

Pension Reforms and Inequality in a Nordic Welfare State

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Introduction

Sustaining nordic “welfare state” requires high employment

With increasing life expectancy, need to extend working lives.

Pension reforms: Eliminate early retirement schemes. Postpone eligibility age for old-age pension.

Latest reform in Finland 2017.

Introduction

Reforms politically difficult. Mainly distributional concerns.

“Poor people die young so have little time to enjoy the benefits. Unfair.”

- Indeed, if we postponed retirement from, say, age 63 to 65 for all, the *relative* shortening of the benefit period would be larger for low earners.

“No one hires old unemployed workers”.

- Indeed, longer unemployment spells at older ages. Also, low earners more likely to be unemployed.

Introduction

We consider the effects of key pension reform options on working lives and redistribution in Finland.

Main results:

1. Increasing the eligibility age for old-age pension alone may not increase working lives. Need to limit early retirement schemes first.
2. Pension reform that extends working lives may well decrease, rather than increase, inequalities.

Method

Life cycle model with labour supply and retirement decisions.

Wage shocks, layoff risk, disability risk, and lifetime uncertainty.

Three education groups, two genders.

- E.g. poorly educated men have on av. low wages, high disability risk, low expected lifetime.

Detailed description of various pension and unemployment benefits.

No private savings. Partial equilibrium.

Social security, pre-reform

Earnings related old-age, part-time and disability pensions.

- Eligibility age for old age pension 63. Accrual rate 1.5% before 63, 4.5% 63-68 (if not withdrawing benefits). No cap!
- Eligibility age for part-time pension 61. No reduction in future pensions!
- Disability pension takes into account “projected” lost earnings.

Social security, pre reform

Flat rate national and guarantee (old-age) pensions.

- National pension appr. 600 euros. Each earnings related pension euro reduces the full national pension by 50 cents.
- Minimum guarantee pension about 750 euros.

Unemployment insurance

- Earnings related benefits for 2 years, subject to suff. employment history.
- Replacement rate decreases with earnings, appr. 60% for average earnings (appr. 75% after taxes)
- Flat rate benefits after 2 years.
- “Unemployment pipeline”: 59+ may receive earnings related benefits until 65 or retirement. Effectively an early retirement scheme.

Reforms considered

1. Eliminate part-time pensions and the unemployment pipeline.
2. Raise the eligibility age for old-age pensions by 2 years.
3. 1+2.

Raising the eligibility age effectively increases disability pensions (via projected earnings). Also postpones the higher accrual rate.

Model, individual problem

Individuals maximize their expected remaining lifetime utility.

Periodic utility depends on consumption and disutility of work.

Consumption smoothing motive/risk-aversion.

In the beginning of every period, employed individuals choose to work part-time, full-time or resign.

After certain age, may also choose part-time pension+part-time work or old-age pension with or without working.

Unemployed choose whether to accept a job offer or not. May also choose to work part-time or possibly retire.

Model, layoffs vs. resign

If resign (choice), choose to be unemployed.

If laid-off (shock), forced to be unemployed.

If resign, lower UI benefits.

We also need to assume a fixed resignation cost.

- Otherwise, unemployment pipeline would attract too many individuals.

Model, shocks

Wages: deterministic age-wage profiles plus AR(1) shocks.

- Also, unemployment lowers next period wage offers.

Layoff risk: if realized, become unemployed beginning of next period.

Disability risk: absorbing state.

Survival prob. ≤ 1 .

Model, state variables

Pension accrual: e.g. $b_{t+1} = b_t + 0.015w_tL_t$

Wage level in the previous employment

Length of the current unemployment spell.

Current wage shock.

Laid-off or not.

Calibration

Groups: men and women; basic, secondary and higher education.

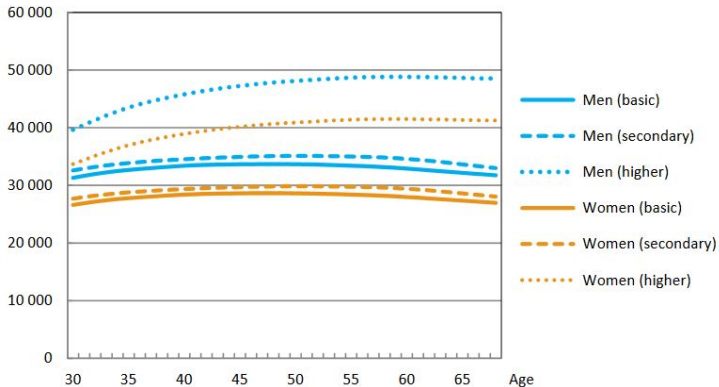
Group specific average age-wage profiles, survival rates, disability risks.

Common wage shocks and lay-off risk (5% per year).

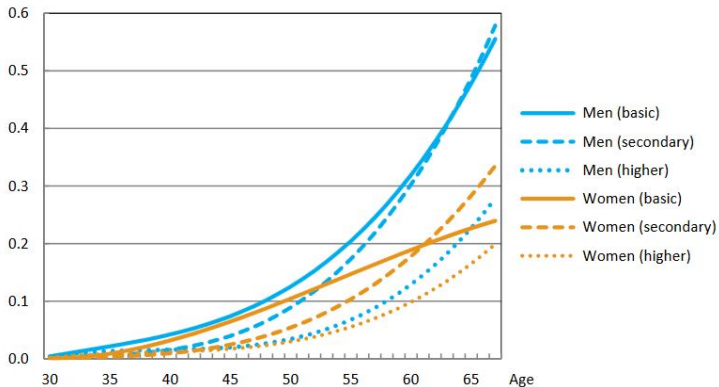
Preference parameters (common across groups): disutility costs of full- and part-time working, the rate at which they increase 58+, and a fixed resignation cost.

