Social Security(Chapter-13)
Part-2
Social Security
How does it work over time?

• **Funded plans**: Refer to retirement plans in which today’s savings are invested in various assets in order to pay future benefits.

• **Unfunded plans**: Refer to retirement plans in which payments collected from today’s workers go directly to today’s retirees, instead of being invested in order to pay future benefits.
Social Security
How does it work over time?

• Social security is an unfunded (partially funded) plan in the sense that the taxes collected from workers today directly go to retirees today.
  – Partially funded now, since the taxes collected from workers are higher than the benefits paid. The excess funds are invested in government bonds.
  – In the near future, however, with the increase in the number of retirees, the taxes might not be sufficient for the benefits and we might run out of government bonds. Then, the system turns into an unfunded system.
Social Security
How does it work over time?

• How does social security redistribute income?
  – Assume that there are 5 periods and each individual lives for 2 periods.
  – During the first period, each individual works and pays a tax to support the SS program.
  – During the second period, each individual retires and lives on their SS benefits.
Social Security
How does it work over time?

• **How does social security redistribute income?**
  
  – In each period, the number of young people grows by 5% (population growth) and their wages go up by 5% (due to productivity increase).
  
  – In the first period, 100 young people work earning $20,000 per period and there is no Social Security program.
Social Security
How does it work over time?

• **How does social security redistribute income?**
  
  – In the second period, the Social Security is established funded by a 10% payroll tax. The taxes are collected from workers today and are paid immediately to today’s retirees.
  
  – In the fifth period, young workers decide that they no longer wish to participate in the Social Security program.
Social Security
How does it work over time?

- How does social security redistribute income?

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<thead>
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<th>TABLE 13-1</th>
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<tbody>
<tr>
<td>Social Security in a Two-Period World</td>
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Social Security
How does it work over time?

- How does social security redistribute income?
  - The rate of return provided by an unfunded Social Security to ‘middle generations’ depend on the rates of population and wage growth.
  - Unfunded Social Security carries with it what is known as the ‘legacy debt’.

  *Legacy debt:* The debt incurred by the government because early generations of beneficiaries received much more in benefits than they paid in taxes.
Social Security
How does it work over time?

• How does social security redistribute in practice?
  – How do we measure the extent of redistribution?
  – **Social Security Wealth:** The expected present discounted values of a person’s future Social Security payments minus the expected present discounted value of a person’s payroll tax payments.
Social Security
How does it work over time?

• How does social security redistribute in practice?
  – Social Security Wealth
    • Calculate the entire future stream of benefits that a person expects until he/she dies. Use a discount rate to calculate the PDV of that stream of benefits.
    • Calculate the entire future stream of taxes that a person expects to pay before he/she dies. Compute the PDV using the discount rate
    • Take the difference between these two.
Social Security
How does it work over time?

• How does social security redistribute in practice?
  – Social Security Wealth

<table>
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<th>TABLE 13–2</th>
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<tr>
<td><strong>Redistribution Under Social Security for a Single Male</strong></td>
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<td><strong>Earnings Level</strong></td>
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<td>Low earner</td>
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<td>Average earner</td>
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<td>High earner</td>
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Social Security
How does it work over time?

• How does social security redistribute in practice?
  – The first generation benefits significantly since
    • They did not pay Social Security taxes for a significant portion of their lives, since the SS program in the U.S. began in 1937.
    • In addition to the wage and population growth effects, there was also a tax rate growth effect: 2% in 1937 versus 12.4% today.
Social Security
How does it work over time?

• **How does social security redistribute in practice?**
  – The second generation benefits significantly less since
    • They had to pay Social Security taxes for all of their working lives.
    • Slowing tax rate growth meant that they received a much smaller tax growth effect.
    • There has been a significant decline in the wage and population growth rates.
  – The third generation have the worst outcome, since payroll taxes are no longer rising at all and wage and population growth are slow.
Social Security
Consumption-Smoothing Benefits

• Why should the government be involved?
  – Failures in the annuity market
    • A pure annuity is a contract whereby a person pays some amount of money in advance to an insurance company and in return, the insurance company makes payments to the individual until he/she dies.
    • Issue: Adverse selection can lead to market failure if those who are insured are the ones who will live longest.
Social Security
Consumption-Smoothing Benefits

