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Deliverable 5
Reference scenarios

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1. Overview of the projection methodology and indicators

1.1 Simulations and status quo projections – concepts and terminology

There is a considerable confusion on the terminology used to label the output of population dynamics models (Kupiszewski, Bijak and Nowok, 2008). Full discussion of the terminology is beyond the scope of this report, however for the sake of clarity of communication we propose a certain coherent set of terms, following Kupiszewski (2002).

Typically we feed the population dynamics model with:

- Initial population, including its structure(s) – a minimum is population by age and sex, but the main limit in defining the initial structures of population is the availability of data.
- Benchmark rates of demographic events, usually at least birth rates, death rates and emigration rates, plus immigration numbers, all by age and sex.
- Assumed scenarios of the change of the rates listed above.

How we call the results of the model depends on the characteristics of the scenarios of changes. The broadest category of the results is labelled the simulation of population. We will get it when we place no limits on the scenarios of the change of the demographic rates. Simulations are very handy in what-if analysis. For example they allow for answering such questions as: what would the population of Germany look like in 50 years if there were no migration in future? Or how would increase in fertility rate to 2.1 in the coming 10 years and its stabilization thereafter, *ceteris paribus* other components, impact population numbers and structures. Or what would happen if 50% of all internal migrants in a country migrated to the capital city of this country? Obviously we may simulate even most improbable scenarios, such as, for example, the lack of international migration.

A very specific and perhaps the most popular simulation of population is the population forecast. This is such a simulation in which a researcher assumes the most likely, in his view, future changes of the rates of the demographic events. We may also conduct a population projection, that is such a simulation in which the demographic rates remain at the level observed at the start.

1.2 Three reference simulations

For the analytical purposes we prepared a projection of population and labour force and two simulations, all three covering the period of 45 years from 2005 until 2050. In the projection, further called the *Status Quo* simulation or the *Status Quo* scenario, all sex and age-specific rates characterising the intensity of demographic events as well as the labour force participation rates remain constant over the projection time on the level observed in 2005. The two other population simulations assume constant fertility, mortality and activity rates, the same as used in the projection, but different migration scenarios: the first one assuming there is no migration at all (the *No Migration* simulation) and the other one, labelled the *No Extra-Europe Migration* simulation, assuming there is no international migration from the outside of the ESPON countries while internal and international migration within the ESPON space remain constant as in the *Status Quo* simulation. Further on we will refer to these three simulations as the reference simulations or the reference scenarios.

The projection allows for the assessment of the consequences of retaining the existing patterns of mortality, fertility and migration over time. The two other simulations, compared with the *Status Quo* simulation, allow for the assessment of the impact of all migration on population and labour force dynamics and for the assessment of the impact of international migration from the outside of the ESPON space. Moreover, the results of the reference scenarios can be used as a base to assess various regional and policy scenarios (see Deliverable 7).

1.3 The MULTIPOLES projection model

The MULTIPOLES model (*MULTIstate POpulation model for multiLEvel Systems*) used to produce the reference scenario simulations is a supranational, multiregional, hierarchical cohort-component model. It allows for simultaneous projections and simulations of regional and national populations and labour forces by country, region, age and sex. A full specification of the model is given in Deliverable 4.

The model follows Rees' idea (Rees, Stillwell and Convey, 1992, Rees 1996) to handle migration on three levels: internal migration, international intra-system migration and international extra-system migration. In the MULTIPOLES version used in DEMIFER, the two former are handled using emigration rates, the latter – using emigration rates and immigration numbers, as rates for the "rest of the world" are impossible to estimate. Such a structure is particularly suitable for the modelling of large population systems, for which data quality and availability varies substantially. The model has been developed by D. Kupiszewska and M. Kupiszewski in the School of Geography of the University of Leeds (Kupiszewski and Kupiszewska, 1998) and the Central European Forum for Migration and Population Research (Kupiszewska and Kupiszewski, 2005).

The model, developed since mid 1990s, has been substantially modified to meet the requirements of the DEMIFER project (see Deliverable 4). In DEMIFER, the MULTIPOLES option with twenty one 5-year age groups (the last half-open one is 100+) was used. The model requires the following data:

- population at the start of the simulation (by region, sex and 5-year age groups up to 100+);
- mortality (mortality rates by region, sex and 5-year age group);
- fertility (fertility rates by region and 5-year age group 15-49);
- internal out-migration (rates by origin and destination region, sex and 5-year age group;
- emigration (rates by region, sex and 5-year age-group);
- percentage distribution of emigrants from each origin country among the destination countries (including the Rest of the world), by sex;
- distribution of immigrants arriving to each country from the other countries of the system among the destination regions, by sex;
- annual number of immigrants from the Rest of the world arriving to each country;
- share of males among the immigrants from the Rest of the world, by destination country;
- age distribution of immigrants from the Rest of the world, by destination country and sex;

- distribution of immigrants arriving to each country from the Rest of the world among the destination regions, by sex;
- labour force participation rates by region, sex and 5-year age group (15-75+).

1.4 Indicators

In order to measure the impact of migration on the age composition of population and labour force, we proposed four indicators. The first one is the *old-age dependency ratio* (ODR). Two others: the *economic old-age dependency ratio* (EODR) and the *labour market dependency ratio* (LMDR) were defined and used previously in a study by Bijak et al. (2005). The fourth one, the *very-old-age dependency ratio* (VODR), was proposed to assess the burden of the potential long-term care need on working population.

ODR is defined as the ratio of population aged 65 and more to population in the age group 15-64 years, multiplied by 100. This is a purely demographic indicator which gives us the number of individuals in the retirement age per 100 persons in the economic activity age. An increase of this indicator tells us that more elderly people will have to be supported by the same number of people in the economic activity age.

Demography itself is a fundamental driver of the dynamics of the labour markets. However, it does not take into account the other component – the labour force participation. Two measures that do take account of the economic activity of population are the *economic old-age dependency ratio* and the *labour market dependency ratio*. EODR is defined as the ratio of the economically inactive population at the retirement age (i.e. 65 years or more) to the whole active population aged 15 years or more, multiplied by 100 as in the case of ODR. This measure tells us about the burden of inactive pensioners on the entire working population, and may be suitable for the assessment of the sustainability of the pension systems. LMDR is defined as the ratio of the whole economically inactive population to the whole active population. This indicator shows the overall economic burden of the inactive population on the labour market. The LMDR value depends not only on the size of the retired population, but also on the labour market behaviour of the young people in educational institutions and those in working age, who may or may not be on the labour market.

Finally, *very-old-age dependency ratio* is defined as the population at the age 75+ to total economically active population aged 15+. It gives us the proportion of population in the age when the needs for long-term care increase to the total working population. Obviously it defines the potential demand rather than actual demand for care services.

2. Data, assumptions and estimates

Taking into account that the quality of the results of the simulations is dependent on the quality of the input data, data collection and estimation was a very important part of the scenario development work. The majority of the data needed to produce the reference scenarios were collected from the Eurostat database[1]. The gaps were filled using the data provided on the websites of national statistical institutes (NSIs) or by contacting the NSIs directly. In the case of the labour force participation rates, data from the ILO database were used as well.

In order to tackle the problem of the statistical variation of the values of the demographic and activity rates, we have averaged the data over several years, as indicated below (2003-2006 or 2004-2005). These averaged rates were assumed as the *status quo* values (kept constant in all the projection periods in the *Status Quo* scenario).

2.1 Population

The starting point of the reference simulations was 1 January 2005, therefore data on the population of all 287 NUTS2 regions on 1 January 2005 were needed, in disaggregation by sex and 5-year age group up to 100+. In addition, data on population on 1 January 2003-2007 were needed in order to estimate mid-year populations 2003-2006.

