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## POPULATION MOVEMENT AND CHANGES IN POPULATION IN EUROPEAN COUNTRIES – PRESENT STATE AND PERSPECTIVES

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**ABSTRACT.** This paper aims at presenting the direction of changes and perspectives in populations and the movement of the population of Europe (as broadly defined) against the backdrop of the situation on other continents, as well as highlighting the internal diversity in terms of the realities of the current political divisions in Europe.

**KEY WORDS:** population, population dynamics, population movement, Europe.

In the Europe of today, after the changes in political systems and extension of the European Union on the one hand, and the ‘new’ quality of life arising from the prevailing realities of the market economy on the other, certain modalities have appeared that are stimulating demographic and social processes.

This new quality concerns broadly defined population movements which, together with the newly-shaped model of the societies on our continent, affect, *inter alia*, the changes and dynamics of populations in certain countries, especially in Central and Eastern Europe, including Poland. According to the recently published report of the World Bank (2007), it has been predicted that in this region, as well as in the countries of the former Soviet Union, the population number will decrease by 24 million by the year 2025, including a drop of 17 million in Russia (12%), 1.6 million in Poland (4%), 11.3 million (24%) in Ukraine, and 1.4 million (18%) in Bulgaria. As far as the components of natural movements are concerned, they show a certain long-term regularity and therefore are easier to forecast, although the trends in population migration, particularly in the wake of the progressive opening up of the European Union labour markets, are more difficult to forecast and their effects – to estimate. It should nevertheless be remembered that in terms of the conditions and shifts in population and its movements, Europe differs

markedly from other continents. It may be just that the processes in the European countries, being at a different level of advancement in their routes to development and in demographic and social transformation, will determine the trends of these changes on other continents in the future.

For these reasons, the objective of this paper is to analyse the conditions, tendencies of transformations and the forecasts concerning the components of population movements and the population of Europe in general, in the years 1996–2015, shown against the phenomena on other continents, as well as highlighting the internal diversity in terms of the realities of the political divisions in Europe over this period. Assuming a forecast horizon not exceeding a 20-year time range seems to be somewhat justified, because forecasts reaching further into the future contain greater errors (even though the most likely developments are selected). In some issues (chiefly in the case of comparisons between continents), the data used were for the period 1950–2025. The analysis uses the material published in the World Population Prospects, which were updated in 2006. The homogeneity of a single source with respect to all the issues discussed below, allowed a certain minimisation of errors stemming from forecast estimates. The considerations of the basic issues covered all countries, including the mini-states (Andorra, Monaco, San Marino and Liechtenstein), except for the Vatican and the autonomous or overseas territories (the Faroe Islands, Jersey, Guernsey, Isle of Man and Gibraltar), which are geographically considered part of Europe.

Both on a global and regional scale, the basic component of natural population processes and movements, the tendencies that are particularly characteristic, are tendencies of birth rates. When these are studied by continent, it can be ascertained that with certain minor fluctuations in Europe and North America, at the turn of the 1970s and 1980s (echoes of compensation for post-war birth rates), decreases in birth rates can be seen on all continents. As to the presented data (Table 1),

Table 1. The level and projections of average birth rates (‰)

Year	World	Europe	Azja	Africa	North America	Latin America	Australia and Oceania
1950–55	37.4	21.5	42.6	48.9	24.6	42.6	27.7
1960–65	35.1	19.2	39.2	48.0	22.0	41.0	26.7
1970–75	30.8	15.7	33.5	46.5	15.7	35.3	24.0
1980–85	27.6	14.4	28.5	45.1	15.5	30.6	20.4
1990–95	24.7	11.5	25.0	40.8	15.5	25.3	19.9
2000–05	21.1	10.2	20.1	37.7	13.8	21.5	17.8
2010–15	19.5	10.0	18.9	34.1	13.4	18.3	15.9
2020–25	17.2	9.3	15.6	29.3	12.2	15.8	15.5

*Source:* authors' own study based on World Population Prospects (The 2006 Revision Population Database).

this trend started from different initial levels. Thus, in terms of the prospects for the next two decades, there will be deviations from the world's average: Africa will differ most in the positive (i.e. showing the greatest decrease) whereas the smallest decrease (change) will occur in Europe. It should be noted that except for Asia and Latin America, the decrease in birth rates in the period 1950–2005 was twice that in other regions and exceeded 21‰ points. However, in the time from now to 2025, the decrease in the birth rate will be least remarkable in Europe (0.9‰ points) and only slightly higher in North America (1.6) and in Australia and Oceania (2.8).

