

# Adapting to Changes in Life Expectancy in the Finnish Earnings-related Pension Scheme

IAA Life Colloquium 2017

Kaarlo Reipas – [kaarlo.reipas@etk.fi](mailto:kaarlo.reipas@etk.fi)

Mikko Sankala – [mikko.sankala@etk.fi](mailto:mikko.sankala@etk.fi)



Finnish Centre for Pensions  
ELÄKETURVAKESKUS

# The Finnish pension scheme and recent reforms

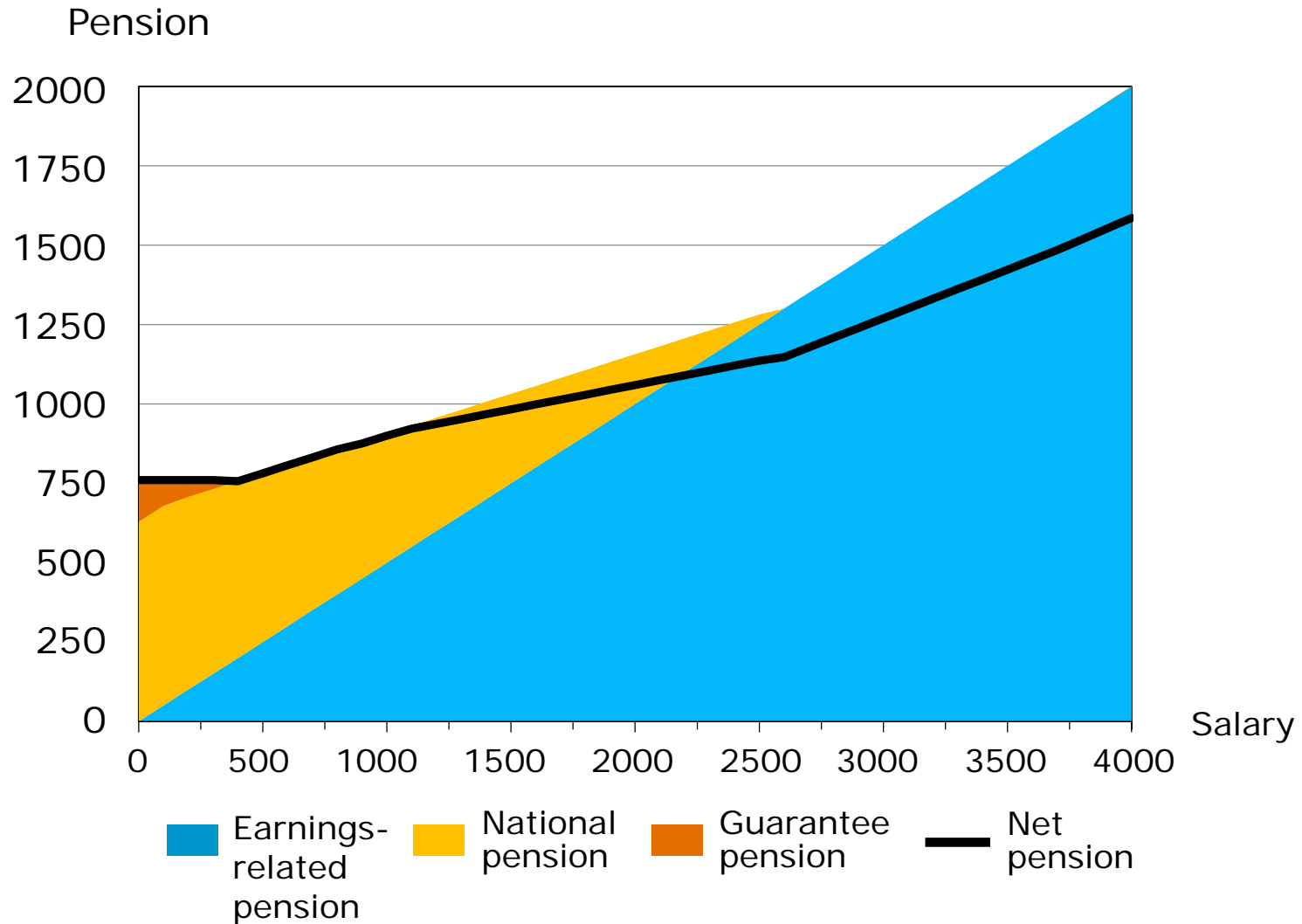


# Statutory pensions in Finland

- Earnings-related pension
  - Defined benefit
  - Practically universal coverage, all earnings insured
  - 90 % of all pension expenditure
  - 1632€ on average in 2016
- National pension
  - Residence based, full amount 628.85€ (married or cohabiting) or 557.79€ (single) in 2017
  - Decreased by 50 % of the earnings-related pension
- Guarantee pension
  - Minimum security
  - 760.26€ in 2017



# Statutory pensions in Finland, 2017



# Defined benefit schemes are challenged by demographic change

- Increasing life expectancy
  - Increases capital value of pensions and hence expenditure
- Low fertility
  - Well below the replacement level in Europe and developed countries
  - Fewer contributors



# Countering rapidly rising life expectancy with automatic mechanisms

- Link the retirement age to life expectancy...
  - Denmark, Greece, Netherlands,...
- ...or link pension size to life expectancy
  - DC/NDC schemes
- ...or both
  - Italy, Finland

