

# NTA in Austria and Slovenia: The role of recent pension reforms and options for the future

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NTA8, Belo Horizonte and Rio de Janeiro, 5-12 December 2011



# Outline

- GA results for Austria and Slovenia with emphasize on recent pension reforms
- Slovenian NTA/GA/age profiles based model for forecasting; results are just preliminary
- Methodological questions about GA

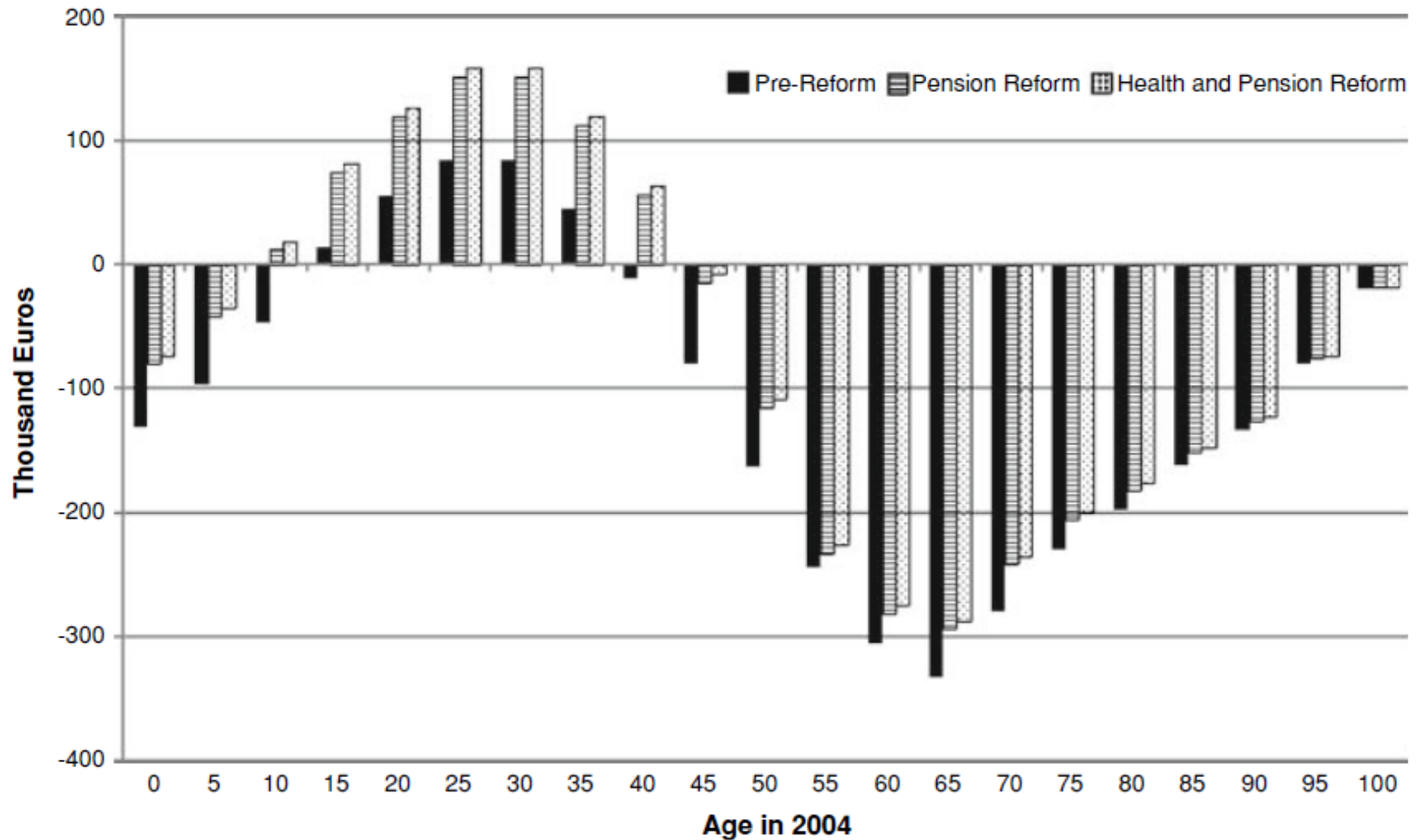
# Austria

- At the moment we present the results published by Deeg, V., Hagist, C., & Moog, S. (2009): „The fiscal outlook in Austria: an evaluation with Generational Accounts. *Empirica*, 36(4), 475-499“.
- The base-year is 2004.
- We will produce our own calculations in the following months – for a more recent year