The procedure to prepare data on population by region, sex and 5-year age group (to 100+) for 1 January 2003-2007 was as follows. Data by region, sex and age as well as by country, sex and age were downloaded from the Eurostat database (from the two parts of the database). Missing and inconsistent data were identified. We have used a variety of methods to fill the gaps and remove inconsistencies. Additional data were collected from the websites of national statistical institutes and from the Human Mortality Database (HMD). The estimates for the UK were provided by Prof. Phil Rees from the University of Leeds. An iterative proportional fitting procedure (IPF) was used for the cases where we had marginal totals and some initial indication of the regional distribution. Altogether, some corrective action was required for 20 out of 31 countries.

Mid-year populations in 2003, 2004, 2005 and 2006 were needed for the calculations of demographic rates and labour force participation rates. They were calculated using the estimates of population 1 January 2003-2007 described above, by taking the average of the populations at the beginning and at the end of the year.

2.2 Mortality

The input data concerning the mortality component are defined in the MULTIPOLES model in terms of annual mortality rates (per 1000) by sex, for all regions and 5-year age groups (up to 100+, based on the age at the last birthday), for all the projection periods. We have downloaded the relevant data on deaths from the Eurostat database and calculated the regional

[1] http://epp.eurostat.ec.europa.eu/portal/page/portal/statistics/search_database).

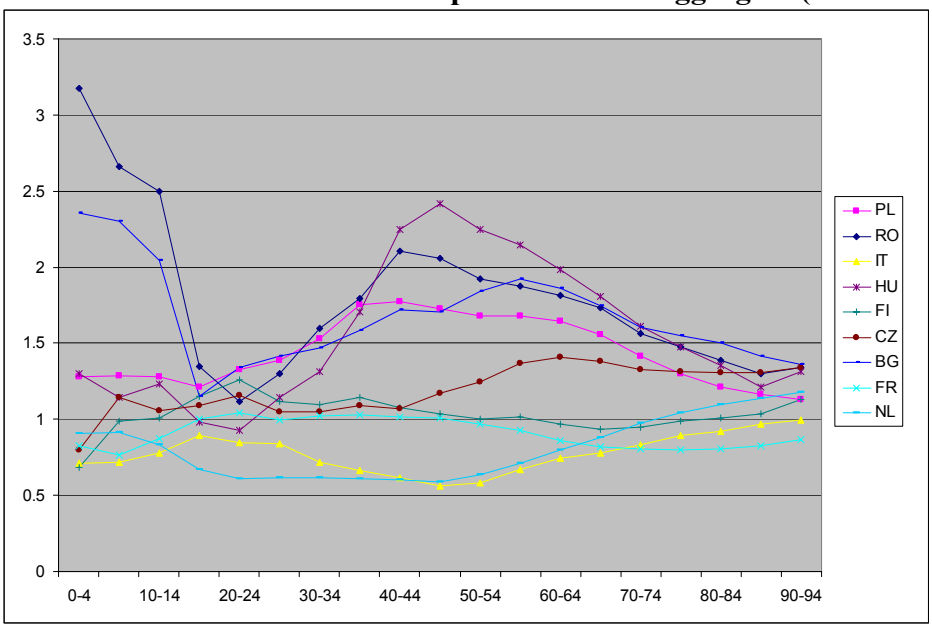
age-specific mortality rates for four years 2003-2006. We have also downloaded the numbers and calculated age-specific mortality rates for the 31 countries.

The completeness of data on deaths in the Eurostat database was far better than for the data on population stocks, although a lot of data processing was necessary in order to assemble all the data. On the country level, data were missing only for the highest age groups (90+) in Malta in 2006. On the regional level, there were no data for the German regions Brandenburg-Nordost and Brandenburg-Südwest (but the data were available for the whole Brandenburg) and for all the Danish NUTS2 regions (except Denmark 2006). For the regions of Romania, data for the highest age groups were missing for 2003-2005, but were available for 2006. For a number of countries there were inconsistencies between regional data and country level data (the sum over the regions gave a different number of deaths than according to the country-level data). These inconsistencies were investigated by checking the websites of national statistical institutes. As a result, corrections were introduced into regional data for Hungary, Portugal 2005 and Slovakia 2006.

The main difficulty in the case of mortality data was the high level of statistical variations in the values of age-specific rates for the age groups in which the annual number of death events is small. Obviously, the smaller the region the larger the number of age groups affected by this problem.

A detailed investigation of data revealed the existence of a variety of shapes of age profiles of mortality rates, with significant differences among countries and even between the regions. In order to illustrate the differences, we have calculated the ratios of the country mortality rates (sex and age-specific) to the rates calculated for the aggregate of the 31 countries. The results for the selected countries are presented in Figure 1. On this figure, the Europe aggregate is represented be a straight line at the level of 1. The points above this level reflect mortality higher than for the Europe aggregate, while those below 1 reflect lower mortality.

Figure 1. Ratios of the age-specific mortality rates of males in the selected countries to the rates observed in the 31 European countries aggregate (2003-2006 average).

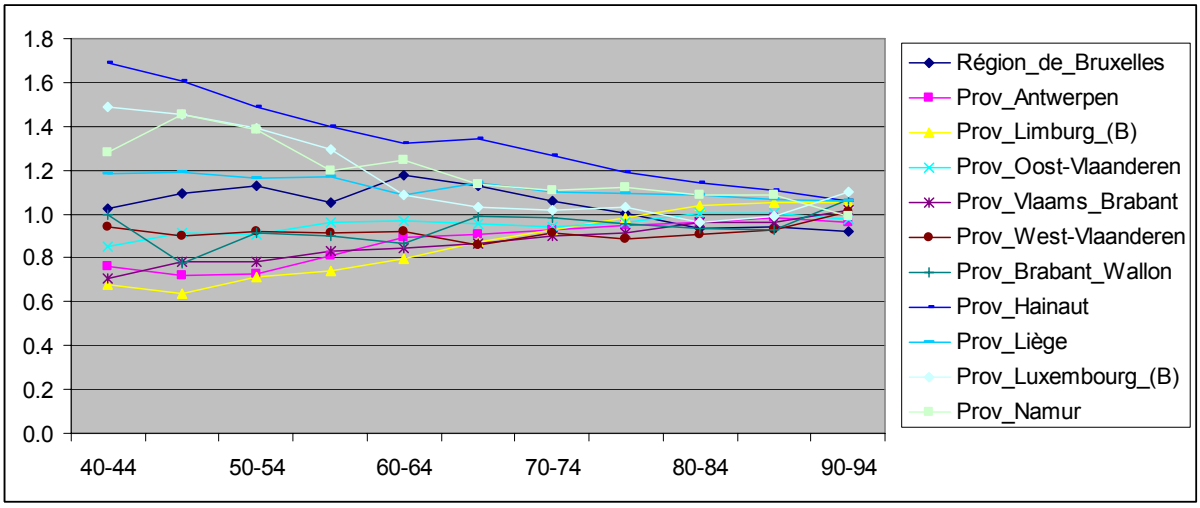


BG – Bulgaria, CZ – Czech Republic, FI – Finland, FR – France, HU – Hungary, IT – Italy, NL – Netherlands, PL – Poland, RO – Romania.

Source: own calculations based on data specified in the report.

