

Reforming pensions: Principles, analytical errors and policy directions

Nicholas Barr

London School of Economics

<http://econ.lse.ac.uk/staff/nb>

Conference on Pension Reform in Serbia
Belgrade, 24-25 September 2009

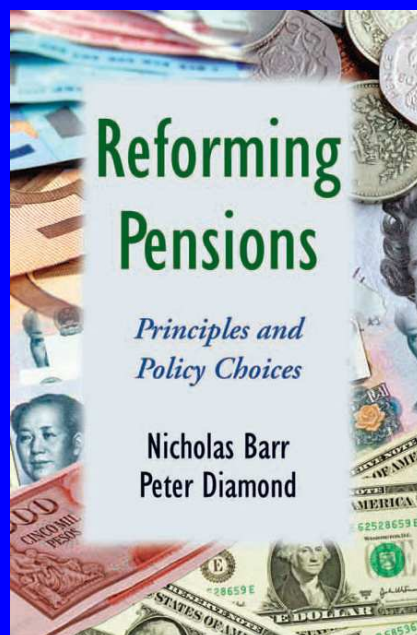
LSE

Reforming pensions: Principles, analytical errors and policy directions

- 1 Strategic messages
- 2 Analytical errors
- 3 Policy problems
- 4 What pension arrangements?
- 5 Concluding thoughts

1 Strategic messages

- Lecture draws heavily on Barr and Diamond (2008)



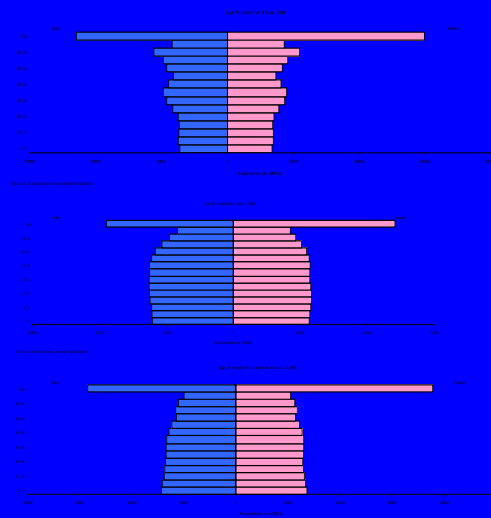
Message 1: It's not the baby boom

- The main cause of the 'crisis' is a failure to adapt to long-term trends
- Many pension systems face a series of trends:
 - a long-term trend of rising life expectancy
 - a long-term trend of declining fertility
 - a long-term trend to earlier retirement
- These are more important than two more recent phenomena:
 - the baby boom
 - the increase in the scale of pension systems since World War II
- There would be a problem of paying for pensions even if there had not been a baby boom

Nicholas Barr, September 2009

4

Age pyramids 2050, China, India, USA



Nicholas Barr, September 2009

5

Message 2: It's not a crisis

- There is no 'ageing problem', nor a 'pensions crisis'
- People are living longer – the great untold good news story; not a problem but a triumph
- The problem is not that people are living too long, but that they are retiring too soon

Message 3: Private pensions are not a panacea

- Funded and PAYG
 - Funded pensions are paid from an accumulated fund built up over a period of years out of contributions of its members
 - Pay-As-You-Go pensions are paid (usually by the state) out of current tax revenues, rather than out of an accumulated fund
- The World Bank has advocated funded private pensions, arguing that they
 - Promote growth
 - Increase coverage
 - Improve old age security
- These arguments can be true but are not always and necessarily true
- The World Bank's arguments have significant analytical flaws, discussed in section 2 and more fully in Barr and Diamond 2008, Box 10.1; 2009

Message 4: Policy should address the multiple objectives of pensions

- Poverty relief
- Consumption smoothing
- Insurance
- Redistribution, aka social solidarity

Message 5: No single best pension system

- Objectives: consumption smoothing, insurance, poverty relief, redistribution
- Constraints include
 - Fiscal capacity
 - Institutional capacity
 - Empirical value of behavioural parameters
 - Shape of the income distribution
- No single best system because
 - Policy makers attach different relative weights to the different objectives
 - The pattern of fiscal and institutional constraints differs across countries
- Thus
 - What is optimal will differ across countries and over time
 - Pension systems look different across countries; this is as it should be

Optimisation: no perfect answers

‘Designing a White House staff, like designing an aircraft, involves trade-offs. If you want speed of decision, you must narrow the number of those involved in the decision—thus sacrificing breadth of information and depth of debate. If you demand single-minded devotion to yourself, you will probably choose people who lack other career options—which is to say, people who are less than supremely able. If you want to recruit the best and the brightest, you will have little choice but to end up with people of strong wills, big egos and intense principles, who may put their beliefs before your interests. The problem of designing an effective political organisation cannot be solved, it can only be finessed.’