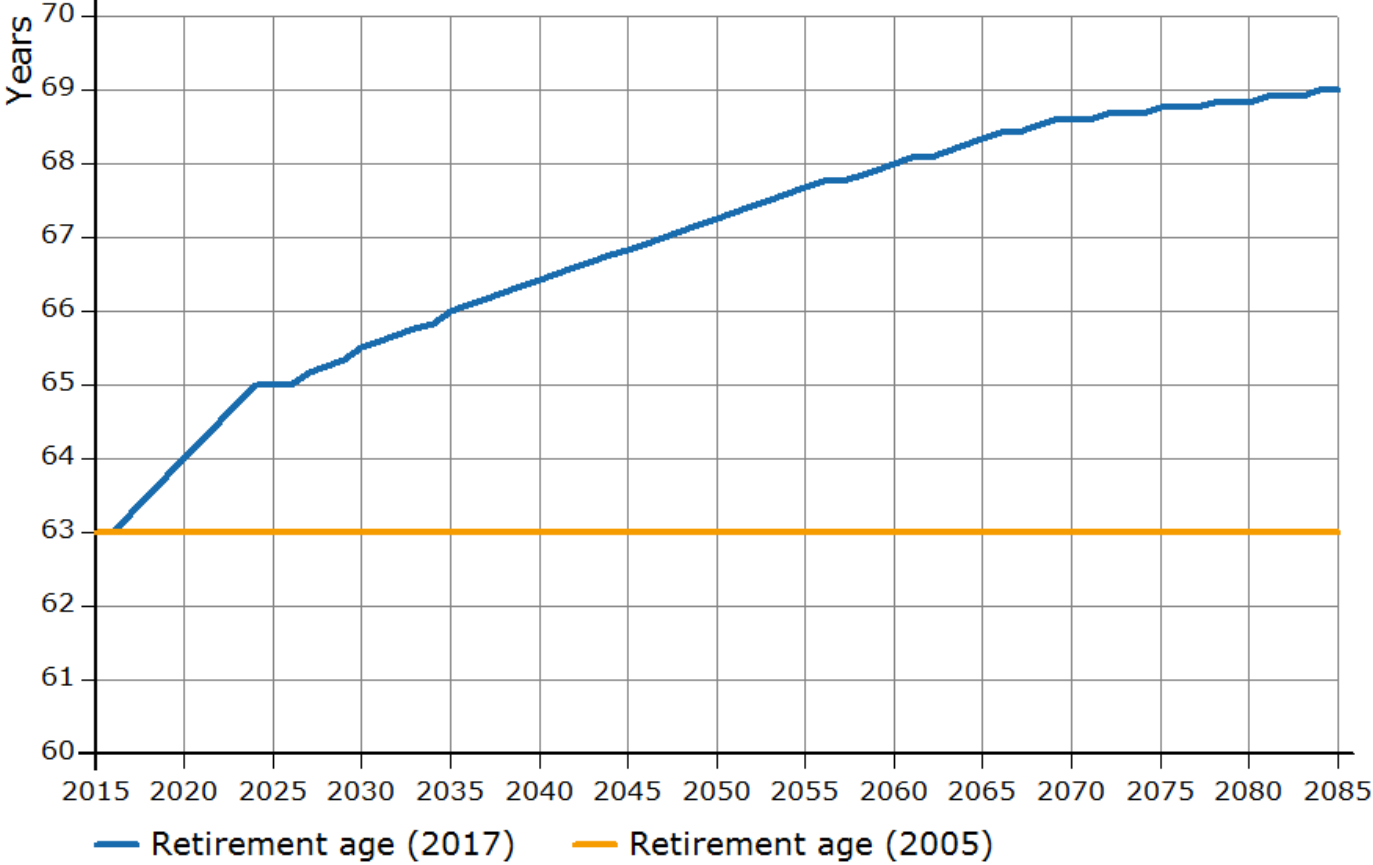


## Recent reforms

- Reform of 2005
  - Life expectancy coefficient
  - As life expectancy increases, the replacement ratio decrease
  - The capital value is kept fixed
  - Affects new pensions
- Reform of 2017
  - Retirement age raised to 65 during 2018-2027, then linked to life expectancy
  - Life expectancy coefficient is kept but mitigated
  - Life expectancy affects both the replacement ratio and the retirement age!