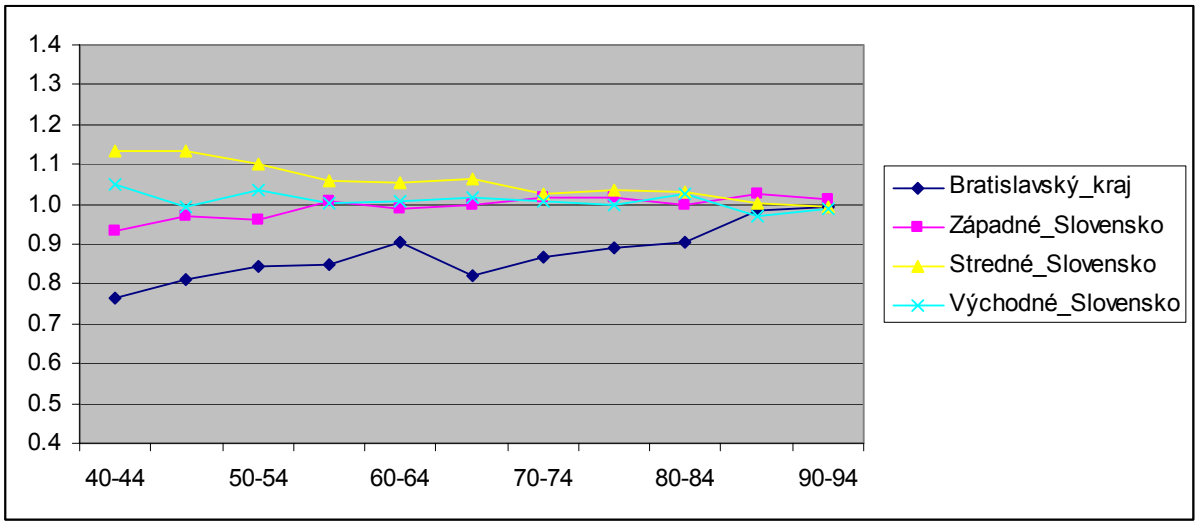
For the regions, the ratios of the regional sex and age-specific mortality rates to the rates observed in the respective countries were calculated. Examples of regional differences are given in Figures 2 and 3, for Belgium and Slovakia respectively.

Figure 2. Ratios of the regional age-specific mortality rates of males to the average rates observed in Belgium (2003-2006 average).



Source: own calculations based on data specified in the report.

Figure 3. Ratios of the regional age-specific mortality rates of males to the average rates observed in Slovakia (2003-2006 average)



Source: own calculations based on data specified in the report.

Taking into account the problem of statistical variations and the regional differences, we have adopted the following methodology to prepare the mortality data for the reference scenarios. Firstly, sex- and age-specific mortality rates of four small, one region countries were estimated using the more stable data of other countries with the similar age patterns. The "borrowed" rates were inflated or deflated to give the observed level of deaths (total over the age groups). In particular: Lichtenstein mortality rates were estimated using the rates for Switzerland, Luxembourg rates for the ages 0-45 were based on the rates for Belgium, Malta 0-45 based on Italy and Island 0-50 based on Sweden. The *status quo* mortality rates for the remaining countries were left unchanged compared to the observed 2003-2006 average.

In the second step, we have tackled the regional rates. For the age groups with a large number of death events, the observed rates were sufficiently reliable and taken without changes. For the younger age groups (the age range differing between the countries and sexes, e.g. 0-45 for males in Belgium), the age profile of the country was assumed and adjusted to give (when applied to regional population numbers) the observed number of deaths in the considered age range in the region (for each sex separately).

Finally, we dealt with the rates for the two highest age groups, for which the rates calculated from the reported data are not very reliable (both regional and national ones). The rates for the age group 100+ were assumed to be the same as those for 95+ (this was necessary due to a very small size of population at risk and hence unreliable estimates of mortality). The rates for the age group 95-99 and 100+ were assumed to be equal to the corresponding European averages (for males and females separately).

The rates for the Danish regions were estimated in a similar way using the sex and age-specific rates for Denmark and the data on the number of deaths by region and sex.

2.3 Fertility

Data on births by region and age of mother (in completed years) were collected for 2004 and 2005. Based on these data and on previously collected data on population, occurrence-exposure rates for 2004 and 2005 were calculated and averaged. The resulting rates were used in the reference scenarios as age and region specific fertility rates.

The main source of the data was the Eurostat database. In some cases we used other sources:

- For Belgium, we obtained the required data on the number of births by mother's age directly from the Belgian statistical office, courtesy of Mr Michel Willems and Mr Nicolas Perrin.
- For Denmark, the data on births by age group or age-specific fertility rates were missing for NUTS regions for 2004 and 2005, but were available for 2006. We estimated the rates for 2004 and 2005 based on the 2006 rates applied to 2004 and 2006 populations and adjusted to total number of births in Denmark in 2004 and 2005.
- We had to estimate the distribution of births by age in two German regions: Brandenburg-Nordost and Brandenburg-Südwest, for which the distribution for Brandenburg was used as the age pattern and the regional age distributions were shifted up or down to match the total number of births in each of the two regions.
- The missing number of births in the last two fertile age groups (40-44 and 45-49) in the regions of Romania in 2004 were estimated by applying the national age distributions.
- For the UK, we used the estimates of the number of births kindly provided by Prof. Phil Rees, which are based on ONS data.

Births from mothers younger than 15 years were added to the births in the age group 15-19. Similarly, births from mothers 50 and over were added to the births in the 45-49 age group. If there was a record of births from mothers whose age was unknown, they were added proportionally to the birth counts in the age groups, in other words we assumed that the probability of not recording the age of mother is the same in all the age groups.

In addition to the data on fertility rates, information on the share of males in total births was required for each country. According to the UN data (United Nations, 2009) these shares are very similar across all the European countries. The value of 0.514 (the average of the UN data for the 31 ESPON countries) was assumed for the proportion of males in total births in all the countries and regions in the reference scenarios.

2.4 Internal migration

Internal migration data describe the migration flows between NUTS2 regions within each out of 23 countries. The remaining eight countries - Cyprus, Estonia, Iceland, Liechtenstein, Lithuania, Luxembourg, Latvia and Malta – comprise one NUTS2 region. In the MULTIPOLES model, the internal migration component is modelled through internal out-migration rates specified for each combination of origin and destination NUTS2 region, sex and 5-year age group (the ODAS array, age to 100+).

The *status quo* values of the rates were obtained using the 2006 estimates prepared by Dr Peter Boden within Deliverable 6, rescaled to 2005. The details of the data and methods used to derive 2006 estimates are presented in Deliverable 6. In a nutshell: the calculations were based on the data on the flows between each pair of regions within the country (the OD matrix) and out-migration numbers by sex and age (OAS data). The 2006 data were collected from Eurostat and national statistical institutes, or taken from the most recent data available (2005 for Italy, 2001 for Greece and Portugal). For the UK, additional estimations were needed. The rates for the 5-year age groups above 85 were assumed to be equal to the rates for the age group 85+.

Using the available 2004-2006 data on total flows within each country, P. Boden has also calculated the annual rate of the change of the internal migration rate, which we have used to rescale the 2006 estimates to get the 2005 estimates of the ODAS array.

2.5 International migration between the 31 ESPON countries

The MULTPOLES model calculates the size of international flows for each OD pair of NUTS2 regions, age group and sex. The calculations are done by applying emigration rates to regional populations in the given age group (to 100+) and sex. The array of ODAS emigration rates for all NUTS2 regions is estimated within the model using the following information provided in the input files: overall emigration rates for each region (the OAS array), the distribution of migrants from each origin country by destination country (including the Rest of the world), and the distribution of immigrants to each country by destination region.

Usually, the main difficulty in estimating migration flows is the fact that the numbers concerning the same (at least in theory) flow, reported by different countries, are not the same, i.e. the number of persons who moved from country A to country B registered in the immigration statistics of country B is different than the one registered in the emigration statistics of country A. For the European countries the problem was discussed in detail by Kupiszewska and Nowok (2008) and more recently by Kupiszewska *et al.* (2010). Until recently, there was no good solution to the problem, as far as the estimation of a consistent data set is concerned. The rescue came from the MIMOSA (*Modelling of statistical data on*

migration and migrant populations) project, completed in December 2009[2]. Within MIMOSA, the 2002-2007 arrays of flows between 31 European countries were estimated, in disaggregation by sex and 5-year age group (up to 85+). There is no doubt that further work is needed to improve the estimates, but at the moment these are the only complete and consistent estimates that exist for the European countries.

