

social insurance: applications

social security

unemployment insurance

disability insurance

workers' compensation

poverty alleviation

health

social insurance: applications

Social Security

- Insurance:
 - Unemployment
 - Disability
 - Sickness
 - Old age
- Welfare:
 - family assistance
 - social pension and minimum pension
 - minimum income

social insurance: applications

Social Security

Welfare (citizens)	Government budget
Welfare (families)	Government budget
Insurance	Contributions

- universal right,
social protection,
equity

- financing,
sustainability

social insurance: applications

Social Security

- Pay-as-you-go vs. fully-funded (actuarially fair?)
 - First pillar: compulsory pay-as-you-go (state)
 - “Segurança Social” (SS)
for private sector-workers
 - “Caixa Geral de Aposentações” (CGA)
for public-sector workers
- Second pillar: complementary occupational systems
- Third pillar: individual savings

social insurance: applications

First pillar: How Does Social Security Work Over Time?

Pension systems can be funded or unfunded.

- **Funded:** Today's savings are invested in various assets in order to pay future benefits.
- **Unfunded:** Payments collected from today's workers go directly to today's retirees instead of being invested in order to pay future benefits.
- Social Security is *partially* funded: Today's taxes fund some but not all of future benefits.
- This leads to redistribution from young to old.

social insurance: applications

How Does Social Security Redistribute in Practice?

- The very first beneficiary of Social Security in the US was Ida May Fuller.
- Worked for only three years after the establishment of the Social Security system, and paid a total of \$24.75 in Social Security taxes:
 - The first Social Security check in U.S. history was issued to her on January 31, 1940, for \$22.54.
 - Ida May went on to live for 35 more years, dying at age 100 in 1975. Over those 35 years, she collected a total of \$22,888.92 in Social Security benefits.

social insurance: applications

Lessons Learned

- Unfunded Social Security systems redistribute from young to old, and the first generation are the big winners.
- Unfunded systems create 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 insurance: applications

How Does Social Security Redistribute in Practice?

- To see how Social Security redistributes in practice, we study the Social Security Wealth of different generations.
- **Social Security Wealth (SSW):** The expected present discounted value of a person's future Social Security payments minus the expected present discounted value of a person's payroll tax payments.

social insurance: applications

How Does Social Security Redistribute in Practice?

SSW is computed as follows:

- Calculate the entire future stream of benefits that a person expects to receive before he or she dies.
- Use a discount rate to calculate the present discounted value (PDV) of that stream of benefits.
- Calculate the entire future stream of taxes that a person expects to pay before he or she dies.
- Compute the PDV of that stream of taxes.
- Take the difference between these two to get the SSW.

social insurance: applications

How Does Social Security Redistribute in Practice? SSW for a Single Male

Earnings	Turns 65 in 1960	Turns 65 in 1995	Turns 65 in 2030
Low earner	\$26,100	\$12,500	-\$4,100
Average earner	35,500	-5,100	-56,200
High earner	35,800	-41,100	-248,500

- Redistribution from younger to older cohorts due to:
 - First cohort didn't pay in until 1937.
 - Payroll tax has increased over time.

social insurance: applications

How Does Social Security Redistribute in Practice?

Some examples of how SSW varies within groups that are the same ages include the following:

- Females have more SSW than males because they live longer.
- Married couples have more SSW than single people.
- Single-earner couples have more SSW than two-earner couples.
- The gains to the poor relative to the rich from Social Security are overstated because the length of life rises with income.

