HUNGARIAN **DEMOGRAPHIC** RESEARCH INSTITUTE

Population trends in Hungary in the 2nd half of the 20th century and in the last 15 years

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Driving forces behind demographic trends in Visegrad countries:

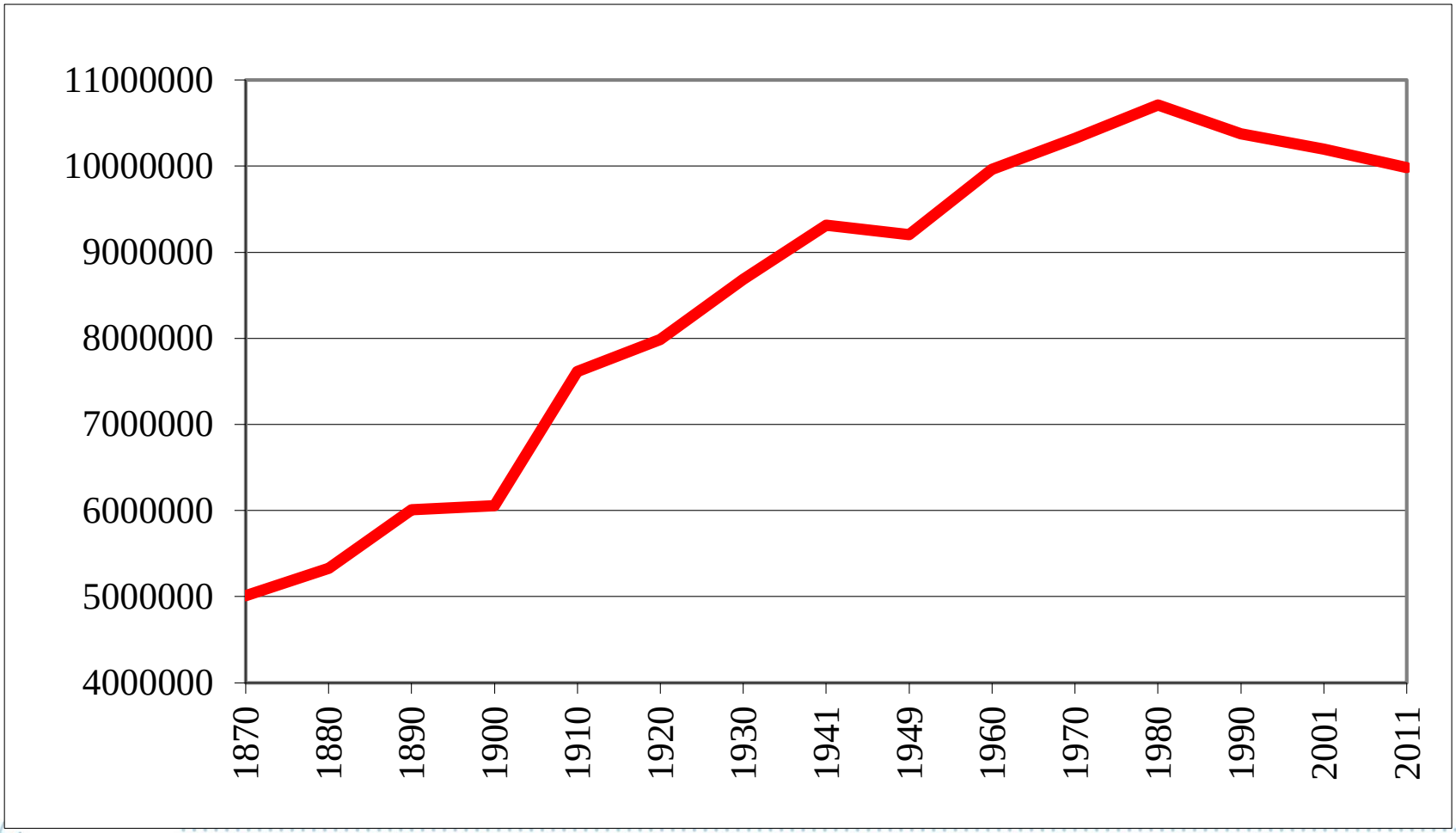
The role of migration and family formation

10-11 September 2015, Prague

Some facts about the demographic development of Hungary

- A continuously decreasing population size since 1981
  - natural decrease + effect of migration (prior to 1989: insignificant; 1990-2007: weak positive effect; since 2007: negative effect)
- Low fertility
  - In the 1960s and recently – even in European comparison
- High mortality – even in Central European comparison
- A special (but changing???) pattern of migration
  - A relatively low level of emigration (a strong increase in the last decade)
  - A special composition of immigrants (mainly ethnic Hungarians from the neighbouring countries: from Romania, Ukraine, and ex-Yugoslavia)

Hungary's population in the longer run



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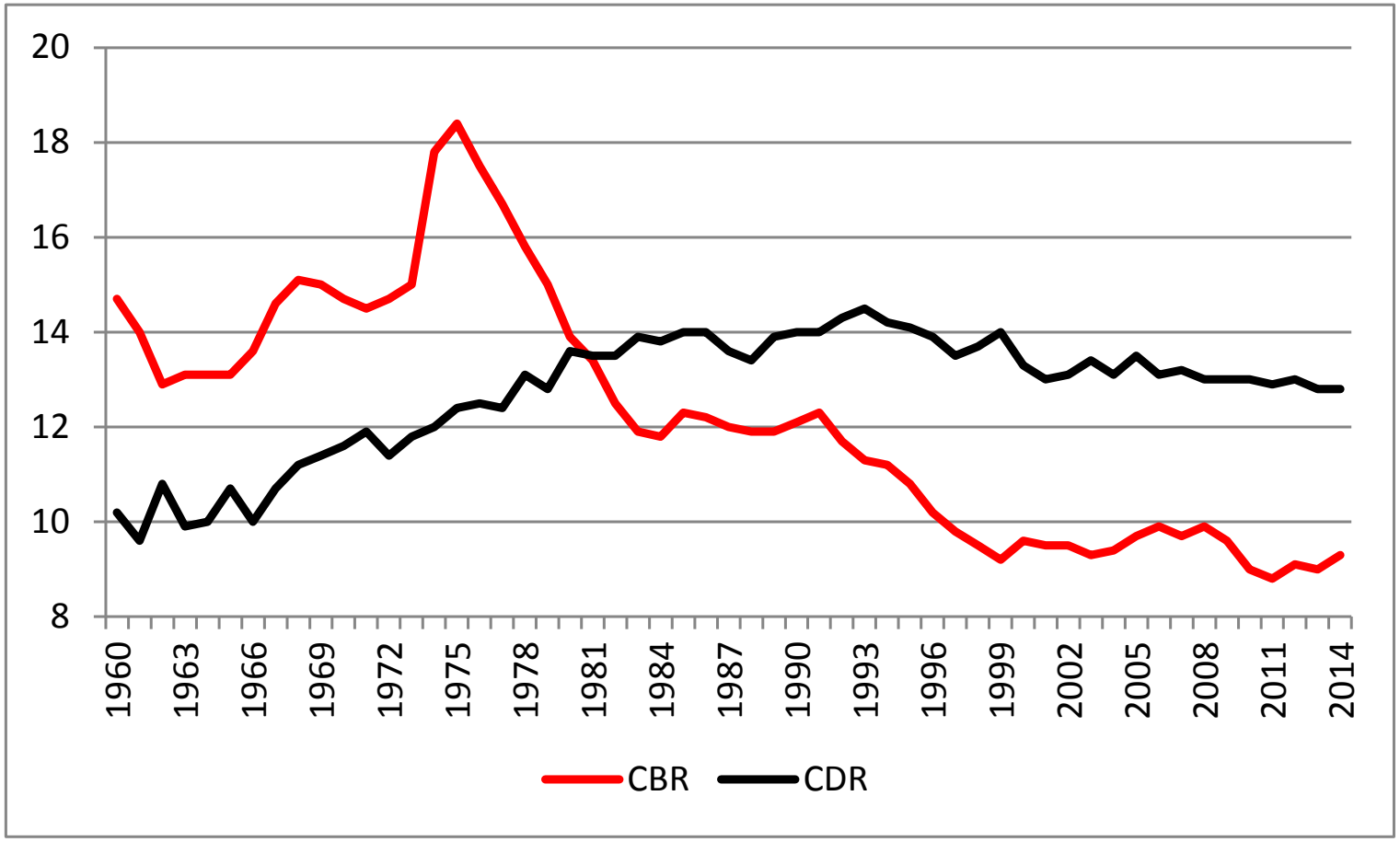
Note: present-day territory, Source: Population censuses, Hungarian Central Statistical Office