The afore-mentioned changes in the European countries will run in both directions, increasing the spread of the birth factor. In 2005, it ranged from 15.1‰ in Albania to 8.3‰ in Germany, but it is predicted that in 2015 it will fluctuate from 15.4‰ (again in Albania) to 7.4‰ in Italy (Fig. 1). The 2005 data plus 2015 predictions indicate that among the countries on our continent, the highest increases in the birth rate will be registered by Lithuania (0.7 ‰ points), Latvia (0.6), Albania, Belarus, Moldova, Estonia, Monaco (0.3 each) and Ukraine, Germany, Sweden (0.1 each). Stabilisation of this factor will characterise Austria, Bosnia, Greece, Malta, Poland and Great Britain, while decreases will be noted in the remaining countries, with the greatest drop in Liechtenstein (2.7‰ points), Spain (1.7), Ireland (1.6) and in Andorra, Portugal, and Italy (1.5 each).

In the time perspective until the 2020s, the death rates calculated for continents will change in a markedly different way, with respect to both the level and direction of changes. The downward trend in the death rate will depend predominantly upon the demographic and social structure in particular regions. As indicated by the analysis of data concerning individual continents, the relevant decreases and changes in trends have been and still continue to be associated with either a decrease in population (with the same death rate, the base of the

Table 2. The level and projections of average total death rates (‰)

Year	World	Europe	Asia	Africa	North America	Latin America	Australia and Oceania
1950–55	19.6	10.8	23.7	26.2	9.4	15.5	12.6
1960–65	15.6	9.8	17.7	22.2	9.3	12.3	10.7
1970–75	11.3	10.1	10.9	18.7	9.0	9.8	9.8
1980–85	10.3	10.8	9.6	15.9	8.7	7.8	8.0
1990–95	9.3	11.2	8.3	14.3	8.7	6.6	7.6
2000–05	8.8	11.6	7.5	14.0	8.2	6.0	7.3
2010–15	8.5	12.0	7.3	12.3	8.2	6.1	7.6
2020–25	8.5	12.3	7.6	10.5	8.5	6.5	7.9

*Source:* authors' own study based on World Population Prospects (The 2006 Revision Population Database).

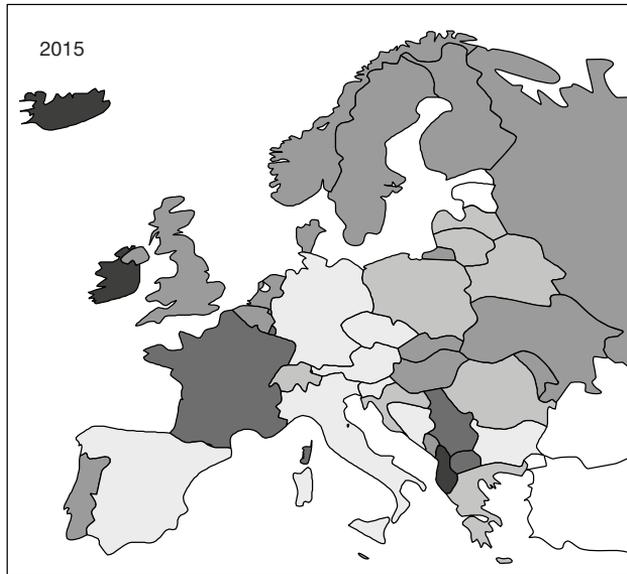
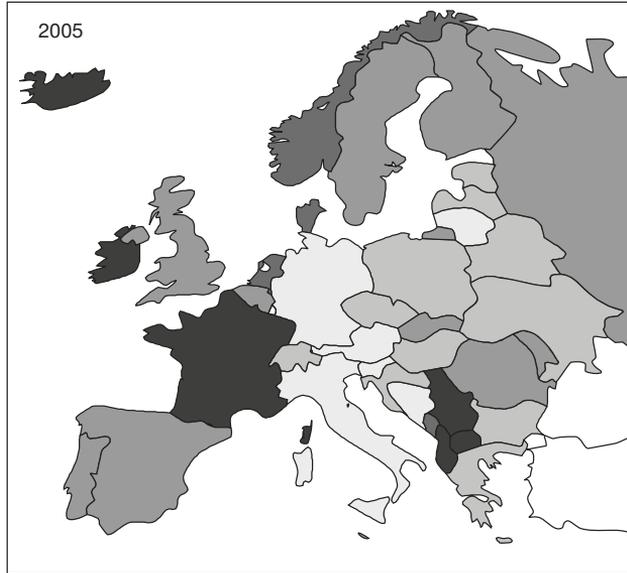


