

# Statistics in focus

## GENERAL STATISTICS

THEME 1 – 3/1999

## REGIONS

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## Regional population decline in the EU: Recent trends and future perspectives

Population growth in the European Union has slowed down considerably over the last 25 years and future growth will probably stagnate around the year 2020. Nevertheless, during the coming 25 years the population of most countries will continue to increase. At the subnational level, however, an increasing number of (NUTS-2) regions will face a declining population. Particularly eastern Germany and large parts of Italy and Spain are expected to permanently lose population.

To anticipate properly the consequences of this development, such as the problem to maintain a sufficient and adequate level of services at the regional level, it is important to know the main forces behind 'depopulation': is it a negative natural growth, a negative net migration, or both, and what are the differences, if any, in socio-economic characteristics?

In this bulletin, the prospect of a regional population decline in the European Union will be examined. All future demographic trends presented are based on the Eurostat's latest national and regional population scenarios, which cover the periods 1995-2050 and 1995-2025 respectively.

### A declining population growth

In the period 1950-1995 EU population grew from 296 to 372 million people, which corresponds to an average annual growth rate of 0.51 percent.

Future population growth in the Union will most likely be no faster than in the past. If current demographic trends persist, as is assumed in the baseline scenario, the EU population will continue to increase to 388 million in 2025, which corresponds to an average annual growth rate of only 0.15 percent. Population starts declining around 2020 and by 2050 a total population close to the current figure is expected.

If fertility recovers, life expectancies increase strongly, and migration will remain high (the high scenario), a faster growth is expected (424 million inhabitants by 2025 or a growth rate of 0.43 percent). A continuous increase is foreseen for the first half of the 21st century, resulting in a population of 445 million in 2050. In the low scenario, on the other hand, annual population growth will become negative in the beginning of the next century. This scenario expects a population of 358 million people in 2025, which will go down further to 303 million in 2050 (Figure 1).

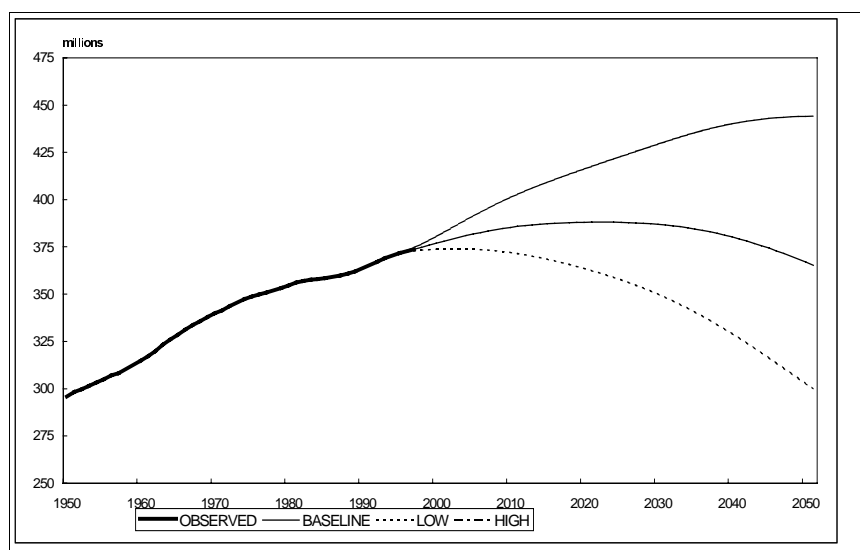


Figure 1: Total population, 1950-2050 — EU-15

## An increasing number of 'shrinking' regions

In the period 1990-1995 about 25 to 40 (NUTS-2) EU regions had to face a declining population in one or more years (Figure 2). These regions are mainly found in southern Europe and in eastern Germany (Figure 3).

