

# *Life Expectancy at birth and Healthy Life Years in Czechia and Slovakia*

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Population ageing is a hot topic for developed countries during last 60 years. Slow renewal by reproduction of populations brings less children and more elderly people. Therefore, there is growing pressures to pension, health and social system in whole Europe. Demography and socio-economic disciplines are trying to quantify economic burden of population aging (Fehr, 1996, Fornero, 2004, Grignon, 2008). Increasing level of Life Expectancy (LE) causes growing the costs of pensions, moreover disability of seniors means high expenditure for hospitals and department of social welfare. The current question is whether the added years of life expectancy are in health or not. The first short look into the issue gave us Healthy Life Years (HLY), which are closely related to life expectancy indicator, and works with combination of mortality tables and morbidity data such as prevalence of self-perceived health status. The indicators of healthy life years show the number of years that are expected to live in health by person in given mortality and disability regime. Therefore, the main objective of the contribution is to examine the development trends in HLY for the Czech and Slovak population utilizing the actual available data. Furthermore, possible causes of given development and differences are detected and discussed. Although the choice of countries is not obvious at first sight, they are both in Europe, they have aging population and they have a lot of in common because they consisted for almost 50 years one state.

Although the issue of healthy life expectancy is really actual, relevant literature about Czechia and Slovakia<sup>2</sup> do not tell a lot. Majority of information are related to general comparative studies for Europe or developed countries, but in-depth analysis of actual data for chosen countries in planned framework is not available. One of the research team working on the analysis of healthy life years across Europe is a research group around Herman Van Oyen<sup>3</sup> (Jagger, et al., 2011). As well as the team OECD (Organisation for Economic Co-operation and Development, European Commission, 2013) examines a quality of life in old age in OECD countries. In Czechia the study of this topic takes place predominantly at the department of demography and geo-demography at the Charles University in Prague. Rychtarikova (2000, 2007, 2008) studied the development trends of the Healthy Life Years in the Czech population utilizing data Generation and Gender Survey. Demographic Research Centre INFOSTAT Bratislava (Šprocha; Šídlo, 2013) is Slovak centre for research of Life Expectancy and Healthy Life Years. The Institute of Health Information and Statistics of the Czech Republic is another research agency, which focuses on the issue of health from the demographic perspective (Hrkal, 2009; Daňková, 2013).

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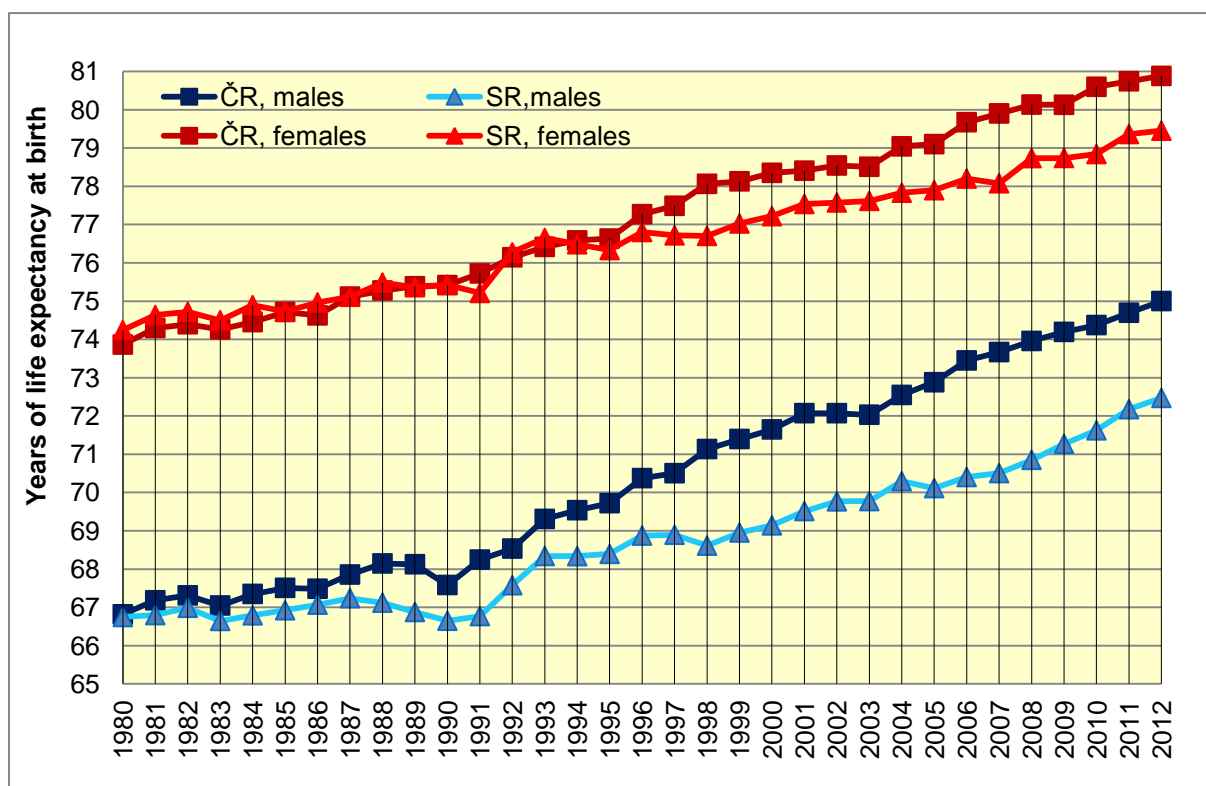
<sup>2</sup> Czechoslovakia was name for common state that separated to the Czech Republic and the Slovak Republic, Czechia and Slovakia are geographical name