David Frum, ‘They stood by their man,’ *Prospect Magazine*, Issue 148, July 2008, pp 12-13

Nicholas Barr, September 2009

10

2 Analytical errors

Nicholas Barr, September 2009

11

Error 1: Tunnel vision

- The problem:
 - Considering one objective in isolation
 - Example: excessive focus on consumption smoothing (e.g. DC pensions), understating poverty relief (hence Chile reformed in 2008)
 - Considering one part of the pension system in isolation

Error 2: Improper use of first-best analysis

- The problem: ignores market imperfections
- Examples
 - Uncritical advocacy of competition, notwithstanding major information problems
 - Uncritical assumption of rational response to incentives, e.g. the argument that DC pensions lead to higher compliance. Ignores
 - Imperfect information, e.g. about rates of return
 - Lessons from behavioural economics, e.g. procrastination, immobilisation, etc.
 - Imperfect capital markets, so that some people are liquidity constrained
 - Ignoring frictions, in particular administrative costs

Error 3: Improper use of steady state analysis

- The problem: improperly compares pension systems in steady state; this is inappropriate if the question being analysed is a move from one steady state to another, e.g. PAYG to funded
- Example: comparing the simple stock market return with the rate of growth of the wage bill in comparing rates of return to funded and PAYG pensions

Error 4: Incomplete analysis of implicit pension debt

- The problem: treating implicit and explicit pension debt as equivalent
- The simple argument about implicit pension debt
 - Focuses only on liabilities, ignoring assets, e.g. ability to tax
 - Fails to recognize important differences in the economic effects of implicit and explicit debt, e.g. can reduce implicit debt through pension reform without repudiating explicit debt
 - Erroneously implies that paying off implicit debt in full is optimal; implicit debt (like government debt) should be optimised, not minimised
 - Ignores the intergenerational distributional effects of a change in balance between implicit and explicit debt
- Implicit debt is a useful concept, but has to be interpreted properly

Error 5: Incomplete analysis of funding

- The problem: loses sight of fact that PAYG and funding are both ways of organising claims on future output
- Examples:
 - Arguing that funding necessarily assists adjustment to demographic change
 - Arguing that an actuarial relationship between contributions and benefits is possible only with a funded system, ignoring the option of NDC

Error 6: Ignoring distributional effects

- The problem: ignores the fact that any pension reform has distributional consequences.
- Examples:
 - Introducing a new PAYG system makes a transfer to the first cohort of retirees; if, instead, policy makers introduce a funded scheme, the first cohort receives no pension
 - Similarly, a move towards funding that increases saving redistributes from today's workers and pensioners to later generations
- Thus
 - Choices about pension systems are inescapably also choices about intergenerational redistribution
 - Such redistribution may or may not be good policy
 - But ignoring distributional effects is faulty analysis; so are claims of Pareto superiority

3 Policy problems

- Paying for pensions
- Making pensions portable internationally

Public pension spending, % GDP

	2000	2030	2050
Denmark	10.5	14.5	13.3
France	12.1	16.0	n.a.
Germany	11.8	15.5	16.9
Greece	12.6	19.6	24.8
Netherlands	7.9	13.1	13.6
Sweden	9.0	11.4	10.7
UK	5.5	5.2	4.4

Source: UK Pensions Commission (2004, Table D2)

Solutions

- Lower pensions
 - Lower monthly pensions
 - Later retirement at the same monthly pension
- Higher contributions
- Policies to increase national output

Any proposal to improve pension finance that does not involve one or more of these approaches is mistaken

Policies to increase output

- Increasing the productivity of each worker, through
 - (1) Higher saving, leading to more/better physical capital
 - (2) Higher investment in human capital, including that of older workers
- Increasing the number of workers from each age cohort
 - (3) Higher labour force participation at all ages
 - (4) A higher age of retirement
 - (5) Importing labour directly (immigration)
 - (6) Importing labour indirectly (export capital)

Portable pensions

- National systems differ, inter alia, in terms of
 - Contributory (UK, USA) or not (Netherlands, Chile)
 - Number of years of contributions
 - Pensions formula
 - Vesting period
 - The role of private pensions
- What is the problem?
 - Workers who move across countries may end up with little pension
 - This creates impediments to labour mobility
- Why does labour mobility matter?
 - For efficiency in a modern labour market
 - As an element in human rights

4 What pension arrangements?

- Though there is no single best pension system, this lecture discusses some policy directions that should be considered seriously
 - Avoiding elderly poverty
 - Redefining retirement
 - Consumption smoothing: learning from the USA
 - Consumption smoothing: learning from Sweden

4.1 Avoiding elderly poverty

- **Policy 1: Non-contributory basic pensions**
- **Definition:** a public pension paid at a flat rate, on the basis of age and residence rather than contributions
- **Why?**
 - The contributory principle assumed workers with long, stable employment, thus coverage would grow
 - History has not sustained this argument

The world then

- Social policy in 1950 was based on a series of assumptions
 - Independent nation states
 - Employment generally full time and long term
 - Limited international mobility
 - Stable nuclear family with male breadwinner and female caregiver
 - Skills once acquired were lifelong
- Though not true even then, true enough to be a realistic basis for policy

What has changed?