According to the baseline scenario, the number of regions with a negative growth rate is expected to grow strongly. Between 1995 and 2010 several more Italian and German regions will follow, as well as some regions in France and Great Britain. By 2025 almost 90 regions, or well over 40 percent of all regions, might be confronted with population decline, among them all regions of Italy. By then, regions with a population loss will be spread out all over the European Union. Moreover, about half of the population of the EU will be living in a region with a shrinking population. Consequently, in the future regional depopulation will no longer be an exception.

The strongest population decline is expected for Alentejo (Portugal). For this region, total population is expected to fall by 19 percent in 2025 compared to 1995 (Table 1).

In contrast, for about 30 percent of the regions total population is assumed to increase by at least 10 percent in the period 1995-2025. Ireland, Luxembourg, Denmark and all but one region of the Netherlands will not be confronted with a population decline before 2025. Also in Sweden, depopulation will not occur before 2025. In this country, however, two regions will experience a population decline in the first 10 to 15 years of the next century. As this decline is just temporary, these regions are not characterised as shrinking regions. Comparable developments will take place in some regions of Great Britain. Absolute leader in terms of population growth is Flevoland (the Netherlands) for which an increase is expected of 75 percent. Flevoland though, is a kind of 'special' region: it is relatively new (established in 1986), has a small and young population and experiences a high internal immigration balance. 'Second best' is Ceuta Y Melilla (Spain) with an expected population growth of 28 percent

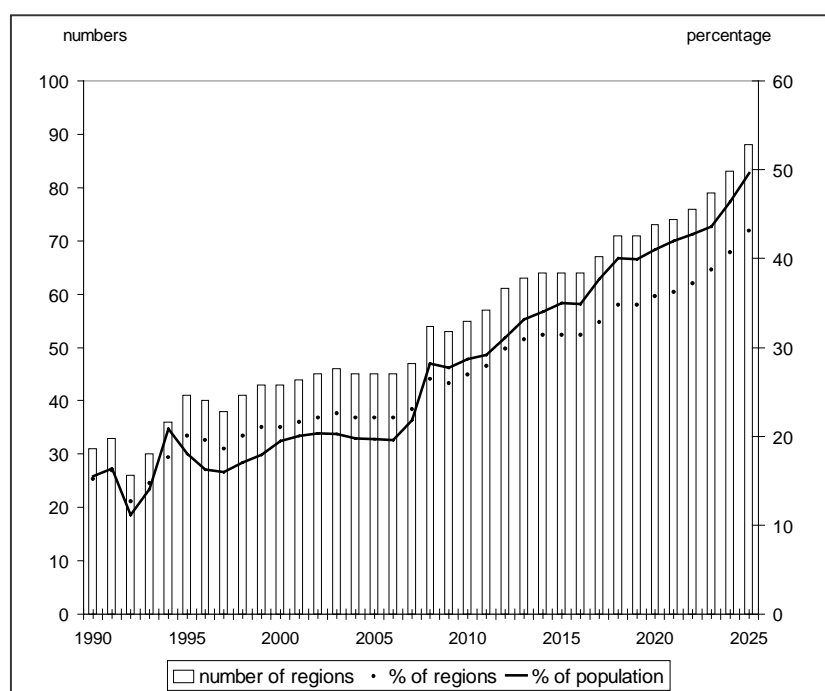


Figure 2: Number and percentage of shrinking EU regions (NUTS 2), 1990-2025, baseline scenario

Shrinking regions (index < 90)		Growing regions (index > 120)	
Alentejo (PT)	81	Madeira (PT)	122
Liguria (IT)	82	Languedoc-Roussillon (FR)	124
Mecklenburg-Vorpommern (DE)	82	Luneburg (DE)	125
Magdenburg (DE)	83	Lincolnshire (UK)	126
Sachsen (DE)	83	Sterea Ellada (GR)	126
Pais Vasco (ES)	84	Grampian (UK)	127
Halle (DE)	84	Luxembourg (LU)	127
Dessau (DE)	84	Acores (PT)	127
Thuringen (DE)	85	Ceuta Y Melilla (ES)	128
Rioja (ES)	86	Flevoland (NL)	175

