RECENT POPULATION CHANGE IN EUROPE

Silvia Megyesiová – Vanda Lieskovská

Abstract

Population ageing is going to be a key demographic challenge in many Member States of the European Union. The ageing process is the result of interactive demographic trends: the decline in fertility in recent decades followed the post-war baby boom, life expectancy at birth could continue to rise, and Europe is already the recipient of major inflows of net migration from third countries. The magnitude and rhythm of the main demographic indicators may vary substantially from one country to another, the impact of the economic crisis is still difficult to assess. Demographic ageing is a result of significant economic, social and medical progress in EU-27.

Key words: fertility, natural change, net migration

JEL Code: J10, J13

Introduction

The population change depends on three main targets: trends in fertility, life expectancy and migration. The average number of children per woman (the current fertility rate, total fertility rate) is low, well below the replacement rate of 2.1 required to stabilise the population size in the absence of immigration. A limited increase of 1.6 is projected for EU-25 by 2030[1]. The impact of family policies on these trends is difficult to assess since cultural factors play an important role. However, the data suggest that postponement of childbearing to a later age is accompanied in some countries (France, Denmark, Finland and the Netherlands for instance) by higher fertility rates and relatively generous public support for parents[2]. In 2010 two positive trends across the population of the European Union countries are emerging – a slight increase in fertility rate and greater life expectancy. Population growth in EU-27 depends

[1] The demographic future of Europe – from challenge to opportunity, Commission of the European communities, 2006

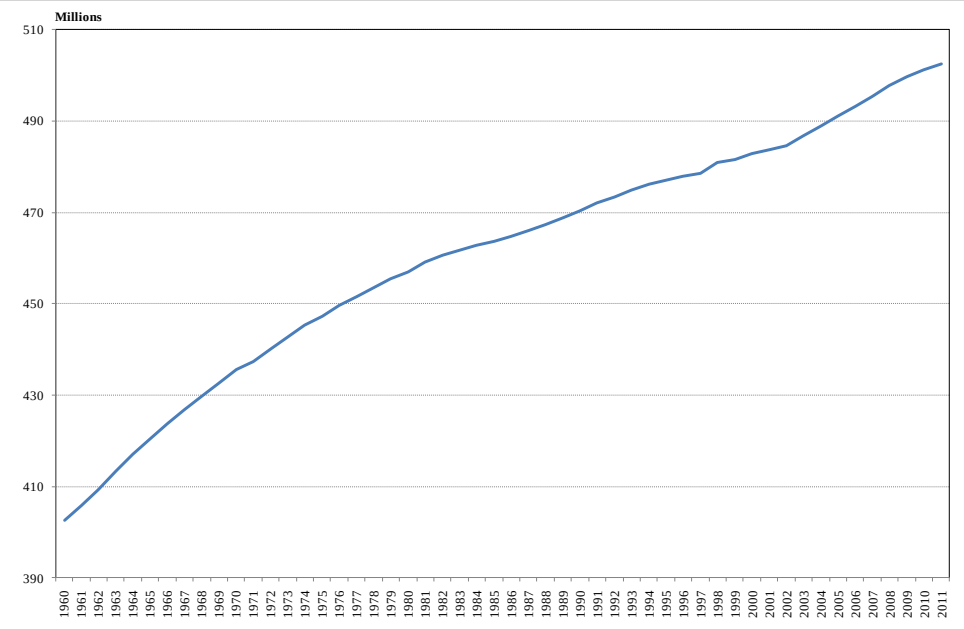
[2] Demography Report, European Commission, 2010

strongly on the contribution made by net migration, since the natural change (more live births than deaths) is low and it is expected that the natural change will be negative in the future.

1 Vital events and migration in EU Member States

The EU-27 population has been growing gradually from 402,6 million in 1960 to reach 502,5 million on 1st January 2011 (see Figure 1). In particular, in the post-World War II period, fertility increased and subsequently declined in several countries: this demographic event, labelled as the "baby boom", has been a factor in the population ageing process of the 21st century[3]. In the last two years the population grew at a slower pace than prior to 2008.