social insurance: applications

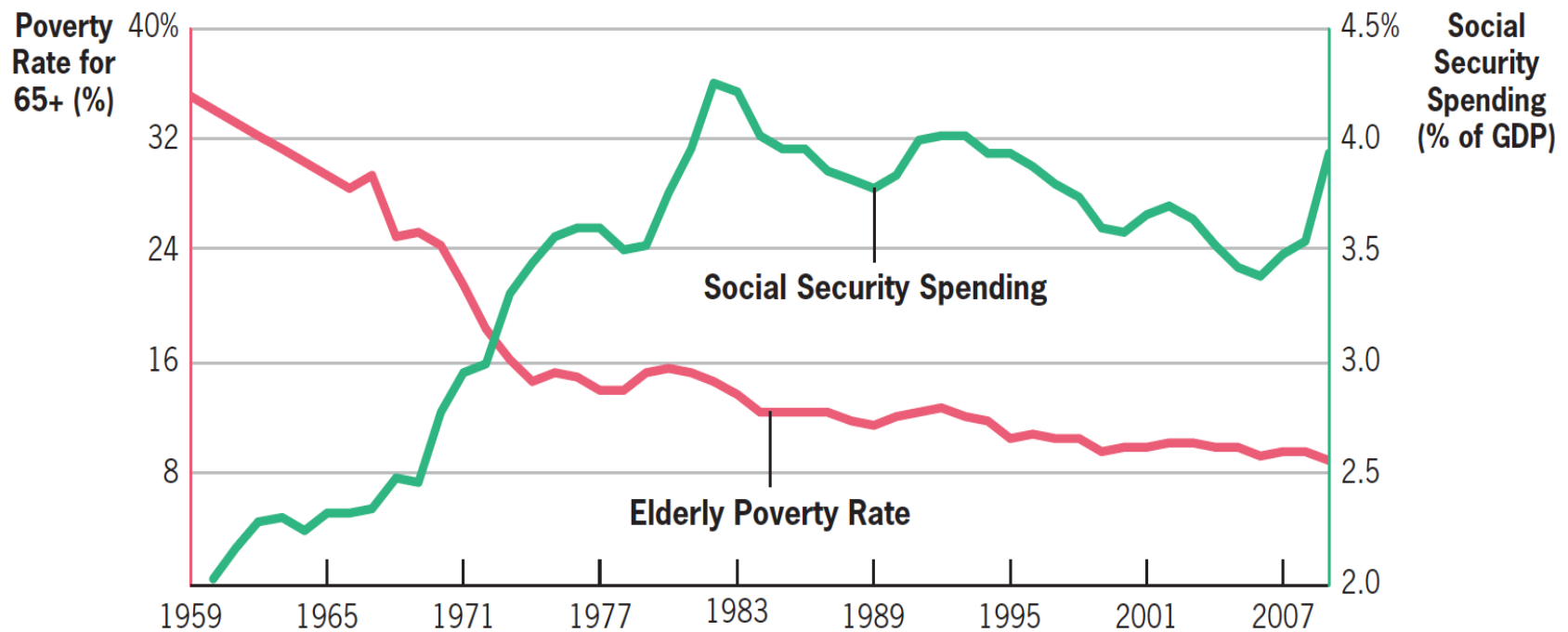
Consumption-Smoothing Benefits of Social Security

Key question: Does Social Security smooth consumption?

- Perhaps Social Security just crowds out savings that individuals would otherwise set aside for their retirement.
- Social Security might crowd out private savings by allowing people to count on a government transfer to support their income in old age.
- The larger this crowd-out is, the less consumption smoothing Social Security provides for retired individuals.