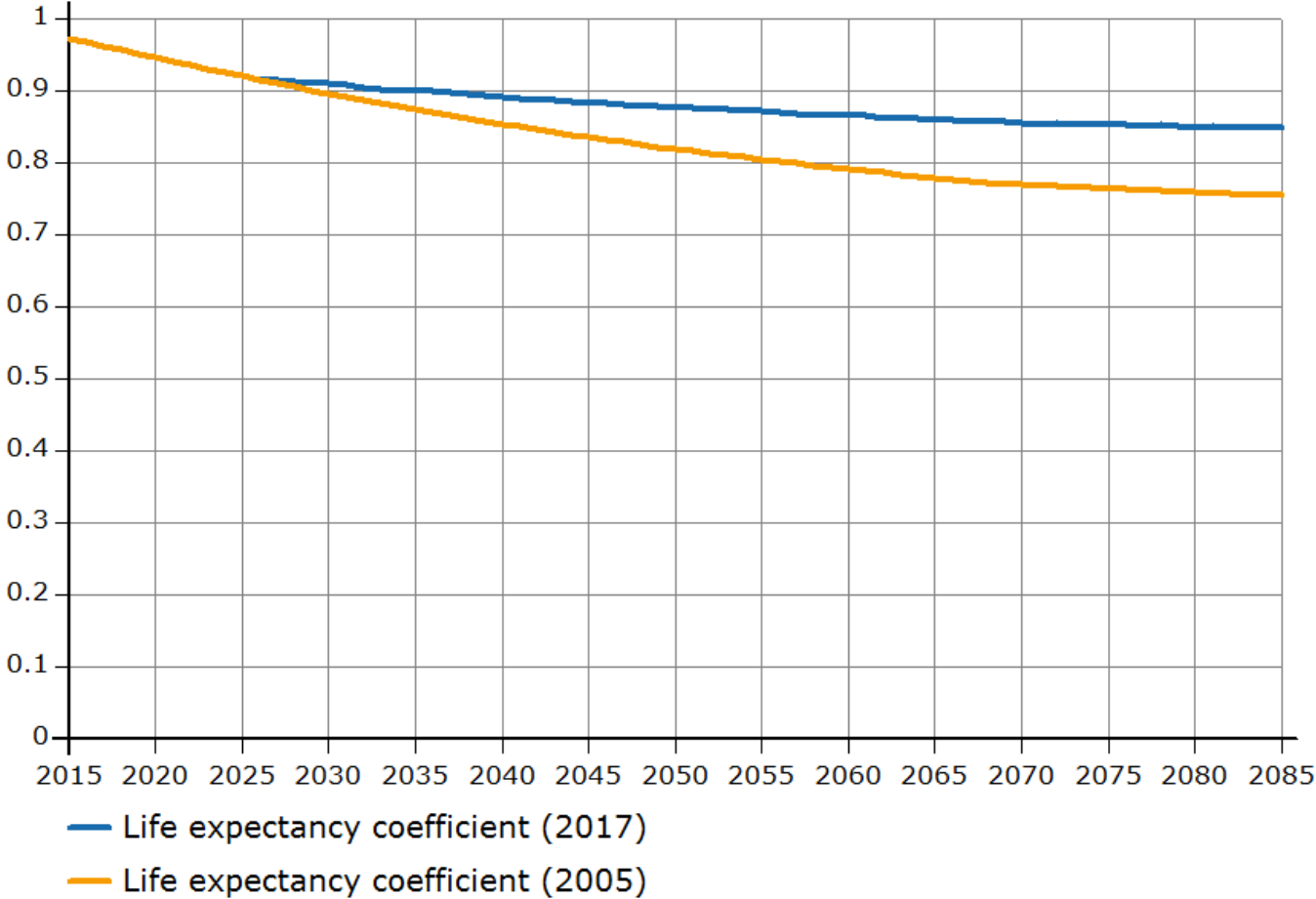


# The retirement age





# The life expectancy coefficient



# Simulations



# The simulations

- Based on the Long Term Planning Model of the Finnish Centre for Pensions
  - Rule-based deterministic average aggregate model (Statutory pensions in Finland: long-term projections 2016. Finnish Centre for Pensions, Reports 02/2017)
- Two scenarios
  - Reform: The legislation according to the 2017 reform
    - » Life expectancy affects the pension age and the replacement ratio
  - No link: The link of life expectancy to the retirement age is not made and the life expectancy coefficient is not mitigated
    - » Life expectancy only affects the replacement ratio



## The simulations

- Sensitivity analysis on the effect of mortality in both scenarios
  - see full paper