# Pension reforms in Austria

- PAYG pension system
- Three pension reforms (2000, 2003 and 2004):
  - reducing early retirement options and introducing actuarially fair discounts for them
  - assessment period: best 15 years → gradually increasing to best 40 years (in 2028).
  - cuts in the accrual rates (from 2% in 2003 to 1.78% in 2009)
  - indexation of pension benefits to inflation
  - increasing retirement age for women from 60 years in 2003 to 65 years in 2034 (equalizing them with the conditions for men)

# GA for Austria; base-year: 2004



Growth rate (g): 1.5%; discount rate (r): 3.0%

Source: Deeg, V., Hagist, C., & Moog, S. (2009), p. 486.

# Austria, GA sustainability indicators; base-year 2004

<b>Sustainability indicator</b>	<b>Pre-reform</b>	<b>Post-reform*</b>
Fiscal gap (in % of GDP of 2004)	634.4	248.8
Future generations' burden (Euros)	239,900	74,000
Revenue gap (%)	19.5	7.3
Transfer gap (%)	15.9	6.9

**\* Pension and health reforms combined**

**Growth rate (g): 1.5%; discount rate (r): 3.0%**

Source: Deeg, V., Hagist, C., & Moog, S. (2009), p. 490.



# Slovenia: data and the model

- For Slovenia we use the „age-profiles-based model“ using NTA/GA age profiles. However:
  - we use assumptions from European Commission on productivity growth, activity rates, unemployment rates, employment rates etc.
  - for pensions:
    - we decompose age profile for pensions per capita to a) retirement rates and b) to average pensions per retiree.
    - we use module from IMAD (Slovenian „Institute of Macroeconomic Analysis and Development“) to relate employment rates to retirement rates
    - age profiles from the base-year are adjusted with matrices obtained from the simulations on micro-data (impacts of the pension reform)
    - separating „new“ pensioners in each calendar year and treating them separately (regarding their pension indexation)