Crude birth and death rates, Hungary, 1960-2014, ‰



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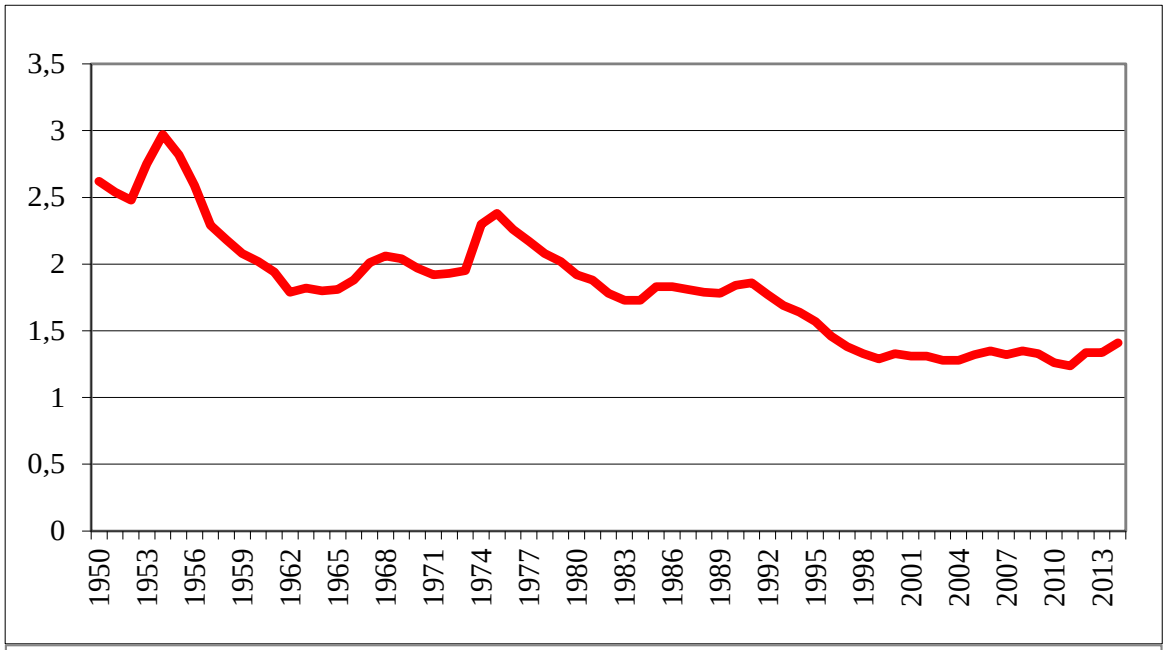
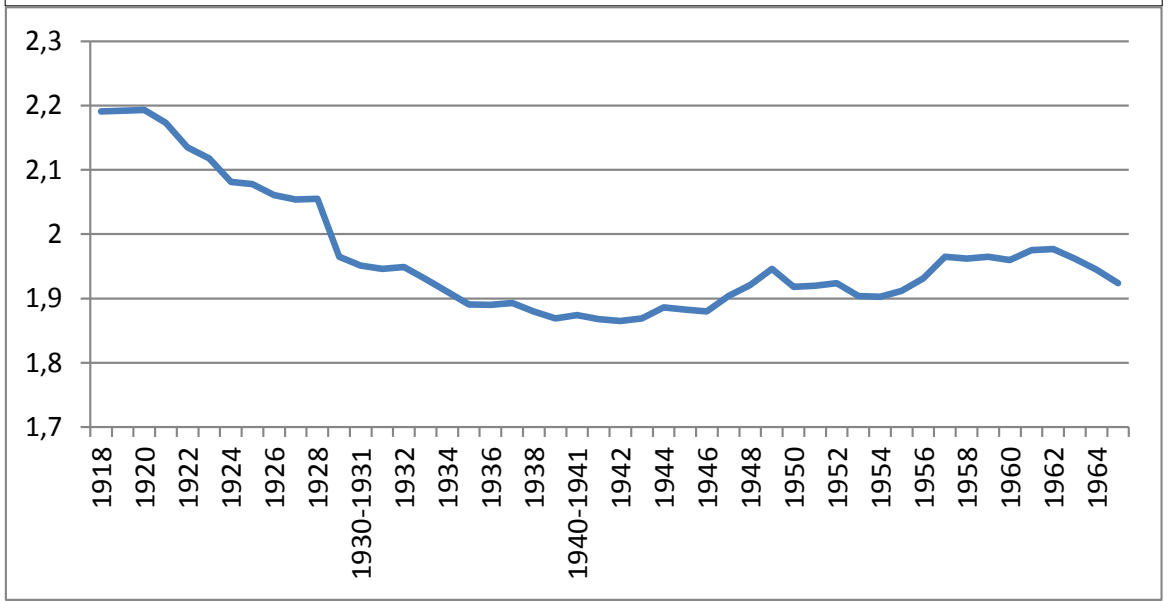
Source: HCSO vital statistics, Demographic Yearbooks

Total fertility rate in Hungary: cross-sectional (a) and cohort rates (b)

a)



b)

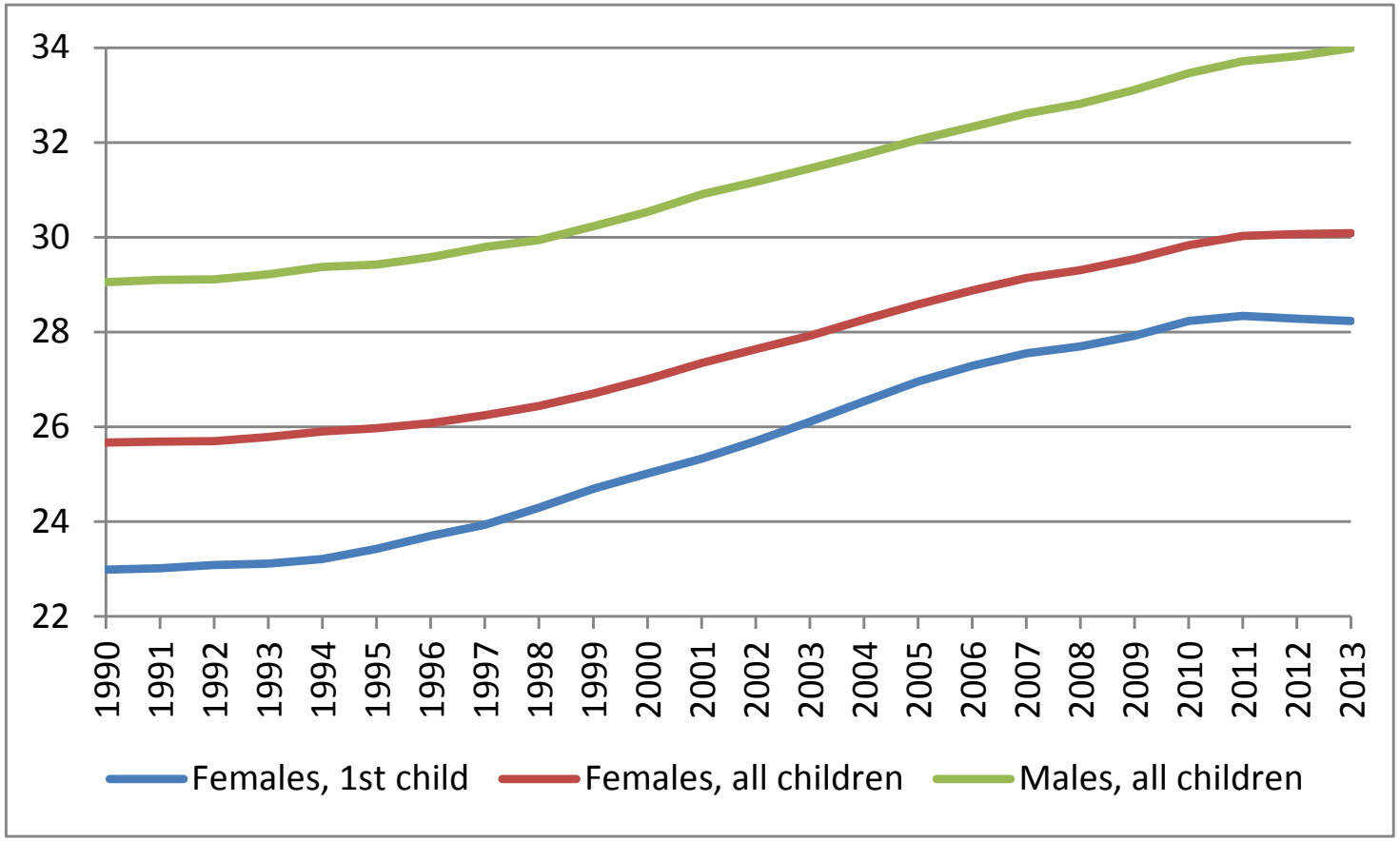


Sources: HCSO, Historical statistics (1992) and Fertility database

Fertility after the regime change in Hungary

- A strong decline from 1992 until the turn of the century
- Fertility stagnating at a low level in European comparison – „lowest low fertility”
- The consequences of the regime change or the crisis situation after 2008 or a total change in reproductive behaviour: „second demographic transition”?
- A definite decrease of fertility or postponement and the persistence of the two-children model?

