

Aging and Pension Adequacy

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Pension Systems

National plan (defined benefit, defined contribution, notional defined contribution)

Non-contributory plan

Employer plans (private firm, industry, public employer)

Individual plans (private supply, public supply)

Primary difficulties for pension design

- **Diversity in labor market experiences, life expectancies, and family structures.**
- Economic and demographic risks to the system.
- Widespread imperfect consumer information and decision making.
- Asset supply responses to the nature of consumer demand.
- Costs of administration can be significant.
- **Government needs to be able to do a good job.**

Automatic adjustment indexation

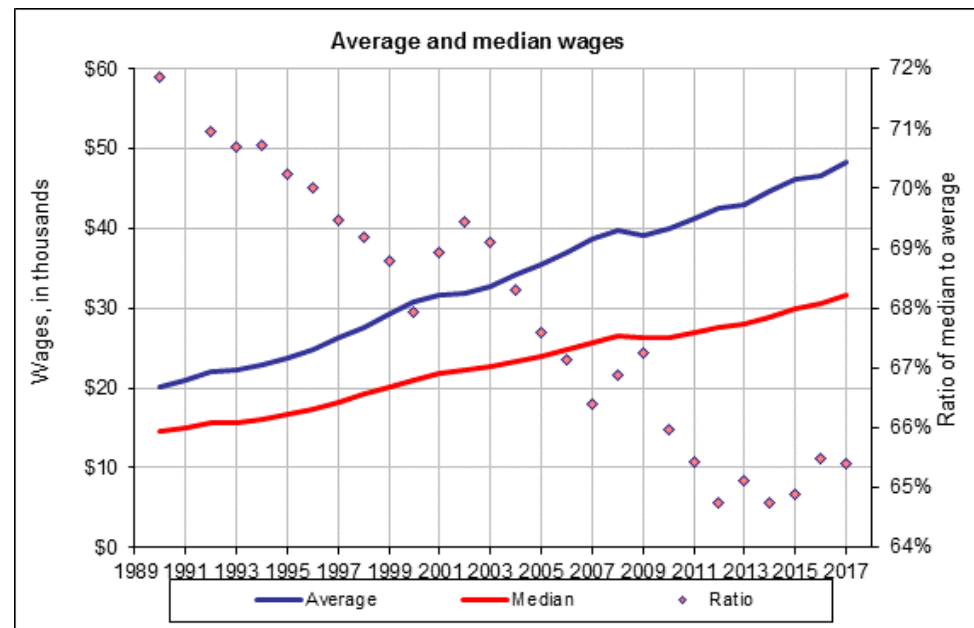
- Indexes used for a long time:
prices, wages, combination

At What Price?

- the price data used to produce the CPI are collected from retail stores and not directly from households,
- the two major aggregation issues:
 - To what extent do changes in living costs differ among the various economic and demographic groups?
 - And to what extent would a democratic index behave differently from a plutocratic one?

Charles Schultze and Christopher Mackie, 2002, P. 5.

Median and Mean Earnings, US



Automatic adjustment indexation

- Indexes used for a long time:
prices, wages, combination
- Indexes adopted since mid-90s:
dependency ratio:
Germany: Deutsche Rentenversicherung
life expectancy:
Netherlands: AOW
Sweden: Inkomstpension (NDC)
financial balance:
Canada: CPP
Sweden: Inkomstpension
Germany: Deutsche Rentenversicherung