Fig.1: Population on 1st January in EU-27



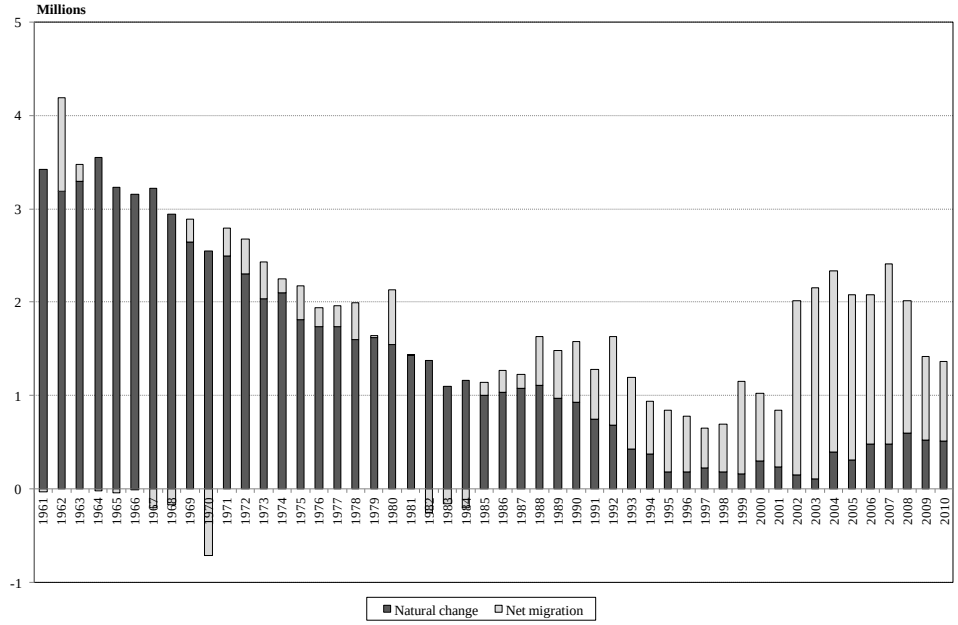
Source: Eurostat

The population change in the EU countries (EU-27) in 2010 was positive, due to a positive natural change and also due to a positive net migration (including statistical adjustment). The total population grew by 1,4 million (+0,3 %) compared with 1 January 2010. Due to natural change the total population increased by 0,5 million, the contribution of the net migration of 0,9 million was the main determinant of the population growth in 2010. The historical contributions made by natural change and net migration (including statistical adjustment) to population change are shown in Figure 2.

[3] Lanzieri, G.: The greying of the baby boomers, Statistics in focus 23/2011, Eurostat, 2011

The contribution of natural change to population growth has been less significant than that made by net migration since 1992 and fell to a historical low in 2003[4]. The contribution of natural change to population growth in 2003 was only about 5 %, next years the contribution was between 15-30 %, reaching 38 % in 2010. The positive net migration (including statistical adjustment) is a very important factor of the population growth in EU-27 and it can be that it will be the only population growth factor in the future.

Fig.2: Contribution of natural change and net migration to population growth



Source: Eurostat

As a result of a low fertility for all the countries in the past and due to a kind of stability in the annual number of deaths the gap between live births and deaths in the EU has been narrowing, see Figure 3. There were 5,4 million live births and 4,8 million deaths in 2010. The highest annual total for the EU-27 was recorded in 1964, with 7,7 million live births.

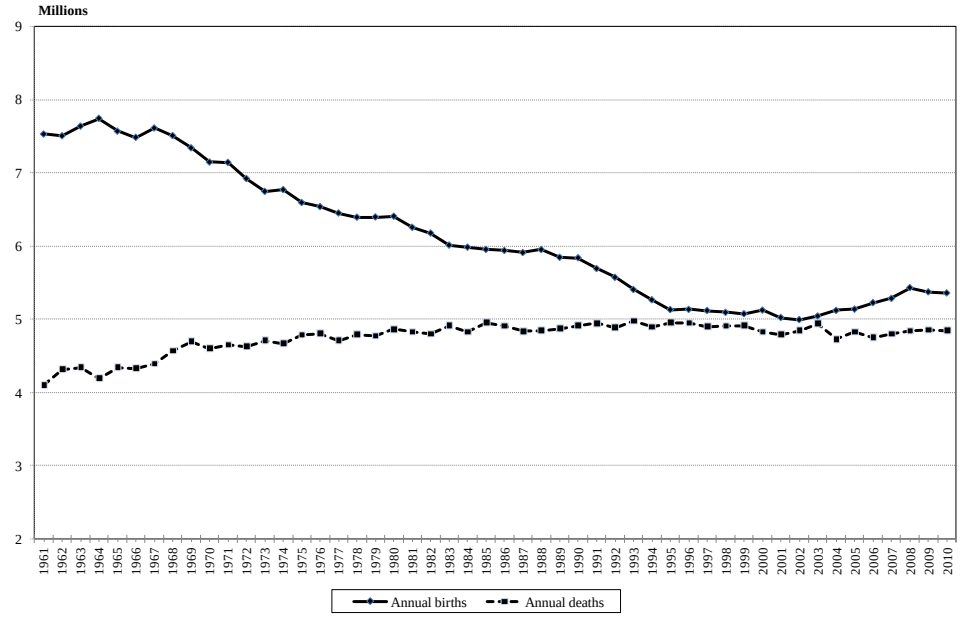
The number of live births decreased by 14,6 thousands (-0,3 %) in 2010 for the second year in row, after an upward trend from 2003 to 2008. The number of annual deaths decreased in 2010 by 8,2 thousands (-0,2 %), after increasing trend from 2007 to 2009. Natural population change in absolute figures reached 514,4 thousands in 2010, what was a slight decline compared with 2009 in absolute terms.