MIMOSA estimates were the main source of data for preparing the estimates of international migration flows for the reference scenarios. However, MIMOSA did not provide any information on the regional level. In order to fill this gap we used the regional data on total immigration and emigration, in disaggregation by sex, obtained from Eurostat or downloaded from the websites of the NSIs. Eurostat data were available for some or all years 2001-2004, while the NSI data were more recent, typically for the years 2003-2006. Eurostat data were used for eleven out of 23 multiregional countries: Austria, Belgium, Switzerland, Czech Republic, Spain, Finland, Netherlands, Norway, Poland, Portugal (for immigration only) and Slovakia. Data from the NSI websites were used for seven countries: Germany, Denmark (for Denmark, we have aggregated the data available on NUTS3 level), Hungary Italy, Romania, Sweden and Slovenia. Data for the UK were provided by P. Rees. Both the Eurostat data and the NSI data concerned overall flows to or from abroad, with intra-Europe migrants and extra-Europe migrants counted together. No information on the regional distribution of international migration flows was available for Bulgaria, France, Greece and Ireland.

The procedure to prepare the estimates required by DEMIFER was as follows. We have used MIMOSA estimates to calculate the number of emigrants from each country by age and sex. The averages of the 2002-2006 numbers were used for the *Status Quo* scenario. They were distributed among the regions using the regional shares calculated from the Eurostat/NSI data on the total emigration from each region to anywhere abroad. By dividing the obtained numbers by regional populations, we arrived at the OAS array of regional emigration rates. For the countries were the information on the regional distribution of emigrants was missing (Bulgaria, France, Greece, Ireland and Portugal), it was assumed that the emigration rates for each region are the same as for the whole country. The highest age group in the MIMOSA estimates was 85+, and we have assumed that the rates for the 5-year age groups above 85 are the same as for 85+.

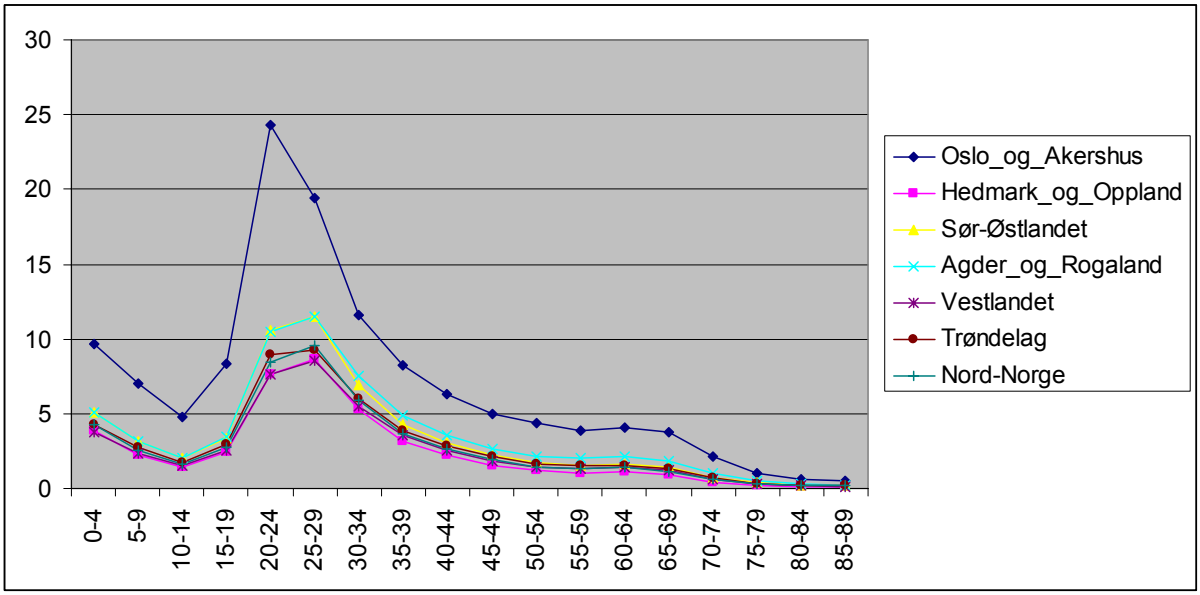
The percentage distribution of migrants from each country among the destination countries was calculated using MIMOSA data (again, the average over 2002-2006 was taken). The share of immigrants arriving to each destination region within the country was calculated using the Eurostat/NSI data on the regional distribution of all immigrating persons (from within Europe and from the Rest of the world) described above. For the four countries for which there was no information about the regional distribution of immigration flows, the distribution was modelled within MULTIPOLES, in proportion to the regional populations.

A similar method was used to prepare the input for the *No Extra-Europe Migration* scenario. The difference is that only the flows to the European countries were taken into account, while the flows to the Rest of the world were ignored.

As an example, emigration rates of males in the regions of Norway are presented in Figure 4.

[2] http://mimosa.gedap.be/

Figure 4. Emigration rates by age for males in Norway in the *Status Quo* scenario.



Source: own calculations based on data specified in the report.

2.6 Extra-Europe migration

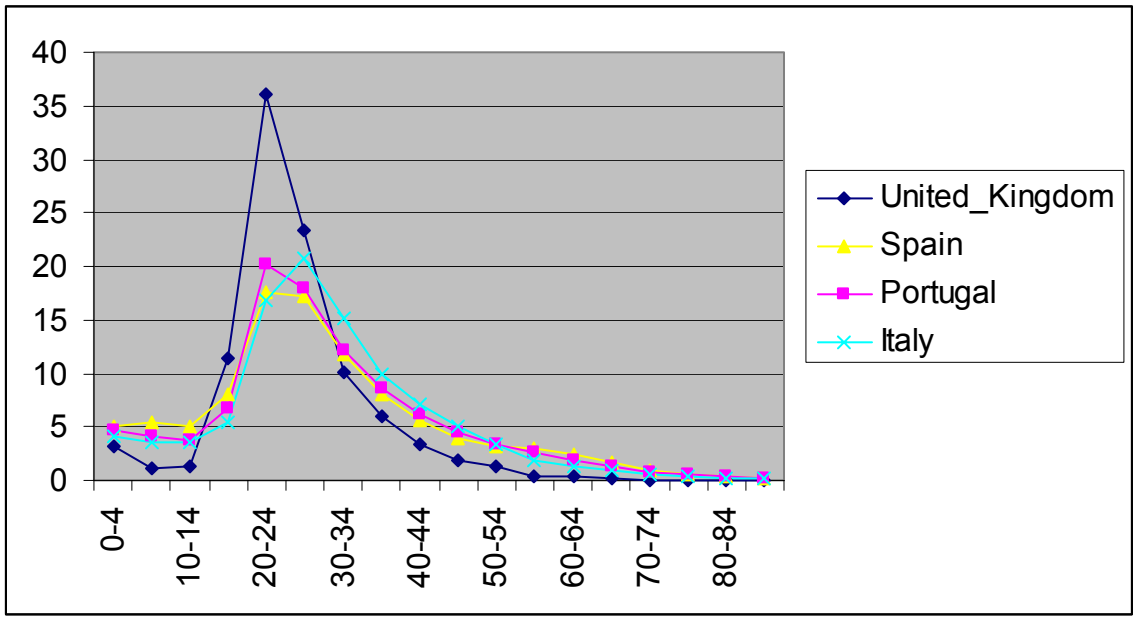
For modelling the extra-Europe migration in the *Status Quo* scenario, two types of information are required for each region: data on emigration rates to the Rest of the world and data on immigration numbers, both in the disaggregation by age and sex. Emigration rates to the Rest of the world are calculated in MULTIPOLES using the data described in the previous section (in particular using the information on the share of migrants moving to the Rest of the world). For immigration, the following data are required:

- average annual number of the extra-Europe immigrants arriving to each country,
- share of males among the extra-Europe immigrants,
- age distribution by 5-year age group, up to 100+, for each sex,
- distribution of the extra-Europe immigrants among the destination regions of each country, for each sex.

The required data, except the regional distribution, were prepared using the MIMOSA estimates. As for the intra-Europe international migration, the average of 2002-2006 numbers were assumed for the *Status Quo* scenario. As an example, the age distributions of female migrants from the Rest of the world to Italy, Portugal, Spain and the UK are shown in Figure 5. No information was available on the distribution of migrants above the age of 85 among the 5-year age groups. We have assigned them to the 85-89 age group, so we have assumed that there are no migrants from outside Europe who are 90 or more years old.