Chosen so as to match: shares employed 30–68 and 58–68, share part-time retirees 58–68, growth in the share of unemployed 55–59 vs. 60–64.

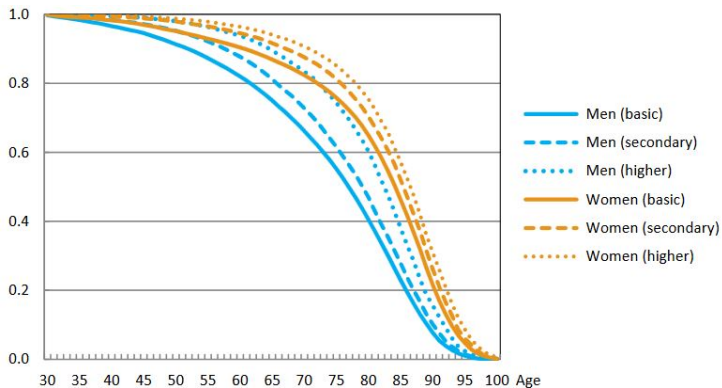
Average full-time wage per year, EUR



Share of the cohort in disability pension, %



Share alive



Shares employed model vs. data, %

Group	Employed, age 30-68	Employed, age 58-68	Partially retired, age 58-68	Unemployed, age 55-59	Unemployed, age 60-64	Full-time employed, age 63+
1 (men basic)	73 (49)	29 (23)	5 (3)	2	9	3 (5)
2 (men secondary)	75 (74)	30 (30)	4 (3)	2	7	3 (7)
3 (men higher)	80 (83)	43 (45)	2 (5)	3	5	8 (11)
4 (women basic)	74 (46)	31 (24)	5 (4)	5	16	4 (3)
5 (women secondary)	76 (75)	33 (36)	5 (6)	4	14	5 (5)
6 (women higher)	80 (85)	43 (46)	1 (9)	3	7	10 (5)
All	77 (83)	36 (34)	3 (5)	3	9	6 (6)

Lifetime taxes and benefits, 100 000 EUR/ratio

Group	Taxes	Benefits	Taxes-Benefits	Taxes/Benefits
1 (men basic)	6.7	2.9	3.8	2.3
2 (men secondary)	7.5	3.2	4.3	2.3
3 (men higher)	12	4.9	7.1	2.5
4 (women basic)	5.9	3.3	2.7	1.8
5 (women secondary)	6.6	3.6	3.0	1.8
6 (women higher)	10.2	5.0	5.2	2.0

Change in average working lives, months

Group	Reform		
	Eliminate early-retirement schemes	Eligibility age for old-age pensions + 2 years	Both
1 (men basic)	2.7	-1.8	8.9
2 (men secondary)	2.5	-1.8	8.9
3 (men higher)	1.3	2.4	12.3
4 (women basic)	3.5	-2.6	10
5 (women secondary)	3.1	-2.9	9.7
6 (women higher)	1.2	0.6	11.2
All	2.2	-0.9	10.1

Understanding labour supply effects

Increasing the eligibility age for old-age pensions shortens working lives among the less educated!?

Unemployment pipeline relatively good substitute for old-age pension, especially for low earners.

Moreover, increasing the retirement age makes the unemployment pipeline more lucrative: Alternative is to work longer.

⇒ Stay there if laid-off.

In a sense, being laid-off is an opportunity.

Also risk considerations.

Change in lifetime taxes less benefits, %

Group	Reform		
	Eliminate early-retirement schemes	Eligibility age for old-age pensions + 2 years	Both
1 (men basic)	1.2	-2.2	3.3
2 (men secondary)	1.1	-2.0	3.4
3 (men higher)	0.4	1.3	5.4
4 (women basic)	2.3	-3.7	5.2
5 (women secondary)	1.9	-3.5	4.9
6 (women higher)	0.5	0.8	5.9
All	2.2	-1.3	5.8

Understanding distributional effects

Also based on expected lifetime or realized lifetime utilities, the joint reform looks progressive rather than regressive.

- For sure, some poor individuals are worse off ex post. But they are exceptions.

Low earners much more likely to withdraw disability pensions, which increase.

In relative terms, low earners still much better protected against unemployment than high earners.

Raising the earliest pensionable age postpones the higher accrual rate, reducing the benefits of high earners who work 63+ anyway.

- Accrual rates roughly actuarially fair only for average lifespan.

Conclusions

Increasing working lives almost a necessity in a Nordic “welfare state”.

Pension reforms face resistance largely because of distributional concerns.

However, the welfare state features many transfers that provide protection against potential adverse effects of the reforms.

At the same time, a low pensionable age may benefit the better off individuals with high life expectancy.

Its complicated! Need to take into account the interaction of various elements of the social security system.