The population of the EU-27 as a whole increased during 2010, but the population growth was not evenly distributed across the Member States. The number of inhabitants fell in

[4] Marcu, M.: Population grows in twenty EU Member States, Statistics in focus 38/2011, Eurostat, 2011

Germany, Latvia, Lithuania, Hungary, Portugal, Romania and Bulgaria. The other 20 Member States reported an increase in their populations. The highest rates of natural change were reached in Ireland, while the highest net migration rate was seen in Luxembourg.

Fig.3: Vital events in EU-27



Source: Eurostat

2 Fertility

The main indicator of fertility, that allows comparing fertility level across countries, is the Total Fertility Rate (TFR). TFR is the mean number of children that would be born alive to a woman during her lifetime if she were to pass through her childbearing years conforming to the fertility rates by age of a given year. This rate is therefore the completed fertility of a hypothetical generation, computed by adding the fertility rates by age for women in a given year. The total fertility rate is also used to indicate the replacement level fertility; in more highly developed countries, a rate of 2,1 is considered to be the replacement level fertility rate[5]. This indicator shows the potential for population change in a specific country. A rate higher than the replacement level indicates populations growing in size, while median age is declining.

Fertility in Member States is increasing, albeit slightly. Most of the increase is in countries that have experienced extremely low fertility in the recent past, that is, fertility below 1,3

[5] Metadata: http://epp.eurostat.ec.europa.eu/cache/ITY_SDDS/en/demo_fer_esms.htm

children per woman[6]. Lowest-low fertility – below 1.3 children per woman – has ended in all Member State and the most recent figure for EU-27 was 1.6 (see Table 1). We can to expect an increase in TFR as EU Member States become wealthier.

Tab. 1: Total Fertility Rate (TFR)