- Increasing international competition ('globalisation')
- **Changing nature of work, with more fluid labour markets ('post-industrialisation')**
- Rising international mobility
- **Changing nature of the family**
 - More fluid family structures
 - Rising labour-market activity by women
- Shorter half-life of skills ('information age')
- Thus the drivers of change are
 - More diverse patterns of work: thus there are problems for coverage of contributory benefits tied to employment
 - Increasingly fluid family structures: thus there are problems basing women's benefits on husbands' contributions

Nicholas Barr, September 2009

26

Arguments for a non-contributory basic pension

- Strengthen poverty relief in terms of
 - Coverage
 - Adequacy
 - Gender balance
- Improve incentives relative to income-tested poverty relief
- Provide good targeting (age is a useful indicator of poverty)
- Assists international labour mobility through pro-rata arrangements

Nicholas Barr, September 2009

27

Containing costs

Adjusting to match budgetary constraints:
three instruments

- The size of the pension
- The age at which the pension is first paid
- Perhaps also an affluence test

Country examples

- UK: illustrates problems of coverage, hence
 - Reduced contribution requirements, i.e. move towards a non-contributory basic pension
 - Ability to buy extra years
- OECD countries with non-contributory basic pensions
 - The Netherlands
 - New Zealand
 - Australia (which has an affluence test)
 - Canada (which has an affluence test)
- Other examples include the new solidarity pension in Chile

4.2 Redefining retirement

- **Policy 2: Later and more flexible retirement**

Later retirement: Why?

- Longer healthy life + constant or declining retirement age creates problems of pension finance
- The solution: pensionable age should rise in a rational way as life expectancy increases
- Thus can say (UK Pensions Commission) that people can retire later but still have a longer retirement than their parents
- This is all the more the case since most work is less physically demanding than in the past

The UK story



Nicholas Barr, September 2009

32

Also more flexible retirement

- Mandatory full retirement made sense historically, but no longer
- Increased choice about when to retire, and whether fully or partially is desirable
 - To promote output growth
 - As a response to individual preferences (and thus desirable for its own sake, irrespective of problems of pension finance)

Nicholas Barr, September 2009

33

Country examples

- USA: age for full pension of 65 (men and women) rising over time to 67
- UK: state pensionable age for 65 (men and women) will rise to 66 in 2024 and thereafter by one year each decade
- Norway: retirement age is already 67 (men and women)
- Not before time, retirement age is now a proper topic for polite society

4.3 Consumption smoothing: Learning from the USA

- **Policy 3: The Thrift Savings Plan approach**
- Why? Lessons from
 - The economics of information
 - Behavioural economics

Lessons from information economics

- In many areas of social policy the model of the well-informed consumer does not hold
- In the context of pensions
 - A survey, 50% of Americans did not know the difference between a stock and a bond
 - Most people do not understand the need to shift from equities to bonds as they age, if they hold an individual account
 - Virtually nobody realises the significance of administrative charges for pensions

Nicholas Barr, September 2009

36

Lessons from behavioural economics

- What conventional theory predicts
 - Voluntary saving to maximise lifetime utility (consumption smoothing)
 - Voluntary purchase of annuities (insurance)

Nicholas Barr, September 2009

37

What actually happens

- Procrastination: people delay saving, do not save, or do not save enough
- Inertia: people stay where they are; in theory it should make no difference whether the system is opt in or opt out – in practice, automatic enrolment leads to higher participation
- Immobilisation
 - Conflicts and confusion lead people to behave passively (rabbit in car headlight)
 - Impossible to process information about 700 different funds (90% go into Swedish default fund)

Why? Recent lessons from behavioural economics

- Experimental evidence shows high discount rate in short run, much lower in long run
 - Next week's snack: 2/3 chose fruit salad, 1/3 chocolate
 - This week's snack: 1/3 fruit salad, 2/3 chocolate
- Thus people are rational for the future, but not for the present; but when the future arrives it is the present, so the short-term wins
- Examples: start dieting tomorrow; give up smoking tomorrow; but when tomorrow comes ...