Indexing based on life expectancy

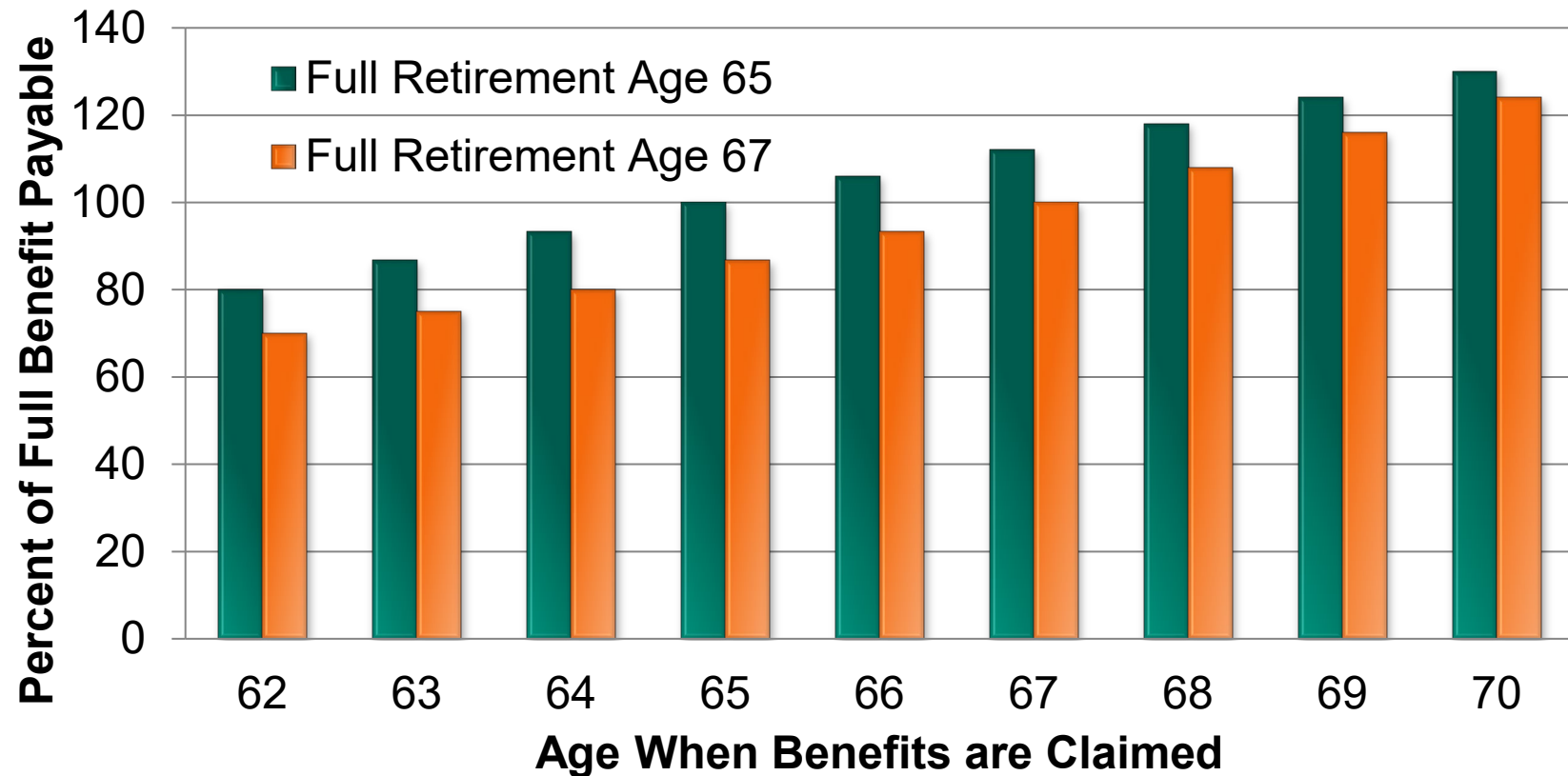
Earliest eligibility age (single or dual)

Age for full benefits (single or dual)

Size of initial benefit

Contribution rate

US: Increase Age for Full Benefits (AFB) from 65 to 67
Lowers Retirement Benefits at Any Age Claimed



Gregory et al., 2010.

Benefit increase for delayed start

- Actuarially neutral
 - Deferred annuity, delayed claiming
 - Neutral for whom
- Earnings insurance
- Earnings history
- Mandate/Adverse selection

Funding the Canada Pension Plan

- Base CPP: Partially funded; building up. Contributions are projected to cover 75–80% of future benefits; investment returns 20–25%.
- Enhanced CPP: Fully funded. Benefits financed by additional contributions and investment earnings, with benefits accruing gradually over a period of 40 years.
- Investment Board is governed independently from the CPP.

Semi-automatic adjustment of the Base Canada Pension Plan

- Every three years, the Chief Actuary of Canada reviews the contribution rate required to sustain the CPP over the next 75 years.
- Funding ratio in 60 years must be as large as in 10 years

Semi-automatic adjustment of the Base Canada Pension Plan

If the **required contribution rate** is projected to be higher than the legislated rate,

and

no agreement is reached by the federal and provincial finance ministers

then

the **contribution rate** is increased by $\frac{1}{2}$ of the excess and **nominal benefits are frozen** until next review in 3 years.

Climate change

- Funding: quantity, quality
- Migration: encouraged, discouraged

Pension Reform

A Short

Nicholas Barr and

尼古拉斯·巴尔 (Nicholas Barr)
彼得·戴蒙德 (Peter Diamond)

养老金改革 理论精要

Pension Reform:
A Short Guide

中国劳动社会

3 La reforma
necesaria
El futuro de
las pensiones

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Nobliści z ekonomii

Nicholas Barr
Peter Diamond

Reformy systemu emerytalnego

Krótki przewodnik



Polskie Towarzystwo Ekonomiczne

El Hombre del Tres