Demographic potential of the countries that have applied for the European Union membership

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Abstract. The purpose of the article is to analyse the demographic potential of the countries that have applied for the European Union membership against the background of the EU member states. The study involves eight candidate states: Croatia, Iceland, Macedonia, Montenegro, and Turkey, i.e. the countries that have been approved by the European Commission as official candidates for the EU membership, as well as Albania, Bosnia and Herzegovina, Serbia, i.e. the potential candidates. Albania and Serbia applied officially for the EU membership in 2009. Favourable population age structure and relatively high fertility rate that occur in these countries determine a significant demographic potential they can bring to the EU after their accession. Decrease in infant mortality rate and extension of life expectancy illustrate positive changes that have been taking place in these countries for the last several years.

Contents:

1. Introduction

The purpose of the article is to analyse demographic potential of the countries that have applied for the European Union membership against the EU member states. The study involves eight candidate states: Croatia, Iceland, Macedonia, Montenegro, and Turkey, i.e. the countries that have been approved by the European Commission as official candidates for the EU membership, as well as Albania, Bosnia and Herzegovina, Serbia, i.e. the potential candidates. Albania and Serbia applied officially for the EU membership in 2009. Complex political and economic conditions in which the analysed group of countries

is located certainly influence their demographic potential.

According to a dictionary definition, 'potential' refers to a range of possibilities, abilities and productive capabilities inherent in something. With reference to population issues, we can analyse the potential as the whole of possibilities, capabilities and abilities inherent in the population, i.e. its condition as well as structure and intensity of population processes of a particular country or region.

2. Materials

Demographic potential of a particular country can be characterised by means of rates that describe not only the population size or structure but also natural movement and migration. However, in case of international comparisons the set of measures is limited by the availability of statistical data. The analysis of demographic potential of the countries that have applied for the European Union membership, referred here as the EU candidate states, has been performed on the grounds of the Eurostat data (the EU Statistical Office, data available at: www.epp.eurostat. ec.europa.eu) for the years 2000–2009.

3. Population size and dynamics of its changes

At the beginning of 2009 a total number of people in the EU candidate states was over 93.3 million, which constituted 18.7% of the population of the EU-27 (Table 1). Turkey, with the population of over 71.5 million, is the most populous country in this group. This locates this country on the second position after Germany among the present EU member states. Over the span of the studied years, the analysed group of states was characterised by a higher dynamics of changes of population size (increase by 5.3%) than the EU–27 (increase by 3.5%) (1). Within the EU candidate states, the most positive change in terms of population size was reported in Iceland (increase by 14.4%), however in absolute approach, the population residing in this country is the smallest among all the analysed states. Relatively high increase was also reported in Turkey (6.9%) and Albania (4.1%).

The average rate of population growth in all the EU–27 states in the years 2000–2009 was 0.43% and it is estimated that in 2009 it reached 0.41%. At the same time we can notice a high rate of population growth in the EU candidate states – 0.64% per year on average. This is the rate of change that is by half higher when compared to the EU–27 states. Within the group of potential candidates for the accession to the EU, the highest dynamics of growth was observed in Iceland (1.70%) and Turkey (0.84%). Dynamic changes in population size in these countries were influenced by the fertility rate and, in the case of Iceland, a significant immigration, particularly between the years 2004 and 2008.

On the other hand, a real population decline occurred in Croatia (decrease by 1.4%) and Serbia (decrease by 2.6%), mainly caused by natural population decline in the whole analysed period of time.

When analysed in shorter periods of time, i.e. from 2000 to 2005 and from 2005 to 2009, the population growth in the studied countries was different. This is presented by the data included in Table 2. In 2009,

Table 1. Population of the EU–27 and EU candidate states in 2000 and 2009 (the state as of 1st January)

Countries	A		B	C	D
	2000	2009			
EU–27	482,767.5	499,705.5	16,938.0	3.5	0.43
Croatia	4,497.7	4,435.1	−62.7	−1.4	−0.18
Macedonia	2,021.6	2,048.6	27.0	1.3	0.17
Turkey	66,889.4	71,517.1	4,627.7	6.9	0.84
Iceland	279.0	319.4	40.3	14.4	1.70
Albania	3,058.5	3,184.7	126.2	4.1	0.51
Bosnia and Herzegovina	3,753.1	3,844.0	90.9	2.4	0.30
Montenegro	612.5	630.1	17.6	2.9	0.36
Serbia	7,528.0	7,334.9	−193.0	−2.6	−0.32
EU candidate states in total	88,639.8	93,313.9	4,674.1	5.3	0.64

Explanation: A – population in thousand; B – increase (+), decrease (–) in thousand; C – dynamics of changes 2009/2010 in%; D – average annual rate of changes 2000–2009 in%

Source: Own compilation based on Eurostat

Table 2. Changes in population size in the EU–27 and EU candidate states between 2000 and 2009 (the state as of 1st January)

