

Introduction

Since the 1980s, all countries in the EU have been experiencing an ageing population; a decreasing number of young people and, at the same time, an increasing number of the elderly. The result is an unbalanced population structure. Not all EU Member States experience these demographic developments to the same degree. Countries with a relatively high proportion of people aged 65 and over (more than 17 %) at 1 January 2002 were Germany, Spain and Sweden. The Slovak Republic, Cyprus and Ireland were at the same time the countries within the European Union with the lowest proportion of elderly (below 12 %). Within the NUTS 2 regions of the European Union the differences are even more pronounced.

What does an 'ageing population' mean exactly? What does it look like? In the following section, the population structure at national and regional level (NUTS 2) will be described. In the next section the causes of these developments will be discussed, followed by a short section about the consequences for society of this demographic phenomenon. What kind of impact do these demographic developments have on public expenditures? As an example, there will be a focus on public spending on pensions. In the last section, we will look into the future and analyse briefly whether there are demographic solutions to stop the process of ageing.

Ageing population

An ageing population, as argued in the introduction, shows an unbalanced population structure; the number of elderly people in society is relatively high compared to the size of the younger generations. As a demographic process, we observe that the number of elderly people increases, while at the same time the number of youngsters decreases. The results of these developments are clearly visible in the (estimated) population pyramid for the EU-25 on 1 January 2002 (Graph 1.1).

The population pyramid of a stable population, a population where demographic behaviour compensates for the natural ageing of a population, looks like a real pyramid, with a wide base (youngest ages), slowly decreasing to a small top (oldest ages). The shape of the pyramid of the EU-

25 differs clearly from this picture. We observe a small base followed by a considerable number of persons born in the 1950s and 1960s, the so-called babyboom. The top of the pyramid shows relatively large numbers of people aged between 65 and 80 years old (light-grey shading in this and the following pyramids) and people in the 80+ age group: the 'oldest old' (white in this and the following pyramids). Remarkable in the pyramid is the size of the group of people who are 90 and older.

The shape of this population pyramid hides existing differences between the population structures in the various regions in the EU, as Graphs 1.2–1.5 show. These examples of population structures show besides some similarities, such as the number of people born during the babyboom, obvious differences in the proportion of elderly and younger generations.

Graph 1.2, showing the structure of the population in the Southern and Eastern region of Ireland, approaches most closely the shape of an 'optimal' pyramid as described earlier. This is one of the few regions in the EU with a relatively high birth rate.

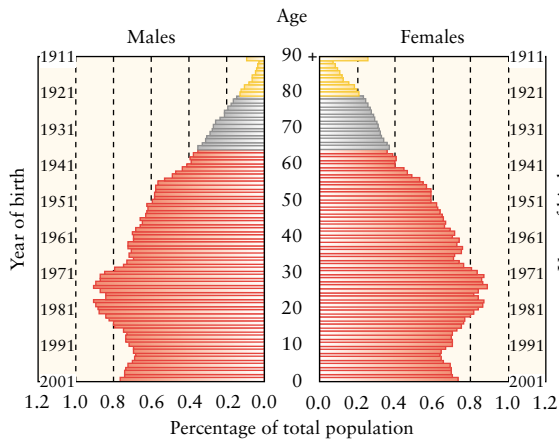
The two following pyramids (Graphs 1.3 and 1.4) respectively Flevoland in the Netherlands and Východné Slovensko in Slovakia show a relatively young population, but also an increasing group of people in the 65+ age group. Flevoland in the Netherlands is a young region, built on land reclaimed from the sea in the last century, with a correspondingly young population: 61 % of the population are aged under 40 and live in the new residential districts, where most housing is designed for (young) families. Although the number of old people has increased in recent years, their share in this region is still the lowest in the Netherlands at only 9 %. Also the region of Východné Slovensko is one of the youngest regions in Slovakia. There are fewer people aged 65 and over than anywhere else in the country.

Graph 1.5 shows the population structure of Principado de Asturias in Spain on 1 January 2002. The proportion of people aged 65 and over is higher than the national average and is indicative of the ageing of the population. This pyramid contrasts with the population structure of the Irish region mentioned above; a very narrow base and a relatively wide group of people aged 65 and over. The notches in the pyramid around the age of 65 are caused by the Spanish Civil War in the late 1930s.