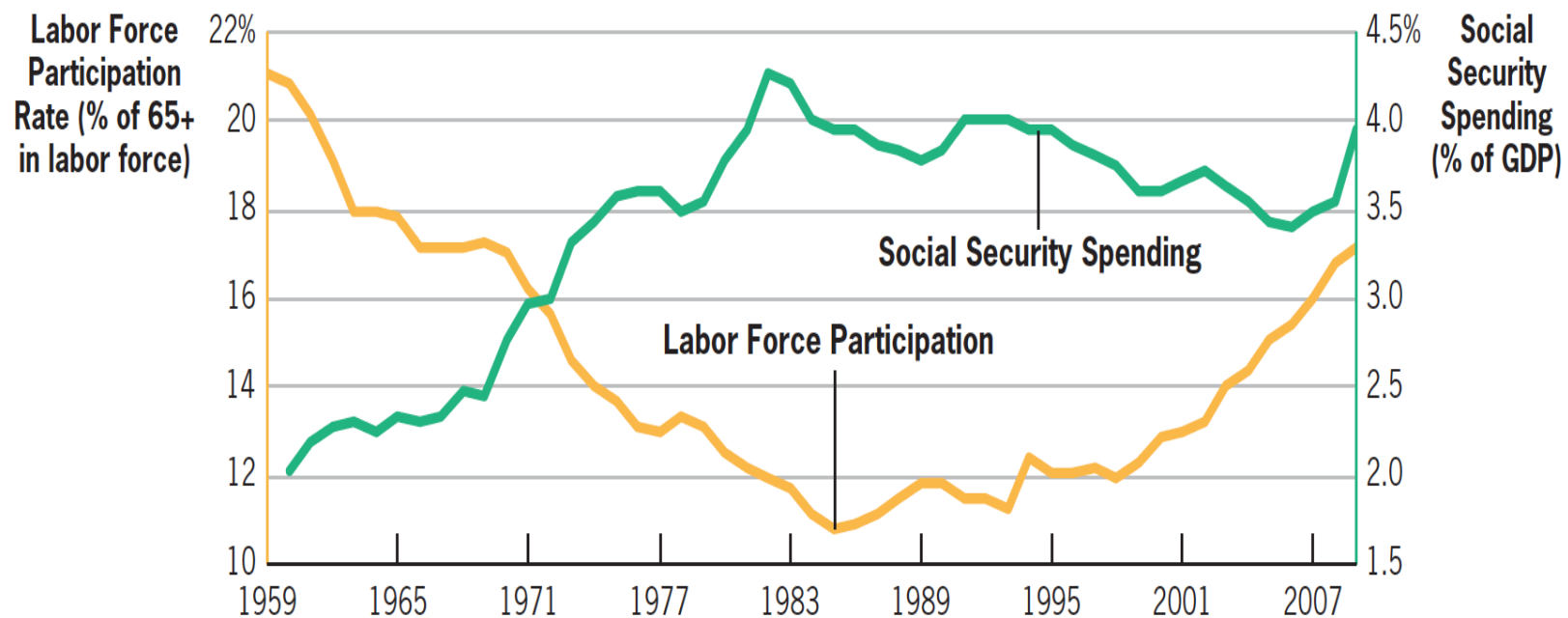
social insurance: applications

Living Standards of the Elderly, 1959–2009



social insurance: applications

Elderly Work and Social Security, 1959–2009



social insurance: applications

Implications

- Evidence suggests that it is potentially very costly to design Social Security systems that penalize additional work beyond the retirement age.
- Adjusting systems to more fairly reward work at old ages can mitigate much of the moral hazard effect of Social Security.

social insurance: applications

APPLICATION: How Many Years for calculation of pension benefits?

- Using the 35 highest years reflects multiple concerns.
 - No penalty for low-earning years early in career.
 - Not too large a benefit for high earning years late in career.
- Too short a window leads to abuse:
 - Bus driver working 25-hour shifts to maximize pension payment.
 - Brazilian public employees receiving promotions right before retirement.