Countries	A			B		
	a	b	c	a	b	c
EU–27	8,367.4	8,570.6	2,019.3	0.43	0.58	0.41
Croatia	−53.8	−8.8	−1.3	−0.30	−0.07	−0.03
Macedonia	13.6	13.4	3.4	0.17	0.22	0.17
Turkey	4,720.6	−92.9	930.8	1.72	−0.04	1.32
Iceland	14.5	25.8	3.9	1.28	2.85	1.24
Albania	76.5	49.7	14.7	0.62	0.53	0.46
Bosnia and Herzegovina	89.4	1.5	0.2	0.59	0.01	0.00
Montenegro	10.5	7.2	2.6	0.43	0.38	0.42
Serbia	−71.9	−121.1	−30.6	−0.24	−0.54	−0.42

Explanation: A – real population growth rate in thousand; B – average rate of change in%; a – 2000‑2005; b – 2005‑2009; c – 2009

Source: Own compilation based on Eurostat

when compared with previous periods, population growth declined most in Bosnia and Herzegovina and Iceland, where decrease in immigration was observed. This was undoubtedly influenced by the financial crisis of 2008.

Between 2000 and 2005 the population of Bosnia and Herzegovina grew every year at the rate of 0.59%, while in the next period the growth rate significantly declined down to 0.01% a year on average. Decrease in the population growth rate, observed between 2005 and 2008 as well as natural decrease in 2009 and the reduction in positive migration balance were the source of this significant decrease in population growth rate. The rate of demographic dynamics for Bosnia and Herzegovina was 1.3 in 2003, 1.0 in 2005 and 0.99 in 2009. This meant that for every 100 deaths in 2003 there were 130 live births and in 2009 there were only 99 of them. These numbers prove the scale of changes that occurred in the studied period of time

in two major processes that define demographic development of this country.

4. Changes in population reproduction

The number of births and deaths are one of the constituents of population growth. Shaping of those elements determines changes in the size and structure of population by age and sex.

Births: Between 2000 and 2009 the number of births was undergoing the strongest fluctuations not only in the group of the analysed countries but also in the majority of European countries. In 2009, when compared with 2000, the number of live births increased by as much as 16.3% in Iceland and by 2.0% in Croatia, at concurrent increase in the total number of births in the EU member states by 4.9% (Table 3). In other countries a decline was observed, however

Table 3. Changes in live births in the EU–27 and EU candidate states between 2000 and 2009

Countries	A	B	C	D	A	B	C	D
			a				b	
EU–27	5,123.1	5,136.6	5,429.8	5,372.3	10.6	10.4	10.9	10.7
Croatia	43.7	42.5	43.8	44.6	9.8	9.6	9.9	10.1
Macedonia	29.3	22.5	22.9	23.7	14.5	11.0	11.2	11.5
Turkey	1,363.0	1,361.0	1,262.3	1,241.6	20.2	18.9	17.8	17.2
Iceland	4.3	4.3	4.8	5.0	15.3	14.4	15.2	15.8
Albania	51.2	39.6	36.3	n.a.	16.7	12.6	11.4	n.a.
Bosnia and Herzegovina	39.6	34.6	34.2	34.6	10.5	9.0	8.9	9.0
Montenegro	9.2	7.4	8.3	8.6	15.0	11.8	13.1	13.7
Serbia	73.8	72.2	69.1	70.3	9.8	9.7	9.4	9.6

Explanation: A – 2000; B – 2005; C – 2008; D – 2009; a – in thousand; b – per 1,000 inhabitants; n.a. – not available

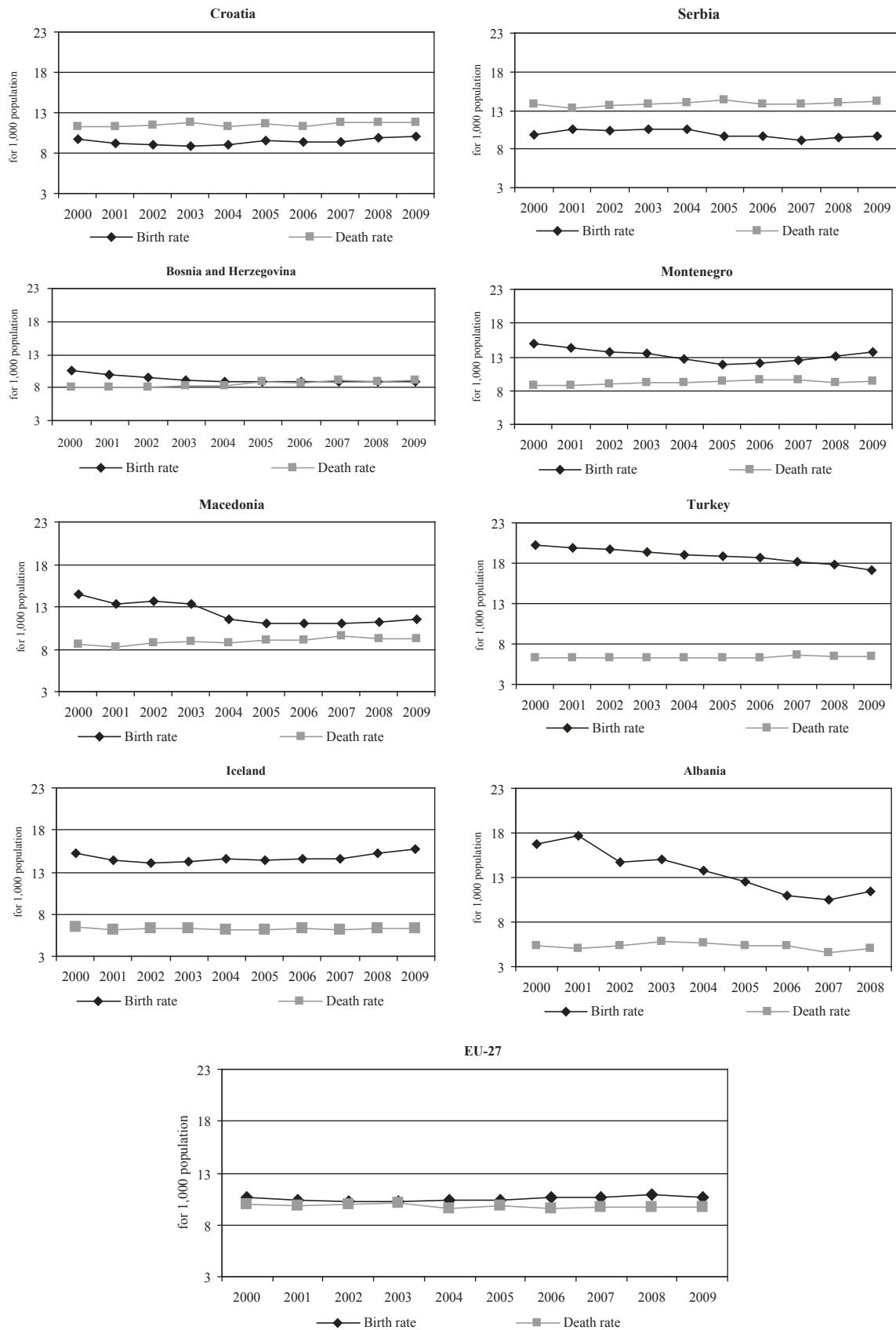*Source:* Own compilation based on Eurostat