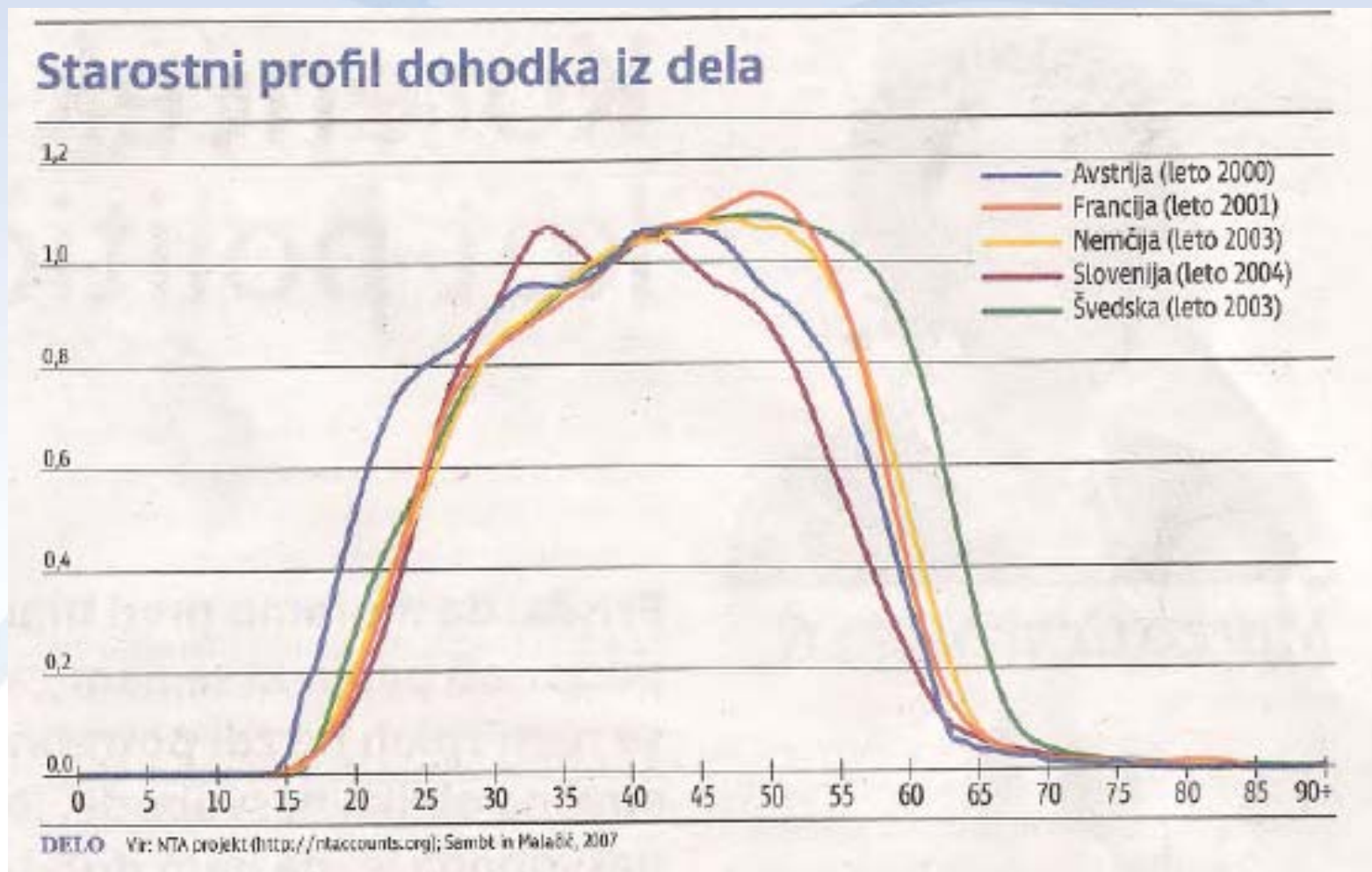
# Pension reform in Slovenia: Passed the parliament in December 2010, but rejected on referendum in June 2011

- Main effect would be to increase the retirement age by 3 years longer. The increase would be very gradual and would increase in life expectancy.
- Various other measures would be implemented to neutralize the impact of inflation on pension benefits. However, the existing pension system that are currently lowering the level of pensions.