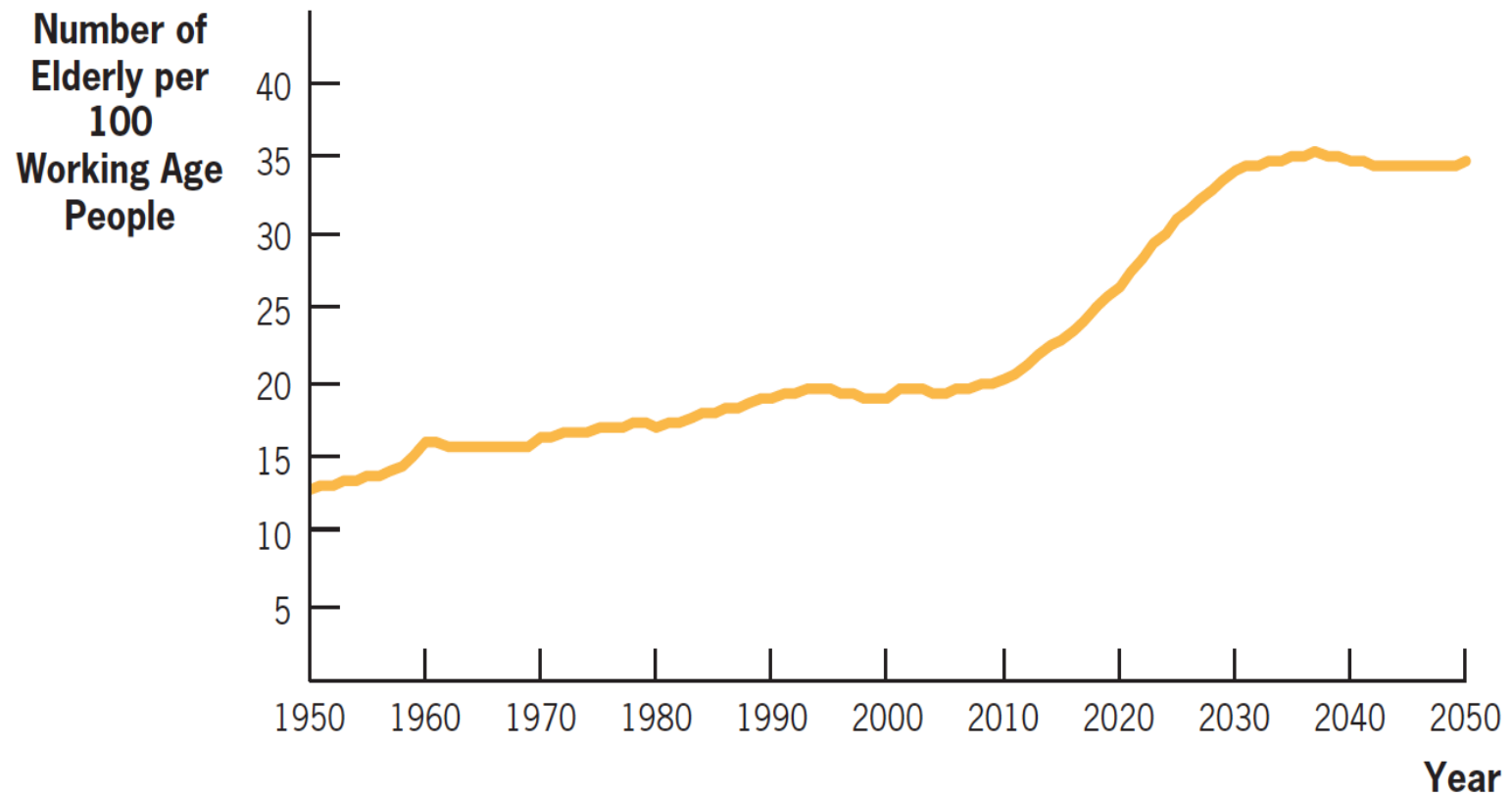
social insurance: applications

Social Security Reform

- Social Security faces a major fiscal imbalance as it is increasingly difficult for young generations to pay for the benefits of older generations.
 - Rising life expectancy
 - Falling birth rates
 - Reduction in wage growth rates

social insurance: applications

Social Security Reform



social insurance: applications

Social Security Reform

- Future? Moving away from unfunded system
 - Immigration
 - Capitalization Fund
 - Incentive schemes to increase average retirement age
 - Contribution rate as a function of life expectancy
 - Taxation of pensions
 - Revision of minimum pensions
 - Revision of role of second and third pillars
 - Reduce benefits? For all or for some?

social insurance: applications

Unemployment Insurance, Workers' Compensation, and Disability insurance.