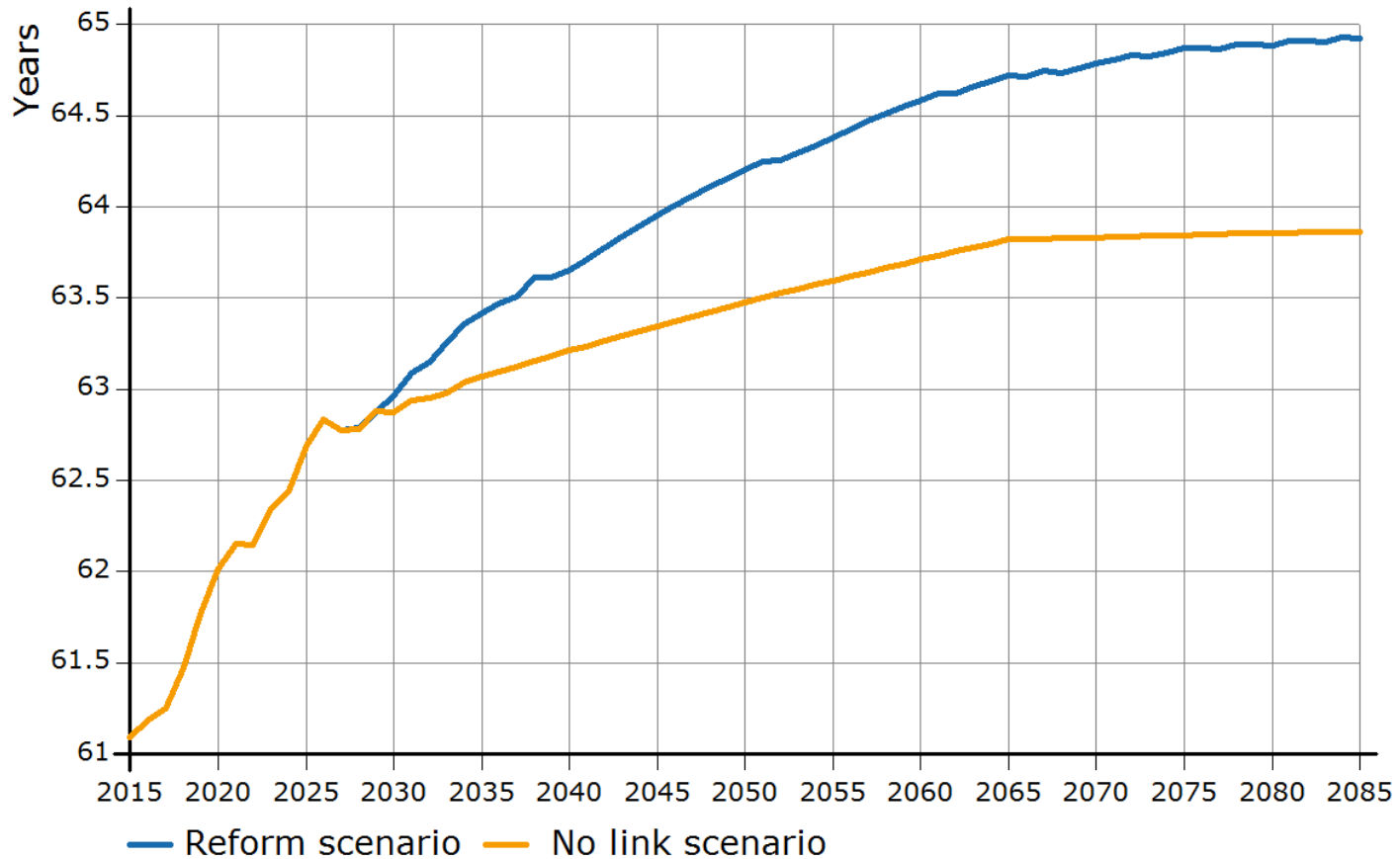


## Effect of the mortality link

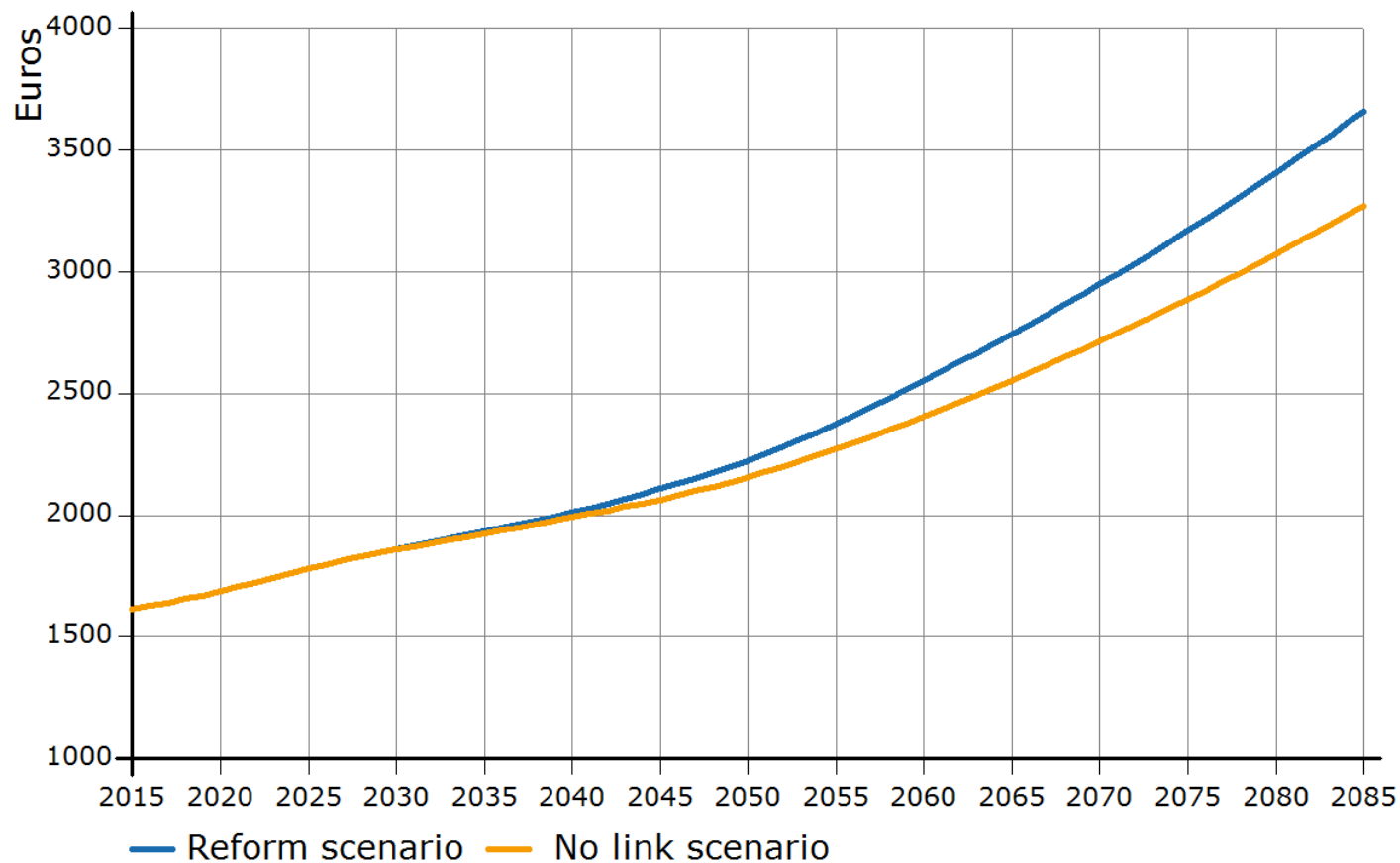
- The mortality link raises the retirement age by 3 years by 2065
  - The effect on the effective retirement age is only 1 year
- The mortality link raises the average pension by 7 % by 2065
  - Mostly due to the mitigated life expectancy coefficient
- Effect on pension expenditure is not clear
  - Later retirement increases the wage sum and decreases expenditure
  - Effect may diminish if retirement is not postponed sufficiently