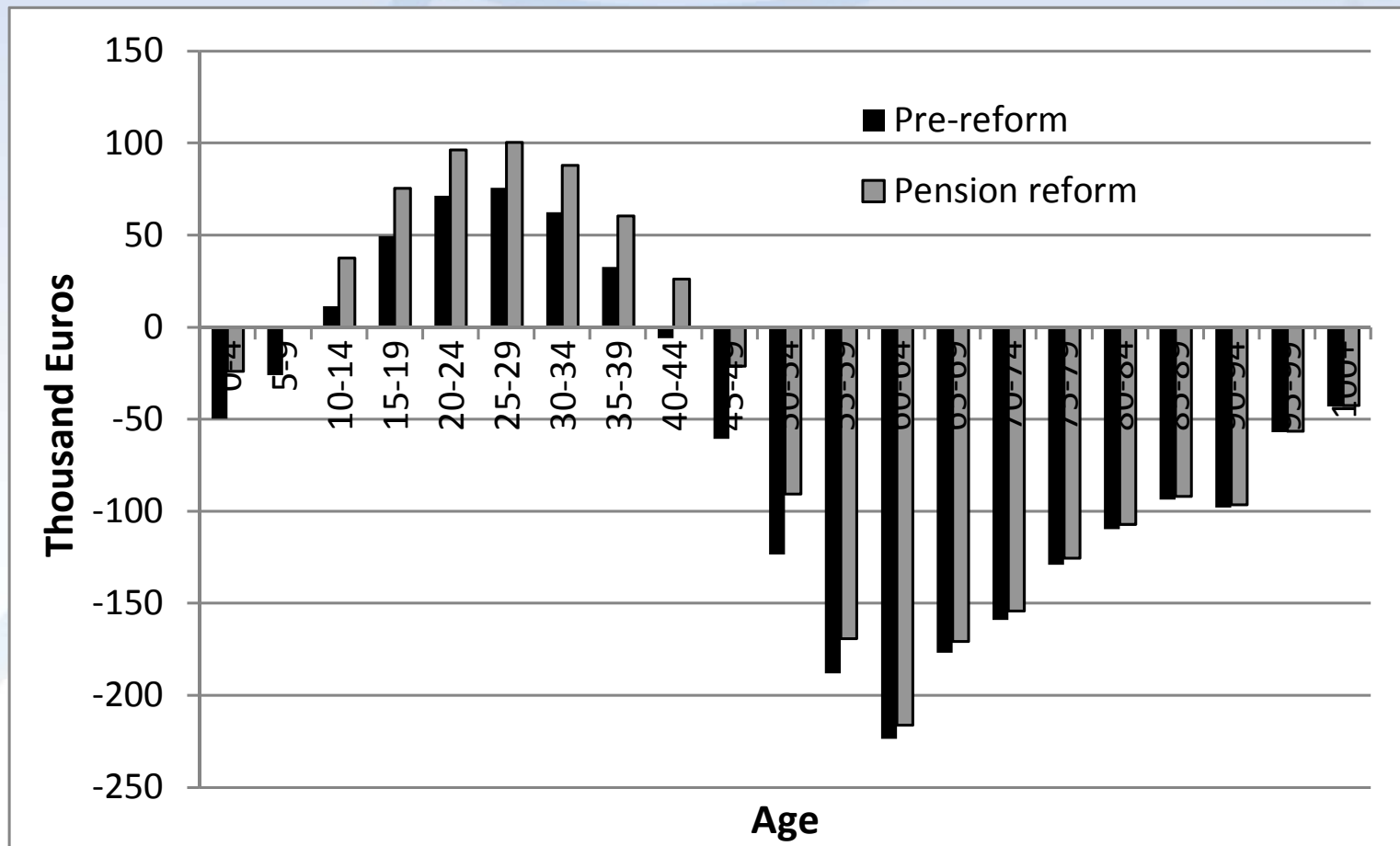


# NTA labour income age profile for Slovenia: entering the labour market late, withdrawing early



Article, published by Sambt & Čok in central Slovenian newspaper „Delo“ just before the referendum in June 2011 – presenting also the NTA results, which suggest a need for increasing retirement age in Slovenia.

# GA for Slovenia (preliminary results); base-year: 2009



Growth rate (g): 1.5%; discount rate (r): 3.5%

Source: own calculations.

# Slovenia, GA sustainability indicators (preliminary results)

<b>Sustainability indicator</b>	<b>Pre-reform</b>	<b>Post-</b>
Fiscal gap (in % of GDP of 2009)	335.4	161.9
Revenue gap (%)	16.7	7.7
Transfer gap (%)	14.3	7.1

**Growth rate (g): 1.5%; discount rate (r): 3.5%; European Commission assumptions**

Source: own calculations.