GEO/TIME	1960	1970	1980	1990	2000	2002	2003	2004	2005	2006	2007	2008	2009
EU - 27	**:**	**:**	**:**	**:**	**:**	**1,45**	**1,47**	**1,50**	**1,51**	**1,54**	**1,56**	**1,60**	**1,60**
Belgium	2,54	2,25	1,68	1,62	1,67	:	1,66	1,72	1,76	1,80	1,82	1,86	1,84
Bulgaria	2,31	2,17	2,05	1,82	*1,26*	*1,21*	*1,23*	*1,29*	1,32	1,38	1,42	1,48	1,57
Czech Republic	2,09	1,92	2,08	1,90	*1,14*	*1,17*	*1,18*	*1,23*	*1,28*	1,33	1,44	1,50	1,49
Denmark	2,57	1,95	1,55	1,67	1,77	1,72	1,76	1,78	1,80	1,85	1,84	1,89	1,84
Germany	:	:	:	:	1,38	1,34	1,34	1,36	1,34	1,33	1,37	1,38	1,36
Estonia	:	:	:	2,05	1,38	1,37	1,37	1,47	1,50	1,55	1,63	1,65	1,62
Ireland	3,78	3,85	3,21	2,11	1,89	1,97	1,96	1,93	1,86	1,92	2,01	2,07	2,07
Greece	2,23	2,40	2,23	1,40	*1,26*	*1,27*	*1,28*	*1,30*	1,33	1,40	1,41	1,51	1,52
Spain	:	:	2,20	1,36	*1,23*	*1,26*	1,31	1,33	1,35	1,38	1,40	1,46	1,40
France	2,73	2,47	1,95	1,78	1,87	1,86	1,87	1,90	1,92	1,98	1,96	1,99	1,99
Italy	2,37	2,38	1,64	1,33	*1,26*	*1,27*	*1,29*	1,33	1,32	1,35	1,37	1,42	1,42
Cyprus	:	:	:	2,41	1,64	1,49	1,50	1,49	1,42	1,45	1,39	1,46	1,51
Latvia	:	:	:	:	*1,24*	*1,23*	*1,29*	*1,24*	1,31	1,35	1,41	1,44	1,31
Lithuania	:	2,40	1,99	2,03	1,39	*1,24*	*1,26*	*1,26*	*1,27*	1,31	1,35	1,47	1,55
Luxembourg	2,29	1,97	1,50	1,60	1,76	1,63	1,62	1,66	1,63	1,65	1,61	1,61	1,59
Hungary	2,02	1,98	1,91	1,87	1,32	1,30	*1,27*	*1,28*	1,31	1,34	1,32	1,35	1,32
Malta	:	:	1,99	2,04	1,70	1,45	1,48	1,40	1,38	1,39	1,37	1,44	1,44
Netherlands	3,12	2,57	1,60	1,62	1,72	1,73	1,75	1,72	1,71	1,72	1,72	1,77	1,79
Austria	2,69	2,29	1,65	1,46	1,36	1,39	1,38	1,42	1,41	1,41	1,38	1,41	1,39
Poland	:	:	:	2,06	1,35	*1,25*	*1,22*	*1,23*	*1,24*	*1,27*	1,31	1,39	1,40
Portugal	3,16	3,01	2,25	1,56	1,55	*1,47*	1,44	1,40	1,40	1,36	1,33	1,37	1,32
Romania	:	:	2,43	1,83	1,31	*1,25*	*1,27*	*1,29*	1,32	1,32	1,30	1,35	1,38
Slovenia	:	:	:	1,46	*1,26*	*1,21*	*1,20*	*1,25*	*1,26*	1,31	1,38	1,53	1,53
Slovakia	3,04	2,41	2,32	2,09	1,30	*1,19*	*1,20*	*1,24*	*1,25*	*1,24*	*1,25*	1,32	1,41
Finland	2,72	1,83	1,63	1,78	1,73	1,72	1,76	1,80	1,80	1,84	1,83	1,85	1,86
Sweden	:	1,92	1,68	2,13	1,54	1,65	1,71	1,75	1,77	1,85	1,88	1,91	1,94
United Kingdom	:	:	1,90	1,83	1,64	1,64	1,71	1,77	1,78	1,84	1,90	1,96	1,94

Source: Eurostat

The total fertility rate declined steeply between 1960 and 2003 in almost every Member State, falling below replacement level. TFR had fallen below its lowest-low in Bulgaria (2000-2004), Czech Republic (2000-2005), Greece (2000-2004), Spain (2000-2002), Italy (2000-2003), Latvia (2000-2004), Lithuania 2002-2005), Hungary (2002-2004), Poland (2002-2006), Romania (2002-2004), Slovenia (2000-2005), Slovakia (2000-2007). Fertility declined below 1,3 mostly in the new Member States that joined the EU after 2004, so "the wind of change" brought to this countries a negative demographic behaviour. This negative development in TFR will cause in future an increase of median age of the population and the proportion of persons aged 65 and over and the proportion of persons aged 80 and over (the "oldest-old").

After reaching the minimum of fertility, TFR had risen in most Member States and from 2008 all EU countries were achieving fertility rates above 1,3.

Over the past 50 years, total fertility rates in the EU-27 countries have been converging. In 1980 the difference between the highest (Ireland) and the lowest (Hungary) rates was about