Fig. 1. The level of birth rates

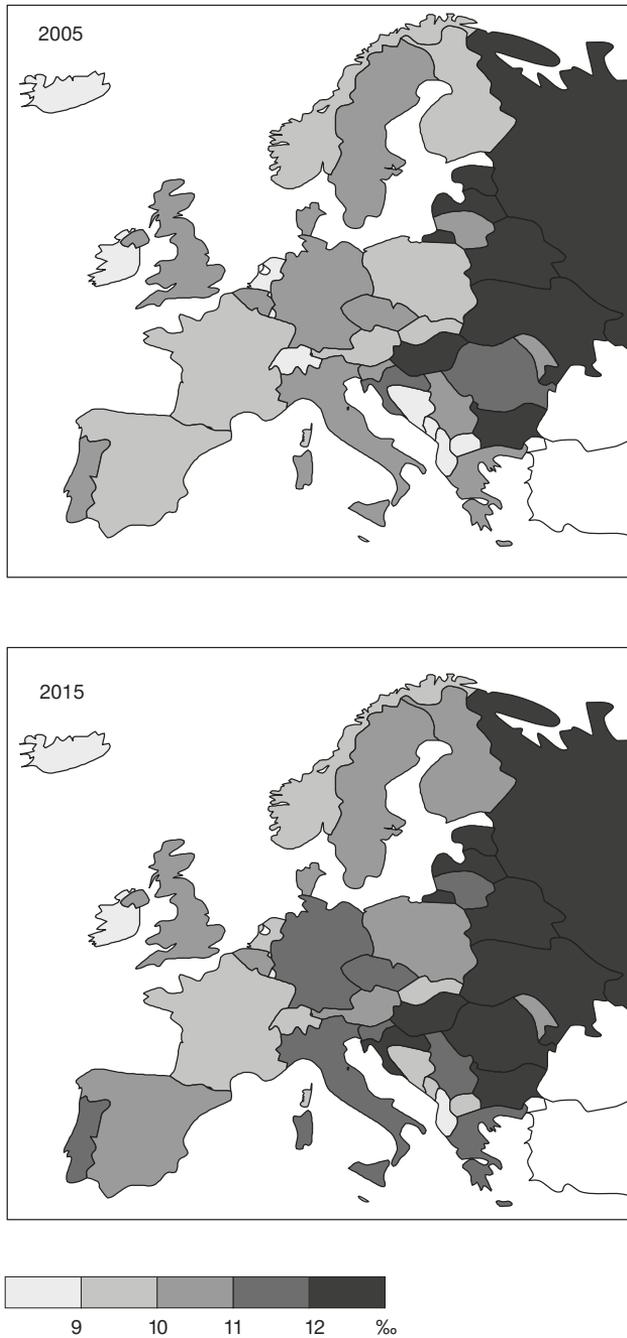


Fig. 2. The level of total death rates

coefficient decreases) or with the increase in death rates resulting from the ageing of societies. This state of affairs appeared in Europe as early as in the 1970s, while in Latin America, North America, and in Australia this development occurred in 2005, and the forecasts are that in Asia it will be noted ca. 2015, whilst Africa will experience a constant decline through to 2025 (Table 2).

So in this area, the changes in Europe will go in one and the same direction and the spread of the factor will become smaller. Thus, in 2005 it fluctuated from 5.1‰ in Albania to 16.5‰ in Ukraine, but it is predicted that in 2015 it will fluctuate from 6.2‰ (again in Albania) to 16‰ in Russia (Fig. 2). The analysis of data for 2005 and 2015 implies that not all European countries will show increases in the level of death rates. The highest increases will be recorded in Andorra (1.9‰ points), Slovenia, Montenegro, Bosnia (1.2 each), Albania, Malta, Liechtenstein, Italy (1.1 each) and Germany (1.0). In Poland, the UNO estimates forecast an increase by 0.6 ‰ points, while in Bulgaria, Ireland and the Faroe Islands the situation will not change. By 2015, the drop in the death rate will, however, be noted in Ukraine (0.8‰ points), the Isle of Man (0.7), Belarus (0.5), Hungary (0.4), as well as in Denmark, Moldova, Norway, Sweden, Great Britain (0.2 each) and Latvia (0.1).