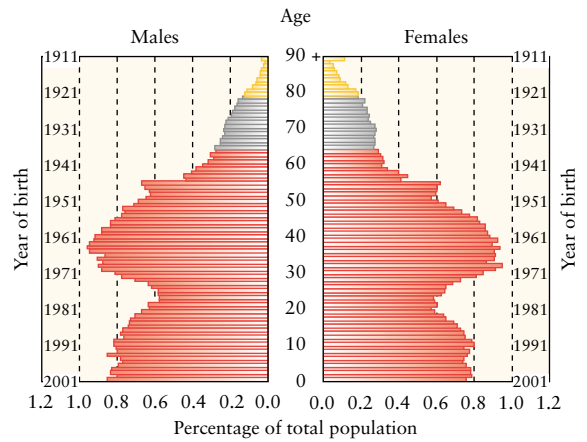
Graph 1.1 — Age pyramid on 1 January 2002 for the Member States (estimated)



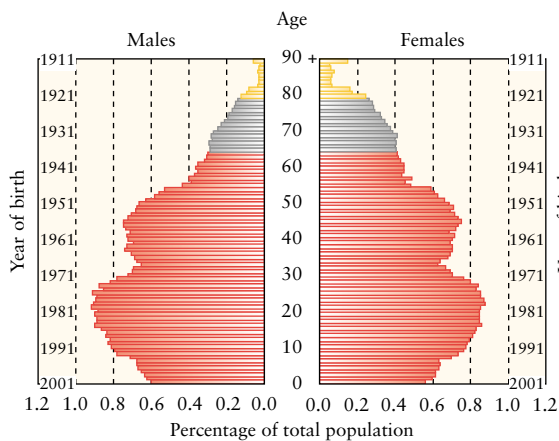
Graph 1.2 — Age pyramid on 1 January 2002 for Southern and Eastern region (IE)



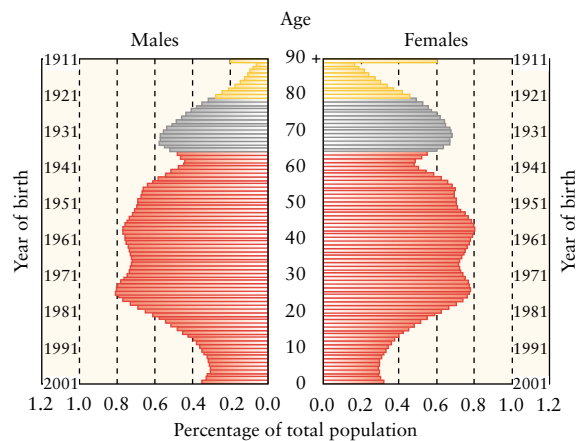
Graph 1.3 — Age pyramid on 1 January 2002 for Flevoland (NL)

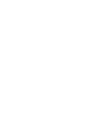
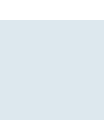
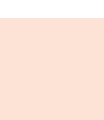
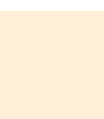
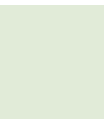


Graph 1.4 — Age pyramid on 1 January 2002 for Východné Slovensko (SK)