• Why should the government be involved?
  – Paternalism
    • Policy-makers are concerned that people won’t save enough for their own retirement.
Social Security
Social Security and Retirement

- There are two effects of social security on retirement:
  - Implicit tax: If an individual works until 63 instead of 62:
    - She pays an additional year of taxes
    - She receives one year less of benefits
    - She gets higher Social Security benefit through the actuarially adjustment
    - Since earnings generally increase with age, she replaces a low-earning year with a high-income year in the 35-year benefits average.
  - If the first two dominate the last two factors, Social Security presents an implicit tax on working
Social Security
Social Security and Retirement

• There are two effects of social security on retirement:
  – The system results in some groups becoming richer over their life and some becoming poorer. The groups that became richer will buy more retirement for themselves and the ‘poorer’ groups will work more.
Social Security
Social Security Reform

• Over the next 75 years, the program has promised $4.6 trillion more in benefit payments than it plans to collect in taxes from payments.

• **Raise taxes further**
  – Increasing the payroll tax from 12.4% to 14.4% solves the problem
Social Security
Social Security Reform

• **Extend the base of taxable wages**
  
  – Increase the number of young who pay into the system.
    
    • Many local or state government workers are excluded from the system (usually have pension plans).

  – Increase the maximum level of taxable income
    
    • Currently the income is taxable up to $94,200 per year.
Social Security Reform

• **Raise the retirement age**
  – Increase the full benefit age (currently 65).
  – Increase the early retirement age (currently 62)

• **Lower benefits**
  – Currently the benefits are adjusted using consumer price index each year. Lowering the adjustment rate will lower the benefits.
Social Security
Social Security Reform

- More fundamental reforms
  - Invest the Trust Fund in Stocks
  - In the long-run, on average stocks have a higher return than government bonds.
  - Issues
    - If we give the control of the trust funds to politicians, they might use them for other purposes to maximize their votes.
    - If the government invests half of the trust fund in the stock market, it would own roughly 6% of the entire stock market. Therefore the government might abuse its position to manipulate the capital markets for their own interests.
Social Security
Social Security Reform

• More fundamental reforms
  – Privatization
    • System would be funded by individual savings, which might be more efficiently invested.
    • The fund will be completely ‘off-budget’ so that the government can not use the it for any other purposes.

• Issues
  – Higher administrative costs.
  – Politicians may not trust the individuals’ willingness to save for their retirements.
Social Security
Social Security Reform

• **More fundamental reforms**
  – Government equity investment vs. Privatization
    • Government equity investment will be more efficient, since it minimizes administrative costs.
    • However, it is risky to give the government such a large stake in private equity markets.
Health Insurance
(Chapters 15 and 16)
Part-1
Health Insurance
Background

• Health care is an expanding expenditure item in the U.S.
  – In 1950, only 4% of the U.S. GDP was used for the health care sector.
  – In 2004, health care accounted for 16% of the GDP.

• Significant improvement in the quality of health care over this time period.
  – In 1950, 29 out of every 1000 infants died in their first year of life.
  – In 2004, that number is only 7 out of 1000.
Health Insurance
The Health Care System in the U.S.

• **How does health insurance work?**
  – Individuals, or firms on their behalf, pay premiums to insurance companies.
  – Insurance companies pay the providers of medical goods and services for most of the expenses.
  – There are three types of patient payments:
    • Deductibles: Individuals face the full cost of their medical expenses, but up to some limit.
    • Copayment: Individuals make some fixed payment when they get a medical good or service.
    • Coinsurance: The patient pays a percentage of each medical bill.
Health Insurance
The Health Care System in the U.S.

• **How does health insurance work?**
  – **Private insurance**
    • 80.8% of those with health insurance are insured thru private channels.
    • Within that group, only 14% of those with private insurance purchase insurance on their own, through the nongroup insurance market.
Health Insurance
The Health Care System in the U.S.

• **How does health insurance work?**
  – **Private insurance**
    • Why do employers provide private insurance?
      – The goal of all insurers is to create large *insurance pools* with a predictable distribution of medical risks. If the insurer can accurately predict the claims that it will pay out for that insurance pool, it can charge a premium to cover its claims costs.
        » The absence of adverse selection
        » The law of large numbers: as the pool becomes larger, the better the insurer will predict the risk levels.
Health Insurance
The Health Care System in the U.S.