The *status quo* regional distribution of immigrants from the Rest of the world was assumed to be the same as the distribution of all immigrants, thus the same as the distribution of the intra-Europe immigrants.

Figure 5. Age distribution of the extra-Europe female immigrants to selected European countries in the *Status Quo* scenario.



Source: own calculations based on data specified in the report.

2.7 Labour force participation

In order to model labour force resources, MULTIPOLES requires data on activity rates by sex and 5-year age group (15-75+) for all the regions. As no data at this disaggregation level were available, the estimates had to be prepared. Some regional data on the number of economically active persons are available for 10-year age groups, however these data, originating from the Labour Force Survey, have large statistical variations and were not considered suitable for the use in the simulations. Instead, it was decided to prepare the regional estimates using the country level data on activity rates by age and sex combined with the regional data on the total number of the economically active.

As the first step, the data on the activity rates on the country level and the size of active population in the regions in the years 2003-2008, estimated from the results of the Labour Force Survey, were collected for both sexes from the Eurostat database. For the age groups up to 65 the data on the activity rates were fairly complete with only Liechtenstein and a few additional cells missing. The availability of data for the higher age groups was patchy. The missing information on 2004 and 2005 rates was estimated in various ways, in particular using the data from the ILO or assuming the rates from other years. For Liechtenstein, the activity rates observed in Switzerland were assumed.

In the next step, the activity rates for the regions were estimated (separately for each sex) using the country rates adjusted in such a way that the observed total number of the economically active in the region is obtained when the rates are applied to the regional populations. This was done separately for 2004 and 2005 and the averages of the 2004 and 2005 estimates were used as the *status quo* values.

3 Brief characteristics of regional population and labour force in 2005 and long term consequences of existing demographic and labour market trends

3.1 Regional population and labour force in 2005

Before we analyse the impact of migration on regional population and labour force, a brief characteristics of the situation in 2005 and the consequences of long term maintenance of demographic and labour force patterns observed in 2005 will be offered.

Ageing is a universal process in Europe, but there are differences in the level of its advancement across the regions. The lowest value of the old-age dependency ratio, among the considered European regions in 2005 (see Table 3 and Map10 in Appendix D), was observed in Flevoland (the Netherlands) and equalled 12.7. The highest one, of 42.4, occurred in Liguria (Italy). The difference is over threefold. The ODR value denotes the number of persons at the age 65 or more per 100 persons at the age 15-64 and can be considered as a simple measure of ageing (however it ignores the size of the youngest sector of population). In general, lower values of ODR were seen in Northern (Iceland, Ireland, Oslo) and Central Europe (north-western Poland, Slovakia, Střední Cechy surrounding Prague, central and north-eastern Romania, Bucharest). Low ODR values were also observed in Inner London, Île de France (Paris), Utrecht and Noord Holland (Amsterdam). From the studies conducted in a finer spatial scale (Rees, Kupiszewski, 1999), we know that relatively young population lives in suburban areas of large cities and metropolis (as demonstrated in the case of Prague and its hinterland, where boundaries of NUTS2 regions disclose the structure of population in the metropolitan city and its surrounding). The highest values of the ODR were observed in a belt going from central Portugal through northern Spain, north-west and central Italy to Greece. Isolated regions with high ODR values were in Germany, mostly in the former GDR and in Saarland and Rheinland-Pfalz, as well as in south-western England and central Sweden. Generalising this picture one may expect increasing ODR values going from the North to the South and from the East to the West.

Except ODR, all analysed dependency ratios depend on economically active population aged 15+, which stands in the denominator. In particular, the *very-old-age dependency ratio* was constructed to inform on the number of the very old old (defined as persons aged 75 and over) per 100 economically active persons. As people in that age may require more or less permanent institutional care, the indicator tells us what would be the burden of very-old-age related care on the working population. In 2005 the highest values of the VODR were observed in Corsica (32) and Liguria (31.9), the lowest in Flevoland (7.2) and in Lichtenstein (8.6) (see Table 3 and Map 14 in Appendix D). Lower values of the indicator are in the north–eastern part of Europe, with VODR below 10 scattered as isolated regions in Iceland, Ireland, the Netherlands, Poland, Slovakia and the Czech Republic. High values, over 20 persons aged 75+ per 100 economically active persons, concentrate in Spain, France and Italy, with the outcrops in central Sweden, south-western England, Portugal, Greece and Bulgaria.

Even this brief analysis of the ODR and VODR values in the European regions in 2005 shows that there is no one European demography, instead there are various regional demographies.

3.2 Long term consequences of existing demographic and labour market trends (*Status Quo* projection 2005-2050)

The *Status Quo* projection calculates population and labour force under the assumption that there would be no change in age, sex and region specific rates of fertility, mortality, emigration and labour force participation. Therefore, it shows the long-term consequences of the observed demographic and labour market patterns for the future population and labour force size and structure. The total ESPON population would reduce from 503.5 million in 2005 to 463.2 million in 2050, that is to 92% of the initial population. On the regional level the differentiation is substantial: out of 287 regions, 119 (41,5%) would experience a population increase and 168 – a decrease (Table 1 and Map 1, Appendix A). An increase would take place in Iceland, Ireland, most of the UK, southern and western France, southern Spain, northern and central Italy, in selected (mostly southern) regions of the countries occupying the Scandinavian Peninsula and in Austria. Notably, not a single region in Central and Eastern Europe (the new 8+2 EU member states) could expect a population increase. To the contrary: the highest decrease, by over 50%, would be expected in all the regions of Romania, except Bucharest and its hinterland – the Sud Muntenia region. An over 50% reduction in regional populations would also occur in northern Bulgaria, Opolskie and Śląskie regions in Poland and in Chemnitz (Germany). The *Status Quo* projection is not a forecast, however these results should ring alarm bells in these 11 regions as well as in 86 regions in which the population decrease would be within the range between 20 and 50 per cent.

The total labour force would drop in the *Status Quo* scenario, from 236.8 million in 2005 to 196.2 in 2050, that is to 82.8% of the initial value. The regional labour force would increase in 76 regions (26.5%) and decrease in 211 (Table 1 and Map 4, Appendix A). An increase would be observed in Iceland, Ireland, Luxembourg, England, in France along the Bay of Biscay, Pyrenees and Mediterranean, in central and northern Italy, and in isolated regions of Spain, Sweden, Norway, the Netherlands, Belgium and Greece. More worrying are the regions with the decreasing labour force. In 23 regions labour resources would shrink by 50% or more. These are: most regions of Romania and Bulgaria (in both countries: all but the capital cities and their immediate hinterland, in which the labour force decrease would also be significant but below the 50% mark), regions in the western part of the former East Germany, Latvia, and selected regions of Poland, the Czech Republic, Slovakia and Hungary. Even if we put aside the extreme cases, the decrease in labour force would be almost universal in the part of Europe from the east of the German western border down to the Adriatic coast and the Black See. Also Portugal and northern Spain could expect a decrease in labour resources.

In most cases the capital cities which constitute NUTS2 regions would be in a better position, both in terms of population change and labour force change, than the rest of the regions in a given country, but they rarely differ significantly from the surrounding regions. However the spatial scale used in the simulations was not suitable to study the demographic differences between large cities and the rest of the ESPON regions.

The changes in the population and labour size are accompanied by the changes in their age structures. The dependency ratios would increase in all the ESPON regions except Cornwall, where they were high already in 2005 and would not change significantly.

In 2005 in most of the regions (230) VODR was between 10 and 20 and in almost all (285 out of 287) it was below 30. Forty five years later the number of regions with VODR above 30

would rise from 2 to 150, with the extreme cases of VODR between 50 and 60 concentrated in southern Europe (northern Spain, Corsica, Sardinia, south-eastern Italy) and in Poland (Opolskie and Śląskie regions) (Table 3 and Map 15, Appendix D). The lowest VODR values are expected in northern and eastern Europe. The changes in the VODR values are quite dramatic and arise mainly from increased longevity and low fertility. Increase in longevity is a great and undisputable success of Europe. However, situation when the increasing number of elderly is disproportional in comparison to the increase in total population may cause problems with the provision of adequate services, especially on the regional level. There would be a need to reorganize social and medical care or in extreme cases – perhaps the entire economy, in order to cater for a large number of very old persons.

