

ARE EUROPEANS LIVING LONGER AND HEALTHIER LIVES?

Silvia Megyesiová – Vanda Lieskovská

Abstract

Population aging shifts the age distribution of a population toward older ages. It is the most global demographic trend in the recent century. A major question with an aging population is whether increases in life expectancy will be associated with a greater or lesser proportion of the future population spending their years living with disability. An improvement in healthy life years is considered as one of the main health goals for the EU. Disability-free life expectancy (healthy life years – HLY) introduces the concept of quality of life. HLY and life expectancy are the head indicators of the EU Sustainable Development Strategy in the fifth theme of Public Health. The life expectancy at birth rose moderately between 2005 and 2010; in general people are living longer. The faster growth rate for men indicates narrowing of the gap in life expectancy between women and men mainly at the EU level. While life expectancy constitutes as a conventional and solid indicator to reflect general health and health care conditions in different countries, the indicator of healthy life years adds complementary information on the quality of life.

Key words: life expectancy, healthy life years, sustainable development strategy

JEL Code: I18, J11

Introduction

The European Union's Sustainable Development Strategy (SDS) sets out the objective of achieving improvement of the quality of life for present and future generations. The strategy is monitored using more than 130 indicators, which are published by Eurostat every two years. The indicators are grouped into ten themes and are organised in four indicator levels reflecting the objectives and structure of the EU's SDS. The indicators are presented in following themes: Socio-economic development, Sustainable consumption and production, Social inclusion, Demographic changes, Public health, Climate change and energy, Sustainable transport, Natural resources, Global partnership, Good governance.

The ten themes follow a gradient from economic, to the social, environmental and institutional dimensions. Different levels of indicators respond to different user needs (Indicators for monitoring the EU Sustainable Development Strategy):

- Headline indicators monitor the overall objectives related to the key challenges of the SDS.
- Operational indicators are related to the operational objectives of the SDS. They are lead indicators in their subthemes.
- Explanatory indicators are related to actions described in the SDS or to other issues which are useful for analyzing progress towards the strategy's objectives.
- Contextual indicators are part of the set, but either do not monitor directly a particular SDS objective, or they are not policy responsive.

The headline indicators give an overall picture of whether the EU has achieved progress toward sustainable development in terms of the objectives and targets defined in the strategy. For more complete picture it is necessary to look at the progress of all indicators within a theme.

1 Public health

The fifth theme of the SDS consists of indicators which set out the objective of promoting good public health on equal conditions and improves protection against health threats. Good health is the foundation of human welfare and productivity and is hence essential for sustainable development. Healthy people represent added value for the economy and the society since they are more productive and can contribute to cohesive ways of living together in the society. Sustainable development cannot be ensured in societies marked by widespread disease (Sustainable development in the European Union, 2011).

The headline indicator comprise of two statistics: healthy life years (HLY) and life expectancy (LE) at birth, by sex (see table 1). The next level of public health indicator, the operational objectives and targets indicators are divided into health and health inequalities objectives with five action or explanatory variables and determinants of health indicators with three actions or explanatory variables.

Tab. 1: Public health indicators

Headline indicator	Operational objectives and targets	Actions / explanatory variables
Healthy life years and life expectancy at birth, by sex	Health and health inequalities	
	Death rate due to chronic diseases, by sex	Healthy life years and life expectancy at age 65, by sex
		Suicide death rate, total by age group
		Suicide death rate, males by age group
		Suicide death rate, females by age group
		Self reported unmet need for medical examination or treatment, by income quintile
	Determinants of health	
	Index of production of toxic chemicals, by toxicity class	Urban population exposure to air pollution by particulate matter
		Urban population exposure to air pollution by ozone
		Proportion of population living in households considering that they suffer from noise
Serious accidents at work		

Source: Eurostat

Life expectancy is defined as the mean number of years still to be lived by a person at birth or a certain exact age, if subjected throughout the rest of his or her life to the current mortality conditions. According to the development of the life expectancies we can say, that people are living longer. The actual question is whether do we live longer and better or do we gain years of life in bad health? The indicator of HLY measures the number of remaining years that a person of specific age is expected to live without any severe or moderate health problems. Healthy life years also monitor health as a productive or economic factor. An increase in healthy life years is one of the main goals for European health policy. And it would not only improve the situation of individuals but also results in lower levels of public health care expenditure. If healthy life years are increasing more rapidly than life expectancy, it means that people are living more years in better health. So health expectancies divide life expectancy into life spent in different states of health. In this way they add a dimension of quality to the quantity of life lived. There are as many health expectancies as dimensions of health.