Fig. 1. Birth and death rate in the EU-27 and EU candidate states between 2000 and 2009 (in ‰)

Source: Own compilation based on Eurostat

at various degrees: in Turkey by 8.9%, in Bosnia and Herzegovina by 12.6%, in Macedonia by 19.1% and the highest in Albania – by about 30% (in 2008 when compared to 2000).

Analysing general (relative) changes in the number of births that occurred between 2000 and 2009 we can observe significant spatial differentiation in this phenomenon (Table 3, Fig. 1). The lowest number of live births per 1,000 inhabitants was observed in 2009 in Bosnia and Herzegovina (9.0), Serbia (9.6) and Croatia (10.1). These values are lower than the EU average that amounted to 10.7‰. The highest level of the raw birth rate had been observed constantly for a few years in Turkey and Iceland. In the last year of the analysis for every 1,000 population there were 15.8 live births in Iceland and 17.2 in Turkey.

At the same time it ought to be indicated that between 2000 and 2007 the intensity of births in Albania was regularly declining from 16.7‰ down to 10.5‰; however, in 2008 a slight increase in birth rate (11.4‰) was reported. A similar declining tendency was observed in the case of Turkey. A well-matched linear function of tendency (R² = 0.9755) shows that every year the birth rate in this country was declining on average by 0.315‰.

In the last five years a clear growing tendency of birth rate can be observed in such countries as Iceland, Montenegro and Croatia.

The number of births in a particular population in a specified time is dependent, on the one hand, on the number and age structure of women in the period of female reproductive capability and, on the other hand, on procreative behaviour, that is, on inclination to have children. This inclination to have children is characterised by the fertility rate (child/woman ratio, i.e. the number of children per a woman at the age from 15 to 49). The level of fertility rate guarantees generations substitutability only in Iceland and Turkey (Fig. 2). Despite growing intensity of births, e.g. in Croatia and Montenegro, in other countries the fertility rate fluctuates, on average, from 1.19 in Bosnia and Herzegovina, to 1.4 in Albania and Serbia to 1.77 in Montenegro. In all countries of the Western Balkans, except for Montenegro, the fertility rate is lower than the EU average, which in 2008 was 1.6 children per woman.