This spatial differentiation of ODR and VODR indicators demonstrates the division of Europe into a younger north-eastern part and an older south-western one.

Unless European regions undergo in future a fundamental change of demographic patterns, their populations will be profoundly affected. One of the consequences of the maintenance of the current demographic patterns would be depopulation not only of regions, but entire nations, such as Romania, Bulgaria, the Baltic States and to a lesser degree the Czech Republic, Slovakia, Hungary, Poland and Germany. Moreover, the combination of the 2005 labour force participation rates with the 2005 demographic patterns would lead in a long term to the reduction of labour resources by more than 20% in 45% of the European regions. Clearly, such levels of economic activity are untenable, especially given an increasing number of workers needed to provide elderly care.

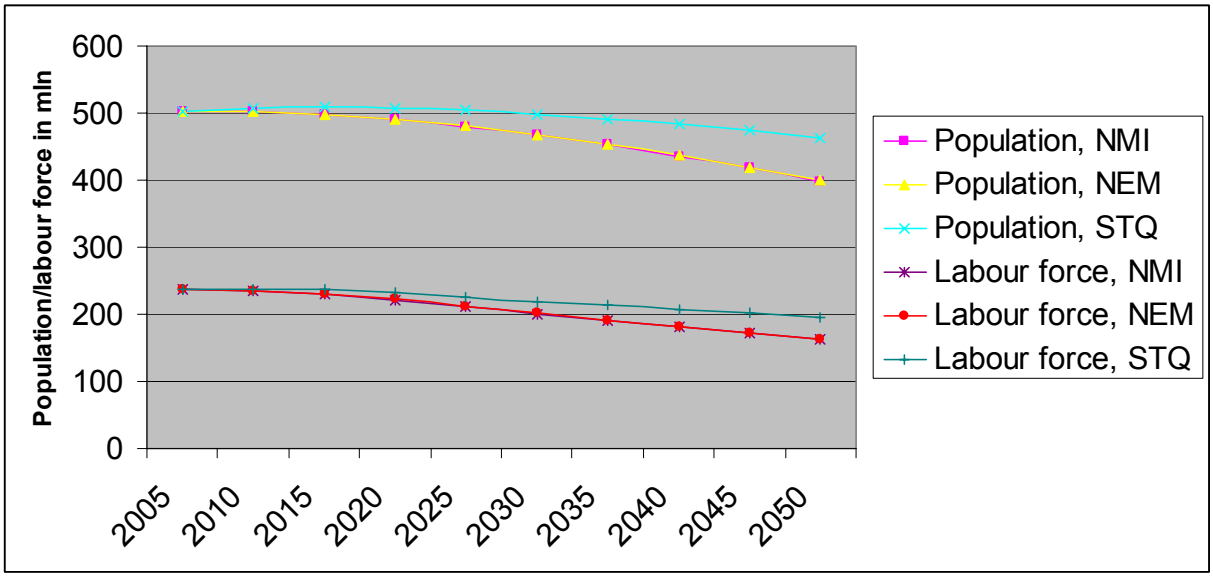
4. Assessment of the impact of components of growth and various types of migration on population and labour force development

The MULTIPOLES model provides a number of characteristics of regional and national populations in subsequent points in time (in 5-year intervals). This is a large amount of information which forces us to a very restrictive approach to the selection of the results for presentation and interpretation. Here, we examine two aspects of the impact of migration, and the extra-Europe international migration in particular, on the population development: (i) the migration-induced change of the overall size of population and labour force and (ii) the impact of migration on the change of the population and labour force age structures.

The measurement of the impact of migration on the overall population and labour force resources was conducted by a comparison of the percentage change in the population and labour force numbers obtained in various simulations. The differences in the numbers in various scenarios inform us on the role of migration in population and labour force development in various regions. In particular, using the results of the three simulations (*Status Quo*, *No Extra-Europe Migration* and *No Migration*) we were able to quantify the impact of the two categories of migration: intra-Europe and extra-Europe, and to assess their relative importance compared to the impact of the natural population change.

Population of the ESPON countries equalled 503.5 million in 2005. In the *Status Quo* projection it would decrease to 463.2 million in 2050, thus by 8%. This decrease would be much larger in the *No Migration* and *No Extra-Europe Migration* simulations: by 20.9 per cent (to 398.4 million) and by 20.6 per cent (to 399.6 million) respectively (Figure 6). Therefore, over 45 years, extra-Europe migration would generate additional 63.5 million persons in the ESPON space. In other words, in the *Status Quo* scenario there would be 16% more persons in Europe than in the *No Extra-Europe Migration* simulation. Further 1,3 million would be due to intra-Europe migration and the consequent relocation of population from regions with lower fertility to regions with the higher one and from regions with higher mortality to regions with lower mortality.

Figure 6. Population and labour force change in the *Status Quo* (STQ), *No Migration* (NMI) and *No Extra-Europe Migration* (NEM) scenarios, 2005 -2050



In the *Status Quo* scenario the labour force would drop from 236,8 million in 2005 to 196,2 in 2050. External migration would contribute 32,8 million economically active and intra-ESPON space migration further 688 thousand. As a result, 2050 population in the *Status Quo* scenario would be 20% higher than in the *No Extra-Europe* migration scenario. It is notable that the migration-induced difference in labour force is, in percentage terms, substantially higher than the overall increase in population. This observation allows us to set a hypothesis that extra-Europe migration is an efficient tool from the point of view of the provision of labour force. However, we do not know what would be the share of unemployed in this part of labour force which would be generated by the external migration.

4.1 Impact of components of growth on population dynamics

To better understand the processes of population change in individual countries and regions, it is important to look at the relative impact of natural change and the impact of various migration streams: extra-Europe migration, international migration within Europe and internal migration. This can be done in two ways. The first one is based on the analysis of the values of the components of population change in the *Status Quo* scenario. It shows that in most of the regions natural change of population (births minus deaths) has larger impact on population than migration flows. Still, in 115 regions (41%) the opposite is true. Figure 7 shows the percentage change of population due to natural change and two types of migration flows for the ESPON countries, while the results for the individual regions are presented in Appendix B. For example, population of the Netherlands would decrease by 2.9%. This decrease may be decomposed into a decrease by 7.9% through natural change, a decrease by 1.6% through net intra-Europe migration flows and an increase by 6.6% through net extra-Europe migration flows.

The approach based on the components of population change does not fully reflect the role of migration, namely it does not take into account that migration has additional indirect impact by changing natural increase. To see how population would change in the absence of migration we have run the *No Migration* scenario, and we have labelled this change as "*No migration* effect". The joint effect of international migration within Europe and internal migration (labelled "*Intra-Europe migration* effect") was calculated by comparing the percentage change of the population in the *No Extra-Europe Migration* simulation and the *No Migration* one. Finally, by comparing the results of the *Status Quo* projection, where all migrations streams are switched on, with the *No Extra-Europe Migration* simulation we could evaluate the impact of extra-Europe migration (labelled "*Extra-Europe migration* effect"). The role of the three effects in the overall population change, each of them expressed as a percentage of the population in 2005, is presented in Figure 8 (for the counties) and in Appendix B (for the regions).

