Will the Norwegian Pension Reform Reach its Goals?

An integrated Micro-macro Assessment

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Main goals of pension reform

1. Improve fiscal stance gradually, not "now"
   - Benefits not cut in transition to new system, but slower growth
   - Life expectancy adjustment to reduce expenditure growth
   - Additional contribution from a partly price indexation of benefits in payment
   - Natural benchmark: Pension reform is not a universal solution, but pension expenditures should not grow faster than the tax base

2. Stimulate employment
   - Early retirement at 62 for everyone, but increased cost for the individual
   - Stronger link between labor income and pension benefit
   ⇒ Increase in entitlement and delayed retirement. Improves fiscal stance without cutting annual benefit.

3. Keep main redistributive characteristics of the present pension system.

Will pension reform reach its goals, in particular for the growth in pension expenditures?
Proposed pension reform

- Maintains
  - Combination of social security (flat minimum benefit) and income replacement
  - Defined benefit
  - PAYGO financed, fully integrated in the government budget.
  - Average replacement ratio when implemented in 2010 (+7%)
  - Wage indexation of entitlements
- New elements
  - Stronger and more transparent dependency between entitlements and labour incomes
  - Universal flexible retirement scheme from age 62
  - “Quasi-actuarial” annual benefit adjustment neutralizes the expenditure effect of increased life expectancy and earlier retirement.
  - Possible to work without income being set off against the pension.
  - Less generous indexing of annual benefit payments

- Cost saving in the long run
- Stimulates labour supply at the extensive and intensive margin
Empirical models

• Dynamic microsimulation (MOSART) estimates "mechanical" effects on:
  – Individual benefits and public pension expenditures
    • Based on accurate description of pension systems, dynamics of population heterogeneity (age, earnings, …)
    • Main model used in the reform preparation

• Behavioural effects on labour supply
  – Incentives (implicit tax, opportunity cost of retirement

• General equilibrium effects (MSG6) on:
  – The wage rate and prices. Affects the nominal expenditures
    • of given real government consumption
    • Indexed transfers
  – All tax bases (through changes in wages, prices and quantities)
  – PAYGO changes in the payroll tax rate required to meet the annual government budget constraint.
Labour supply incentives

• **Intensive margin:**
  • Closer and more transparent correlation between earnings and benefits => 8% (4.5%) increase in effective wage rate

• **Exstensive margin:**
  • A more actuarial system increases the individual cost of early retirement for 60% of the labour force (+)
  • 40% get access to retire early (at 62) (-)
  • The life expectancy adjustment ratio will increase the retirement age as life expectancy increases
  • On average retirement postponed by 0.6 years in 2010 increasing to 2.6 år in 2050 (=> 4.1% increase in total labour supply).
A fiscal sustainability problem…?

Fiscal policy rule, 50 2005-USD/barrel, present pension system and public service standards

• Combined use of microsimulation- and CGE models
• Lower tax burden every year until 2050
• Pension fund reaches 2.5xGDP
• Brighter prospects than previous simulations
• Continued uncertainty
... is a "growth" problem!

- Growth rates from 2020:
  - Public expenditures: 4.43%
  - Tax base: 3.46%
  - close to interest rate => low effective discounting
  - Growth rates more robust than levels in distant future

- Tax rates in 2020?
  - Present => payroll tax doubled by 2050
  - Improved welfare for elderly => accelerates tax rate growth

- Pre-funding already unrealistically high?
Reform improves fiscal stance. But LEVEL-effect!

**Level-effects in 2050:**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Payroll tax rate</td>
<td>-9.5 %p</td>
</tr>
<tr>
<td>Employment</td>
<td>11.0 %</td>
</tr>
<tr>
<td>Public expenditures</td>
<td>-5.9 %</td>
</tr>
<tr>
<td>Pension expenditures</td>
<td>-12.2 %</td>
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</tbody>
</table>
Reform does not reduce growth in pension expenditures

- Reform improves significantly fiscal stance
  - lower pension expenditure level
  - higher tax base level
- But no change in growth rate of pension benefits after 2020!
- But ”growth” problem reduced by stronger growth in tax base (incidence)

<table>
<thead>
<tr>
<th>Change in average growth rates 2020-50, %p</th>
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<tbody>
<tr>
<td>Payroll tax</td>
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<tr>
<td>Pension expenditures (PE)</td>
</tr>
<tr>
<td>Tax base (TB)</td>
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</table>
Reform effect on growth rate of pension expenditures

Remember: \( PE = N \times W \times C \)

1. Slower growth of \( N \)
   Improved longevity + Life expectancy adjustment \( \Rightarrow \) Retirement increasingly delayed

2. Stronger growth of \( W \)
   Lower growth of payroll tax rate

3. Stronger growth of \( C \)
   • Stronger wage growth \( \Rightarrow \) stronger labor supply growth + indexation

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<tbody>
<tr>
<td>Old age pension expenditures (PE)</td>
<td>-0.01</td>
</tr>
<tr>
<td># pensioners (N)</td>
<td>-0.23</td>
</tr>
<tr>
<td>Benefit (W x C)</td>
<td>0.22</td>
</tr>
<tr>
<td>Before wage indexation (C)</td>
<td>0.08</td>
</tr>
<tr>
<td>Wage indexation (W)</td>
<td>0.13</td>
</tr>
</tbody>
</table>

1 and 3 intended reform effects
2 a well-known equilibrium effect
2+3 neutralizes 1!
Significance of wage growth

- Wage growth is the main source to growth in tax bases, government consumption and public pensions/transfers
- Norway: Petroleum wealth => Wage dependent expenditures exceed wage dependent revenues
  - Wage growth => higher tax burden
- New pension system:
  - Continued wage indexation of entitlements
  - Less generous indexation of benefits in payment is only significant for the time profile of total pension benefit
- **Wage formation**: \( PW \times A = W(1+t) \) => lower growth of payroll tax rates strengthens wage growth => modifies the scope for tax cut
- **Wage growth** depends on how the welfare state is financed.
  - Budget neutral fiscal instruments
  - Indexation to pre- or after-tax wage rates, taxation of benefits
  - Payroll tax rate is not bizarre: Most pension premiums are paid by employer as a share of the employee’s wage
Conclusions I: Fiscal sustainability

1. Pension reform gives huge ”level improvement”
   - The payroll tax rate can be 10 percentage points lower in 2050 than in a no-reform scenario.
   - Large expansion of tax bases
2. Growth imbalance problem after 2020 only marginally solved
   - Annual growth in payroll tax down from 0.42 til 0.29 %points
   - Growth rate of public expenditures not much reduced
   - 0.08 %p stronger growth in tax base
   - Other reforms necessary to remove the growth in the necessary tax burden
3. ”No” effect on the growth rate of pension expenditures after 2020!
   - Every year, increase in average benefit cancels the effect of fewer pensioners
   - Pension expenditures still grow 0.90 %points stronger than the tax base per year, even after reform
   - Robust results: Weak effect of reform on growth rates is not sensitive to variations in life expectancy and different assumptions of labour supply responses
Conclusions II: Employment and Distribution

1. Employment 13 % higher in 2050 than in no-reform scenario.
   • Very large macro-effects compared to other reforms.
2. Some increase in inequality among old-age pensioners.
   • GINI-c. up by nearly 0.04.
   • Inequality between high benefits magnified
   • Wider gap between men and women.

*Neglecting equilibrium and behavioural effects would render highly misleading results*

• Expands and accelerates growth in tax bases
• Accelerates growth in pension expenditures