In both the EU member states and candidate states a gradual increase in the average age of mothers at the moment of giving birth to children is observed, which shows changes in fertility pattern by age in these countries. In 2008, the average age of women giving birth to children in Iceland reached the average level of the EU–27, i.e. 29.7 years. In other countries it was lower and varied between 27.2 years in Turkey to 29.1 years in Croatia. For the purpose of comparison, it has to be indicated that in Germany, Denmark or Sweden, in the same period of time the average age of women giving birth was over 30 years (cf. Sojka, 2011: 58). Deaths: Deaths are the second element of natural population growth. Although the cognitive value of raw death rate (particularly in comparative analysis) is limited, it ought to be indicated that the death rate in the EU candidate states during the whole analysed period was undergoing definitely smaller
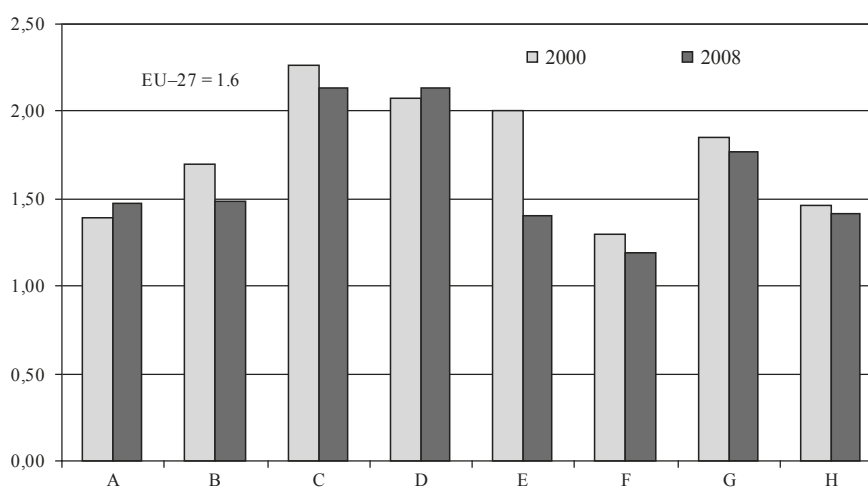

Fig. 2. Fertility rate in the EU-27 and EU candidate states in 2000 and 2008 (children per woman in ‰)

Explanation: A – Croatia; B – Macedonia; C – Turkey; D – Iceland; E – Albania; F – Bosnia and Herzegovina; G – Montenegro; H – Serbia

Source: Own compilation based on Eurostat

changes that the birth rate (Fig. 1). In all the analysed countries, except for Iceland and the EU–27, the rate of deaths per 1,000 inhabitants increased. In the case of Iceland, the death rate decreased from 6.5‰ down to 6.3‰ and in the case of the EU–27 states from 10‰ down to 9.7‰.

However, if we want to formulate opinions on the level of death rate we have to reach for more detailed numerical descriptions such as infant mortality rate and life expectancy (2). The infant mortality rate provides information on the level of socio-economic development of a state and the quality of health care offered to mothers and babies. In social sciences this measure is perceived as a general index of civilisation development.

The analysed countries often showed quite a significant differentiation with respect to the infant mortality rate (Fig. 3). The lowest number of infant deaths per 1,000 live births was recorded in Iceland (1.8 in 2009), while the highest in Turkey (15.3 in 2009) and Macedonia (11.7 in 2009). The difference in infant mortality was from 10 to 13 deaths per 1,000 live births. In all the EU candidate states, except for Iceland, the infant mortality rate was higher than the average level for the EU–27. However, in the last decade we could observe a significant decrease in infant mortality in Turkey – as much as by 47% in 2009 when compared with 2000, which is a very positive phenomenon.

Average life expectancy at birth is another synthetic measure that gives information on socio-economic development of a particular country but at the same time it reflects changes that have occurred in the level of mortality in the studied period (Fig. 4). Generally, in Europe there are significant differences in life expectancy. In more economically developed countries that are mainly located in the western part of Europe and in Scandinavia people live few years longer than in the countries of Central Europe. When compared with the countries of Eastern Europe this difference is as high as even several years. As Fig. 4 indicates, apart from Iceland in which life expectancy is one of the highest in the world (79.6 years for men, 83 years for women in 2008), in the other analysed countries the parameter e_0 was on a lower level than in the EU–27, where men on average live as long as 76.1 years and women 82.2 years (3).

This is an unfavourable phenomenon that proves significant population death rate. Inhabitants of Turkey live for the shortest period of time: men for 71.4 years and women for 75.8 years. However, it was in this country where recently the highest rise in the average life expectancy regardless of the gender was reported (by 2.8 years for women and 3.2 years for men). In 2008 the difference between the highest and the lowest rate among the studied countries (excluding Iceland) was 3.2 years for women and 1.8 years for men, i.e. by half lower.

Traditionally, life expectancy of women is higher than of men (the so-called excess mortality of men). In 2008 the smallest difference between corresponding parameters for both genders was reported in Iceland (3.4 years), while the highest was reported in Croatia (7.2 years). In other countries the difference varied between 4.1 and 5.3 years.
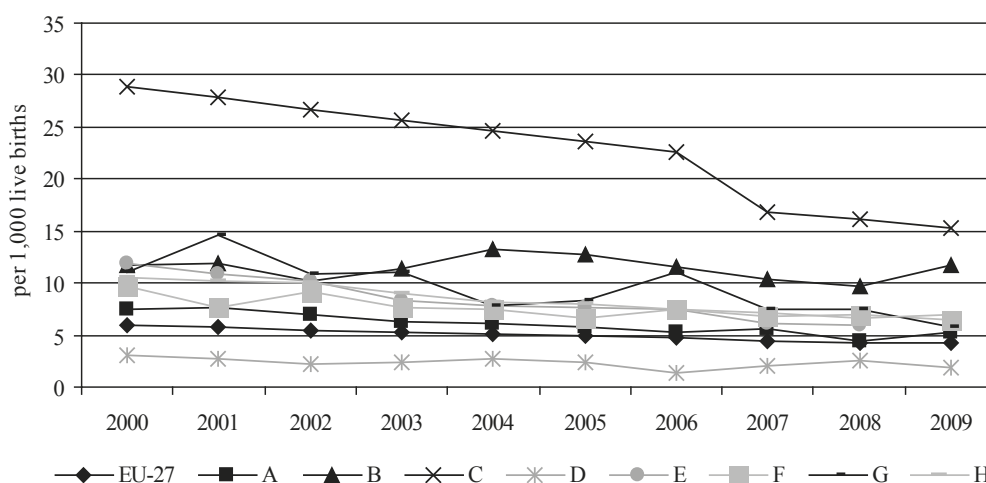