## **Note:**

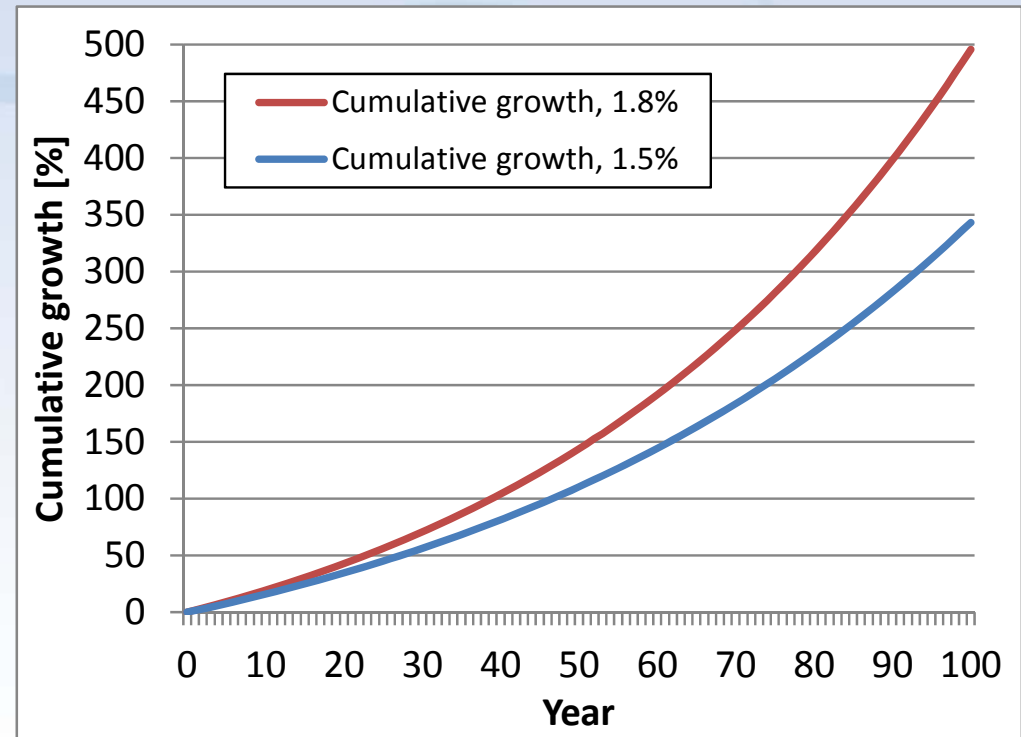
**-compared to Austria higher discount rate (r) is used for Slovenia  
-that European Commission assumes increase in employment  
rates and decline in unemployment rates etc.**

# Question: Only shifting age profiles with productivity growth or adjusting them? (1)

- „The only exception from this rule are those legal changes which have already been decided upon in the base-year.“ (Generational accounting in Europe; European Commission, 2000).
- Auerbach, A. J., & Chun, Y. J. (2003): *„In order to take into account the special features of Korea’s fiscal situation, we extend the traditional GA calculation in two ways. First, we incorporate prospective changes in the age profiles and aggregate benefits and contributions of public pensions. ... A second extension of the standard method is that we incorporate expected changes in social welfare expenditures in the future.“*

# Question: Only shifting age profiles with productivity growth or adjusting them? (2)

- Health: assuming income elasticity of demand = 1.2 → annual growth (g) being 1.8% instead of 1.5%

