

# Reforming Pensions: Principles and Policy Choices

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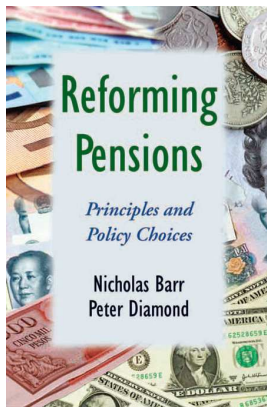


## Reforming Pensions: Principles and Policy Choices

- 1 The backdrop
- 2 What are the problems?
- 3 What pension arrangements?
- 4 Concluding thoughts

## 1 The backdrop

- Lecture draws heavily on Barr and Diamond (2008)



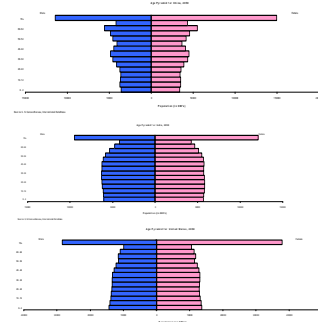
## The objectives of pension systems

- For the individual
  - Consumption smoothing
  - Insurance
- Additional objectives of public policy
  - Poverty relief
  - Redistribution

## Message 1: It ain't 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

## Age pyramids 2050, China, India, USA



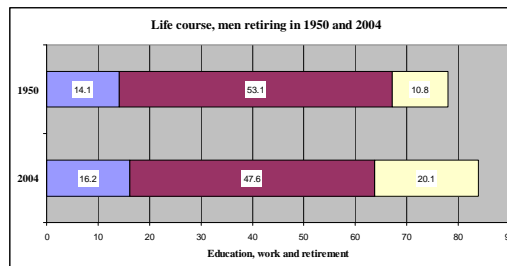
## Message 2: It ain't a crisis

- 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

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7

## The UK as an illustration



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8

## 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 (Barr and Diamond 2008, Box 10.1; 2009)

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9

## Message 4: Policy should take account of the multiple objectives of pensions

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

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## 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

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11

## 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

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12

## 2 What are the problems?

- Paying for pensions
- Making pensions portable internationally

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## 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)

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14

## 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

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15

## 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)

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16

## 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

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17

## 3 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

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18

### 3.1 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

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19

### 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

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20

### 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

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21

### 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

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22

### 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

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23

### 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)
  - Chile introduced a non-contributory pension in 2008

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24

## 3.2 Redefining retirement

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

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## 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

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26

## 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)

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27

## Beware age discrimination as a black box

- Discrimination is real, but not the whole story
- Enlightened employers may face impediments to employing older workers
  - Fixed costs of employment (militates against part-time work)
  - Legal rigidities, e.g. inability to reduce pay as a worker downshifts
  - Contractual issues, e.g. 'hassle factor' over the design of part-time contracts
  - Insurance issues, e.g. health or travel insurance provided by employers may rise sharply for workers over 65
- Policy needs to address these impediments

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28

## 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

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29

## 3.3 Consumption smoothing: Learning from the USA

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

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30

## 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

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31

## Lessons from behavioural economics

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

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32

## 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)

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33

## 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 ...

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34

## 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

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35

## 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

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36

## The US Thrift Savings Plan

- The system ([www.tsp.gov](http://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

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37

## 3.4 Consumption smoothing: Learning from Sweden

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

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38

## 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

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39

## 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)

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40

## Country examples

- Canada
- Sweden
- Poland
- Latvia

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41

## 4 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

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42



## Country illustrations

- Countries have implemented very different systems
- Largely consumption smoothing; Singapore's state-administered provident fund, mainly a saving scheme
- Mainly poverty relief through a non-contributory pension, with voluntary consumption smoothing (New Zealand till recently)
- Both objectives: Netherlands: non-contributory PAYG universal pension plus funded occupational pensions
- Chile has strengthened poverty relief by introducing a non-contributory pension alongside its existing system of individual funded accounts
- Wide variation in reliance on mandatory funding
  - Substantial reliance (Chile)
  - Intermediate reliance (Sweden, USA)
  - Mainly PAYG (France, Germany, Italy)

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43

## Range of options for developed countries

- 1<sup>st</sup> tier: choice of
  - Contributory pension aimed at poverty relief
  - Non-contributory tax-financed pension, with or without an affluence test
- 2<sup>nd</sup> tier: choice of
  - A publicly-organized defined-benefit pension, which may be integrated as a single system with the first tier
  - Notional Defined Contribution pension
  - An administratively cheap savings plan with access to annuities
  - Mandatory occupational funded defined-benefit pensions
  - Funded defined-contribution pensions
- 3<sup>rd</sup> tier: Voluntary defined contribution pensions at the level of the firm or the individual; any tax favouring should seek to avoid excessive regressivity

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44

## 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

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45

## 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>)



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46