Table 1: Ten strongest shrinking and growing EU regions (NUTS 2), 1995-2025 (1995=100), baseline scenario

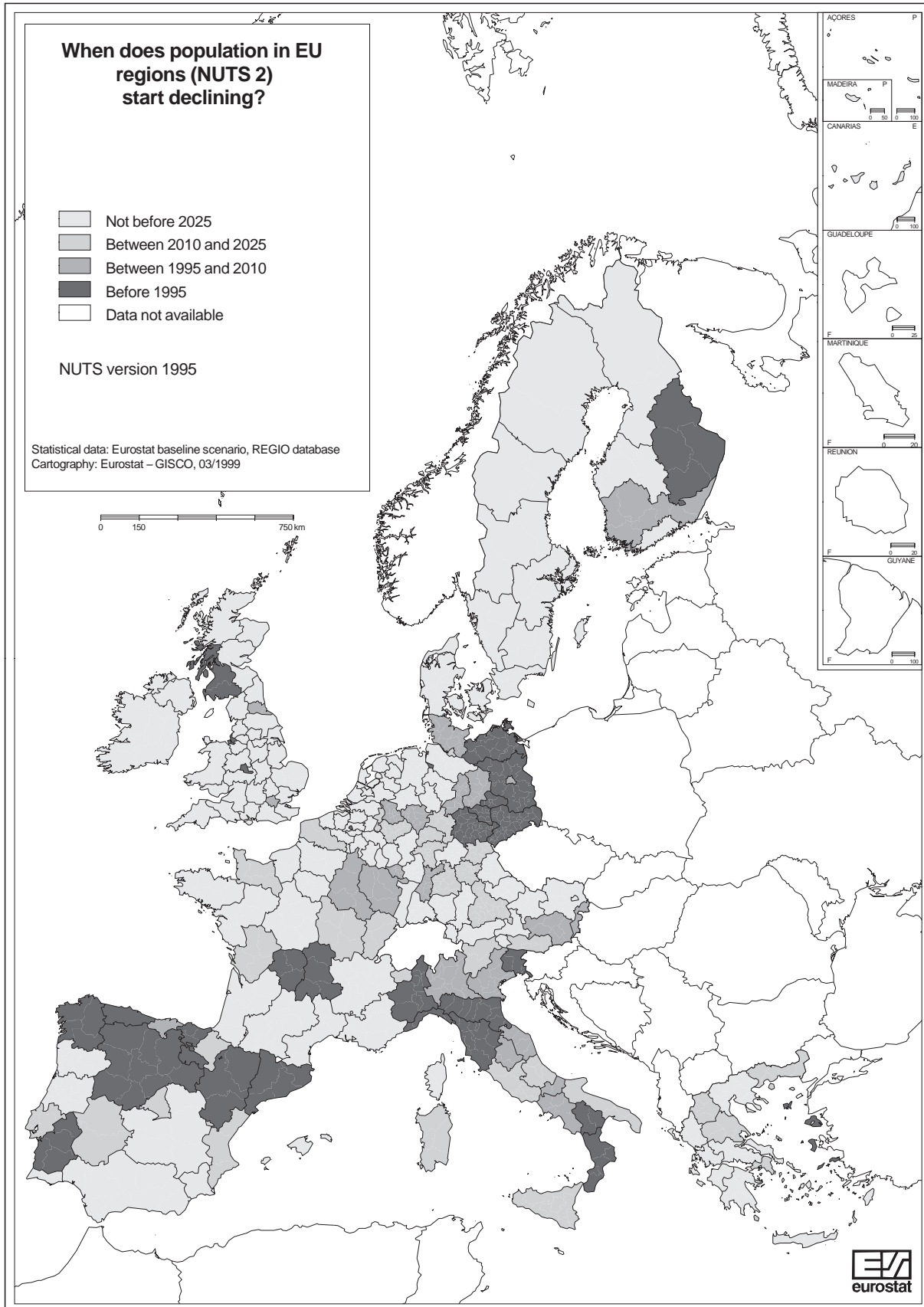


Figure 3: Regions with a declining population, 1995-2025, baseline scenario

## Population change: natural growth versus net migration

Population change is the combined result of natural increase (births minus deaths) and net migration (arrivals minus departures). Traditionally, natural growth in the European Union has been positive. As a result of declining fertility levels together with increasing numbers of deaths due to population ageing, however, this will undoubtedly change in the future. In the first half of the 1990s, most regions experienced a positive natural increase (NI+) as well as a positive net migration (MIG+) (Figure 4). In about one third of the regions, natural growth was negative (NI-). Despite this natural loss in most of these regions total population was still growing due to a large net migration balance. In eight regions only, net migration was positive but insufficient to compensate for natural decrease. In about one fifth of the regions a negative migration balance (MIG-) was observed, but in half of the cases depopulation did not occur due to natural increase. For six regions only population decline was exclusively attributed to negative net migration.

By 2025, the number of regions where population is declining is expected to increase drastically. For almost all of these regions the population loss is mainly due to negative natural growth. As it cannot be expected that the economic gap between the EU and the developing world will be reduced to such an extent that the migration pressure from outside the EU will diminish, international migration is expected to remain positive. The internal migration balance, on the other hand, will