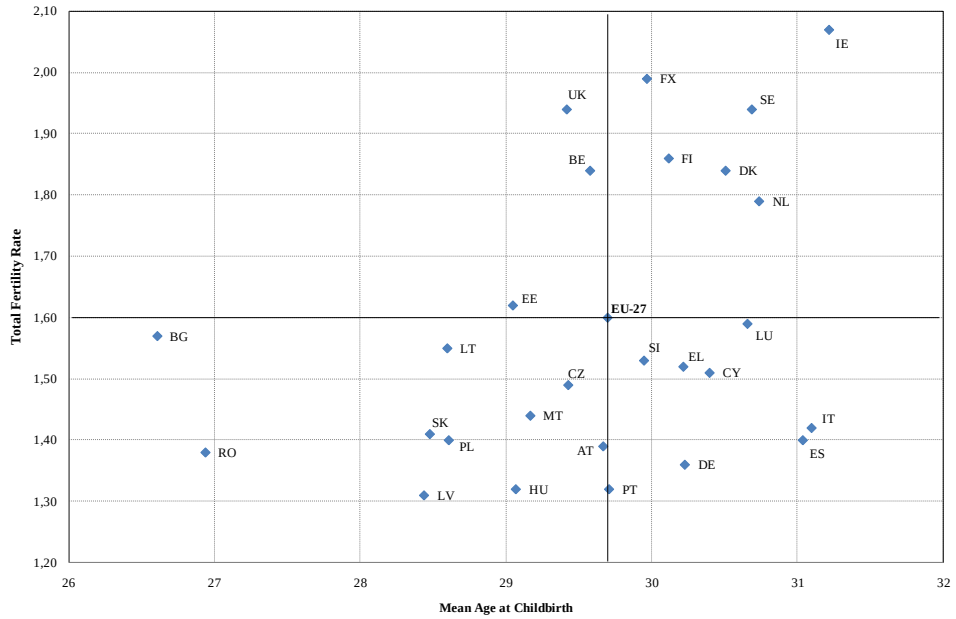
[6] Demography Report, European Commission, 2010

1,8. In 2009 the difference had fallen to 0,8, with Ireland and Latvia representing the two extreme values of fertility.

It is too early to draw any firm conclusions about the effect of the crisis on fertility and life expectancy. Recent experience with past recessions indicates that both fertility and mortality may initially decrease slightly, only to return to their pre-recession levels shortly after the crisis has ended[7].

The mean age of women at childbirth has been increasing over the past 50 years. The highest ages at childbirth in 2009 were in Ireland and Italy (see Figure 4). The lowest ages were in Bulgaria and Romania. In 2009, mostly in the former EU-15 Member States the women tended to have their children when they were 30 or over: Ireland, France, Sweden, Denmark, Finland, the Netherlands, Luxembourg, Greece, Italy, Spain, Germany, and Cyprus.

Fig.4: TFR and mean age of women at childbirth, 2009



Source: Eurostat

Figure 4 shows that many countries with the highest total fertility rate also display a high mean age for women at childbirth. According to this figure we cannot express the opinion that in the countries with a lower age of women at childbirth the total fertility rate will be higher.

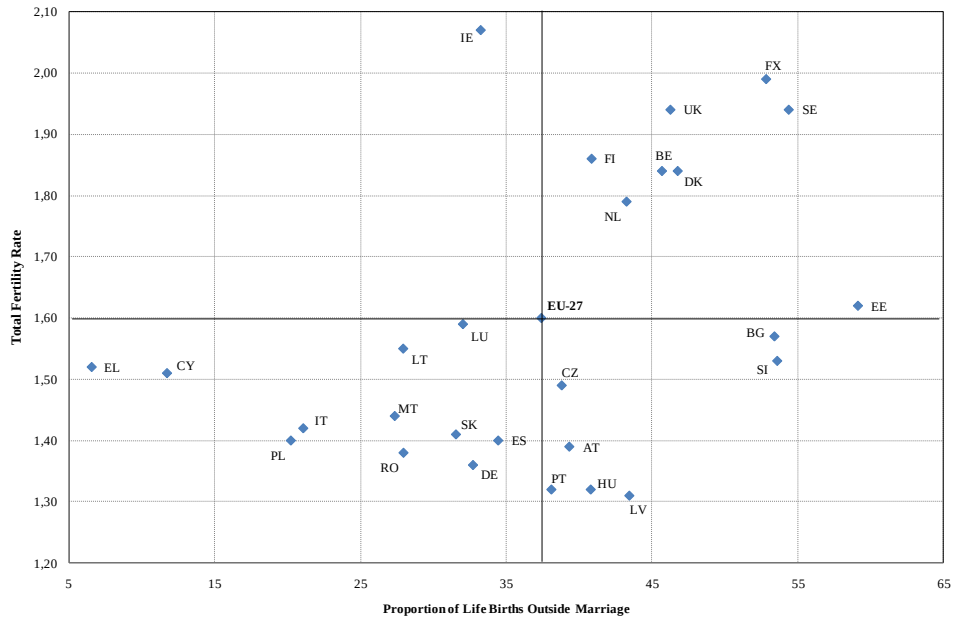
Four groups of countries can be identified based on the point representing the EU-27 average for TFR and mean age of women at childbirth. The first group of six countries – France, Finland, Sweden, Denmark, the Netherlands, Ireland - shows both the TFR and the mean age