Mean age at childbirth in Hungary, 1990-2013, females and males*



* If the father is known

Source: Kapitány, B. - Spéder Z.: Gyermekvállalás [Childbearing] In Monostori Judit – Őri, P. - Spéder Z. (eds.): *Demográfiai Portré, 2015 [Demographic Portrait of Hungary, 2015, English version in print],* Hungarian Demographic Research Institute, Budapest, 2015. 46.

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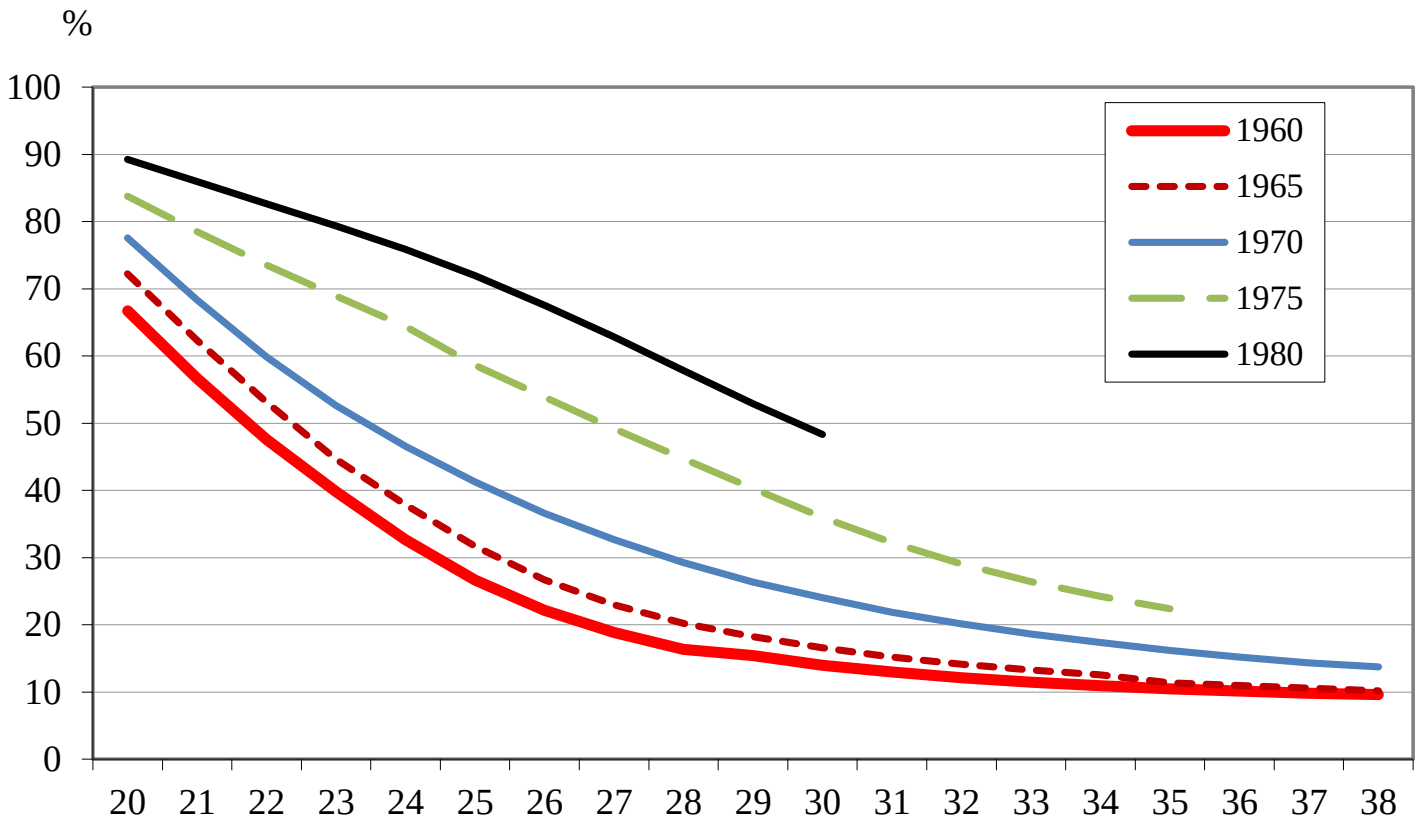
Rate of childless women in a given age, by birth cohort, 2010, Hungary



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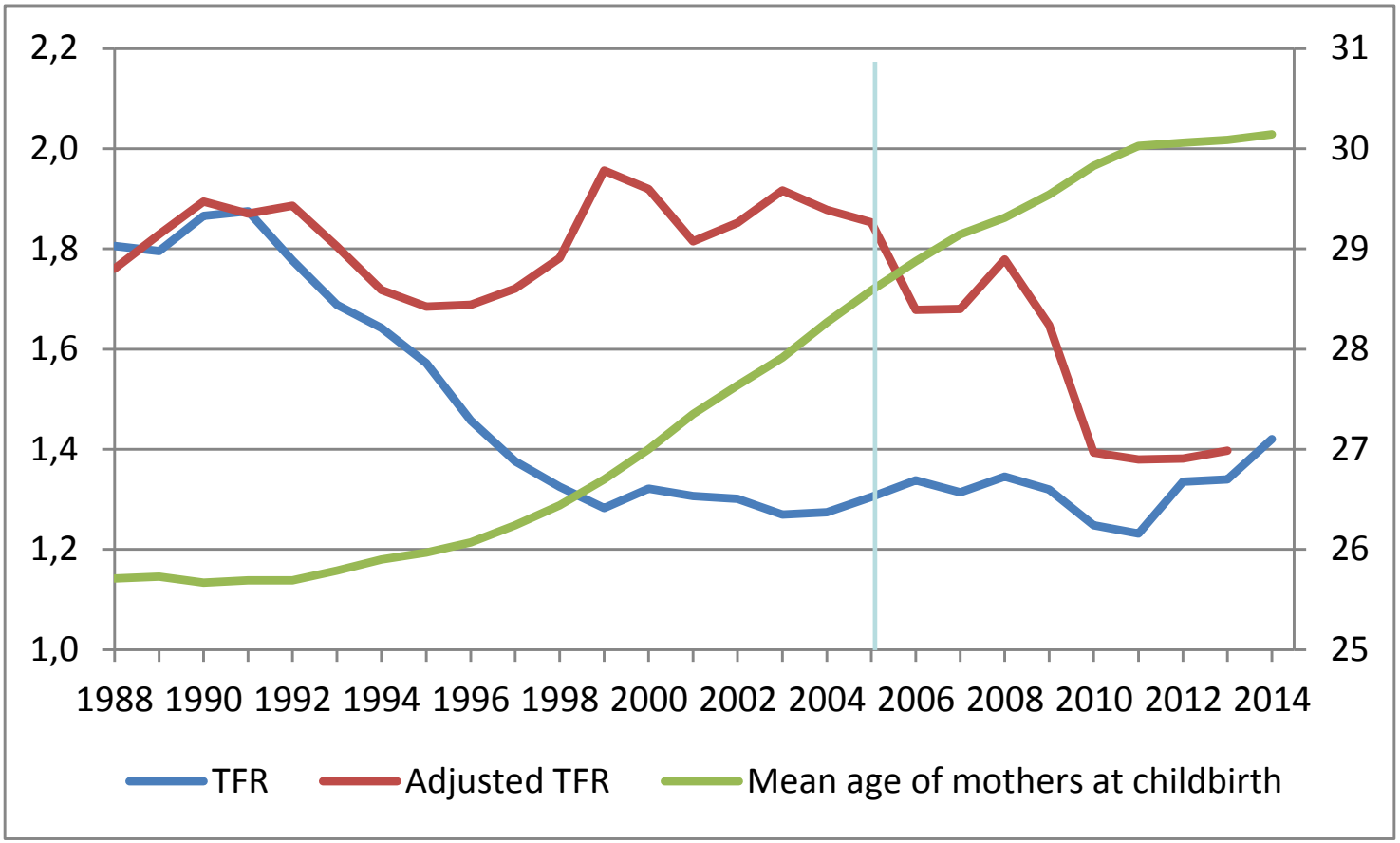
Source: Kapitány, B. - Spéder Z.: Fertility. In Őri, P. - Spéder Z. (eds.): *Demographic Portrait of Hungary, 2012,* Hungarian Demographic Research Institute, Budapest, 2012. 37.