HLY is a composite indicator that combines mortality data with health status data. The Eurostat's HLY is reflecting a disability dimension based on a self-perceived question which aims to measure the extent of any limitations because of a health problem that may have affected respondents as regards activities they usually do, for at least six months. The indicator is therefore known as disability-free life expectancy indicator (DFLE). The proportion of the population in healthy and unhealthy conditions is calculated by sex and age

and they are a result of the so-called GALI – Global Activity Limitation Instrument foreseen in the EU Statistics on Income and Living Conditions (EU-SILC Survey). Health expectancies are calculated using the Sullivan method which combines information on mortality and health status data.

2 Life expectancy and healthy life years in the EU and selected countries

The life expectancy at birth rose moderately between 2005 and 2010. The headline indicator shows that in general people are living longer. The faster growth rate for men indicates narrowing of the gap in life expectancy between women and men mainly at the EU level. The LE in EU has increased by 1.2 years for women and 1.5 years for men over the period 2005-2010. But the closing gap was not so typical for all of the Member States for example the gap stayed unchanged in Czech Republic and Poland. In Slovakia and Hungary there was a positive sign of a faster growth rate for men's life expectancy which led to a closing gap (see table 2).

Tab. 2: Life expectancy at birth, by sex

Life expectancy	2005	2006	2007	2008	2009	2010
females						
EU	81,5	82,0	82,2	82,4	82,6	82,7
Czech Republic	79,2	79,9	80,2	80,5	80,5	80,9
Slovakia	78,1	78,4	78,4	79,0	79,1	79,3
Hungary	77,2	77,8	77,8	78,3	78,4	78,6
Poland	79,3	79,7	79,8	80,0	80,1	80,7
males						
EU	75,4	75,8	76,1	76,4	76,7	76,9
Czech Republic	72,9	73,5	73,8	74,1	74,2	74,5
Slovakia	70,2	70,4	70,6	70,8	71,4	71,7
Hungary	68,7	69,2	69,4	70,0	70,3	70,7
Poland	70,8	70,9	71,0	71,3	71,5	72,1
differences (F-M)						
EU	6,1	6,2	6,1	6,0	5,9	5,8
Czech Republic	6,3	6,4	6,4	6,4	6,3	6,4
Slovakia	7,9	8,0	7,8	8,2	7,7	7,6
Hungary	8,5	8,6	8,4	8,3	8,1	7,9
Poland	8,5	8,8	8,8	8,7	8,6	8,6

Source: Eurostat

Average life expectancy at birth was in the EU 5.8 years higher for women than men in 2010. A girl born in 2010 is expected to live 82.7 years on average and a boy 76.9 years. Growing life expectancy reflects improved living conditions in the EU in terms of economic

Between 2009 and 2010 HLY increased for both men and women in EU. The increase was stronger for women than for men. But in some countries the development was not positive, in Slovakia and Poland for example the HLY decreased in the same period. The gap between the HLY of women and men is narrowing especially at the EU level. There is almost no difference between HLY for women and men in Slovakia. The biggest difference between two sexes was typical for Poland where women lived in good health 3.7 years longer than men in 2010; the difference of the overall average for the EU was only 0.9 years.

Tab. 3: Healthy life years at birth, by sex

Healthy Life Years	2005	2006	2007	2008	2009	2010
females						
EU	62,1	62,4	62,5	62,2	62,0	62,6
Czech Republic	59,9	59,6	63,3	63,4	62,7	64,6
Slovakia	56,7	54,6	56,3	52,6	52,6	52,1
Hungary	54,3	57,2	57,6	58,3	58,3	58,6
Poland	66,9	62,9	61,5	63,0	62,5	62,2
males						
EU	60,7	61,7	61,7	61,1	61,3	61,7
Czech Republic	57,9	58,2	61,3	61,2	61,1	62,2
Slovakia	55,3	54,6	55,6	52,1	52,4	52,3
Hungary	52,2	54,3	55,2	54,8	55,8	56,4
Poland	61,1	58,3	57,7	58,5	58,3	58,5
differences (F-M)						
EU	1,4	0,7	0,8	1,1	0,7	0,9
Czech Republic	2,0	1,4	2,0	2,2	1,6	2,4
Slovakia	1,4	0,0	0,7	0,5	0,2	-0,2
Hungary	2,1	2,9	2,4	3,5	2,5	2,2
Poland	5,8	4,6	3,8	4,5	4,2	3,7