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The main source of data about health prevalence in a given society in Europe is the Minimum European Health Module (MEHM). Three global questions concerning 3 health domains: self-perceived health, chronic conditions and long-term activity limitation (also GALI – global activity limitation indicator) (Cox, et al., 2009) are included in the module. Big advantage of this approach is comparability across countries as well as reliability of MEHM. On the other hand, cultural dimensions could influence the sample surveys in way of understanding of questions as well as the view of self-declared health status. MEHM is also part of the sample survey of the Czech Statistical Office - The European Union Statistics on Income and Living Conditions (EU-SILC) from 2002 that is carried out every year in EU-countries. Additional data source are mortality tables that are officially issued by statistical offices.

This paper targets at the situation in Czechia and Slovakia where the Life Expectancy started at the same level in the 80's of the 20<sup>th</sup> century and diverges until now. This situation is unique cause of Czechoslovakia had been one country until Velvet Divorce in 1993. Uncommonly, we can observe the process of lagging less developed country in many different areas. Graph 1 shows us the slowly divergence in LE. The very similar development is in case of women until 1994 when the gap started growing. In case of men, the divergence started earlier possibly from better exogenous conditions of mortality.

*Graph 1: Developed in the Life Expectancy at birth by sex in Czech and Slovakia, 1980-2012*

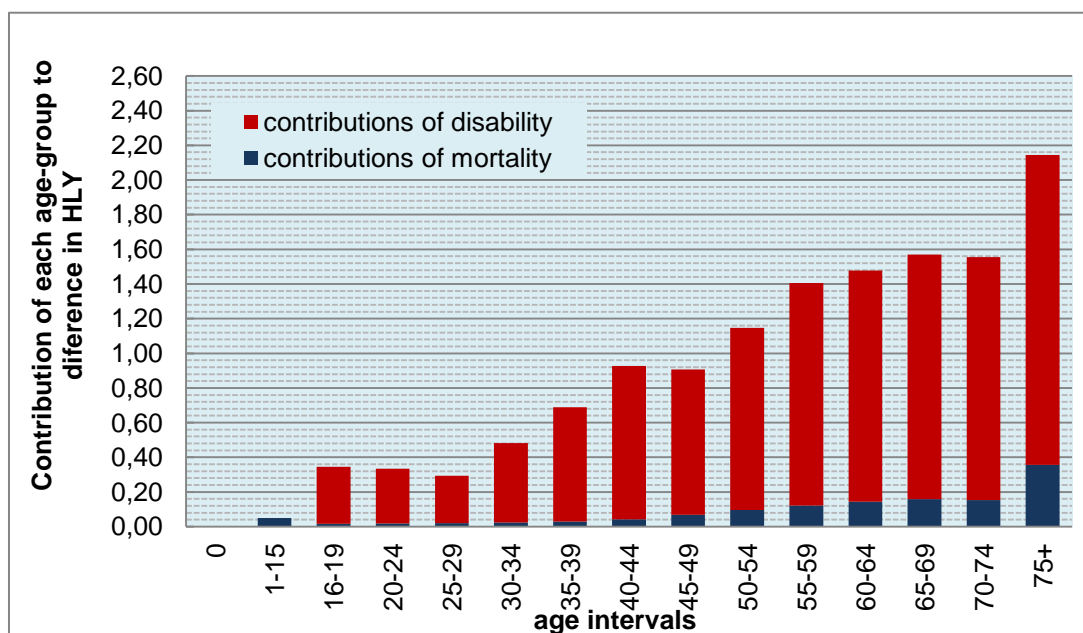


Source: Czech Statistical Office, SlovakPopin

Although the differences between Czechia and Slovakia in LE at birth in 2011 is only 2.52 years for males and 1.38 years for females, the same place and time difference in HLY based on GALI