Fig. 3. Infant mortality rate in the EU–27 and EU candidate states between 2000 and 2009 (per 1,000 live births)

Explanation: A – Croatia; B – Macedonia; C – Turkey; D – Iceland; E – Albania; F – Bosnia and Herzegovina; G – Montenegro; H – Serbia

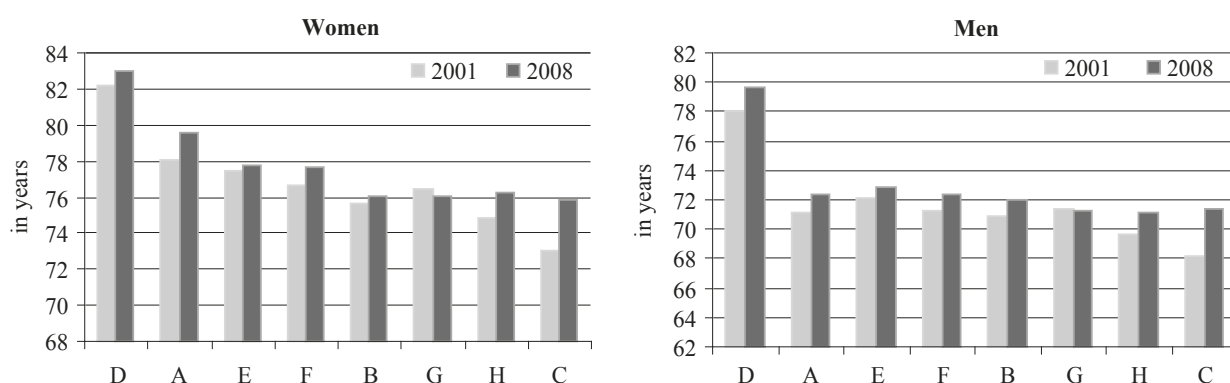*Source:* Own compilation based on Eurostat

Fig. 4. Life expectancy by sex in the EU candidate states in 2001 and 2008

Explanation: A – Croatia; B – Macedonia; C – Turkey; D – Iceland; E – Albania; F – Bosnia and Herzegovina; G – Montenegro; H – Serbia

Source: Own compilation based on Eurostat

Population growth and its components: Observing the phenomenon of population change it is possible to record natural decline in population size in Croatia and Serbia in the whole analysed period of time, while in other countries population growth was observed (Fig. 1). Bosnia and Herzegovina was an exception, as in this country only in the last three years the number of deaths was slightly higher than the number of births. In 2009 the highest population growth per 1,000 inhabitants was reported in the countries of the highest fertility rate, that is in Turkey (10.8‰) and Iceland (9.5‰). It was also recorded in Albania (6.3‰ in 2008) despite a drastic decline in the birth rate in this country in the whole studied period. In all the countries with positive population growth the rate

per 1,000 inhabitants was significantly higher than that observed for the EU–27 (1‰ in 2009).

Changes in population size in a particular area are not only influenced by the population growth (or decline) but also by migration. The EU candidate states have to cope with various problems that result from the existing economic and political conditions. In recent years we can observe the decrease in intensity of out-migration from these countries when compared with the beginning of the decade (Table 4).

The process of population influx into the EU but also to Iceland impeded between 2008 and 2009. It was triggered by the world financial and economic crisis that influenced, however to various degrees, practically all the EU states and not only them. In the

Table 4. Net migration rate in the EU–27 and candidate states (including administrative changes) between 2000 and 2009 (‰)

Countries	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
EU–27	1.50	1.25	3.83	4.20	3.97	3.58	3.25	3.88	2.86	1.75
Croatia	−11.72	3.22	1.94	2.68	2.61	1.86	1.64	1.27	1.59	−0.33
Macedonia	−1.24	−1.25	−12.21	−1.37	−0.06	−0.37	−0.26	0.07	−0.25	−0.25
Turkey	0.86	0.04	−0.02	−0.04	0.01	−0.01	−0.04	1.35	1.72	3.66
Iceland	6.49	2.98	−1.15	−0.75	2.04	13.05	17.34	16.59	3.34	−14.95
Albania	−9.80	−5.74	−3.44	−3.95	−3.15	−2.65	−4.38	−0.39	−1.72	n.a.
Bosnia and Herzegovina	7.31	4.22	3.02	0.94	0.72	−0.03	0.14	0.27	0.00	0.10
Montenegro	−2.41	−1.81	−1.25	−1.10	−0.68	−1.47	−0.39	1.21	0.13	0.00
Serbia	0.94	2.39	1.80	0.57	1.60	0.54	0.55	0.35	0.42	0.74

Explanation: n.a. – not available

Source: Own compilation based on Eurostat

region of the Western Balkans migration is important, however net migration rate is gradually decreasing. In Macedonia and Albania we can observe a negative balance of net migration in most studied years. In the case of Albania the total net migration rate decreased from – 9.8‰ in 2000 to –1.7‰ in 2008 (4).