- Unemployment insurance, workers' compensation, and disability insurance are three of the largest social insurance programs.
- They share many common features.
 - They operate in similar ways.
 - They provide similar insurance.
 - They generate similar moral hazard concerns.

social insurance: applications

Institutional Features of Unemployment Insurance

- **Unemployment insurance:** A state-run program in which payroll taxes are used to pay benefits to workers laid off by companies.
- Qualifications: minimum earnings amount, cannot quit or be fired for cause, must be looking for work.
- Benefits depend on past earnings.
- Benefits rise with earnings up to a maximum amount.
- The replacement rate is less than 100%.
- Maximum duration

social insurance: applications

Institutional Features of Disability Insurance and Workers' Compensation

- **Disability insurance:** A state program in which a portion of the Social Security payroll tax is used to pay benefits to workers who have suffered a medical impairment that leaves them unable to work.
- **Workers' compensation:** State-mandated insurance, which firms generally buy from private insurers, that pays for medical costs and lost wages associated with an on-the-job injury.

social insurance: applications

Comparison of the Features of UI, DI, and WC (U.S.)

Characteristic	UI	DI	WC
Qualifying Event	Job loss, job search	Disability	On-the-job injury
Duration	26-65 weeks	Indefinite	Indefinite (if verified)
Difficulty of verification	Job loss: easy Search: impossible	Somewhat difficult	Very difficult
Average after tax replacement rate	47%	60%	89%
Variation across states	Benefits and other rules	Only disability determination	Benefits and other rules