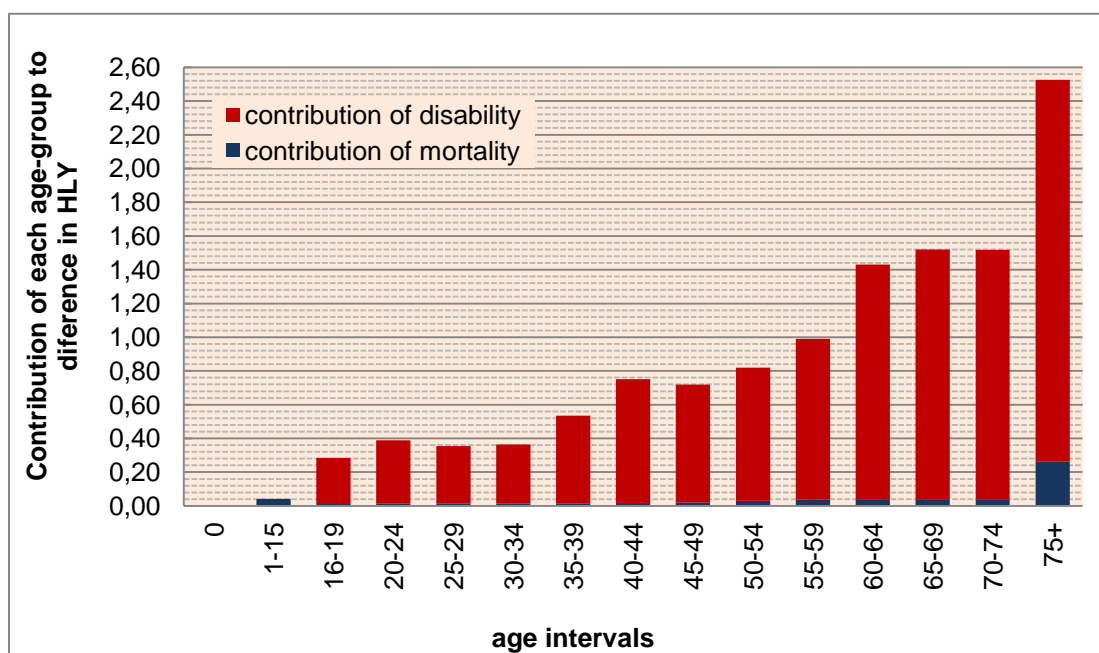
is 13.33 years for male and 12.24 for female. According to decomposition of difference in HLY (Nusselder, Looman, 2004) between Czechia and Slovakia in 2011, which was performed by sex, two kinds of effect were found: effect of mortality and effect of disability. The difference in male group is caused from 90.2 % by disability. Almost the same holds for female group, i.e. 95.2 %. Our preliminary results are shown in Graph 2 and Graph 3. The effect of disability plays main role especially in female group.

*Graph 2: Decomposition of Healthy Life Years, male, Czechia and Slovakia, 2011*



Source: Czech Statistical Office, Statistical Office of the Slovak Republic, 2011, own calculations

*Graph 3: Decomposition of Healthy Life Years, female, Czechia and Slovakia, 2011*



Source: Czech Statistical Office, Statistical Office of the Slovak Republic, 2011, own calculations

The trends of Life expectancy at birth are obvious; however, trends of Healthy Life Years are not documented enough in studied countries. The aim of this paper is showing the relationship between HLY in chosen countries and explain quite big observed gap. Besides decomposition technique, regression analysis to detect possible causes of differences will be utilized. We see from the decomposition of HLY (graph 2 and 3) that higher effect of disability than mortality plays role in the difference therefore the possible impact of the gap is also cultural diversity of these countries. There is a concept of cultural differences that may occur to the answers of the respondents during the interview (Baer; De Norre, 2009).

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