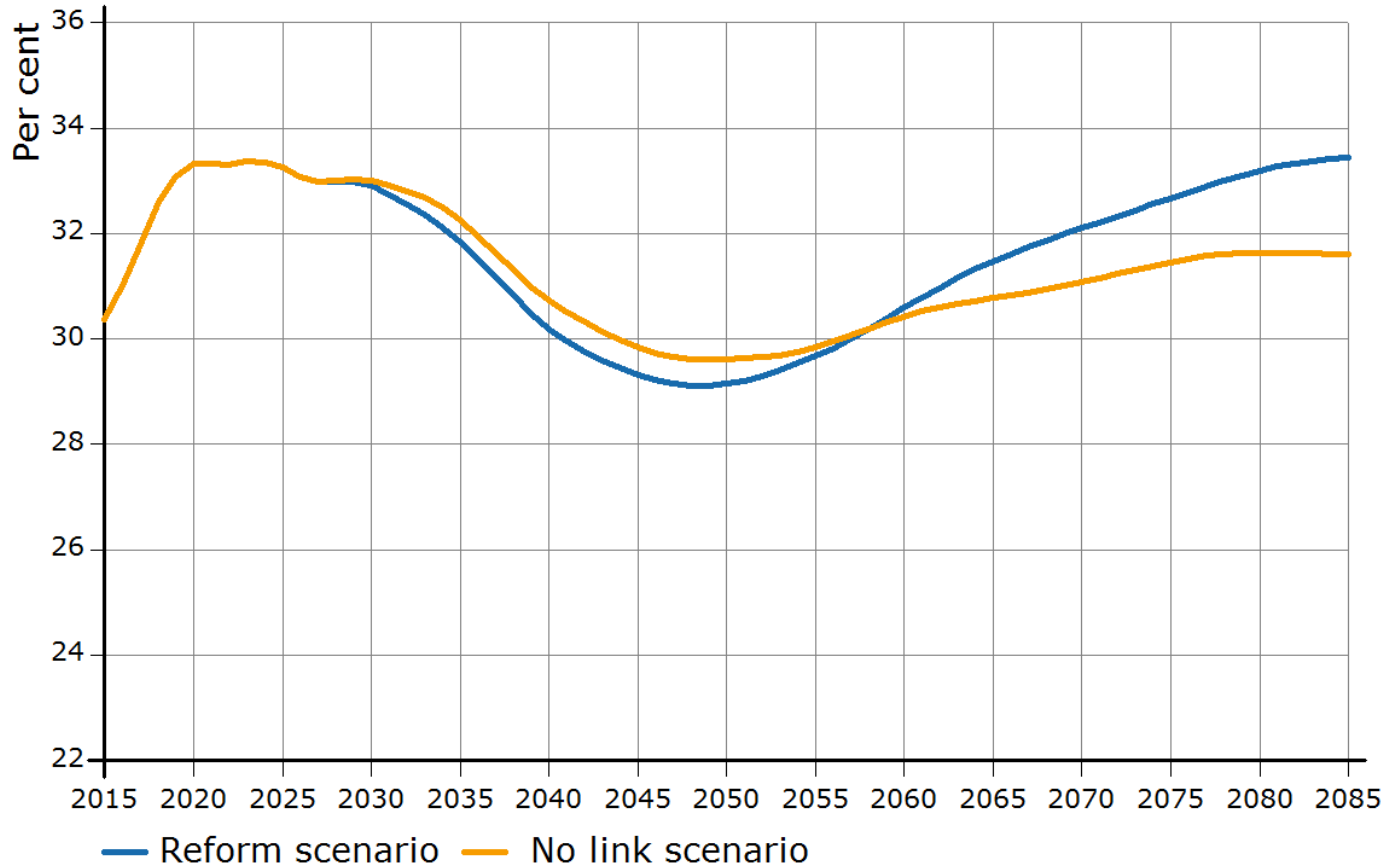
# Effective retirement age



# Average pension at 2015 prices



# Pension expenditure, % of wage sum





# The simulations

	2015	2025	2045	2065	2085
<b>Effective retirement age, years</b>					
Reform	61,1	62,7	64	64,7	64,9
No link	61,1	62,7	63,3	63,8	63,9
Effect of mortality link	-	-	0,6	0,9	1,1
<b>Average pension, e/month at 2015 prices</b>					
Reform	1613	1782	2109	2743	3658
No link	1613	1782	2064	2553	3270
Effect of mortality link	-	-	44	190	388
<b>Earnings-related pension expenditure (% of wage sum)</b>					
Reform	30,4	33,3	29,3	31,5	33,4
No link	30,4	33,3	29,8	30,8	31,6
Effect of mortality link	-	-	-0,5	0,7	1,8



## Conclusions

- Linking the retirement age to life expectancy can
  - Improve the adequacy of pensions
  - Postpone retirement and increase the size of the workforce
- Early retirement should be monitored!
- Full paper also includes the sensitivity analysis on mortality



**Thank you!**