The problem of postponement: TFR, adjusted TFR and mean age of mothers at childbirth, 1988-2013



Source: Kapitány, B. - Spéder Z.: Gyermekvállalás [Childbearing] In Monostori Judit – Őri, P. - Spéder Z. (eds.): *Demográfiai Portré, 2015 [Demographic Portrait of Hungary, 2015, English version in print],* Hungarian Demographic Research Institute, Budapest, 2015. 47.

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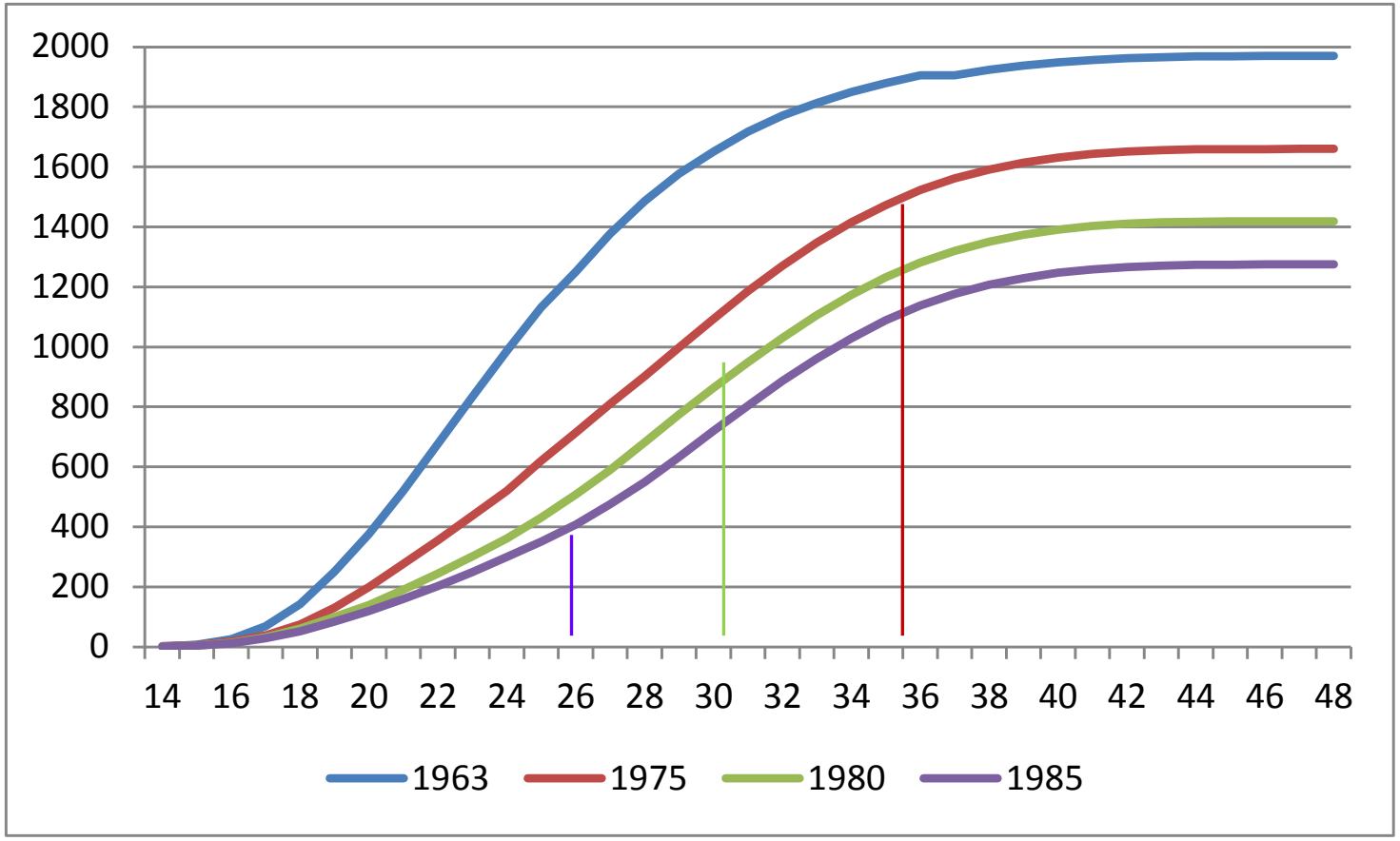
A model without postponement: a pessimistic view

- Ferenc Kamarás *(Demográfia,* 2012 55(4): 243-267.): fertility level by birth cohort
  - Completed fertility in the cohorts of the 1960s
  - Observed number of children born + actual age-specific rates in higher age groups in the case of younger generations with uncompleted fertility
  - Fertility level without any compensation or postponement: the worst possible version?

The observed and estimated number of children by age in different birth cohorts, 2011, per thousand



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Note: observed number of children by birth cohort + age-specific fertility rates in higher age groups observed in the the given calendar year. Source: Kamarás, F.: A születések és a termékenység hazai irányzatai [Births and fertility in Hungary], *Demográfia,* 2012, 55(4): 253.

The distribution of birth cohorts by child number and the partly estimated completed fertility

Year of birth	Child number				Total	Mean number of children per thousand women
	0	1	2	3+		
	%					
1963	8,5	21,3	47,1	23,2	100,0	1 970
1975*	17,5	26,2	36,4	19,8	100,0	1 660
1980*	29,3	22,8	30,6	17,4	100,0	1 420
1985*	38,3	19,9	25,7	16,1	100,0	1 275

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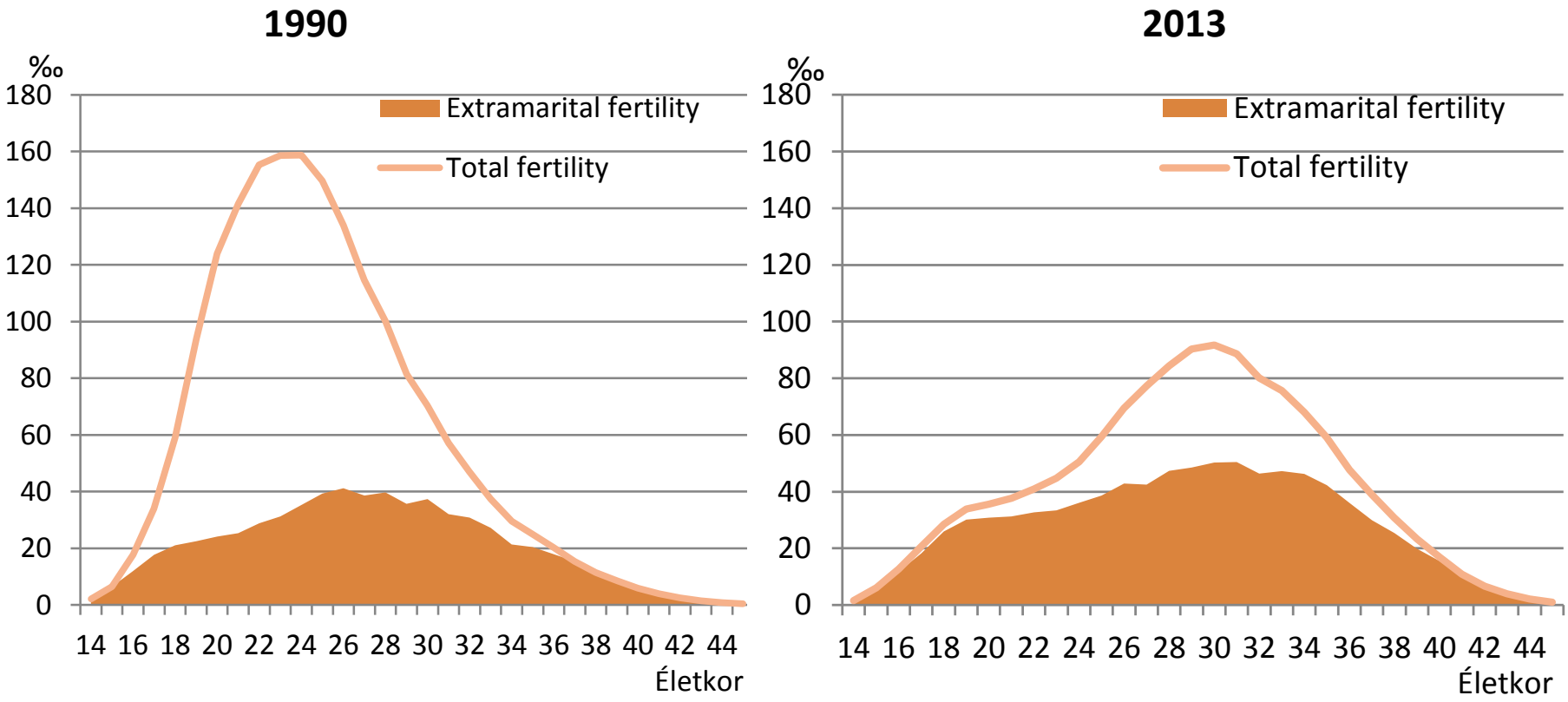
* Partly estimated on the basis of the age-specific fertility rates observed in the year 2011.
Source: Kamarás, F.: A születések és a termékenység hazai irányzatai [Births and fertility in Hungary], *Demográfia,* 2012, 55(4): 255.