In 32% of regions intra-Europe migration has a larger impact on population change than extra-Europe migration. This is true in particular in the regions of Bulgaria, Estonia, Lithuania, Poland, Romania and Slovakia, where population decreases significantly through intra-Europe migration (Figure 8). In the majority of regions in Western Europe, extra-Europe migration is more significant than intra-Europe migration and is the factor that reduces population decline or even causes an increase. Generally, out of 119 regions that would experience an increase of population, 92 would do so mainly as the result of extra-Europe migration, 22 mainly due to intra-Europe migration and 5 due to natural change. Out of 168

Figure 7. Components of population change 2005- 2050, NUTS0, *Status Quo* projection
(expressed as a percentage of the population in 2005)

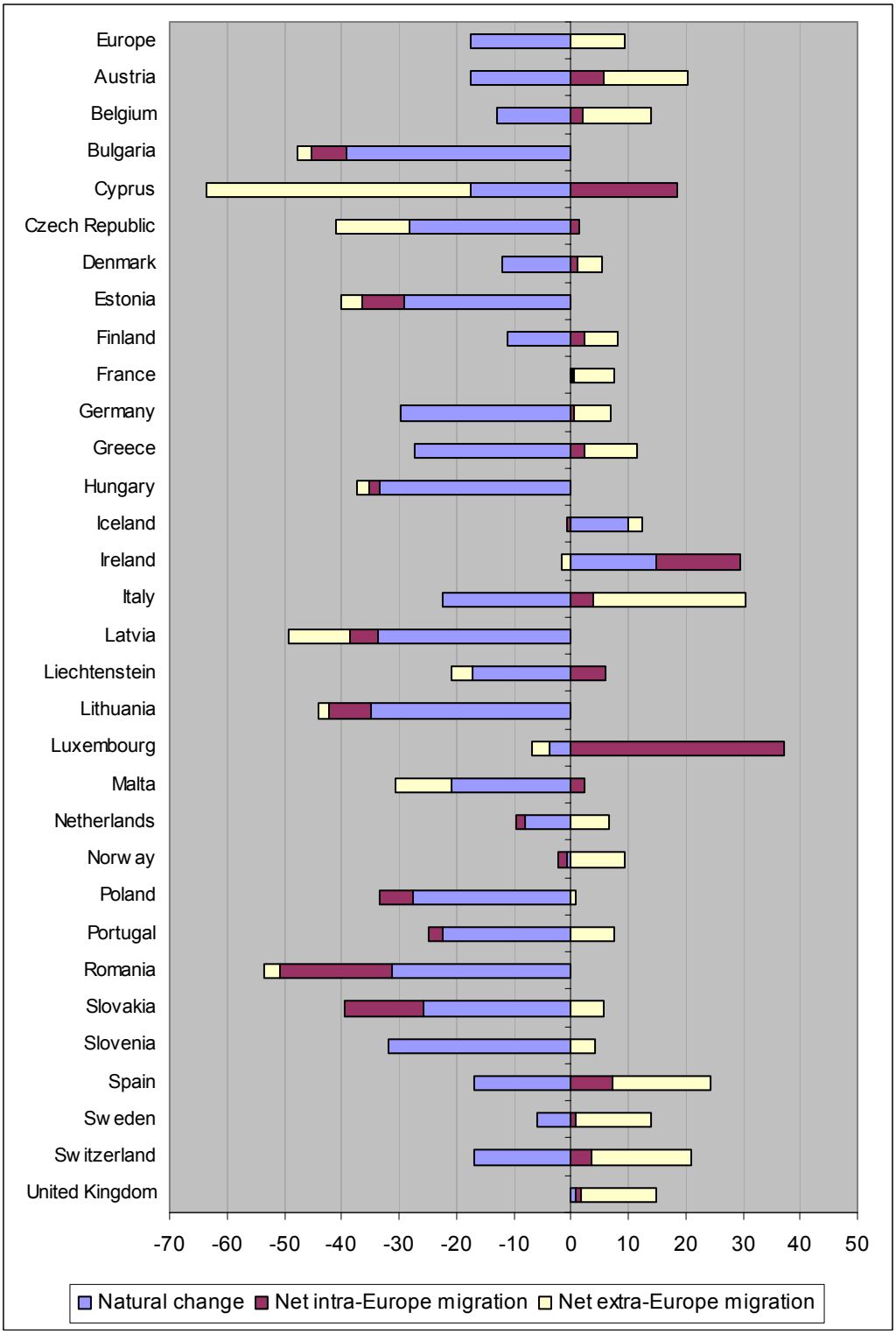
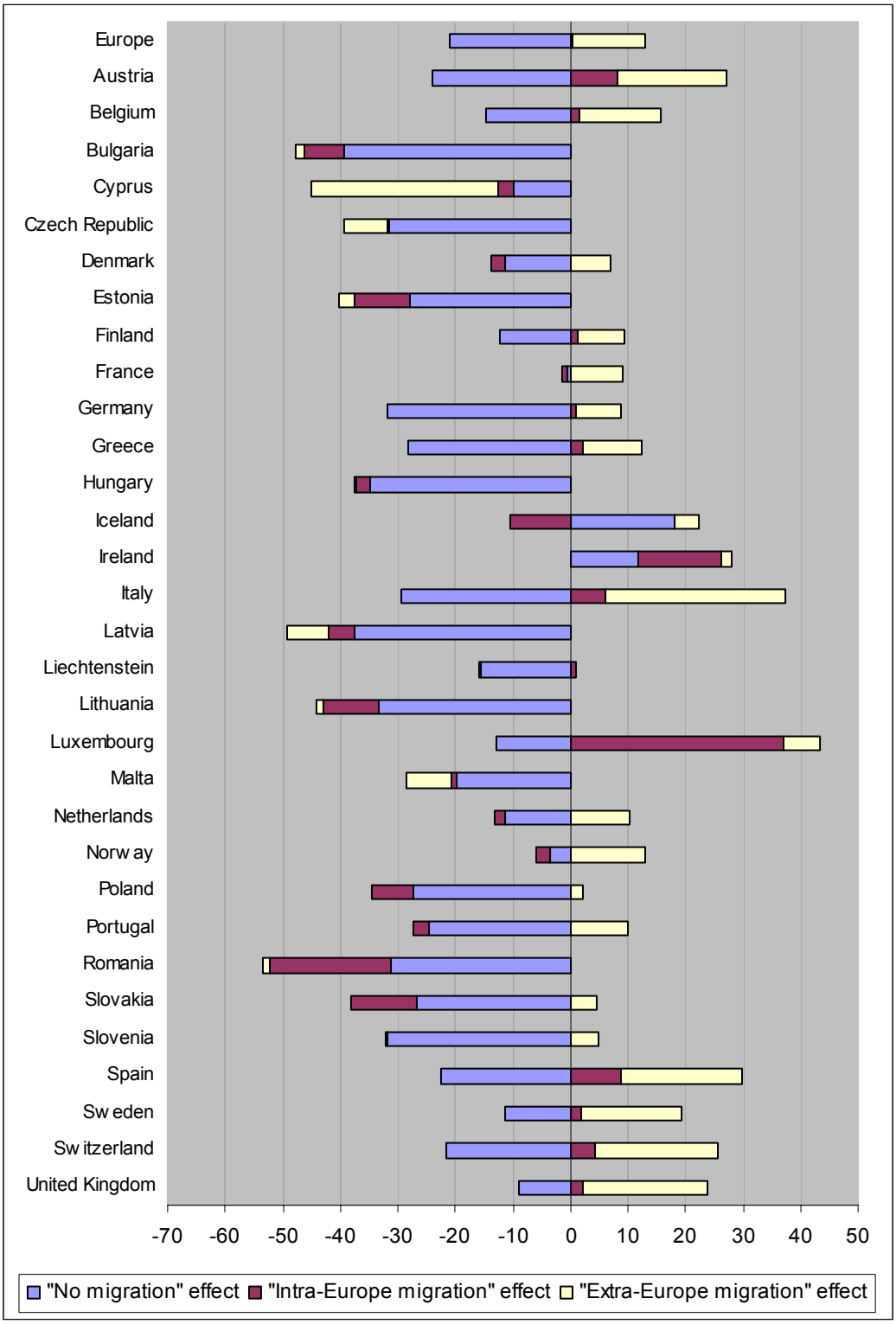


Figure 8. Impact of migration on population change 2005-2050, NUTS0, *Status Quo* projection



Notes:
No migration effect- natural population change if there were no migration;
Intra-Europe migration effect- additional population change triggered by intra-Europe migration (in the absence of extra-Europe migration);
Extra-Europe migration effect – further population change, when extra-Europe migration is present in addition to intra-Europe migration.
All the effects are expressed as a percentage of the population in 2005.

regions which would loose population, a majority (149) would do so mainly because of natural change and 18 (including 11 regions in France) predominantly due to intra-Europe migration (Appendix B).