Clinical measurement of brain activity

- Two parts of the brain
 - Mesolimbic: old part of brain: impatient – ‘eat now, won’t last’
 - Prefrontal cortex: newer part of brain: patient and rational – this is rational economic man and woman
- Life is a constant fight between the two parts
- Clinical measurement (experiments while person is in scanner) shows that short-term decisions are made by the mesolimbic system, longer-term decisions by the prefrontal cortex
- These results call into question the simple model of long-term rationality

Nicholas Barr, September 2009

40

Implications: getting it right

- Use automatic enrolment
- Keep choices simple
 - Highly constrained choice is a deliberate and welfare-enhancing design feature
 - But one of the options can be to allow individual choice (Marks and Spencer or Saville Row)
- Design a good default option which includes life-cycle profiling
- Decouple fund administration from fund management
 - Centralised administration
 - Fund management: wholesale, competitive

Nicholas Barr, September 2009

41

The US Thrift Savings Plan

- The system (www.tsp.gov)
 - Initially voluntary for federal civil servants, now auto-enrolment
 - Workers choose from five funds
 - Centralised account administration
 - Wholesale fund management
- Comments
 - Simplifies choice for workers, respecting information constraints
 - Keeps administrative costs low
 - The new system of personal pensions in the UK is similar
 - If there were ever to be publicly-organised individual accounts in Chile this model bears study

4.4 Consumption smoothing: Learning from Sweden

- **Policy 4: Notional defined contribution (NDC) pensions**

How do NDC pensions work?

- Mimic individual funded accounts, but on a Pay-As-You-Go basis, i.e. actuarial Pay-As-You-Go
- Workers' contributions this year pay this year's pensions
- The government keeps a record of individual contributions, each year attributing a notional interest rate to each worker's accumulation
- When the worker retires, his/her notional accumulation is converted into an annuity
- In a pure NDC system benefits are actuarial; the system can also incorporate redistribution, e.g. minimum benefits or pension credits for caring activities

Why NDC might be advantageous

- Simple from the point of view of the worker
- Centrally administered, hence low administrative costs
- Avoids much of the risk of funded individual accounts, since avoids volatility of capital markets
- Does not require the institutional capacity to manage funded schemes, including Thrift Savings Plan arrangements
- Saving may be the wrong policy (China), or people may not want to save
- In either case, NDC can be the basis for a future move to partial or full funding; thus may have advantages as a starting point if financial market turbulence continues
- NDC or funded accounts? Solid economic principles for informing the choice (Barr and Diamond 2008)

Country examples

- Canada
- Sweden
- Poland
- Latvia

5 Concluding thoughts

- No single best pension system. Thus
- What is optimal will differ across countries and over time
- Pension systems look different across countries; this is as it should be
- That said, the policies outlined above can be applied in a wide range of countries
- Thus earlier arguments have wider relevance

Range of options for developed countries

- 1st tier: choice of
 - Contributory pension aimed at poverty relief
 - Non-contributory tax-financed pension (Netherlands), perhaps with an affluence test (Canada)
- 2nd tier: choice of
 - A publicly-organized defined-benefit pension (USA), which may be integrated as a single system with the first tier
 - Notional Defined Contribution pension (Sweden)
 - An administratively cheap savings plan with access to annuities (the Thrift Savings Plan)
 - Mandatory occupational funded defined-benefit pensions (de facto in the Netherlands)
 - Funded defined-contribution pensions (Chile)
- 3rd tier: Voluntary defined contribution pensions at the level of the firm or the individual; any tax favouring should seek to avoid excessive regressivity

Why does this matter? Answering the 'So what?' question

- Pensions affect the quality of life of hundreds of millions of older citizens and, as they look to their future, hundreds of millions of workers
- Pensions matter for national economic performance
- Pensions can matter internationally: global imbalances and China's precautionary savings rate of about 40% of GDP

References

- Barr, Nicholas (2006), 'Pensions: Overview of the Issues', *Oxford Review of Economic Policy*, Vol. 22. No. 1, pp. 1-14.
- Barr, Nicholas and Diamond, Peter (2006), 'The Economics of Pensions', *Oxford Review of Economic Policy*, Vol. 22. No. 1, Spring, pp. 15-39.
- Barr, Nicholas and Diamond, Peter (2008), *Reforming pensions: Principles and policy choices*, New York and Oxford: OUP.
- Barr, Nicholas and Diamond, Peter (2009), 'Reforming pensions: Principles, analytical errors and policy directions', *International Social Security Review*, Vol. 62, No. 2, 2009, pp. 5-29 (also in French, German and Spanish)
- Barr, Nicholas and Diamond, Peter (forthcoming), *Pension reform: A Short Guide*, New York and Oxford: OUP.
- UK Pensions Commission (2004), *Pensions: Challenges and Choices: The First Report of the Pensions Commission*, London: TSO, <http://www.pensionscommission.org.uk>
- UK Pensions Commission (2005), *A New Pension Settlement for the Twenty-First Century: Second Report of the Pensions Commission*, London: TSO, 2005, <http://www.pensionscommission.org.uk>
- US Thrift Savings Plan (<http://www.tsp.gov>)