be negative for several regions by definition. This negative balance, however, will often be entirely compensated by positive net international migration. Therefore, also in the future regions with a negative net migration balance will remain a minority. In contrast, the number of shrinking regions with a negative natural growth and a positive net migration will shoot up considerably: from eight in 1990-1995 to 56 in 2020-2025.

Whereas today regions with natural decrease are found particularly in Germany, Italy, Spain, Great Britain and Greece, in the future these regions will most likely be found all over the European Union. Especially in Italy and Spain there will be regions where the attractiveness of the area has a mitigating effect upon natural decrease (Figure 5).

With respect to population growth, the number of regions where both natural increase and net migration contribute to population growth will be reduced considerably. These regions will be mainly left in the northern part of the EU. On the other hand, the number of (slowly) growing regions with a natural decrease and a positive net migration will rise by more than 60 percent. Regions of growth with negative net migration are currently found in economically weak areas like northern Finland, southern Italy and northern France. By 2025, in this category there are only a few regions left.

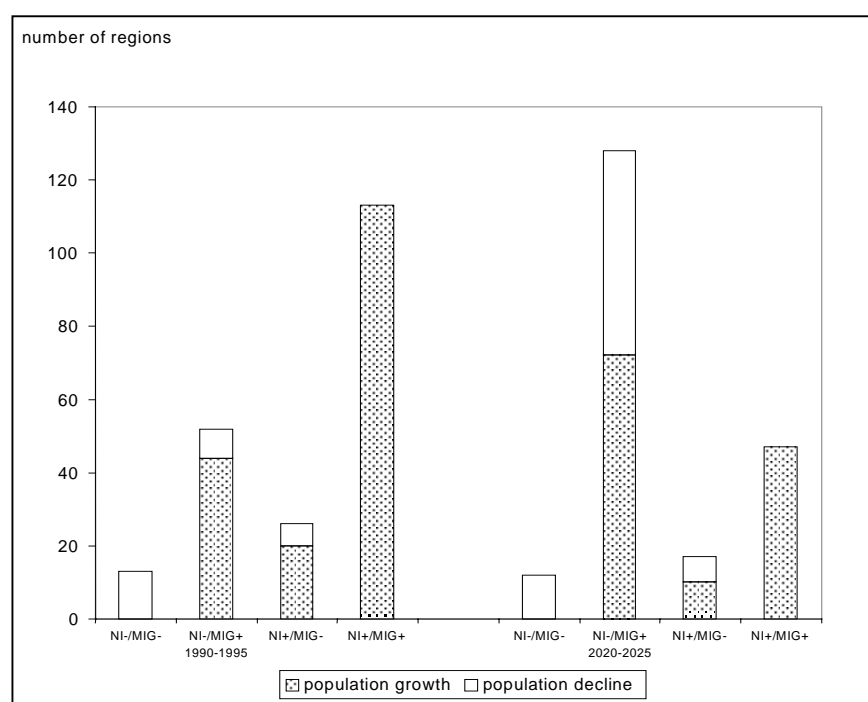


Figure 4: Natural increase (NI) and net migration (MIG) in the EU regions (NUTS 2)