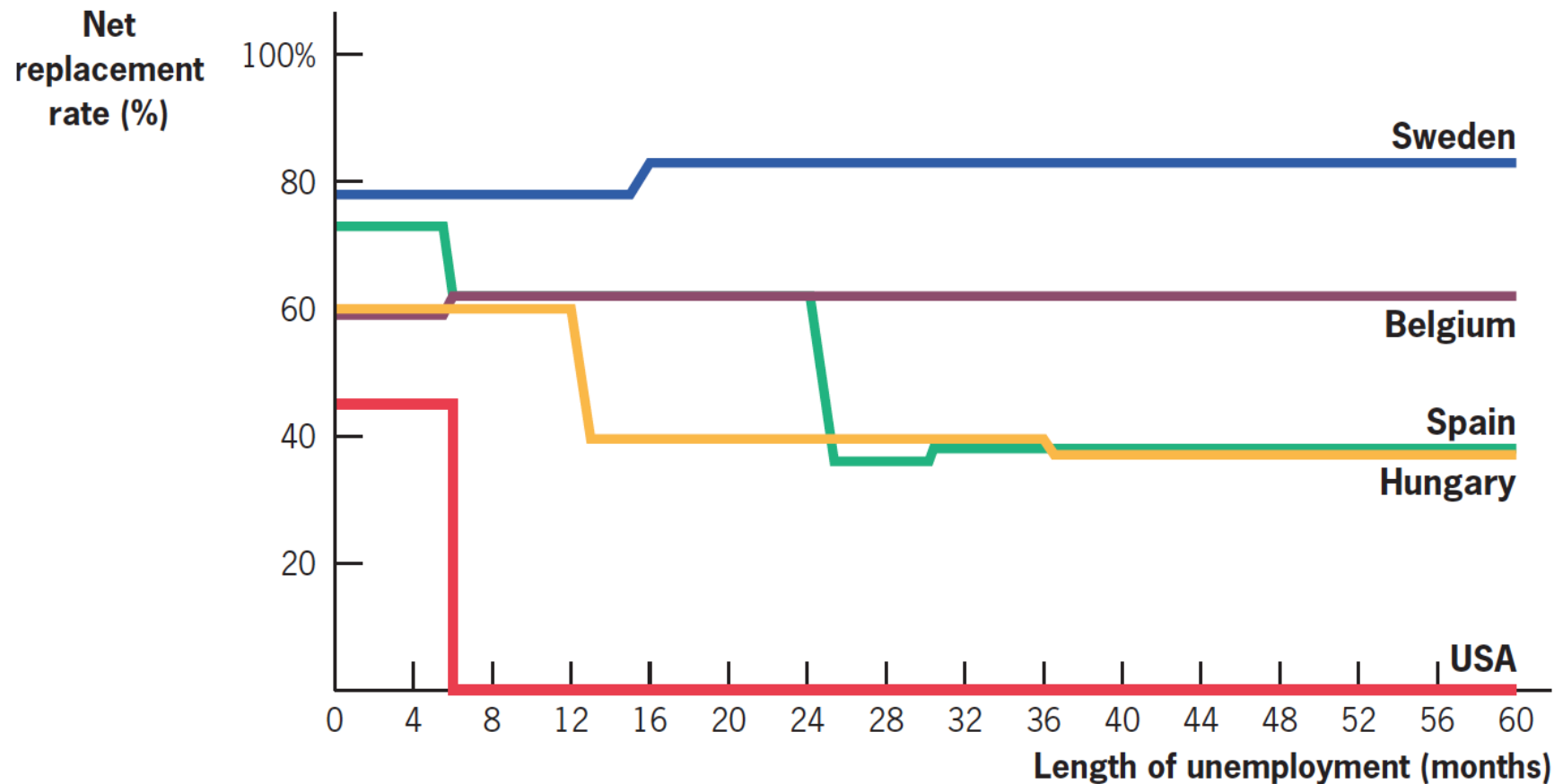
social insurance: applications

APPLICATION: The Duration of Social Insurance Benefits around the World

- These programs have distinct time patterns, paying out for 26 weeks or indefinitely.
- Unemployment insurance lasts much longer in many European countries than in the United States.
- Appropriate time pattern balances three factors:
 - Moral hazard: increases with length,
 - Consumption smoothing: increases with length,
 - Benefit targeting: increases with length.