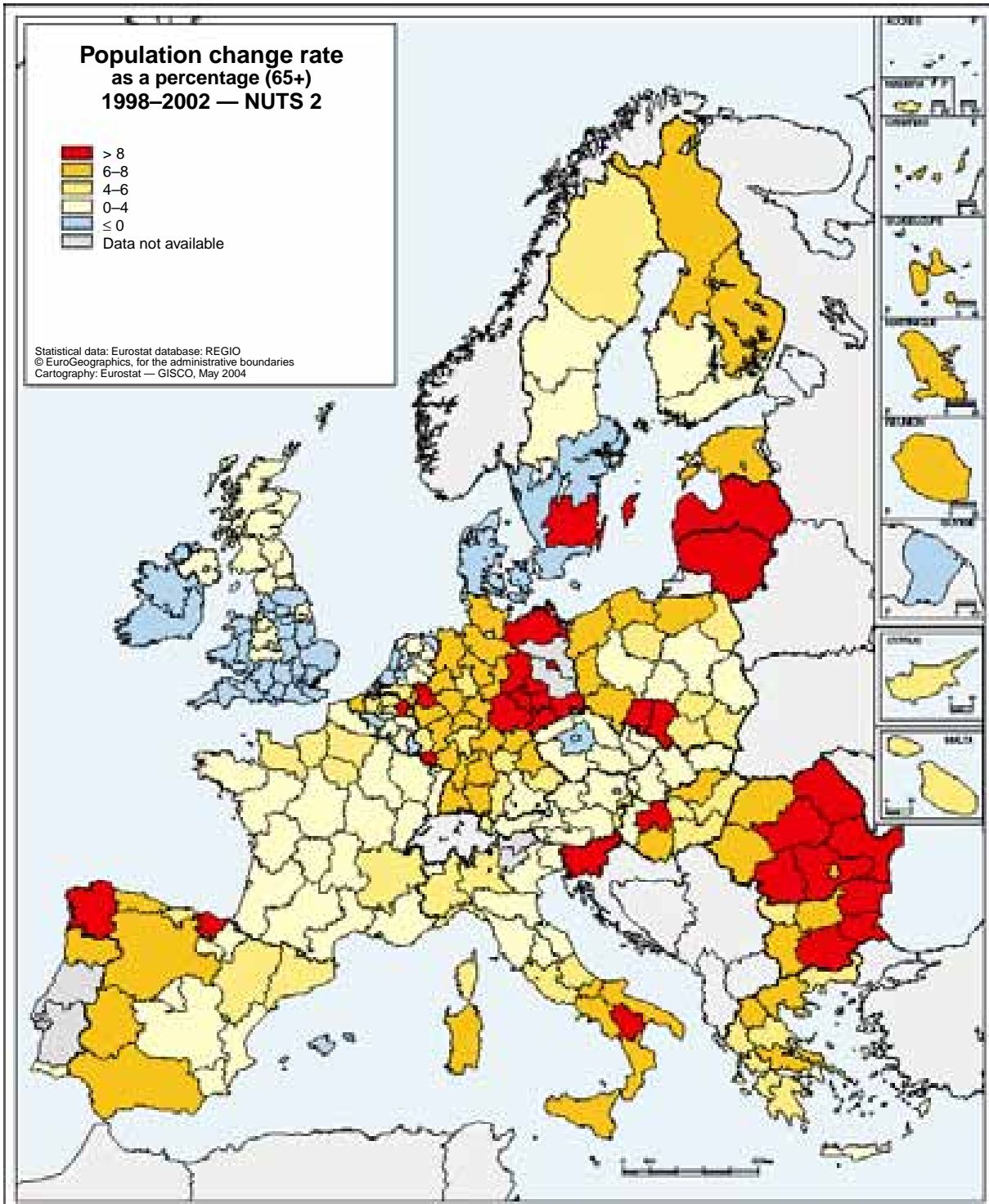
Graph 1.5 — Age pyramid on 1 January 2002 for Principado de Asturias (ES)





The population pyramids show the considerable differences in the population structure between regions. Map 1.1 shows the changes in the number of older people between 1 January 1998 and 1 January 2002 for the various NUTS 2 regions in the EU (i.e. the percentage of people aged 65 and older as a proportion of the whole population). In the blue coloured regions, the share of people in that age group decreased during the period. This

decreasing number of elderly during the last five years can be observed in both regions in Ireland, most of the regions in England and Wales in the United Kingdom, in Denmark, in Noord-Holland, Zuid-Holland, Utrecht, Flevoland and Groningen in the Netherlands, in the regions of Sydsvetige, Västsvetige, Östra Mellansvetige and Stockholm in Sweden, and in Praha and the surrounding region in the Czech Republic.



Map 1.1

Regions with a relatively high increase, the dark red regions, can mainly be observed in the eastern part of Germany, in parts of the new Member States, such as Latvia and Lithuania, Slovenia and in major parts of Bulgaria and Romania. In most of the regions of France, Austria, Hungary, the Czech Republic and the Slovak Republic, the calculated change rate is rather low.