• How does health insurance work?
  – Private insurance
    • Why do employers provide private insurance?
      – Tax subsidy to employer-provided health insurance:
        Employment compensation in the form of wages is subject to taxation, but employment compensation in the form of health insurance is not.

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<tr>
<th>Illustrating the Tax Subsidy to Employer-Provided Insurance</th>
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<td>Marginal Product, Wage</td>
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<tr>
<td>Jim</td>
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<td>Peter</td>
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Health Insurance
The Health Care System in the U.S.

• How does health insurance work?
  – Medicare
    • Provides health insurance for all people over the age of 65 and disabled individuals under the age 65.
    • Every citizen who has worked for ten years in the Medicare-covered employment is eligible for Medicare at age 65.
Health Insurance
The Health Care System in the U.S.

• **How does health insurance work?**
  – **Medicaid**
    • Provides health insurance for the poor:
      – Those who qualify for cash welfare program
      – Most low-income children in the United States
      – Most low-income pregnant women
      – The low-income elderly and disabled
  – **Tricare**
    • Provides health insurance for those currently or formerly in the military and their dependents.
Health Insurance
The Health Care System in the U.S.

• How does health insurance work?
  – The uninsured: Who are they?
    • Lower than average income
    • 70% of the uninsured came from families where one or more members were full-term workers, but were either not offered health insurance by their employers or did not enroll in the employer-provided health insurance program.
    • Over one-fifth of the uninsured are the children.
Health Insurance
The Health Care System in the U.S.

• **How does health insurance work?**
  – **Why care about the uninsured?**
    • Negative health externality on the insured
    • Negative financial externality on the insured
    • Health care is not delivered appropriately to the uninsured.
    • Inefficient labor market because of those who value the availability of health insurance more than their productivity at that job.
Health Insurance
The Health Care System in the U.S.

• How generous should insurance be to patients?
  – Depends on two factors: benefits and the costs associated with health insurance
    • Benefits: Consumption-smoothing
    • Costs: Moral hazard
Health Insurance
The Health Care System in the U.S.

• How generous should insurance be to patients?
  – **Consumption smoothing effect of health insurance**: allows individuals to protect themselves from the bad days by paying premium during the ‘good days’.
Health Insurance
The Health Care System in the U.S.

• How generous should insurance be to patients?
  – Moral hazard costs:
    • Assume that the cost of a doctor’s office visit (physician’s time, supplies etc) is $100 (social marginal cost).
    • The demand for visits is downward sloping.
    • With insurance, patients only need to pay a copayment of $10 per visit.
  • Result: Unefficiently high level of office visits.
Health Insurance
The Health Care System in the U.S.

• How generous should insurance be to patients?
  – Moral hazard costs:
Health Insurance
The Health Care System in the U.S.

• How generous should insurance be to patients?
  – Optimal health insurance policy is one in which individuals bear a large share of medical costs within some affordable range, and are only fully insured when costs become unaffordable.
Health Insurance
The Health Care System in the U.S.

• How generous should insurance be to medical providers?
  – Moral hazard in the providers’ side: even when insurers can assess your health risks accurately, they can not always assess how much it will cost to cure you.
  – Retrospective reimbursement: Reimbursing physicians for the costs they have already incurred.
  – Health care providers may take advantage of this uncertainty by overstating their costs.
Health Insurance
The Health Care System in the U.S.

• Two solutions to the moral hazard issue:
  – **Managed care**: An approach to controlling medical costs using supply-side restrictions such as limited choice of medical provider. Comes in two forms:
    • **Preferred provider organizations (PPO)**: A health care organization that lowers the health care costs by shopping for health care providers on behalf of the insured.
    • **Health maintenance organizations (HMO)**: A health care organization that integrates insurance and delivery of care by, for example, paying its own doctors and hospitals a salary independent of the care they deliver.
Health Insurance
The Health Care System in the U.S.

• Two solutions to the moral hazard issue:
  – Prospective reimbursement: Typically used by HMO’s: the practice of paying providers based on what treating patients should cost, not on what provider spends.