A constant downward trend is noted in the newborn death rate and will continue this way with variable intensity. It is important not only as one of the parameters of the natural movement in populations but also as a determinant of social and economic development. For this reason, the essence of this decrease will not be so much of a trend, which is constant over some long period of time, but rather a factor of the size of the reduction (Table 3).

In this case, the level and the scale of the changes in the newborn death rate both at the present and after 2005 have been and continue to be lowest in North America, which is not surprising because it concerns two of the most highly

Table 3. The level and projections of average infant death rates (‰)

Year	World	Europe	Asia	Africa	North America	Latin America	Australia and Oceania
1950–55	153.1	72.3	176.0	180.6	28.6	126.2	61.4
1960–65	116.4	37.1	130.1	156.8	25.4	100.8	50.5
1970–75	90.0	24.8	93.9	133.2	18.0	80.5	44.0
1980–85	73.1	18.0	74.2	113.4	10.2	56.7	34.0
1990–95	61.5	12.7	59.0	103.2	7.7	38.0	29.4
2000–05	53.9	8.8	48.6	93.2	6.7	25.4	28.6
2010–15	45.1	7.8	38.2	80.0	5.9	18.5	23.2
2020–25	37.7	6.5	30.5	67.4	5.3	13.6	19.6

Source: authors' own study based on World Population Prospects (The 2006 Revision Population Database).

developed countries in the world: the United States and Canada. As regards these countries, Europe has higher parameters because of its greater internal diversity, particularly between the eastern and western parts of the continent. In the continent-level comparisons it is also characteristic that after the 1950s, Asia, as opposed to Africa, had not had only these parameters but also a faster rate of reduction in the death rate of newborns. Such a situation and the relative relationships will continue until the 2020s.

It is also estimated that in the countries of Europe (except for Andorra having a constant factor at the level of 4‰), the decrease in the newborn death rate and differences between its extreme values will decrease. As regards the 2005 newborn death rate, this ranged from 2.8‰ in Sweden to 26.4‰ in Rumania, but it is predicted that in 2015 it will fluctuate in the same countries from 2.7‰ to 18.5‰ (Fig. 3). More detailed analysis of the data for the years 2005 and 2015 implies that the newborn death rate will be inhibited most in the countries which currently show the relatively highest values; namely: Rumania (a drop of 7.9‰ points), Albania (6.4), Bulgaria (6.0), Moldova (3.5), Serbia (3.2), Montenegro (2.5), Macedonia (2.4), and Bosnia and Herzegovina (2.2). In Poland, the UNO estimates forecast a decrease of 1.6 ‰ points. This state of affairs will certainly affect not only the general balance of the natural movement of population numbers but also the demographic structure in individual countries.

The result of the variability of the two aforementioned parameters, i.e. the overall birth rate, is more closely associated with the trends in the level of births than in the level of deaths. The constant global decrease was temporarily disturbed mainly by upward fecundity trends in Asia and Africa (until the 1970s) as well as in North and Latin America, and Australia and Oceania that persisted until the mid-1960s. Only in Europe is there a constant downward trend in the overall birth rate, which is today termed a natural population drop (Table 4). Looking ahead to

Table 4. The level and projections of natural increase rates (‰)

Year	World	Europe	Asia	Africa	North America	Latin America	Australia and Oceania
1950–55	17.8	10.7	18.9	22.7	15.2	27.1	15.1
1960–65	19.5	9.4	21.5	25.8	28.7	28.7	16.0
1970–75	19.5	5.6	22.6	27.5	6.7	25.5	14.2
1980–85	17.3	3.6	18.9	29.2	6.8	22.8	12.4
1990–95	15.4	0.3	16.7	26.5	7.1	18.7	12.3
2000–05	12.3	-1.4	12.6	23.7	5.6	15.5	10.5
2010–15	11.0	-2.0	11.6	21.8	5.2	12.2	8.3
2020–25	8.7	-3.0	8.0	18.8	3.7	9.3	7.6

Source: authors' own study based on World Population Prospects (The 2006 Revision Population Database).