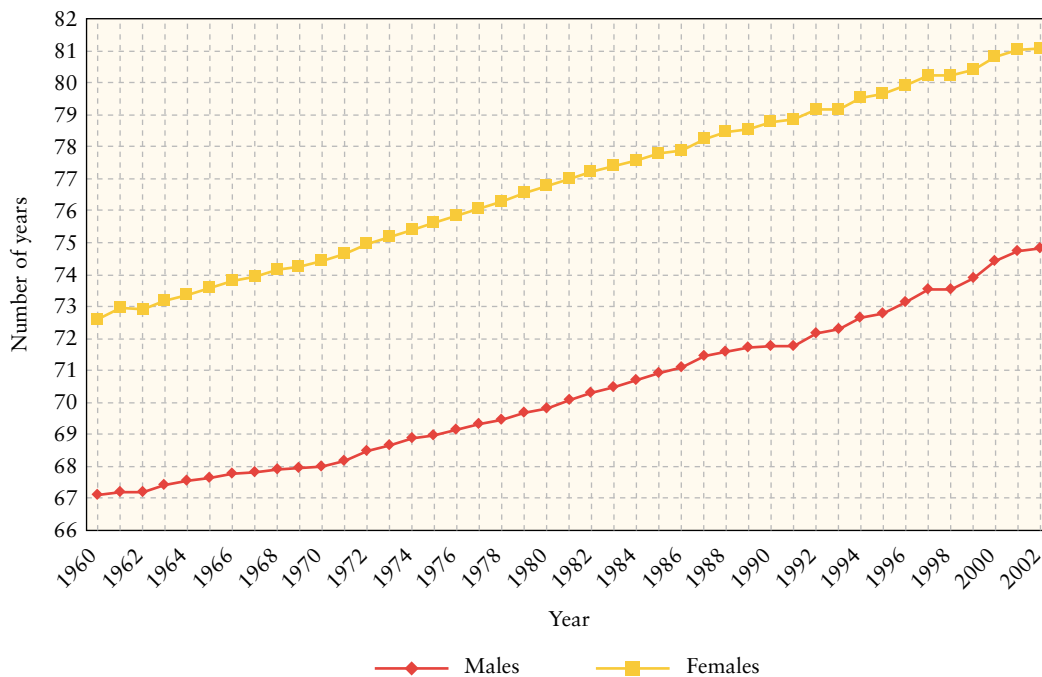
sate each other. Population dynamics are the result of demographic behaviour and are mainly influenced by mortality (the mean life expectancy), fertility (the average number of children born and the mean age at which women have children) and migration (the relative number of immigrants and emigrants and their age distribution).

To start with the last mentioned cause, the consequences of specific immigration and emigration flows in certain regions can have a great impact on the population structure. Within the European Union we can observe flows of young people to regions with more jobs; the elderly stay behind. In the Netherlands we also see an opposite flow, as mentioned earlier, in Flevoland. In that specific example the government developed a policy to attract young people and young households to settle in this region. Graph 1.3 clearly shows these working age people and their children.

Causes of the ageing population

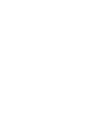
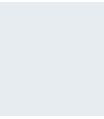
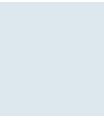
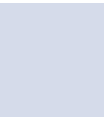
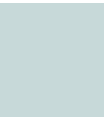
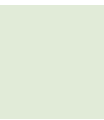
In general one could say that the ageing of the population is caused by a population dynamic which is too low: the relative influx of youngsters and outflow of older people is too low to compen-

Graph 1.6 — Life expectancy at birth 1960–2002, EU-25



In the course of the 20th century, life expectancy increased considerably. Graph 1.6 shows the trend in life expectancy at birth for men and women within the EU-25 over the period 1960–2002. In 1960 the average life expectancy at birth was 67.1 years for men and 72.6 for women. During the following years this expectancy increased for men by nearly eight years and for women by near-

ly nine years to respectively 74.8 and 81.1 years in 2002. However such an increase in the number of expected years to live at birth does not necessarily mean an increase in years of good health. Researchers have different opinions on this point: some say that the increase in life expectancy has been accompanied by an increasing frailty of people at higher ages, others hold the opposite view.