Fertility in the past few years and the prospects of the future

- Postponement before 2005
- In the last decade: change in the reproductive behaviour (lowest low fertility has become a prevailing model)
- The possible consequences are serious
  - The elimination of the two-children model
  - A strong percentage of childlessness
  - A further decreasing cohort fertility, further moving off from the replacement level
- Crisis situation or the signs of a convergent demographic development
  - Both: anyway the elements of a new and coherent demographic behaviour
    - Low fertility
    - Cohabitation before marriage and instead of marriage

Extramarital and total fertility (the number of live births per thousand) by the age of the mothers



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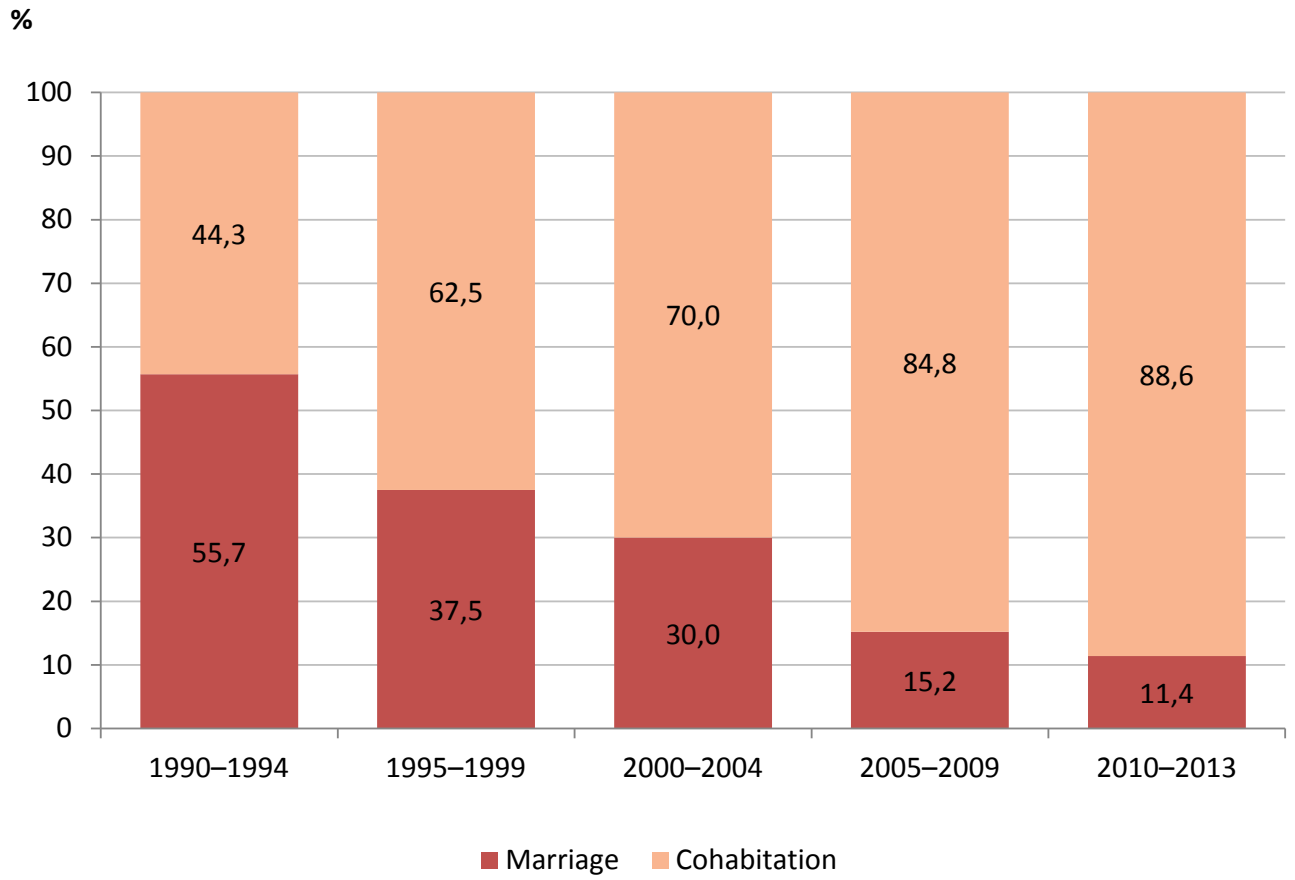
Source: Kapitány, B. - Spéder Z.: Gyermekvállalás [Childbearing] In Monostori Judit – Őri, P. - Spéder Z. (eds.): *Demográfiai Portré, 2015 [Demographic Portrait of Hungary, 2015, English version in print]*, Hungarian Demographic Research Institute, Budapest, 2015. 53.

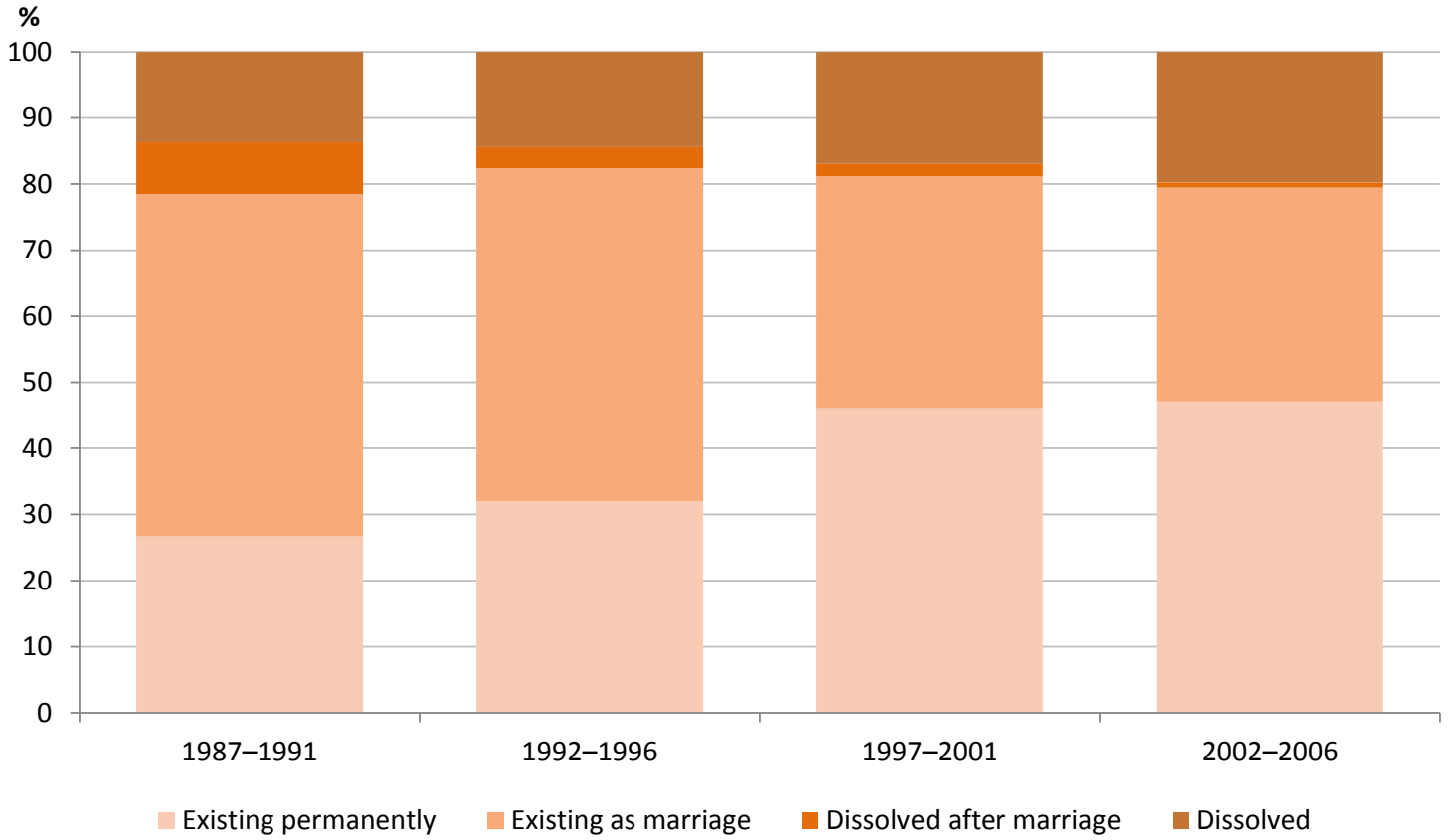
Type of first long-term union by the period of its formation



HDRI

Source: HDRI Turning points of the life course panel-study, Murinkó, L. – Spéder Z.: marriage and cohabitation. In In Monostori Judit – Őri, P. - Spéder Z. (eds.): *Demográfiai Portré, 2015 [Demographic Portrait of Hungary, 2015, English version in print],* Hungarian Demographic Research Institute, Budapest, 2015. 17.