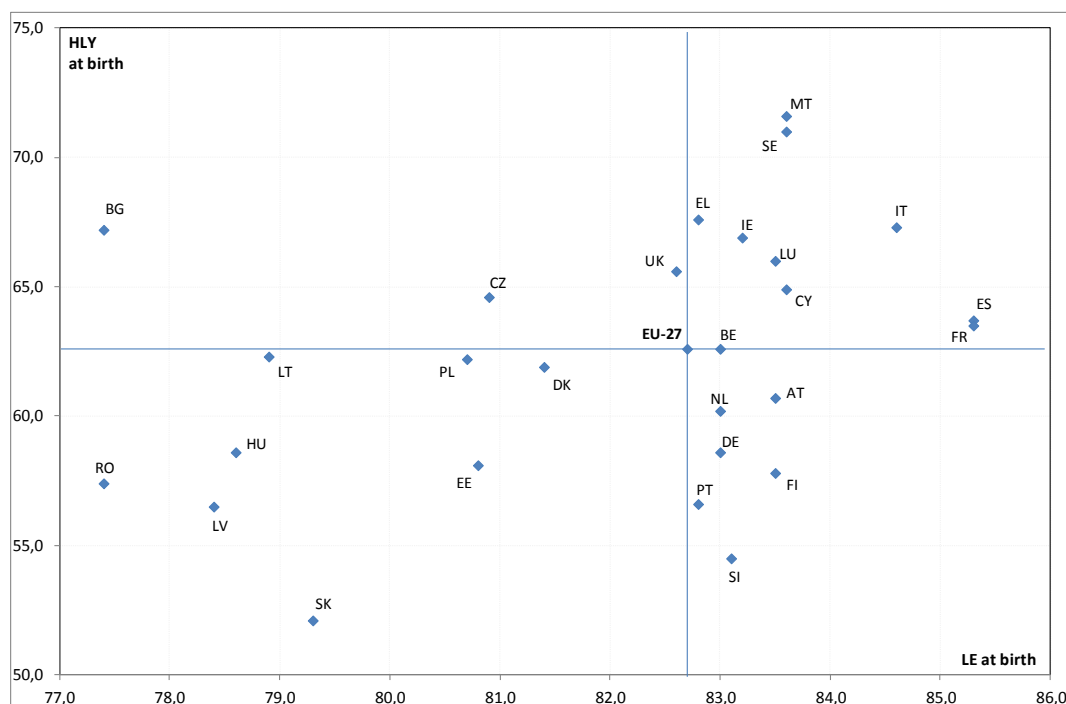
Source: Eurostat

3 Correlation between life expectancies and HLY at births in the EU

When we prepare a chart presenting a relationship between LE and HLY we can discover some clusters of the EU Member States. Based on the point representing the EU-27 averages, four different groups of Member States can be identified. The upper right corner of the figure 2 obtains countries where both the LE and the HLY at birth for women are above the EU-27 average. This cluster is composed mainly of the former EU Member States: Sweden, Luxembourg, Belgium, Italy, France, Spain, Greece, Ireland, Malta, and Cyprus. The next group of countries composed of Austria, the Netherlands, Germany, Finland, Portugal and Slovenia presents countries where LE is above the EU-27 average but the HLY is lower than the average of the EU Member States. Only three countries are located at the upper left

corner. Czech Republic, Bulgaria and the United Kingdom are the Member States with a lower LE than the EU-27 average, but with a higher HLY than the average value. In last group lies most of the countries that joined the EU after 2004: Latvia, Lithuania, Romania, Hungary, Slovakia, Poland, Estonia, and Denmark. This group of countries achieved a very low LE and also a very low HLY at birth for women in 2010.