In a study, commissioned by the Council of Europe, Dragana Avramov and Miroslava Maskova consider this point:

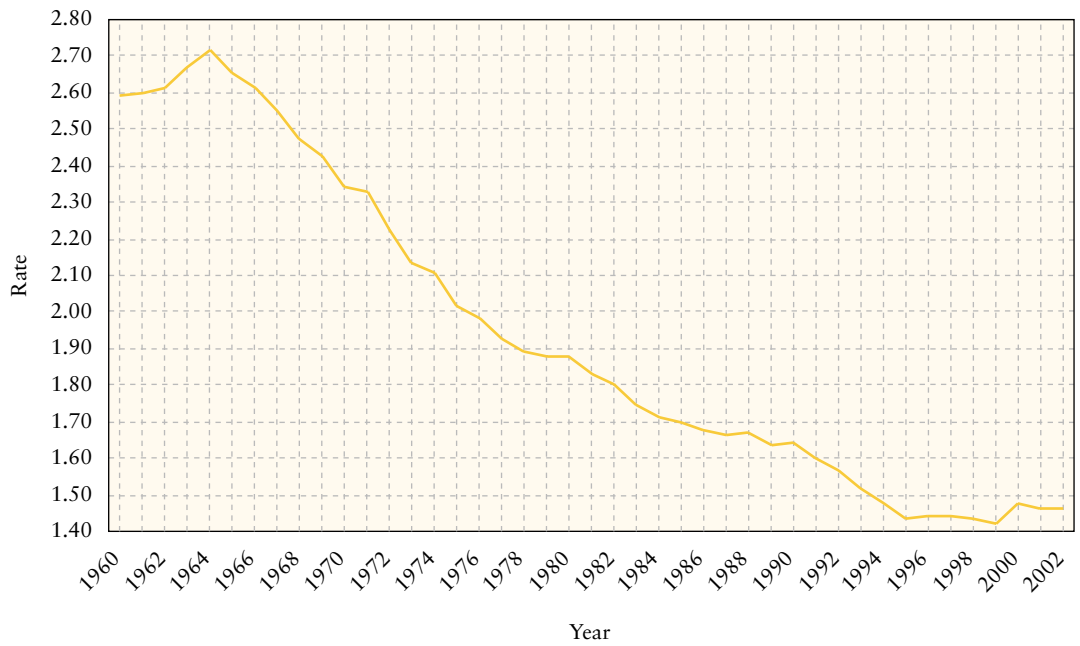
‘... the increase in life expectancy in the course of the 20th century was accompanied by a compression of morbidity to higher ages, resulting in a double trend: better health and increasing capabilities of the younger aged and an increasing frailty of the oldest old who are no longer suffering or dying from infectious diseases but are confronted with the degenerative processes of senescence at a very high age. At the same time large proportions of the new generations of elderly people have benefited from higher levels of education

acquired in youth, enjoyed the advantages of the modern affluence culture and experienced less demanding or debilitating living conditions during their life course ...’

Either way, it is inescapable that the increase in life expectancy also means an increase in the costs for healthcare.

The most important explanation for the changing population structure however, is the level of fertility. In general, it can be argued that the process of our ageing population was caused directly by the remarkable trends in the number of births since the Second World War.

Graph 1.7 — Total fertility rate 1960–2002, EU-25



In most of the countries of the European Union, there were high numbers of births during the first 25 years after the war. However, after 1970 birth rates dropped dramatically as women had fewer children and at a later age. The babyboom can clearly be observed in all of the previous population pyramids; a considerable group of persons born in the 1950s and 1960s moves like a bulge up the pyramid.

Graph 1.7 shows the overall trend in the total fertility rate (TFR) in the EU-25 since 1960. The total fertility rate is the mean number of children