Partnership trajectory in the first five years after the start of cohabitation as first-time union by partnership cohorts



Source: HDRI Turning points of the life course panel-study, Murinkó, L. – Spéder Z.: marriage and cohabitation. In In Monostori Judit – Őri, P. - Spéder Z. (eds.): *Demográfiai Portré, 2015 [Demographic Portrait of Hungary, 2015, English version in print],* Hungarian Demographic Research Institute, Budapest, 2015. 18.

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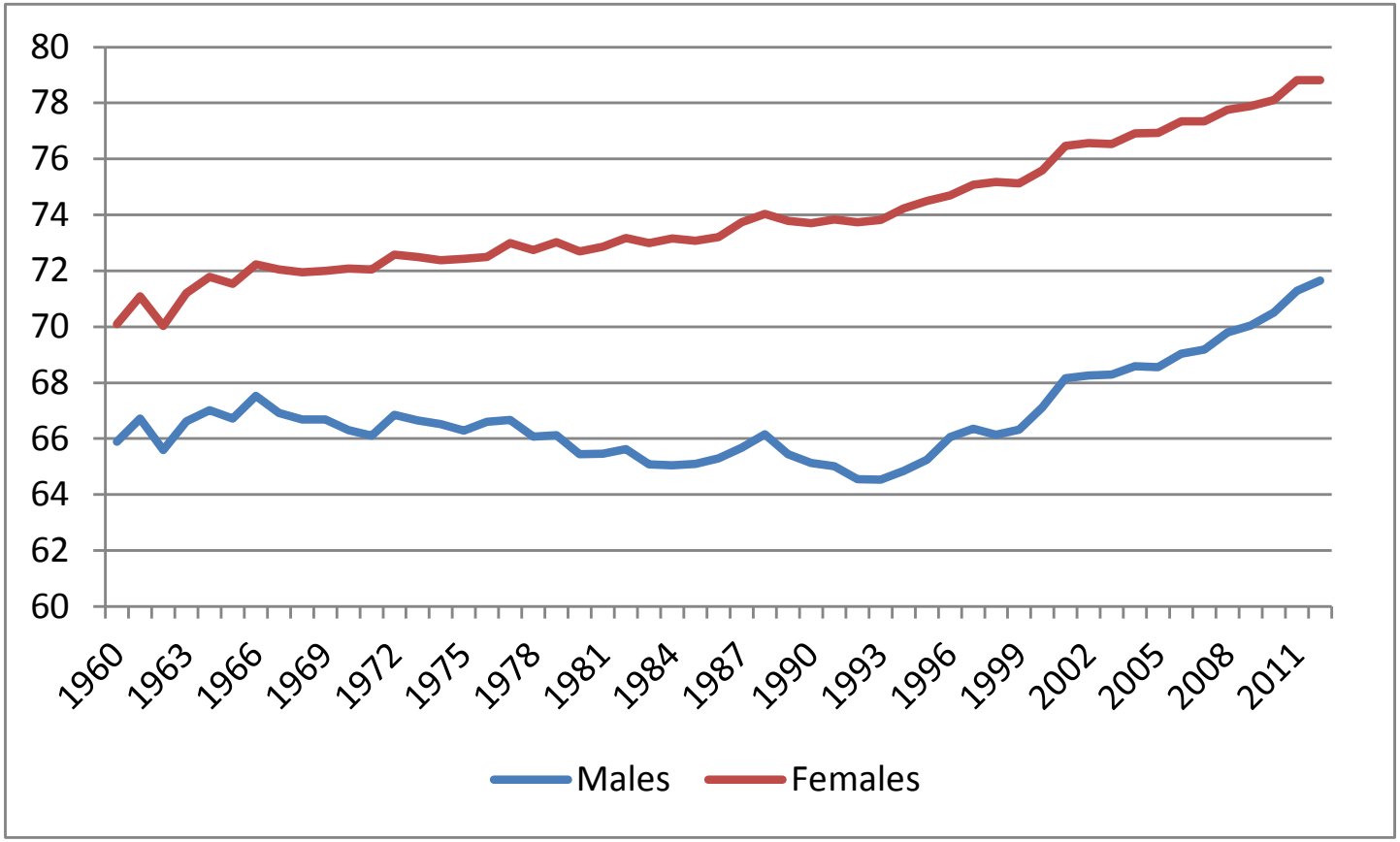
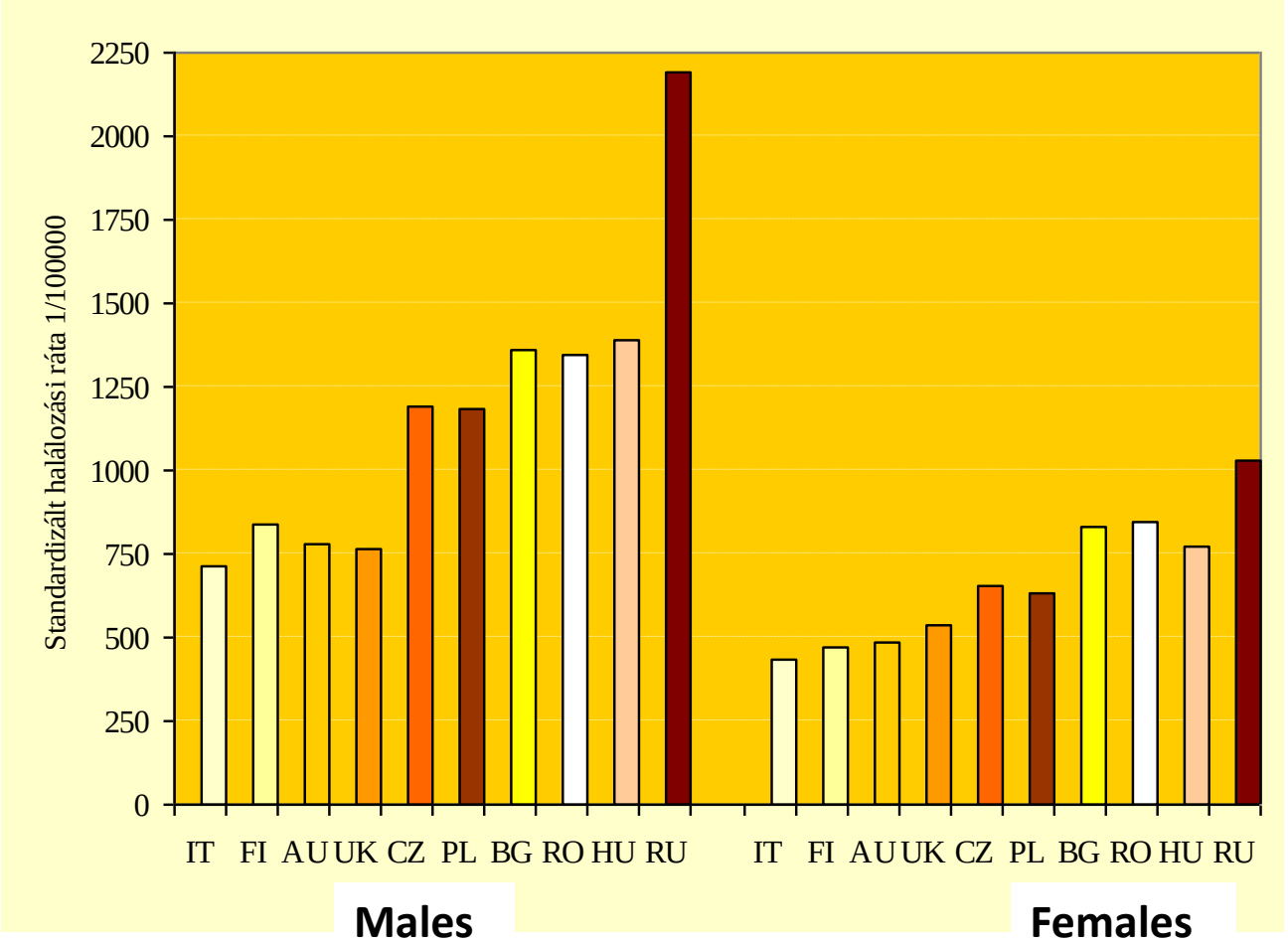
Life expectancy at birth, 1960-2012, by sex