Greece, France and Italy are destination countries for Albanian emigration. The share of immigrants from Albania in the total number of foreigners in these states was significant and in 2008 amounted to 38% in Greece, 27% in France and 27% in Italy (cf. Vasileva, 2009).

On the other hand, in Iceland migration-related population growth dropped four times between 2007 and 2008 and in the following year a significant decrease in the number of migrants was recorded. As official statistics indicates, almost twice as many people emigrated from Iceland in 2009 than settled down on the island. As a result, out-migration from that country reached exceptionally high level which directly influenced a significant decrease in net migration (–15.0‰). It was the highest emigration level since running the statistics was started in 1998. Poles, followed by Lithuanians, Germans and Danes, were the most numerous group of foreigners. Banking crisis in Iceland was one of the most spectacular ones. In 2007 the country still belonged to the group of five world richest countries with respect to national income per capita. A year later, Iceland was forced to ask International Monetary Fund for help.

In recent years Turkey reported a positive migration balance. It ought to be mentioned that Turkish people mainly settled down in Germany. At present 2.7 million people of Turkish descent live in Germany and in 2008 their share in the total number of foreigners in this country was over 75%. More and more children of Turkish emigrants – educated people who speak foreign languages – are tempted to come back to their parents' homeland they mostly know only from holidays. An inviting job offer or better prospects for the future are major reasons here. In Germany special agencies that are interested in this group of re-emigrants have even been established. Also those who get a solid German pension can afford to move to Turkey. It is estimated that since 1980 almost half a million of emigrants from Turkey have returned to their homeland. In recent years Turkish economy has been developing very dynamically and at present more and more Bulgarians, Romanians and also Greeks find employment in Turkey.

While in the EU–27 the size of migration was the factor that significantly contributed to the real population growth (particularly after 2004), in the demographic development of the EU candidate states the natural population growth (or decline) was a decisive factor (Table 5).

In Macedonia, Turkey and Montenegro, it was the population growth that determined the population size and not the emigration balance that was either negative or close to zero. In Iceland, between 2005 and 2007 the size of net migration growth was the factor that mainly influenced the increase of the population size and in the period between 2008 and 2009 the natural population growth was a decisive factor (in 2009 a negative balance of net migration was recorded). Still in 2000 Croatia reported a significant real decline in population (–13.2‰) that resulted from the negative net migration, while in 2009 population decline per 1,000 inhabitants was much smaller due to curbing out-migration. In Serbia, the real decrease of the population size was mainly associated with the natural decline in population.

5. Poplation structure by age and gender

Demographic events that are elements of natural movement, similarly to migration, determine changes in population size and shape its structure by age and sex. On the other hand, the existing demographic structure significantly determines the situation in the sphere of natural movement of population. It also influences aspects of socio-economic life different from demographic ones.

Population residing in the EU candidate states is really diversified with respect to age but, at the same time, the age structure in the majority of those countries is relatively favourable. The average age (median) of inhabitants of the EU–27 was 41 years in 2009, which means that the age of half of them was up to 41 years and the other half was already older than that. In all the candidate states, except for Croatia, the median age was lower than in the EU–27 countries: the lowest in Turkey (28 years), followed by Albania (30 years) and Iceland (35 years). Definitely the oldest age structure is observed in Croatia – the median age is equal to the average level observed in the EU–27. In other Balkan republics respective values of the median age were 36 years in Montenegro and Macedonia, and 37 years in Serbia.

The major and most complete characteristics of population structure by age are structure measures that show the share of population of particular age groups (cohorts) in the total number of population (Fig. 5, 6).
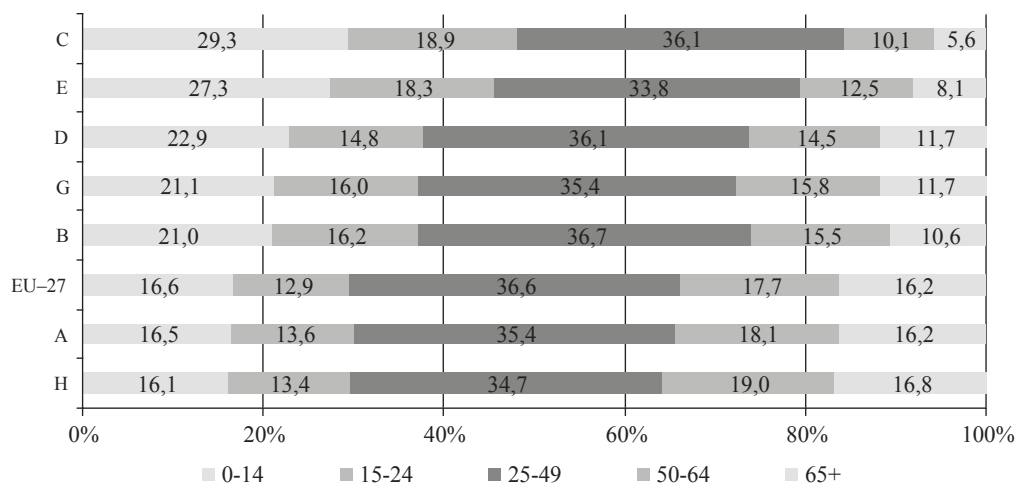
Fig. 5. Population structure in the EU-27 and EU candidate states by age cohorts in 2003 (the state as of 1ˢᵗ January, no data for Bosnia and Herzegovina available)

