NOTTINGHAM TRENT UNIVERSITY

Ageing and Pensions

Lectures 5 and 6

Le Grand, Propper and Smith (2008): Chp 4

Barr (2004): Chp 9

Tresch (2008): Chp 12

Outline

- Pensions and Ageing
- Efficiency and Intertemporal Allocation
- Pensioner Poverty
- Pensions and Private Markets
- Pensions and Govt Intervention
- www.thepensionservice.gov.uk

Pensions and Ageing

- Pensions and population ageing
  - Life expectancy and ↑ longevity
  - Ageing of the "baby boomers"
  - Low and falling birth rates

  ⇒ Rising cost of pensions

- NB component of govt provision

- What to do?
  - ↑ Savings
  - ↑ Taxes
  - ↑ Retirement age
  - ↓ incomes in retirement

Country	**Birth rates**
Ireland	1.99
France	1.90
UK	1.74
Germany	1.37
Spain	1.33
Italy	1.32
Greece	1.27

Pensions and Govt Policy I: Efficiency

- Efficient level of pension provision: consumption smoothing
  - Provide income in retirement
  - How to accumulate resources to finance spending in retirement
  - Resources available in retirement compared with working life
- How to allocate resources over a lifetime?
  - Income variability
  - Retirement is anticipated
- Maximise total lifetime welfare
  - Period 1: employed and receive earnings
  - Period 2: retired; no earnings
  - Total lifetime welfare: the sum of benefits in the 2 periods

Solving the Intertemporal Allocation Problem

- Trade-off between 2 periods: diminishing marginal benefit of consumption
- Deferred utility can ↑ total benefit
- Efficient outcome
  - Current spending v saving for retirement

Units consumed	Total benefit	Marginal benefit
1	10	10
2	19	9
3	27	8
4	34	7
5	40	6
6	45	5
7	49	4
8	52	3
9	54	2
10	55	1

The Intertemporal Allocation Problem Modified

- 1. Consumption Variability at different life stages
  - ↑ consumption needs in period 1
  - ↑ leisure in period 2 → spending indeterminate
- 2. Future consumption discounted
  - Heavier weighting in favour of current costs and benefits
- 3. Returns to Saving
  - Foregoing consumption today will ↑ consumption tomorrow
- Deferred resources → pension

Distinct Features of Pensions

- Tax treatment
- Lock-in
- **Annuity**
  - Reduce spending sprees
  - Efficient outcome when timing of death is uncertain
  - Risk-aversion and guaranteed level of income

$\longrightarrow$ Role of Pensions

- A form of savings (consumption smoothing)
- A form of insurance (against mortality risk)

Pensions and Govt Policy II: Equity

- Explicit objective to reduce **pensioner poverty**

- Pensioner poverty defined
  - Household income below 60% of the median
  - Equality between young and old

- Policies to combat pensioner poverty entail
  - A redistribution of resources between generations
  - A redistribution of resources within generations

  …but no adjustment for spending needs
  - Index linked v a pensioner price index?
  - Pro-cyclical variation in pensioner poverty

Pensions and the Market System I: Equity

- Consumption smoothing v low lifetime incomes
  - Insufficient funds for retirement
- What to do?
  - $\uparrow$ Retirement age
- Govt provision of pensions based on
  - Income in retirement?
  - Lifetime earnings?

$\Rightarrow$ Tension
  - Re-distribute to the poor based on current income
  - Fair treatment according to lifetime income

Pensions and the Market System II: Efficiency

- Consumption smoothing and optimality

  …but potential market failures

- 1. Information problems
  - Lack of information
  - Complicated and opaque charging structures
  - Financial providers

  $\Rightarrow$ barriers to saving for retirement

- Systematic under-saving v ill-health?
- Automatic enrolment (opt out) v conscious enrolment (opt in)
- 2. Aggregate or Social Risks
  - Pooling of risk v same risk
  - eg unexpected increases in life expectancy, inflation

Govt Intervention I: Direct Provision

- 1. Means-tested benefits
  - Income and wealth eligibility criteria
  - Cost-effective in targeting limited resources on poor
  - Moral hazard problem
- 2. Pay-as-you-go (PAYG)
  - Insurance based pension
  - Eligibility criteria: contributions into a fund for a specified nr of years
  - Taxes of working population pay current pensioners
  - Social risks are spread across generations
  - Under pressure by ageing populations
- 3. Funded System
  - insurance based pension
  - Working population contributions invested for future retirement
  - Higher return, greater choice

PAYG or Funded Pensions Scheme?

- Is a funded system the solution to the ageing population?
- 1. Financing
  - Hard choices also relevant for funded systems
  - Transition from a PAYG to a funded system painful
- 2. Rate of return (ROR) and choice
  - PAYG: return = rate of wage growth
  - Funded: historically, stock market returns > wage growth
    …but ↑ investment risk
  - Funded: > choice to invest savings in a wide range of assets
    …but information asymmetries
- 3. Aggregate risks
  - PAYG: aggregate risks are spread across generations

Pension Provision: an International Comparison

- UK
  - First tier: basic state pension: flat-rate, minimum amount, PAYG
  - Eligibility criteria: sufficient years of contributions
  - Index-linked to inflation
  - Second tier: S2P
- Germany
  - Single state scheme
  - Earnings replacement
  - Roughly proportional to labour income over a lifetime
  - PAYG
- Australia
  - Flat-rate means-tested: Age pension
  - Eligibility based on income and assets
  - Superannuation guarantee: additional mandatory contributions

Govt Intervention II: Regulation

- Market failures
  - Are consumers rational, well-informed agents?
  - Complex decisions and opaque charging structures
  - Financial advisers

  $\Rightarrow$ Govt regulation of financial market
- Process regulation
  - Purchase and sale of financial services
- Product regulation
  - Stakeholders pensions: individual plan above basic level of pension provision
  - Policy of informed choice
- National Pensions Saving Scheme
  - Simplified, low-cost vehicle to save for retirement
  - Automatic enrolment
  - Stops short of compelling people to save

Govt Intervention III: Subsidies

- Tax system treats pensions favourably
  - Income tax relief on contributions paid into personal private pension
  - Up to 25% of savings tax free

  $\Rightarrow$ subsidy for pension saving
- Tax Incentives and the ambiguous effect on savings
  - Tax relief $\rightarrow$ $\uparrow$ return on saving $\rightarrow$ $\uparrow$ saving
  - Tax relief $\rightarrow$ $\uparrow$ consumption $\rightarrow$ $\downarrow$ saving
- Locked-in
  - Desirable from govt perspective
- Regressive
  - Caps?
  - Tax relief limited to basic tax rate for everyone
  - Matched pension saving: National Savings Plan

Summary

- Benefits of social insurance: consumption smoothing
- Costs of social insurance: moral hazard
- Govt intervention justified
  - Individuals too poor to save
  - Private markets cannot insure against aggregate risk
  - Decisions on complicated financial products
- Govt provision
  - Means-tested benefits
  - System of social insurance
- Social insurance
  - UK: minimum basic pensions and additional private saving (via subsidies or automatic enrolment)
  - Germany: generous system, but costly (ageing population)