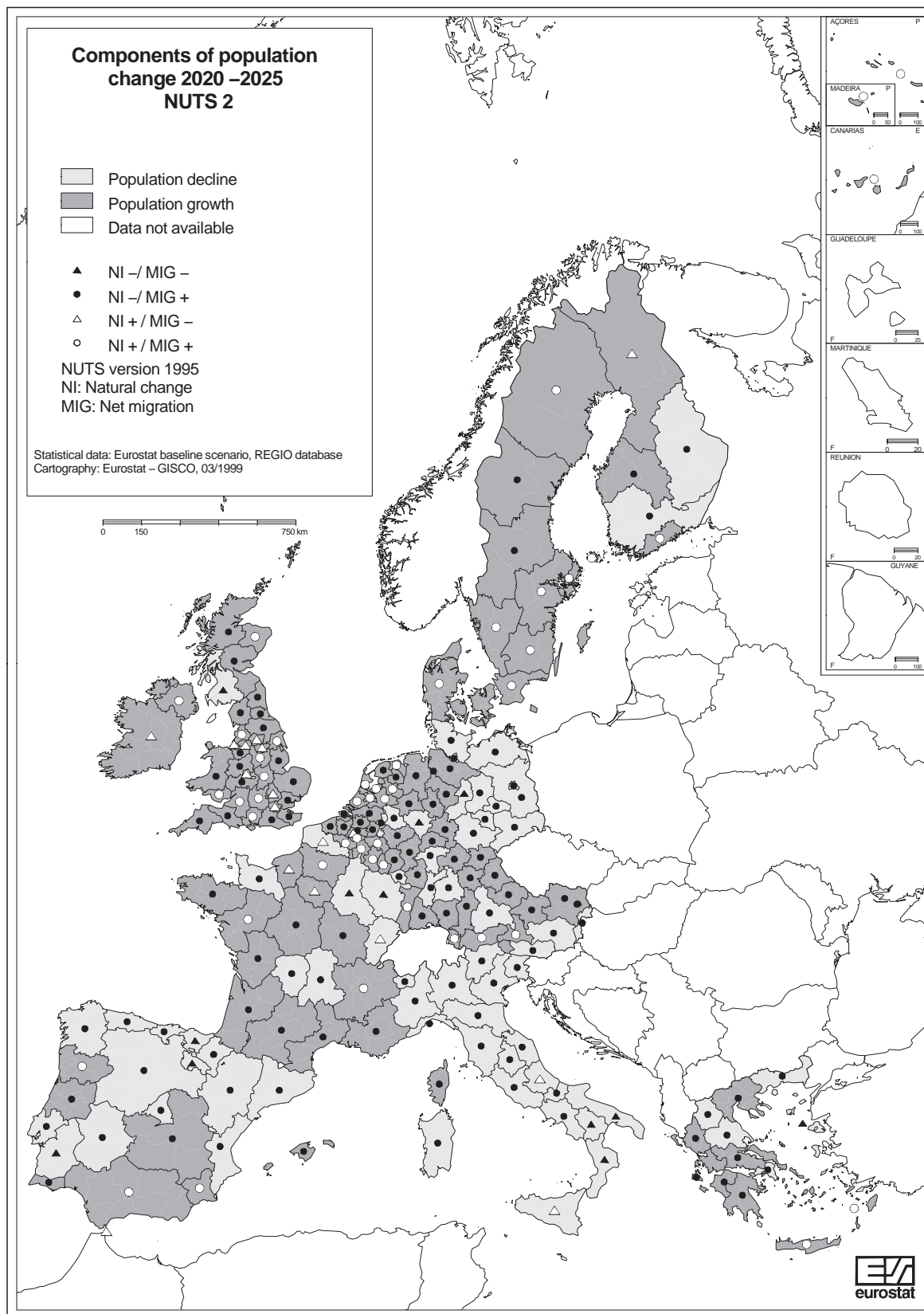


Figure 5: Regional population development, 2020-2025, baseline scenario

## Socio-economic characteristics: affluent regions grow faster

Demographic processes are for a large part influenced by socio-economic developments. Population trends, however, do not simply respond to socio-economic developments: both trends are interrelated. Whereas socio-economic changes may trigger regional demographic trends, population changes themselves may have an impact on regional socio-economic developments. Migration, for example, is clearly related to regional differences in economic developments (migrants are often attracted to regions of rapid economic growth), whereas the increase of the population of foreign descent in turn may have strong social consequences. The native population, for example, may adopt some cultural values of the immigrants or may become more ethnocentric or conservative. Important in this respect is whether socio-economic characteristics of shrinking regions differ from the average EU figures.

The general conclusion is that affluent regions grow faster. The most striking dissimilarities are the relatively high proportions employed in the agricultural sector in shrinking regions, the relatively high unemployment rates, especially among women and the relatively low-income levels (Figure 6).

Another feature of regions with population decline is the

relatively high proportion of elderly people and low proportion of children and adolescents. Obviously, shrinking regions tend to lose young people. Also in the future shrinking regions are expected to have lower percentages of young and higher shares of elderly people compared to the EU average. By 2025, the share of the young in regions with a population loss compared to 2020 is expected to be 18 percent, while for the Union as a whole a share of 20 percent is foreseen. For the elderly a share of 31 percent is expected, compared to 29 percent for the EU.

A final question to be addressed is whether population decline occurs in less densely populated regions. On average, population density in currently shrinking regions is about 10 percent lower than overall population density in the EU. In the period 1990-1995, 27 regions experienced a population loss. Only two of these regions have a high population density (more than 320 persons per square kilometre): Brussels and Athens. Both of these regions, however, are capital cities, which indicates that the classification of regions does have some influence on the conclusions drawn. Only five of the shrinking regions are sparsely populated (less than 70 persons per square kilometre), which indicate an ever-declining population. These regions are mainly concentrated in the Iberian Peninsula.