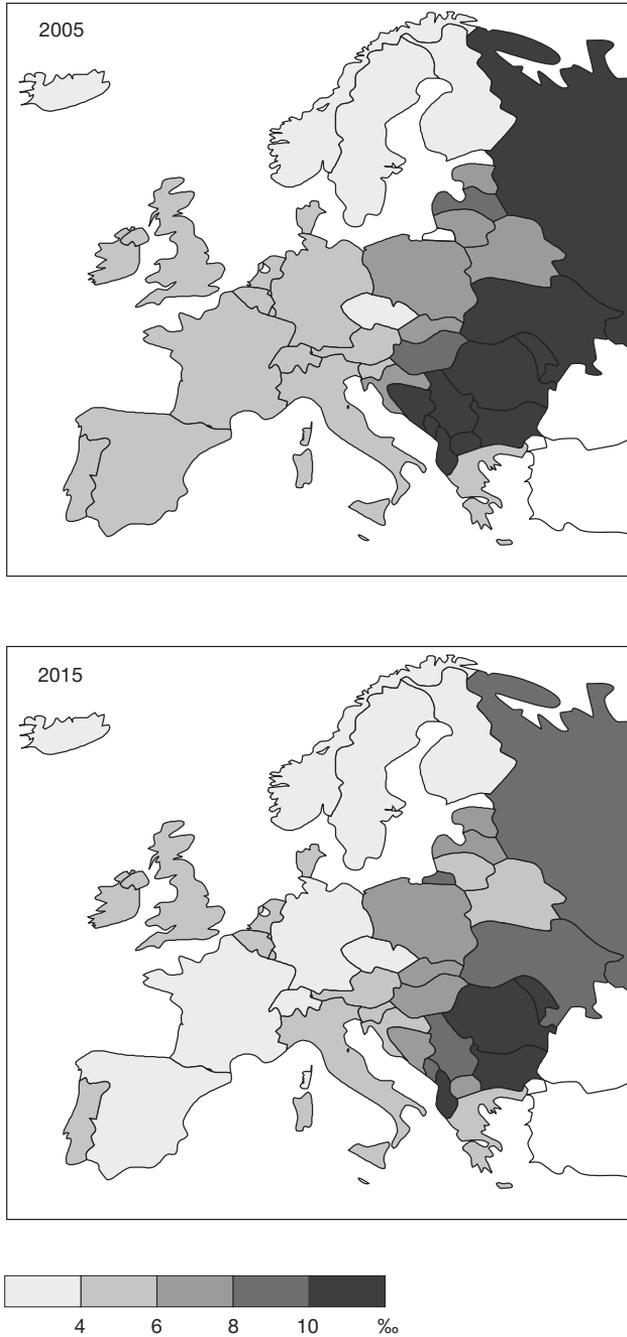


Fig. 3. The level of infant mortality rates

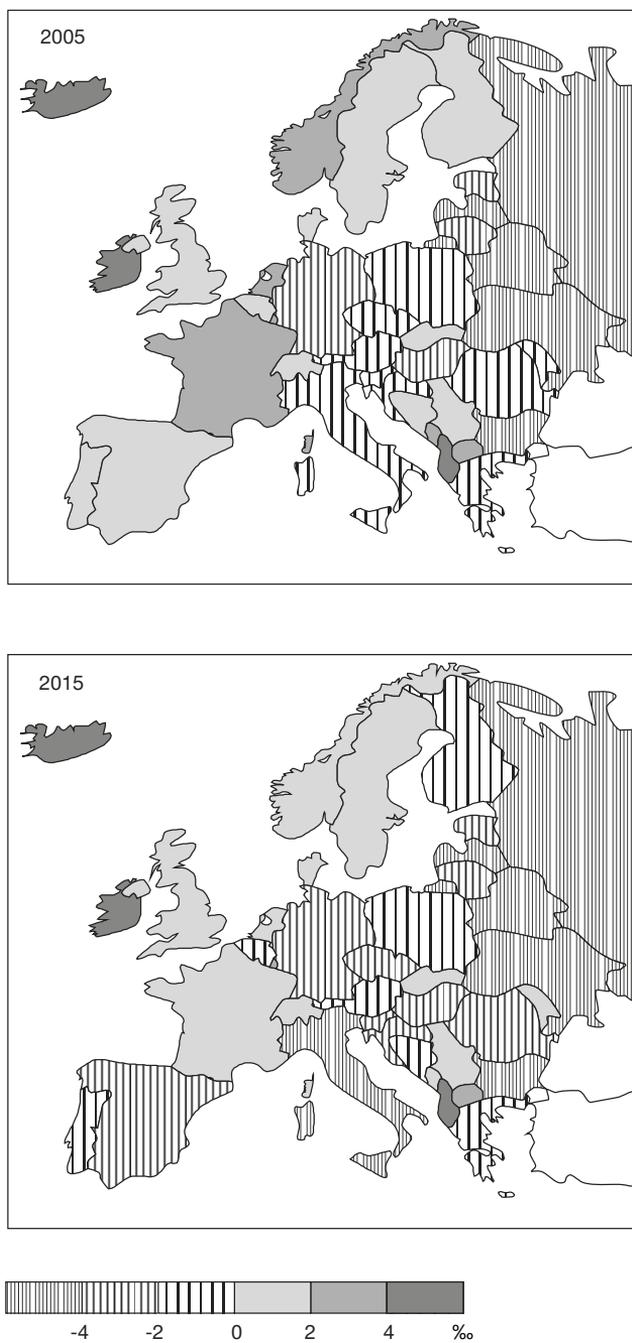


Fig. 4. The level of natural increase

2015, the decline in the balance in natural movements of population numbers will be registered on all continents, but only in Europe will it be negative.

In this case, using the scale of a continent as a factor was, however, too great a simplification, even more so because in Europe it is diversified in a particular way. It is only in Europe that for a certain time a natural population decline has been recorded, although it is envisaged that other countries will join this group shortly, whereas in several other countries there will be an increase in this regard (Fig. 4). Thus, in 2005 the level of the natural birth rate fluctuated from 10‰ in Albania to -7.3‰ in Ukraine, but it is assumed that in 2015 the extreme values will continue to appear in the same countries and will fluctuate from 9.2‰ to -6.4‰ correspondingly. More detailed analysis of the data for the years 2005 and 2015 implies that in Lithuania and on the Isle of Man the birth rate will not change, and an increase will appear only in Monaco and Great Britain (by 0.2‰ points), Sweden (0.3), Moldova (0.5), Latvia (0.7), Belarus (0.8) and Ukraine (0.9). In other countries, the birth rate deficit will deepen, primarily in Liechtenstein (by 3.8‰ points), Andorra (3.4), Italy and Spain (2.6 each), Portugal (2.1) and Montenegro (2). In Poland, the UNO estimates forecast a drop in the birth rate to -0.7‰, although it should be remembered that in the immediate future, an 'echo-effect of the post-war demographic boom' should appear, albeit somewhat delayed.

As was mentioned above, the prospects of trans-boundary migrations are, unfortunately, much more difficult to estimate, and even more so in a region as demographically diverse as Europe. For this reason, while cautiously using the relevant estimates for both the present and long-term forecasts, the analysis has been principally based on the data concerning the balance of migrations, disregarding the directions of human migrations. As implied by the data presented (Table 5), the areas of intercontinental migrations have long since been Australia, the USA, and Canada, and, for some time now specific European countries, particularly because of the economic potential and historical connections. This situation and these trends cannot be translated directly into inter-state migrations,