social insurance: applications

APPLICATION: The Duration of Social Insurance Benefits around the World



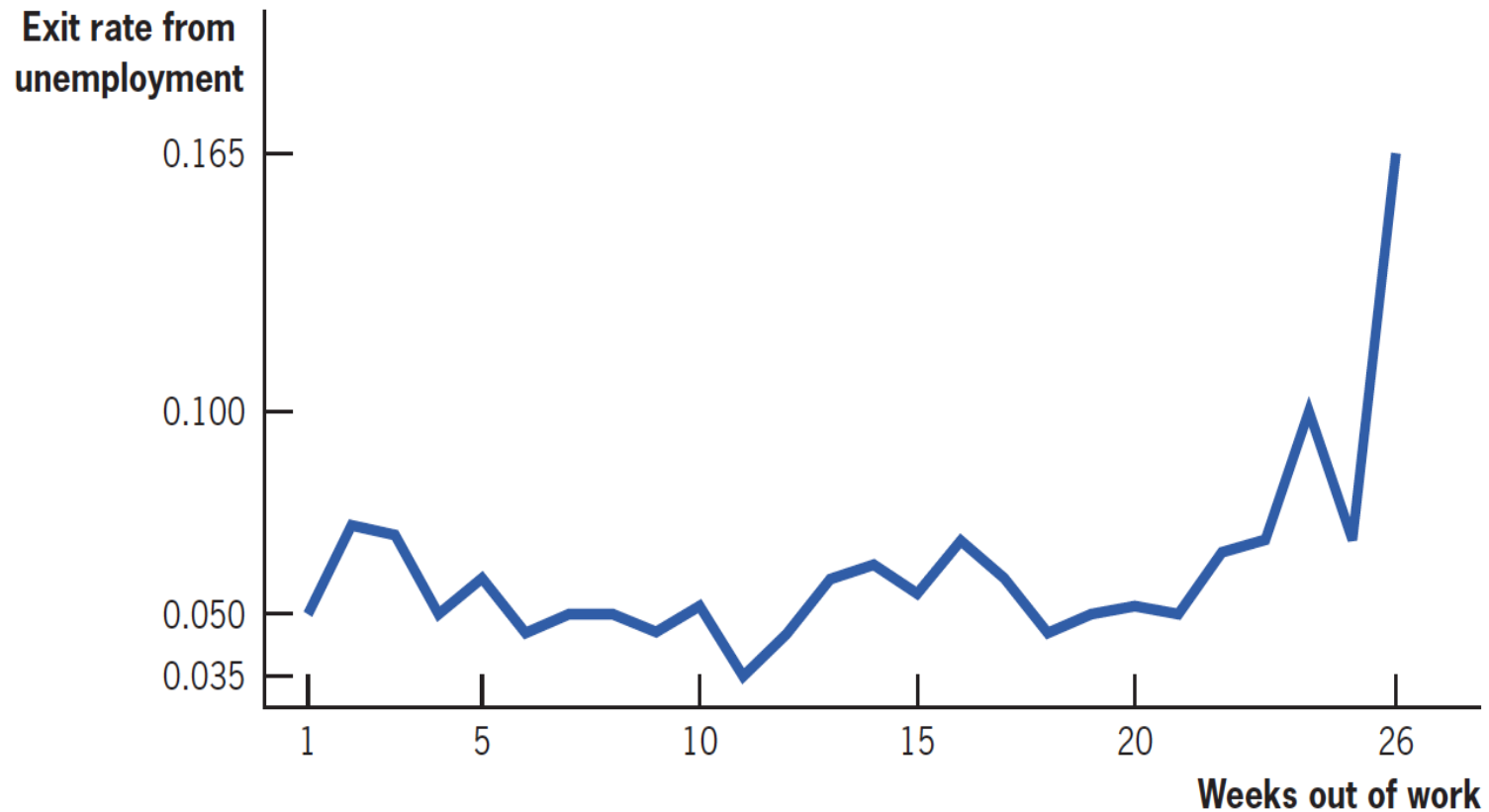
social insurance: applications

Consumption-Smoothing Benefits of Social Insurance Programs

- There is relatively little evidence on the consumption-smoothing implications of these programs.
- Most direct study: Gruber (1997)
 - Individuals are not fully insured by other sources against the income loss of unemployment.
 - Consumption falls significantly when they lose their jobs.
 - Higher levels of UI lessen the negative effects of job loss.