HDRI

Source: HCSO vital statistics, Demographic Yearbooks

Standardised mortality rates (number of deaths per 100 thousand) in some European countries, 2005-2007

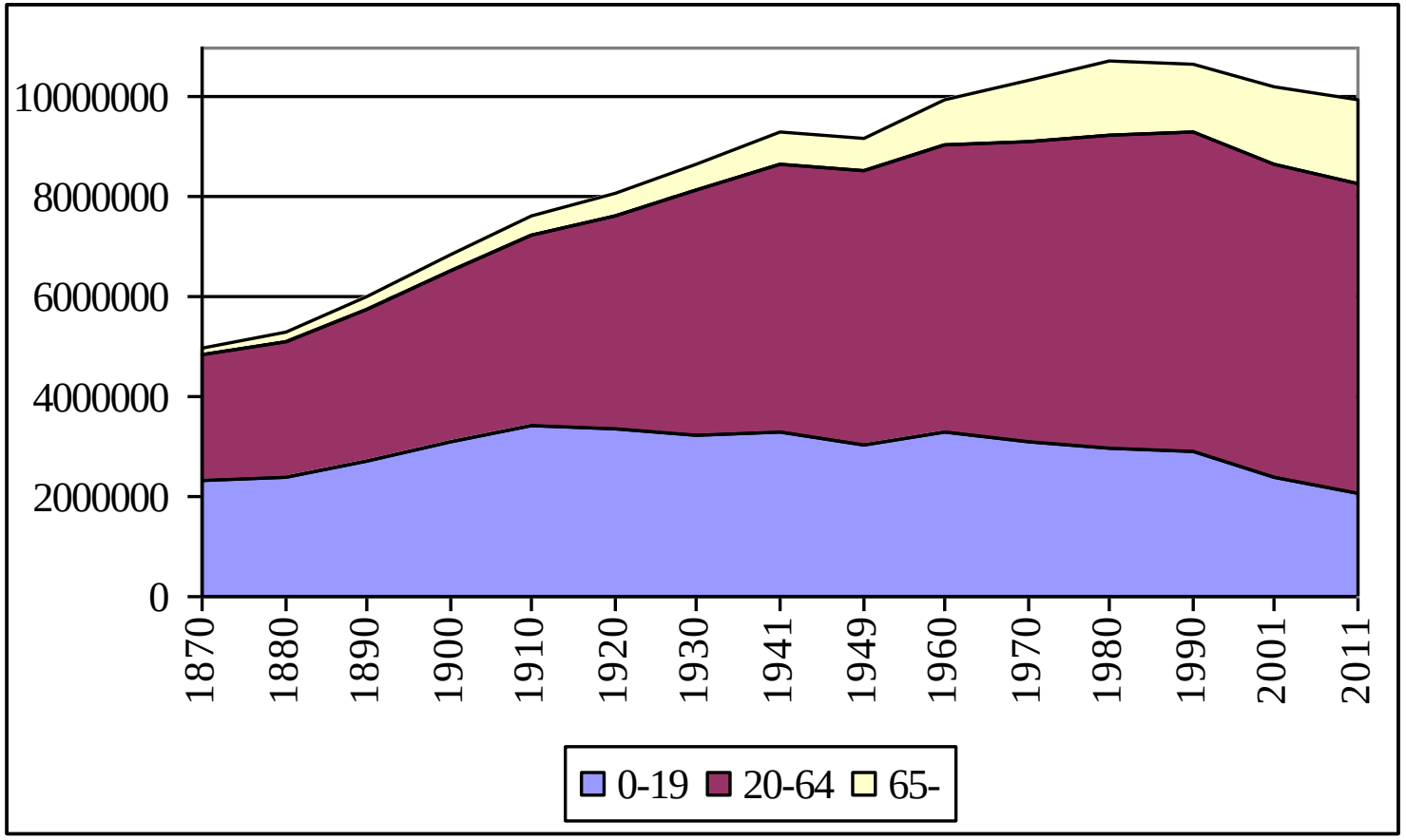


Source: Kovács, K. – Őri, P.: Social disparities in mortality. In Monostori, J. – Őri, P. – S. Molnár E. – Spéder Z. (eds.): *Demographic Portrait of Hungary, 2009*. HDRI, Budapest, 2010. 55.

Mortality trends in Hungary

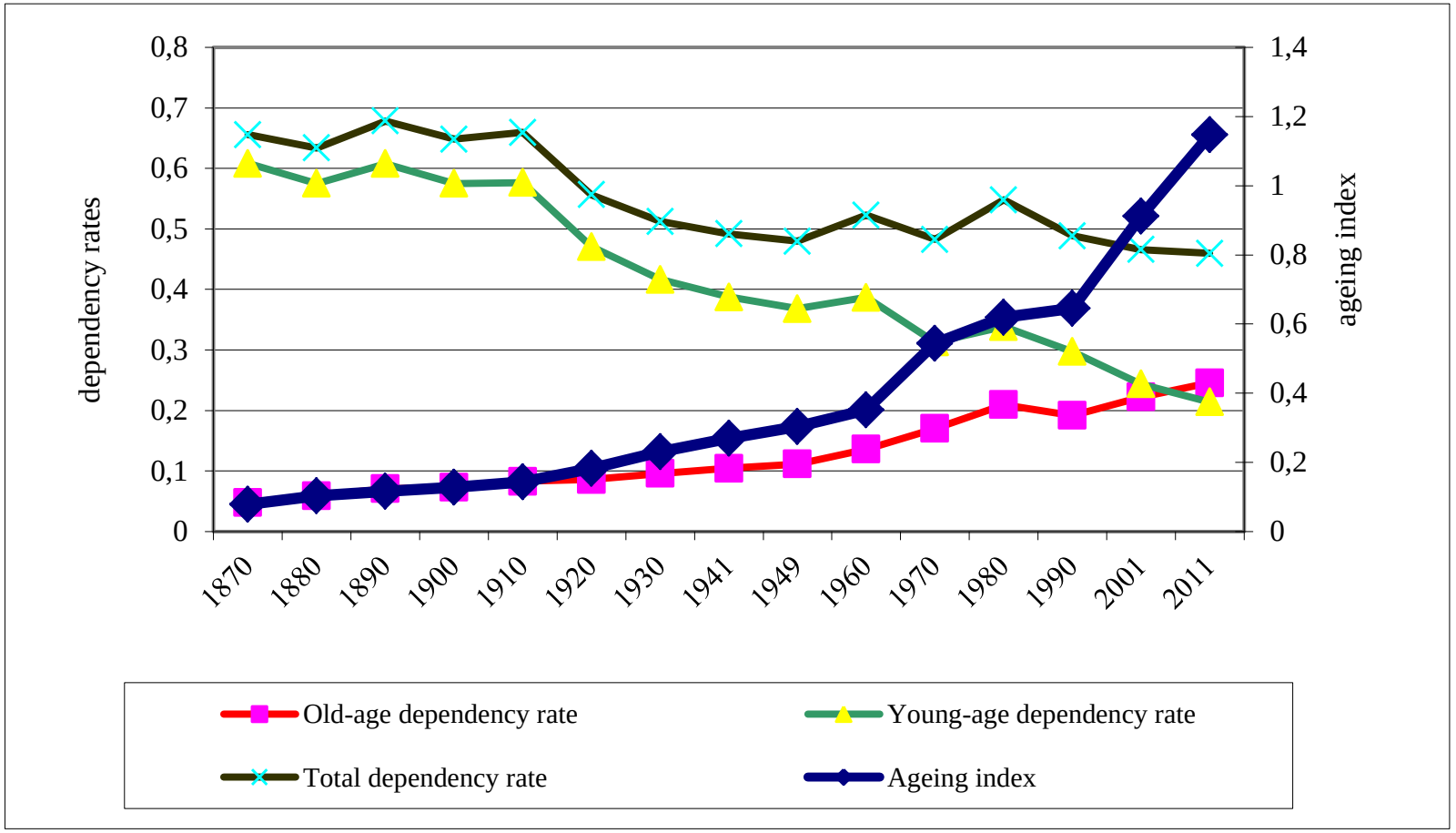
- Crisis situation in the first half of the 1990s
  - Particularly middle-aged males
  - Stagnating or slightly decreasing female mortality
- A marked decrease in mortality from the second part of the 1990s onwards
  - First of all due to the decrease in cardio-vascular mortality
  - Cancer mortality is one of the worst ones in international comparison
  - Overall mortality is also very unfavourable in European comparison
    - Male mortality is significantly higher than in Poland or in the Czech Republic
  - Social disparities in mortality are very strong