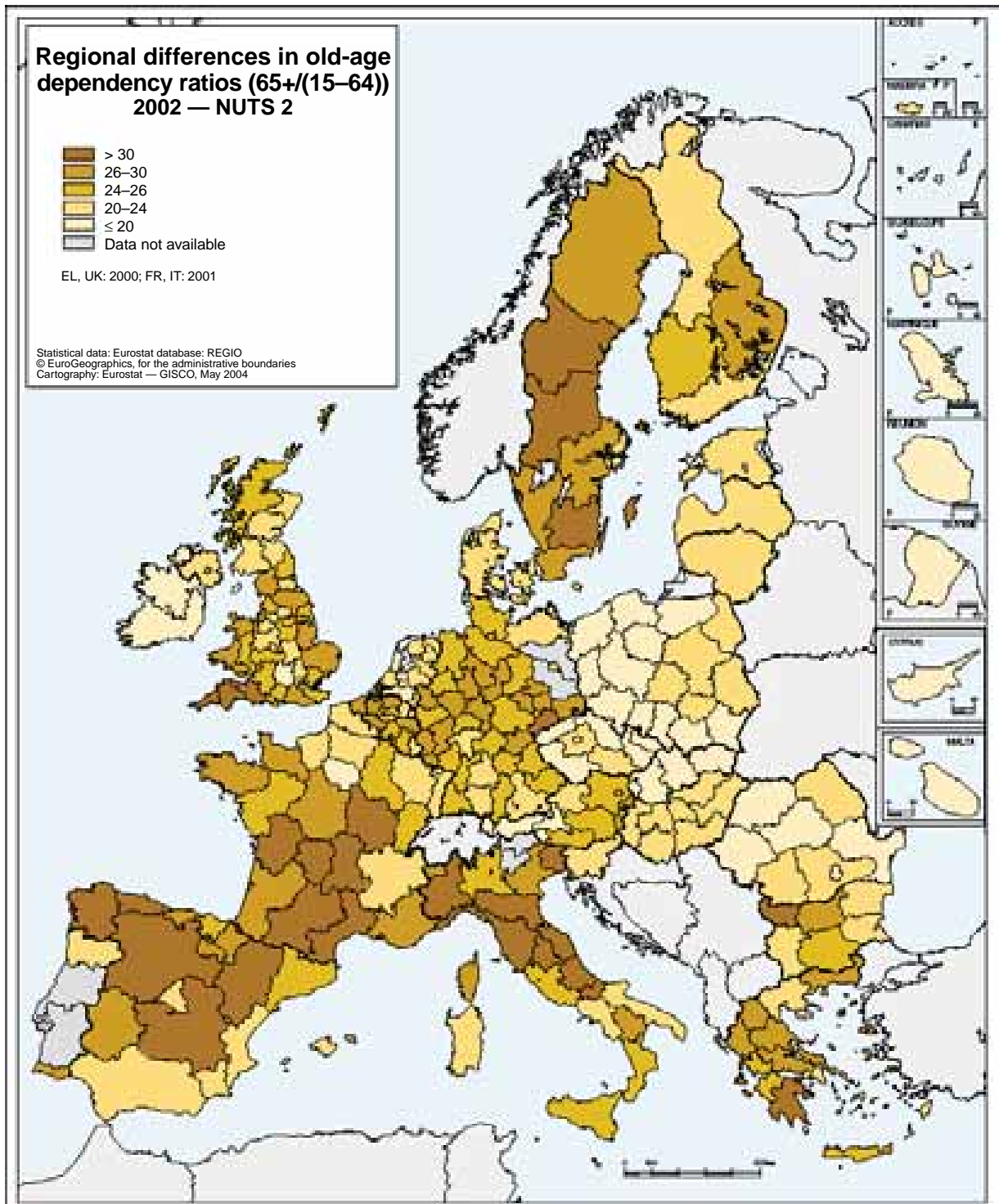
that would be born alive to a woman during her lifetime assuming that her reproductive pattern during each of her childbearing years was the same as the overall fertility rate for women of that age in that specific year. This rate is also used to indicate the replacement level fertility; in more developed countries, a rate of 2.1 is considered to be replacement level. At the beginning of the 1960s, the TFR was around 2.6. Since the second half of the 1990s, the level of the TFR seems to have stabilised around 1.44 and, as the graph shows, the 21st century even starts with a small increase in the number of births to a level of 1.46.

Consequences of an ageing population

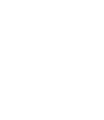
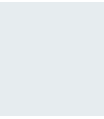
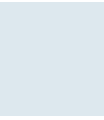
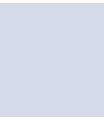
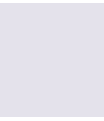
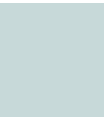
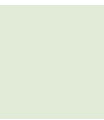
In economic terms the consequences of the ageing population are often expressed in the old-age dependency ratio, the ratio of the number of elderly persons of an age when they are generally eco-

nomically inactive (here 65 and over) to the number of persons of working age (here 15 to 64).

Map 1.2 shows the regional differences in old-age dependency ratios ($65+/(15-64)$). As can be observed, a high dependency ratio (the dark brown regions) can mainly be found in northern and central Spain and Italy, in the south-west of the United Kingdom, southern and central France and parts of Sweden. Regions with low dependency



Map 1.2



ratios, coloured light brown, can especially be observed in Poland, the Czech and Slovak Republics, Ireland and in Romania.