[7] Demography Report, European Commission, 2010

at childbirth above the EU-27 average. In the opposite quadrant lie most of the countries that joined the EU after 2004 and Austria and Portugal. Typical for these countries were both the TFR and the mean age of women at childbirth below the EU-27 average. Third group of countries is composed of Belgium, the United Kingdom, Estonia, where TFR is higher than the EU-27 value, but the mean age of mothers is lower. The fourth and last group of Member States shows lower TFR as compared to the EU-27 point and mothers with a higher age at childbirth.

The proportion of live births outside marriage in Member States increases. While the proportion for EU-27 was about 17,4 % in 1990, the proportion level increased to 37,4 % in 2009. Extra-marital births have been increasing in almost every country in EU-27, in some countries, mostly in northern Europe, the proportion of live births outside marriage in 2009 was higher than 50 %.

Fig.5: TFR and proportion of live births outside marriage (in % of total live births), 2009



Source: Eurostat

Graph 5 shows that countries with the highest proportion of live births outside marriage also display a high total fertility rate. Based on the point representing the EU-27 averages, four groups of the Member States can be identified. Group of countries where both the TFR and the proportion of live births outside marriage are above the EU-27 average is composed of Sweden, Finland, Denmark, the Netherland, the United Kingdom, France, Estonia.

The quadrant representing a high level of fertility and lower proportion of life births outside marriage than the EU-27 average is typical only for one country – Ireland.

The Mediterranean countries like Greece, Cyprus, Italy, Malta, along with Poland, Romania, Germany, Slovakia, Lithuania, Luxembourg, Spain have reached the proportion of life births outside marriage below 35%, with its lowest value 6,5 % in Greece. In these Member States also the fertility was below the EU-27 average. The fourth, last group is composed of the countries that joined the EU after 2004 plus Austria. In these EU countries the proportion of live births outside marriage is higher than the EU-27 value, but the TFR is lower.

Overall, fertility is higher in those countries that made an earlier transition to more gender equality and female participation in employment, allowing for flexible, less traditional family-forming and child-bearing patterns[8].

Conclusion

The population change in the EU countries (EU-27) in 2010 was positive, due to a positive natural change and also due to a positive net migration (including statistical adjustment), the contribution of the net migration was the main determinant of the population growth in 2010.

The population growth was not evenly distributed across the Member States, the number of inhabitants fell in Germany, Latvia, Lithuania, Hungary, Portugal, Romania and Bulgaria. The other 20 Member States reported an increase in their populations. The highest rates of natural change were reached in Ireland, while the highest net migration rate was seen in Luxembourg.

The total fertility rate declined steeply between 1960 and 2003 in almost every Member State. After reaching the minimum of fertility, TFR had risen in most Member States and from 2008 all EU countries were achieving fertility rates above the lowest-low rate of 1,3. It is too early to draw any firm conclusions about the effect of the crisis on fertility.

Acknowledgment

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References

"Demography Report, European Commission, 2010." *Eurostat*. 30 June 2011 <http://epp.eurostat.ec.europa.eu/page/portal/population/documents/Tab/report.pdf>.

Lanzieri, Giampaolo. "The greying of the baby boomers." *Eurostat.* 30 June 2011

[8] Demography Report, European Commission, 2010

<http://epp.eurostat.ec.europa.eu/cache/ity_offpub/ks-sf-11-023/en/ks-sf-11-023-en.pdf>.

Marcu, Monica. "Population grows in twenty EU Member States." *Eurostat*. 30 June 2011 <http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-11-038/EN/KS-SF-11-038-en.pdf>.

"The demographic future of Europe – from challenge to opportunity." *Europa.* 30 June 2011 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=com:2006:0571:en:pdf>.

Contact

Silvia Megyesiová
University of Economics in Bratislava
The Faculty of Business Economics with seat in Košice
Tajovského 13, 041 30 Košice
silvia.megyesiova@euke.sk

Vanda Lieskovská
University of Economics in Bratislava
The Faculty of Business Economics with seat in Košice
Tajovského 13, 041 30 Košice
lieskovska@euke.sk