The change in the age structure of the population



Source: HCSO census data (present-day territory)

Dependency rates and ageing index in the long run



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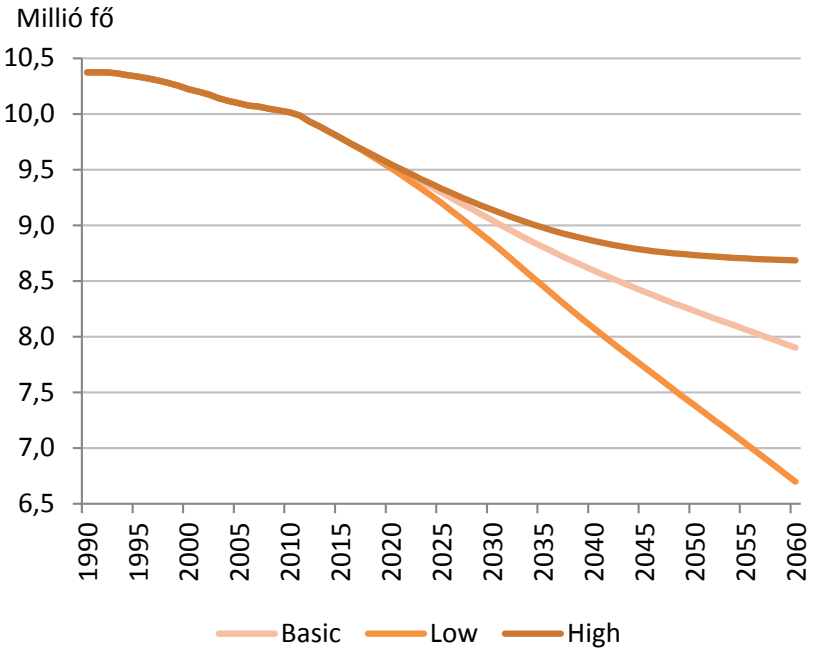
Source: HCSO census data (present-day territory)

The future: hypotheses of the population projection and population size in the future

		Basic version		Low version		High version	
	2013	2030	2060	2030	2060	2030	2060
TFR	1,34	1,60	1,60	1,45	1,45	1,74	1,74
Life expectancy, males	72,00	76,70	84,80	75,60	82,50	77,50	87,10
Life expectancy, females	78,70	82,40	88,70	81,10	85,00	83,70	92,40
Balance of international migration	-7340	-5960	7500	-17500	-7500	-4360	17500

Source: Földházi, E. : The structure and future of the population. In In Monostori Judit – Őri, P. - Spéder Z. (eds.): *Demográfiai Portré, 2015 [Demographic Portrait of Hungary, 2015, English version in print],* Hungarian Demographic Research Institute, Budapest, 2015. 214. 216.



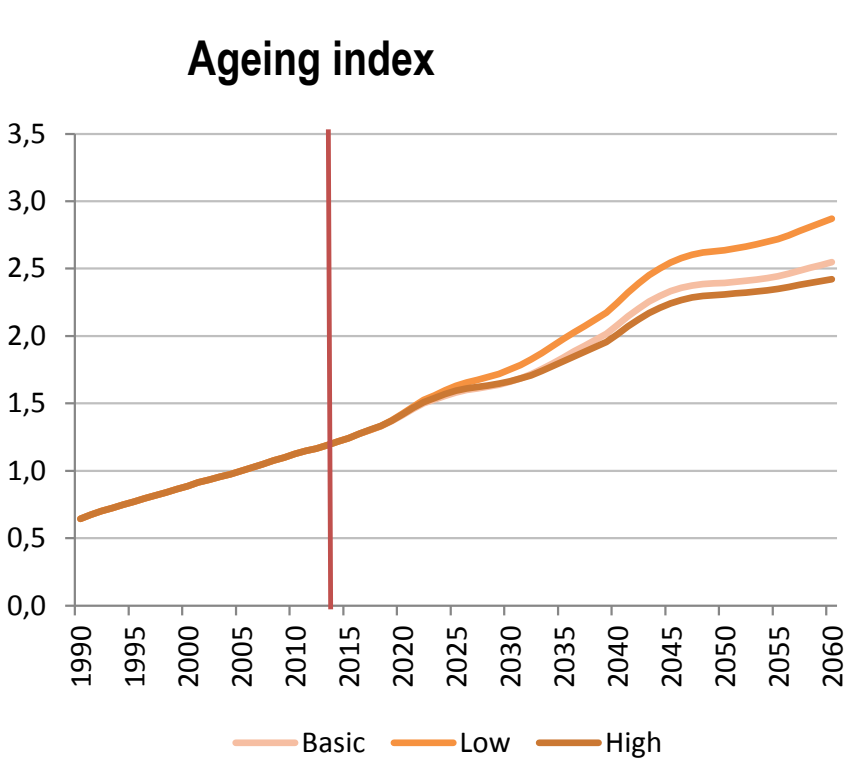
Ageing and old-age dependency rate in the future

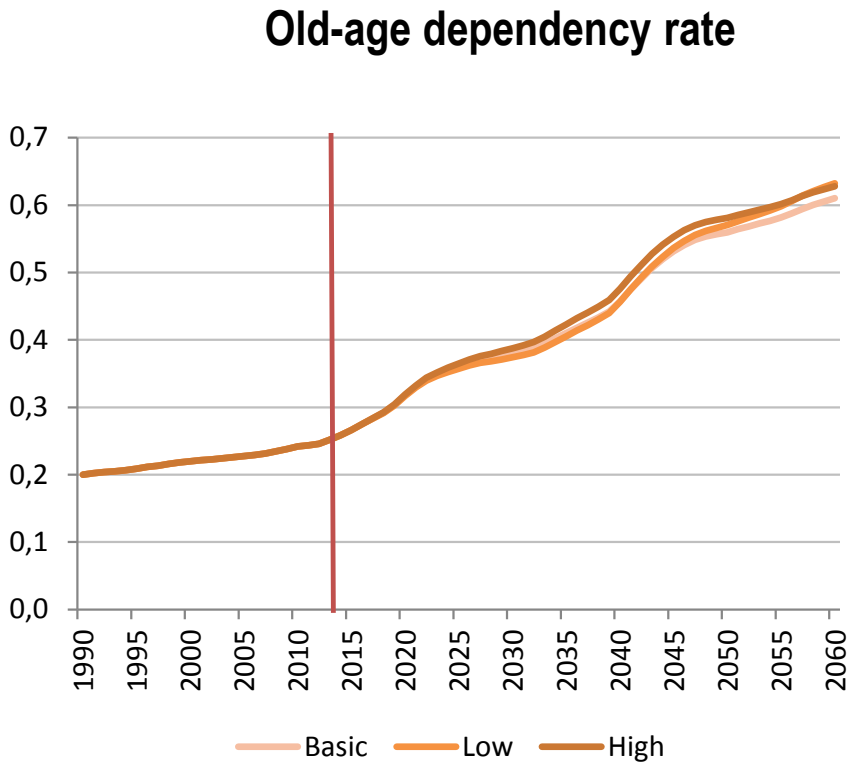
At present: more elder people than young, 2060: 2,5-3 times more

1990: 1 elder people + 5 active-age people

2011: 1 elder people + 4 active-age people

2060: 1 elder people + 2 active-age people





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Population in the future – instead of conclusions

- Considerable decrease of population size according to every version
- Strong ageing process
- Increasing burdens on the active-age population
  - The overall situation can be more favourable since the elder people produce something
  - But the problem is not entirely demographic
    - The burdens depend on the economic development, on the level of employment, on the education and on the health status of the elderly
- Population size under 7 million only in the low version in case of emigration and modestly increasing fertility and decreasing mortality
- But if we calculate with the size of the generations already born and the long-term persistence of these numbers and with actual life expectancy the „mean size" (number of years they will live) of these generations will be around or below 7 million even without emigration
- Only with high life expectancy (around 90 years) and/or a positive balance of international migration can be reached the basic version's 8 million
- Without a considerable surplus of international migration the worst scenarios will come