Explanation: A – Croatia; B – Macedonia; C – Turkey; D – Iceland; E – Albania; F – Bosnia and Herzegovina; G – Montenegro; H – Serbia

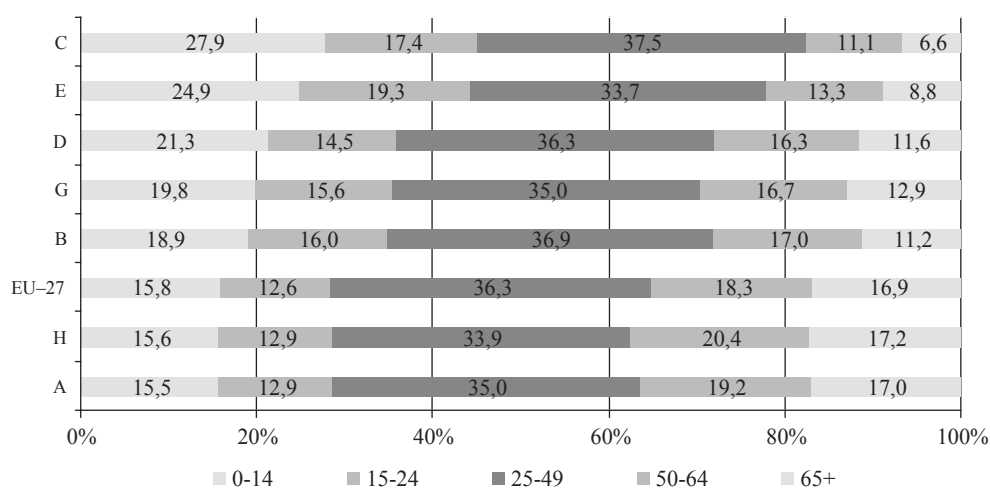*Source:* Own compilation based on Eurostat

Fig. 6. Population structure in the EU-27 and EU candidate states by age cohorts in 2007 (the state as of 1ˢᵗ January, no data for Bosnia and Herzegovina available)

Explanation: A – Croatia; B – Macedonia; C – Turkey; D – Iceland; E – Albania; F – Bosnia and Herzegovina; G – Montenegro; H – Serbia

Source: Own compilation based on Eurostat

The largest share of the 0-14 age cohort obviously occurred in the countries of the highest fertility rate, that is in Turkey (27.9%), Albania (24.9%) and Iceland (21.3%). Only in Serbia and Croatia the share of children in total population was lower than that in the EU–27 states.

Between 2003 and 2007 in all the countries a decline in the share of population in child and youth age cohorts (that is up to 25 years) was reported. On the other hand, the share of the 25-49 age cohort increased in Turkey from 36.1% to 37.5%, in Iceland from 36.1% to 36.3% and in Macedonia from 36.7% to 36.9%, i.e. in the countries that are official EU candidate states. This is a positive phenomenon because these are the most valuable labour resources – educated, with work experience and ready to develop their qualifications.

Table 5. Population growth and its components per 1,000 inhabitants in the EU–27 and EU candidate states in 2000, 2005 and 2009

Countries	A			B			C		
	a	d		a	d		a	d	
		b	c		b	c		b	c
EU–27	2.1	0.6	1.5	4.2	0.6	3.6	2.8	1.0	1.8
Croatia	−13.2	−1.5	−11.7	−0.2	−2.1	1.9	−2.1	−1.8	−0.3
Macedonia	4.7	5.9	−1.2	1.6	2.0	−0.4	2.0	2.3	−0.3
Turkey	15.0	14.1	0.9	12.6	12.6	0	14.5	10.8	3.7
Iceland	15.3	8.8	6.5	21.2	8.2	13	−5.5	9.5	−15
Albania	1.6	11.4	−9.8	4.5	7.2	−2.6	4.6	6.3	−1.7
Bosnia and Herzegovina	9.7	2.4	7.3	0.1	0.1	0.0	0.0	−0.1	0.1
Montenegro	3.7	6.1	−2.4	0.9	2.4	−1.5	4.4	4.4	0.0
Serbia	−3.1	−4.0	0.9	−4.1	−4.6	0.5	−3.9	−4.6	0.7

Explanation: A – population growth in 2000; B – population growth in 2005; C – population growth in 2009; a – real growth; b – natural growth; c – migration; d – therein

Source: Own compilation based on Eurostat

In other countries, a decline in the shares of the 25–49 age cohort was reported (cf. Fig. 5, 6).