Table 5. Population net migration rates (‰)

Year	Europe	Asia	Africa	North America	Latin America	Australia and Oceania
1995–2000	1.3	-0.4	-0.4	4.5	-1.5	2.7
2000–2005	2.2	-0.4	-0.5	4.7	-2.5	3.9
2005–2010	1.3	-0.3	-0.4	4.1	-1.5	2.8
2010–2015	1.1	-0.3	-0.3	3.1	-1.1	2.7
2015–2020	1.1	-0.3	-0.3	3.5	-0.9	2.6

Source: authors' own study based on World Population Prospects (The 2006 Revision Population Database).

which include not only intercontinental movements but also the dynamically changing migrations within particular continents.

Europe, considered from the viewpoint of the balance of internal migrations, without going into detail about the structure of intercontinental flows, is diversified generally into Western and Eastern Europe. In the years between 2000–2005, an average negative balance of migration abroad appeared in 11 countries (Fig. 5). In the countries with high demographic potential, such as Poland, Ukraine, or Rumania, excessive migration resulted from the poor adjustment of market requirements to the situation during the period of transformation. In the Baltic states and other post-Soviet countries, these conditions have been overlapping with national migrations after the collapse of the Soviet Union, similar to the situation in the Balkan countries – with the demise of the Socialist Federal Republic of Yugoslavia and the internal ethnic and religious turmoil that continues to fester there. For the reasons outlined above, Russia and Serbia, and partly Croatia are exceptions, as are smaller countries – Estonia and Slovenia because they have all adjusted quickly to the new reality. The relevant forecasts for the years 2015–2020 indicate that migrations abroad will decrease markedly during that period while the spread of the average balance of migrations for the years 2000–2005, which ranged from –24‰ (Montenegro) to 13‰ (Spain), will drop and fluctuate in the years 2015–2020 from -3‰ in Albania to 7‰ in Luxembourg.