social insurance: applications

Moral Hazard Effects of Unemployment Insurance



social insurance: applications

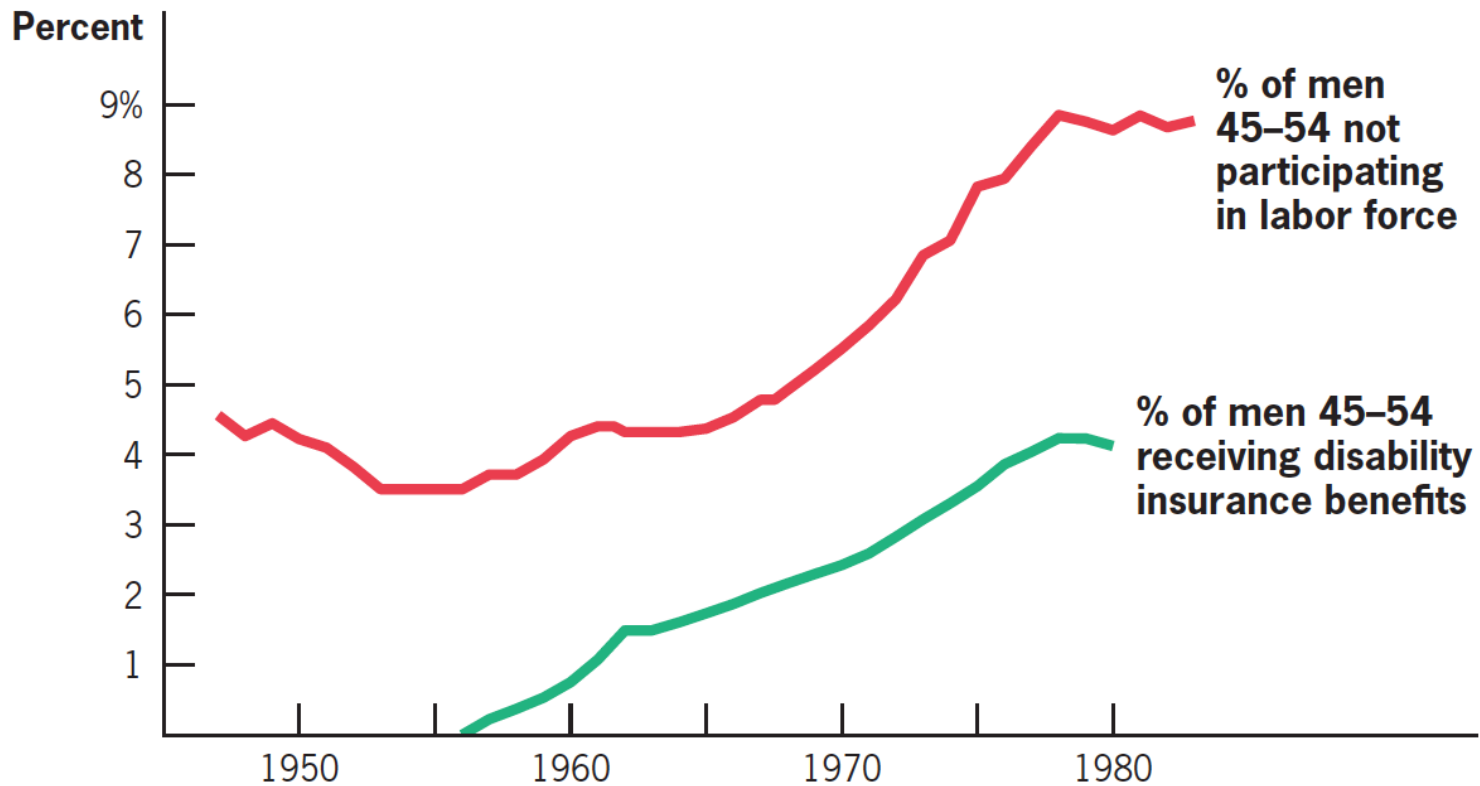
Normative Implications of Longer Durations

Do longer durations represent an undesirable outcome?

- Yes, if UI is subsidizing unproductive leisure.
- No, if UI is helping people find higher quality job matches.
 - **Job match quality:** The marginal product associated with the match of a particular worker with a particular job.

social insurance: applications

Evidence for Moral Hazard in DI



social insurance: applications

Workers ' Compensation and Firms

- With WC, firms and workers can get together to increase “injuries” if the insurance is less than fully experience-rated.
- Firms have less incentive to invest in safety when there is no-fault insurance for injuries.

social insurance: applications

Implications for Program Reform

- **Targeting**
 - Target UI benefits toward those who have been permanently laid off.
 - Pay higher DI/WC benefits to people with less ambiguous disabilities or injuries.

social insurance: applications

Conclusion

- Individuals clearly value the consumption smoothing provided by social insurance programs.
- In each case there are significant moral hazard costs associated with the provision of the insurance.
- Empirical analyses of all three programs can be used to inform policy makers' decisions as program reforms move forward.