Fig. 2: Life expectancy and HLY at birth, females, 2010¹



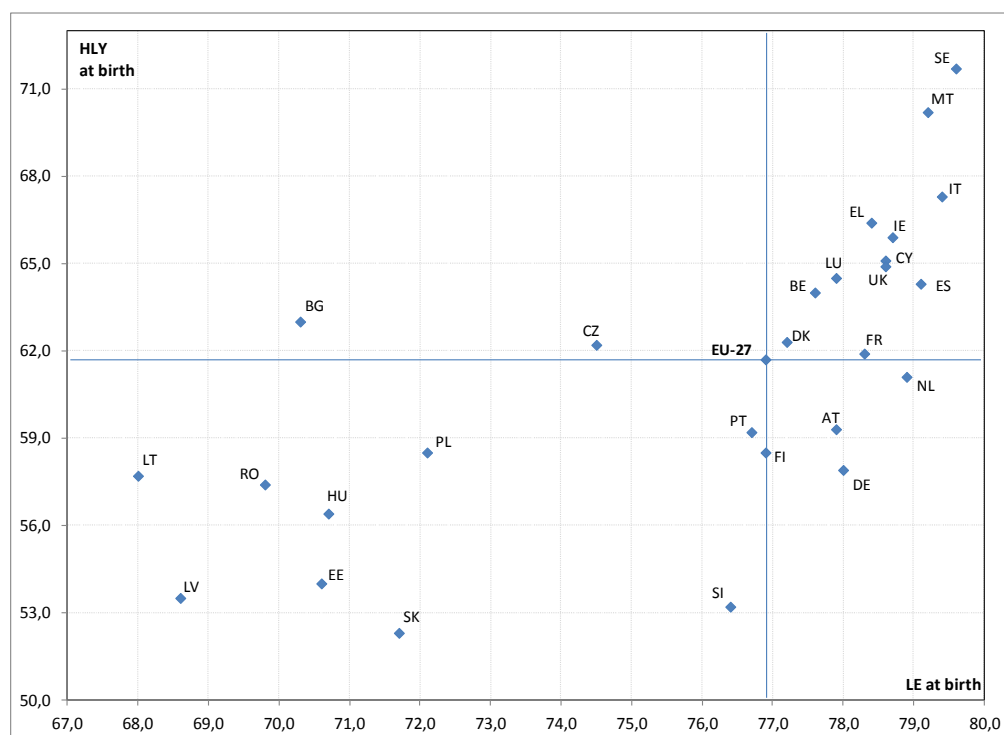
Source: Eurostat

Very similar was the situation when we compared the LE and HLY of men in 2010 (see figure 3). The cluster, with very low levels of the selected indicators grouped the following Eastern European countries together: Latvia, Romania, Lithuania, Hungary, Estonia, Poland, Slovakia, Slovenia and Portugal. The upper left corner obtains only two countries, namely Bulgaria and the Czech Republic. The upper right corner represents a large group of countries with very similar LE but widely ranging HLY. In the last group lies the

¹ Abbreviations of the names of the EU Member States (EU-27): AT = Austria; BE = Belgium; BG = Bulgaria; CY = Cyprus; CZ = the Czech Republic; DK = Denmark; EE = Estonia; FI = Finland; FR = France; DE = Germany; EL = Greece; HU = Hungary; IE = Ireland; IT = Italy; LV = Latvia; LT = Lithuania; LU = Luxembourg; MT = Malta; NL = the Netherlands; PL = Poland; PT = Portugal; RO = Romania; SK = Slovakia; SI = Slovenia; ES = Spain; SE = Sweden; and UK = the United Kingdom.

countries with the average LE higher compared to the EU-27 average but with the HLY lower compared to the EU-27 average.

Fig. 3: Life expectancy and HLY at birth, males, 2010



Source: Eurostat

Conclusion

The EU is in a process of significant population ageing. Growing life expectancy reflects improved living conditions in the EU in terms of economic welfare, social security and health care resources. A girl born in 2005 was expected to live 81.5 years on average and the LE at birth increased to 82.7 years in 2010. A boy born in 2005 was expected to live 75.4 years on average, the LE at birth of men increased to 76.9 six years later. Nevertheless, there are differences between Member States. An improvement in healthy life years is considered as one of the main health goals for the EU. Between 2009 and 2010 HLY increased for both men and women in EU. The increase was stronger for women than for men. But in some countries the development was not positive, in Slovakia and Poland for example the HLY decreased in

the same period. The gap between the HLY of women and men is narrowing especially at the EU level.

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Contact

Silvia Megyesiová

Podnikovohospodárska fakulta EU

Tajovského 13, 041 30 Košice

Slovakia

megyesiova@euke.sk

Vanda Lieskovská

Podnikovohospodárska fakulta EU

Tajovského 13, 041 30 Košice

Slovakia

lieskovska@euke.sk