Therefore, what do the population dynamics of our continent from the mid 20th century look like, against this backdrop, how is it going to develop until the year 2015, and to what extent are population movements going to continue to stimulate population levels in the countries of Europe?

On a global scale (Table 6), the rate of population growth has slowed down since the 1960s, although the intensity of the process has varied. On various continents this phenomenon has occurred to different degrees. In Asia, a slowing of the birth rate has been marked since the 1980s, in Africa since the 1990s,

Table 6. Population dynamics

Year	World	Europe	Asia	Africa	North America	Latin America	Australia and Oceania
1950–55	109	105	110	112	109	115	111
1960–65	110	104	111	113	107	114	111
1970–75	110	103	112	114	105	113	108
1980–85	109	102	110	116	105	111	108
1990–95	108	101	109	114	106	109	108
2000–05	106	101	106	112	105	107	107
2010–15	106	99	105	111	105	106	106

*Source:* authors' own study based on World Population Prospects (The 2006 Revision Population Database).

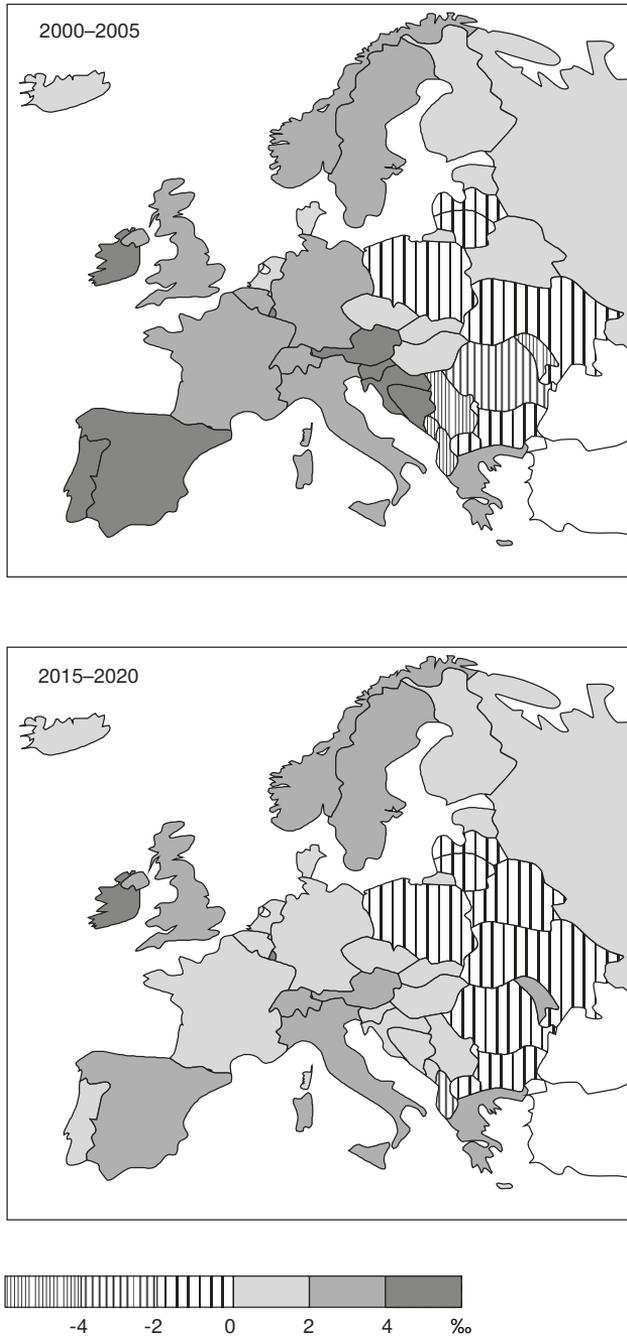


Fig. 5. Average net migration rates

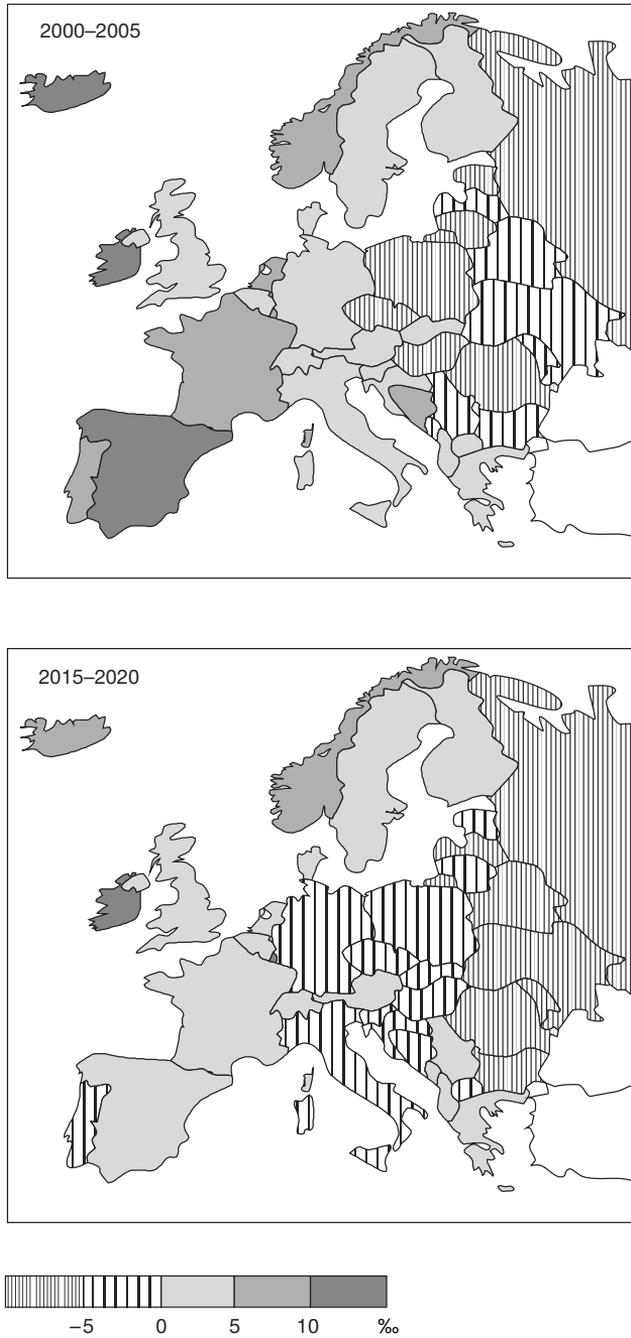


Fig. 6. Average population growth rates

while in other regions since the 1950s, with certain pauses noted in particular decades. The demographic forecasts by the United Nations indicate that Europe is going to be the sole continent where a drop in population will occur in the period 2010–2015. But even on this continent the actual movement of population numbers will be diversified at the level of individual countries (Fig. 6).

For these reasons, an attempt was made to conclude this paper by applying Webb’s method in dynamic form, in order to obtain the classification of European countries based on the parameters of the average balance of birth rate and the balance of migrations for the years 2000–2005 and 2015–2020. A detailed analysis has shown that among 8 possible types in the