In 2007, 18.3% (almost 91 million) of the EU–27 population were those of the 50–64 age cohort. In Serbia and Croatia these rates exceeded the level of the EU–27, while in Albania, Iceland, Montenegro, and Macedonia the respective shares ranged from 13.3% to 17.0%. Only Turkey presents a low share of people at the 50–64 age cohort in the total population of the country. Demographic projections say that in 2035 the size of the 50–64 age cohort in the EU–27 will amount to almost 103 million people, which will constitute about 20% of the total EU population.

In the same period of time, the share of 65+ age cohort may reach the level of 25% of the whole population. In total, in 2035 the generation of people of 50+ age cohort will include 235 million people. This will represent 45% of all inhabitants of the EU–27, i.e. 10% more than in 2007 (cf. Balcerowicz-Szkutnik, Sojka, 2010: 213–230).

Assessing population ageing in the EU candidate states in 2007, on the grounds of the share of the 65+ age cohort, we can state that according to the UN scale all populations that were considered, except for Turkey, ought to be classified as the old ones. In all those countries the share of the 65+ age cohort
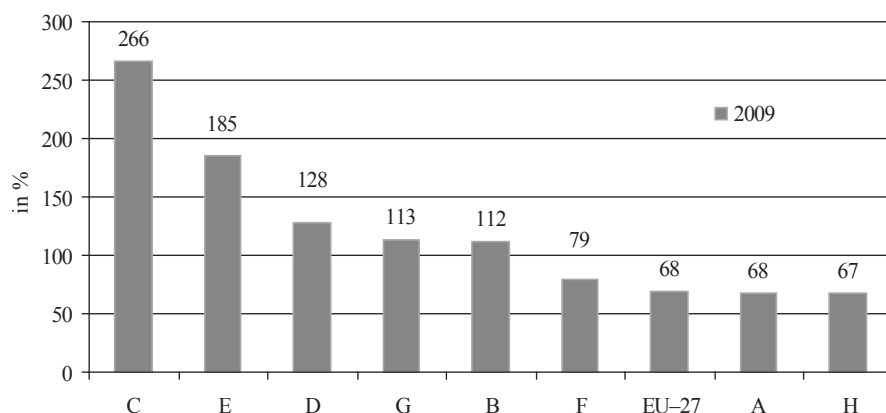

Fig. 7. Demographic juvenility index in the EU-27 and EU candidate states in 2009 (the state as of 1st January, in%)

Explanation: A – Croatia; B – Macedonia; C – Turkey; D – Iceland; E – Albania; F – Bosnia and Herzegovina; G – Montenegro; H – Serbia

Source: Own compilation based on Eurostat

exceeded 7%. What is more, in Croatia and Serbia it was over 17% and thus higher than the average rate for the EU–27. According to the criterion of the median age Turkey is an ageing population, Albania is an old population (with an advanced ageing process) and all the other countries are very old populations (median age of 35 years and more) (cf. Kurkiewicz, 2010: 131).

Another measure of population ageing is demographic juvenility index that shows the number of children up to 15 years old per 100 people of the 60+ age cohort. It can be interpreted as a number of grandchildren per 100 grandparents.

The values of demographic juvenility index (Fig. 7) confirm previous observations. In the study group the demographically youngest country is Turkey where in 2009 were 266 grandchildren per 100 grandparents. The most unfavourable relations between the population of grandchildren and grandparents occurred in Serbia (67), Croatia (68) and Bosnia and Herzegovina (79) and also in the EU–27 (68).

The EU candidate states are also characterised by a diversified population structure by sex. In Iceland, Turkey and Macedonia men are predominant. In 2009 the share of women in the total population of these countries ranged from 49.3% to 49.8%. In other countries women-to-men ratio was from 101 in Albania to 107 in Croatia at the average for the EU–27 amounting to 105.

6. Conclusions

On the basis of the performed research results it can be concluded that the demographic potential of the countries that have applied for the EU membership is important. However, over the period of recent years changes occurred in population structure by age (decrease in the percentage of people of the 0-14 age cohort in favour of the 65+ age cohort, increased median age) and in fundamental demographic processes that are manifested in decline of population growth. Yet, in general, the rates for the EU candidate states are better than those for the EU–27. Decrease in infant mortality and extension of life expectancy show positive changes in the candidate states. At the same time, their populations are relatively mobile. It can be supposed that socio-economic reforms being introduced will favour the formation of demographic potential of the candidate states. Their population
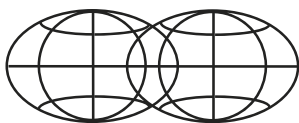
structure, i.e. still favourable and a relatively high fertility rate, determines a high demographic potential those countries can bring to the EU once they join this structure.

Notes

(1) All comparisons of changes in time were performed while observing comparable conditions, that are considering the data for the EU–27 regardless of the year individual states joined the EU.

(2) For the purpose of the presentation of spatial diversities in deaths level it is recommended to apply a standardised death rate. It allows eliminating the influence of diversity of population age structure that occurs between compared populations on the level of this indicator. However, there were no values of standardised death rates for the analysed states available and therefore the analysis was limited to infant mortality rate and e_0 parameter.

(3) For the purpose of comparison, in the same year the values of the e_0 parameter in Poland was 71.3 years for men and 80.0 years for women.

(4) In 2008 the emigrants from Albania constituted 3.3% of the total number of foreigners who were residing in the EU–27 states.

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