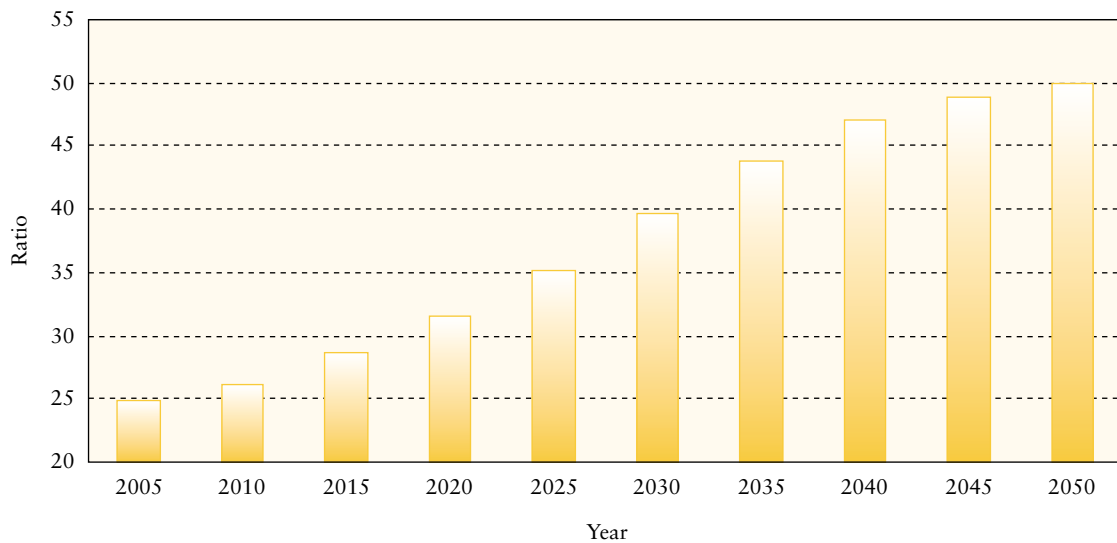
A special working group within the European Commission is currently studying the consequences of the ageing populations on society, in particular on public finances. The working group is especially focusing on the impact on public spending on pensions, healthcare and long-term care. The discussion around the impact on healthcare was mentioned earlier in passing. With regard to pensions, it can be noted that most of the countries of the European Union have a public pension system called ‘pay-as-you-go’. This system implies that the active population has to pay the State pensions for the elderly, in the form of taxes. The higher the dependency ratio, the smaller the active population who have to bear the increasing burden of the growing number of elderly.

At this moment there are for every person aged 65 and over around three or four persons in the active age group. In the future, this will decrease to between 1.5 and 2 persons.

Expectations for the future

The previous section ended with expected developments with regard to the relation between active and inactive population in the EU. Accordingly, we cannot finish this chapter without turning our attention to the future. The pyramids presented earlier show people (the ‘babyboom bulge’) moving slowly upwards in the population structure; these are our future elderly.

Graph 1.8 — Old-age dependency ratio (65+) 2005–50, EU-25 (¹)
(based on UN population estimates)



(¹) Cyprus excluded.

Graph 1.8 shows expected developments (median scenario) in the old-age dependency ratio in the coming decades in the EU-25 (excluding Cyprus), based on the population estimates calculated by the United Nations. The graph shows a steady growth of the ratio from 25 to 50 % in 2050. Researchers expect that after 2040 a turning point will be reached in most of the EU countries after which the proportion of elderly within the population will slightly decrease.

Finally, some thought is given to the issues of whether and how the consequences of the ageing population can be influenced. Researchers doubt that changes in fertility behaviour would be effective and even migration flows are no more than a temporary and partial solution. So, if demographic changes occur, their impact on ageing will probably be of minor importance. Accordingly, the solution may lie not in the demographic but in the political field, with such sensitive issues as

postponing the age of retirement, reallocating State resources and private supplementing of State pensions.

Literature

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C. van Ewijk e.a., *Vergrijzing als uitdaging. Kansen en bedreigingen van een vergrijzende Europese bevolking*, Den Haag, December 2003.

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