties
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
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 cost curve is represented by shifting the private marginal cost curve downward by the size of the externality.

Source: Cabral et al. (2019)
Redistribution

- 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-Mirlees and other screening models)
Behavioral Biases

- **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
Paternalism

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)