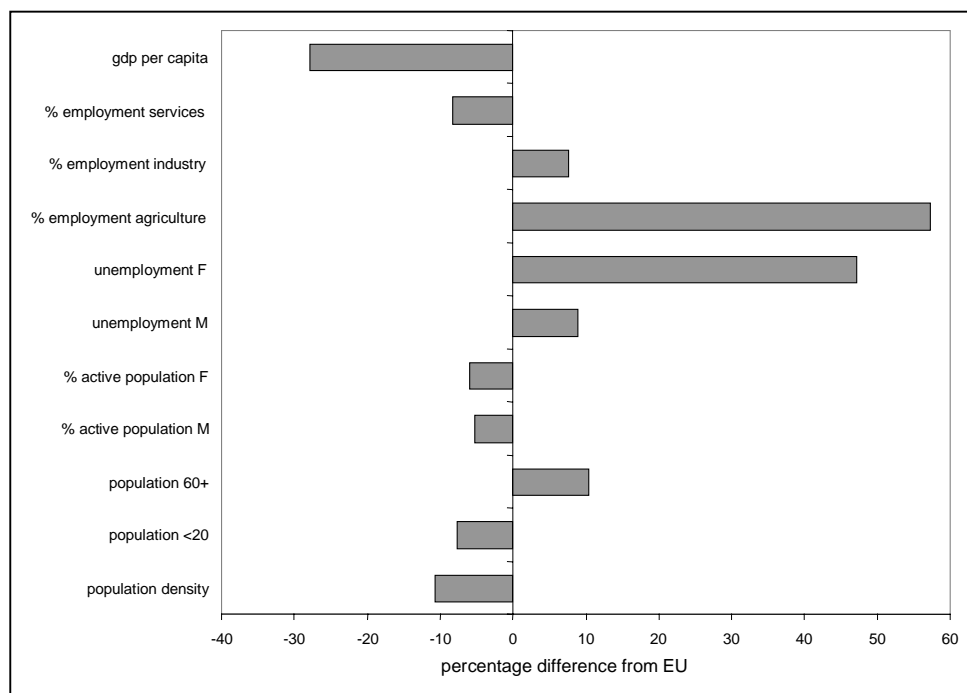


Figure 6: Socio-economic characteristics of EU regions (NUTS 2) with a population decline, 1990-1995

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## Possible implications of a declining population

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The prospect of a declining population may have several consequences. In general, this may concern unfavourable effects, such as the problem to maintain a sufficient and adequate level of services at the subnational level or the question how to deal with a downturn in economic production. On the other hand, a population decline in high density regions may be helpful in remedying congestion problems or a regional population loss could help to improve, at least partially, the unfavourable situation of high unemployment. This latter, however, does not necessarily imply that the socio-economic situation in those regions would improve significantly. In fact, the contrary is more likely

to occur. Since shrinking regions tend to face an outflow of highly skilled young people, it will be even more difficult for these regions to improve the economic situation.

Moreover, as regions with a population loss are inclined to have relatively high proportions of the elderly, also the consequences of ageing will be felt strongly in those regions. Ageing for instance will no doubt have a bearing on the financial aspects of pension schemes, and health expenditures are likely to increase significantly, as health care consumption by the elderly is well above average.

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## Eurostat's regional population scenarios

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Eurostat's regional population scenarios, compiled in 1997 with the assistance of the Netherlands Interdisciplinary Demographic Institute and Statistics Netherlands, concern 204 regions of the European Union at the so-called NUTS-2 level and cover the period 1995-2025. All scenarios project the population at 1 January by sex and single years of age up to the age group of 90+. The scenarios are based on key assumptions on fertility, life expectancy, international and internal migration and results are consistent with the national population scenarios produced in 1996, which cover the period 1995-2050.

Three scenarios were prepared: a baseline, low and high scenario. The low and high scenarios can be considered as plausible extremes with respect to both population growth and regional imbalances. The low

scenario describes a demographic future in which current low fertility levels will persist, life expectancies will hardly increase, total net migration will drop by 50 percent, and regional imbalances will be high. In the high scenario population growth will be high as a result of a recovery of fertility levels, strongly increasing life expectancies and an increasing, and therefore high net inflow of migrants. Furthermore, regional imbalances are assumed to be low. The baseline scenario describes a continuation of current trends.

More detailed descriptions of the assumptions used can be found in Eurostat's series Working Papers (see list below); comprehensive statistical information is available by means of a CD-ROM and by consulting Eurostat's database NewCronos.

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## Further reading

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- De Jong, A (1998), Long-term fertility scenarios for the countries of the European Economic Area. Eurostat Working Paper, 3/1998/E/n° 17.
- De Jong, A. and H. Visser (1997), Long-term international migration scenarios for the European Economic Area. Eurostat Working Paper E4/1997-6.
- Eurostat (1997), Beyond the predictable: demographic changes in the EU up to 2050. Statistics in Focus. Population and social conditions, n° 7/1997.
- Eurostat (1999), Regional population ageing of the EU at different speeds up to 2025. Statistics in Focus. Population and social conditions, n° 4/1999.
- Van Hoorn W. and J. De Beer (1998), Long-term mortality scenarios for the countries of the European Economic Area. Eurostat Working Paper, 3/1998/E/n° 8.
- Van der Gaag, N. E. Van Imhoff, and L. Van Wissen (1997), Long-term internal migration scenarios for the countries of the European Union. Eurostat Working Paper E4/1997-5.
- Van Der Gaag, N., L. Van Wissen, E. Van Imhoff, and C. Huisman (1999), National and Regional Population Trends in the European Union, 1975-2025. Eurostat Working Paper 3/1999/E/n°8

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