analysed sections, only the G type has not been represented by any country (because of the lack of comparable data, the territories ruled by other countries and the mini-states have been omitted). Because of the variability of the balance and the role of the component of actual movements in population numbers in a given country, all the countries have been divided into 6 basic types and 16 subtypes (based on overall balance and the variability of the balance of the natural movements in population numbers in the two aforementioned periods).

Table 7. The classification of European countries by changes of Webb’s typology (according to averages in the years 2000–2005 and 2015–2020)

Type	Subtype	Countries
1	a	A→A
	b	B→B
	c	C→C
	d	D→D
2	a	B→C
	b	C→B
	c	C→D
3	a	G→A
	b	H→B
4	a	D→E
	b	A→H
	c	C→E
5	a	E→F
	b	G→F
6	a	E→E
	b	F→F

Types: 1 – stable increase, 2 – permanent increase, 3 – increase, 4 – decrease, 5 – permanent decrease, 6 – stable decrease

Source: authors’ own study based on World Population Prospects (The 2006 Revision Population Database).

As shown in the above compilation (Table 7), and with respect to the factors affecting the population dynamics, the countries of Europe form a complex mosaic. The countries covered have been arranged in the following order; those with positive birth rates today and expected in the future (within the 2015–2020 time horizon) (i.e. types 1 and 2), followed by a group exhibiting different trends: increasing (type 3) and decreasing tendencies (type 4), and finally a group of countries where the population decline has been constant and is expected to remain so in the future (types 5 and 6). In presenting subtypes, an attempt was made to indicate, under Webb's formula, where and to what extent the net decrease or increase in the number of residents will be determined by either the balance of migrations or in natural movements of population numbers in a given country.

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