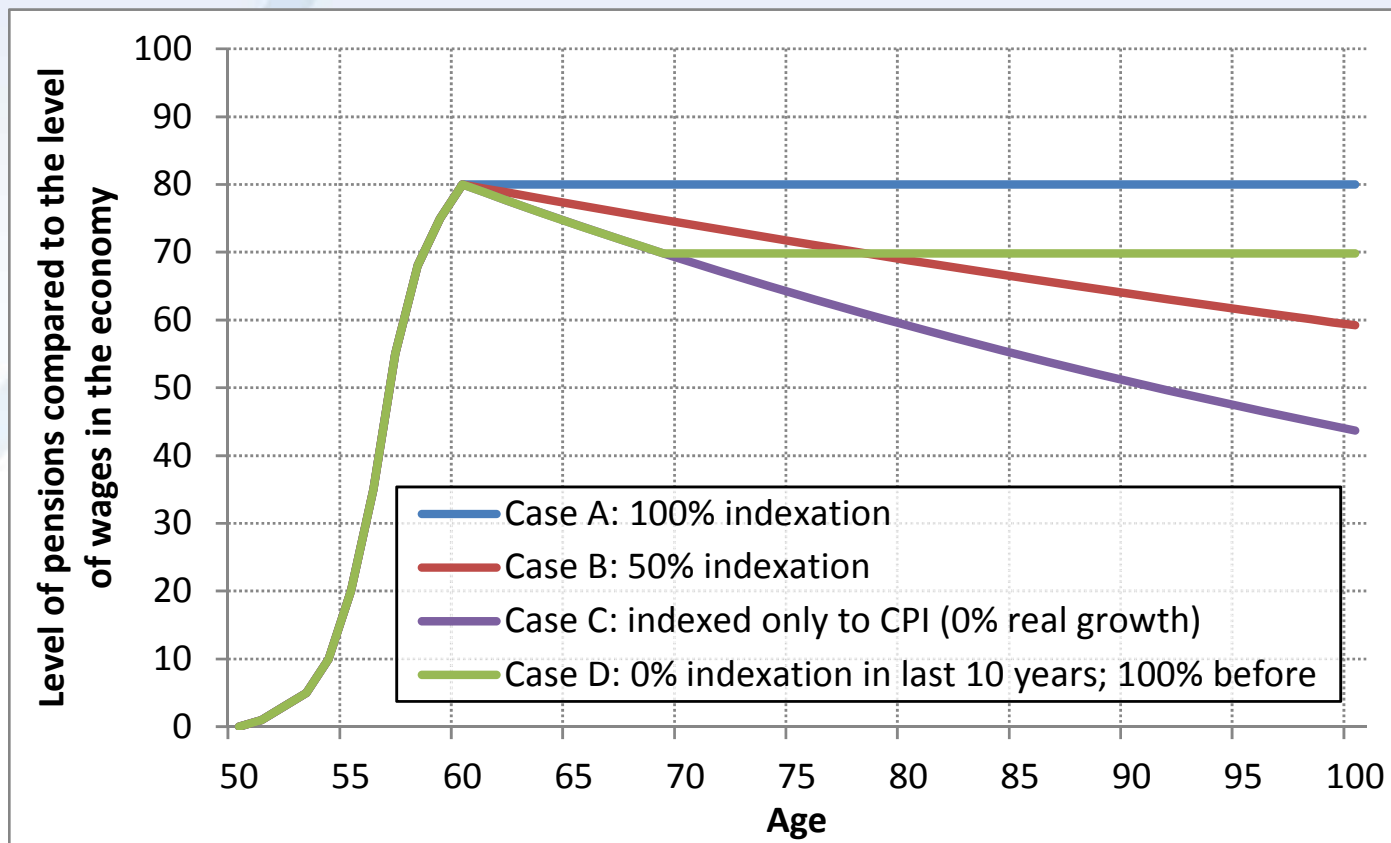


What about:

- medical inflation > inflation?
- improvement in health when life expectancy is increasing (age profile of health shifting to the 'right', i.e. to higher ages)?
- changing family composition → in the future less long-term care will be provided by the family members?

# Question: Only shifting age profiles with productivity growth or adjusting them? (3)

- Pension age profile includes changes in the past; let's assume 1.5% wage growth, but different indexations of pensions to the growth of wages



# Some further questions

- For the GA book: base-year 2009/2010 - despite the crisis?
- Investment expenditures: is there available decomposition of investment expenditures on health, long-term care etc. for all countries?
- Is it enough to project only 100 years into the future – especially if we will use discount rate

of only 3.5%?  $100 \cdot \frac{1.015^{100}}{1.035^{100}} = 14,2$

# Conclusions

- Strongly improved fiscal sustainability in Austria through 2000-2004 pension reforms; however, intertemporal balance has not been restored yet
- Milder improved of fiscal sustainability in Slovenia if the reform would be implemented – however, it was rejected anyway
- We have to carefully define assumptions and synchronize them across countries for the GA book
- Keeping age profiles fixed or adjusting them (which?)