As an illustration, we will take the example of Eastern Scotland (see Table 2 and Figure 39 in Appendix B). In the *Status Quo* scenario, population of Eastern Scotland would increase from 1934 thousand in 2005 to 2117 thousand in 2050, so by 9.5%. Natural change, calculated as births minus deaths, would be negative and equal -10.8% of the 2005 population. Total net migration would be 20.3%, including net intra-Europe migration of 8.8% and net extra-Europe migration of 11.5% respectively. If there were no migration, natural change would be -20.1%. Clearly, international migration modify natural change. Population in the scenario with intra-Europe migration is by 10.1% larger than without any migration. Extra-Europe migration generate an additional 19.5% increase. Thus, the overall migration-induced population change is in this case larger than suggested by the migration flow numbers only. It amounts to 29.6%, which can be decomposed into 20.3% change related directly to the net migration flow and 9.3 percentage points increase of natural change.

4.2 Impact of migration on population and labour force size

The population patterns observed in the *Status Quo* scenario are the result of natural population change and migration. The question is how important the influence of migration is and in particular how big a role the extra-Europe migrants play in the population and labour force dynamics in the ESPON regions.

The first observation is that migration very significantly influences regional populations. Map 7 (in Appendix C) presents the differences between the 2050 regional populations in the *Status Quo* scenario and the *No Migration* scenario, scaled to the latter. It presents the overall impact of migration, including migration flows *per se* and the migration-induced natural change. Clearly a vast majority of regions (over 75%) are gainers. In nearly a quarter (24%) of all the regions, 2050 population would be higher by 30% or more compared to the *No Migration* scenario. In the EU15, almost all regions, except those in north-eastern France, north Portugal, north-eastern Finland and some regions in the former East Germany profit from migration. The most profound gains would take place in Italy north of Naples, western France, some south-western regions of Spain and in Algarve (south Portugal), all forming a broad Mediterranean crescent, and in east and south-west England.

The gains will be "financed" from three sources: extra-Europe migration, international intra-Europe migration and internal migration. The European regions which would pay for these gains are located in the East, especially in Romania and southern Poland. These regions will loose population mostly due to international intra-European migration. However, internal migration also plays a role and would fuel for example the increase of Bucharest, Mazowsze (Poland) and the hinterland of Prague.

Overall the divide goes along the wealth and accessibility lines: affluent regions, including large agglomerations in Central and Eastern Europe would gain on migration whereas far-away and poor regions would lose. Keeping in mind that migration is a powerful component of population dynamics, we should be aware of general consequences of migration, namely two interlinked processes: (i) regional and in some cases even national depopulation in areas

most negatively affected by migration and (ii) concentration of population in the regions offering a combination of accessibility, affluence and nice climate.

There are differing views to what extent the population size influences regional development, and the consensus is that the key factor is the human and social capital which is not directly linked to the size of population. However, very far going decrease of population cannot be isolated from the regional economic development. Therefore migration, as an important factor of depopulation, may lead to an increase in regional disparities.

Migration would have a very similar impact on labour force. Its geographic distribution (Map 8, Appendix C) is the same as the distribution of the impact of migration on population: in 217 regions the labour force would be higher due to migration (216 would have higher population) and in 70 - lower (71 in the case of population).

4.3 Impact of migration on population structure

Obviously, the impact of migration goes beyond the simple increase or decrease of population or labour force. It affects the age structures of populations and the labour force resources. As most migrants are in the young adult age group, their emigration raises the very-old-age dependency ratio, as it reduces the number of economically active persons. At the same time, in the regions attracting migrants newcomers increase the stock of the younger and more economically active population, reducing the proportion of the very old. There will be no surprise that the patterns of the decrease and increase of VODR as a result of migration (Map 9, Appendix C) resembles strongly the pattern of migration-induced population gains and losses, respectively. 71% of European regions would experience lower VODR because of migration, 35 of them by more than 30%. The regions with the highest reduction (when comparing the *Status Quo* scenario with the *No Migration* one) are in central and northern Italy, Mediterranean Spain, south-eastern Greece and capital cities of Europe (Bucharest, Vienna, Prague, Berlin, Zurich, Stockholm, Oslo, London, Madrid). On the other end of the spectrum two Polish regions, Opolskie and Śląskie would expect VODR larger by over 40 % and over 50% respectively than in the absence of migration. Generally, most of eastern Europe, in particular Romania, Bulgaria, Poland, Lithuania and Estonia would observe larger VODR as a consequence of migration. In the Scandinavian Peninsula, southern regions would reduce and northern ones further increase the VODR. Clearly, more affluent region would benefit from migration, reducing VODR, whereas migration would penalise poorer regions.

It may be interesting to investigate what levels of regional dependency ratios would be observed if there were no migration, i.e. if the natural change of the population already present in the region at the start of the simulation was the only intervening factor. Let us start with an overview of the distribution of the ODR values after 45 years, that is in 2050 (Map 13, Appendix D). The picture we get is predictable, but to a certain extent only. Relatively low values would be observed in the north of Europe, northern and eastern France and northern Romania and Bulgaria (the increase of ODR in Severozapad would be meagre 1.4, from 32.8 to 34.2, over the period 2005 - 2050). The south of Europe would have the highest ODR values, but the increase in ODR in Spain, which would experience the highest ODR values (90.3 in Asturias) and the highest increase in absolute numbers (in Asturias by 58.2), would be much higher than in Greece. Also Germany and southern Austria would experience high ODR values, but mostly lower than in Italy and in particular in Spain. The

urban centres, where ODR values were low in 2005, would have in 2050 ODRs higher than the regions surrounding them.

Maintaining the patterns of fertility and mortality observed in 2005, in the absence of migration, would generally lead to ageing (very far going in Spain and far going in Italy) and strong diversification, in comparison to 2005, of the regional ODR values.

Another indicator of ageing, VODR, would also change and differentiate substantially in the *No Migration* simulation. It would be very high is some regions, reaching over 80 in Asturias, 72.8 in Sardegna and 72.7 in Liguria. Another 14 regions in Spain and Italy as well as Corsica would have VODR values over 60. Greece, Austria and Germany would also experience quite high values of VODR. In northern and central-eastern Europe the values of the indicator would be relatively low to moderate (except Opolskie region in Poland), below 40 (see Map 17 in Appendix D).

4.4. Impact of extra-Europe migration on population and labour force size and structure

One of the hot topics in research and in public debate is the assessment of the impact of the extra-Europe migration on population development in Europe. The first observation, based on the comparison of the *Status Quo* and *No Extra-Europe Migration* scenarios, is that most of the European regions gain population due to extra-Europe migration. This is not the case in 31 regions (11%), mostly located in the EU 10+2, especially the Czech Republic, Romania and Bulgaria. In some regions, in particular in Italy, but also in Algarve and Inner London populations in the STQ scenario would be over 40% larger than in the *No Extra-Europe Migration* scenario. Extra-Europe migration would also reduce, often substantially, the value of the old-age dependency ratios in all European regions. In some Italian and Spanish regions this reduction exceeds 40%. Considerable reductions, again compared with the hypothetical situation with no migration, would be expected also in Austria, Switzerland, Great Britain and Sweden.

Extra-Europe migration would enhance regional labour force in 90% of the investigated regions. In 43 regions (15%) the differences between labour force in the *Status Quo* and *No Extra-Europe Migration* simulations would exceed 30%. However in the Baltic States, Cyprus and regions in the Czech Republic, Romania and Bulgaria extra-European migration would lower the labour force. The reduction is moderate in most cases, but in Cyprus would be as high as 34%. In all European regions, the labour market dependency ratios (LMDR) would be smaller due to extra-Europe migration. In Austria and Switzerland and a large part of the UK and Italy the difference would be within 10 to 20 percent bracket, therefore very significant. The differences between LMDR in the *Status Quo* projection and the *No Extra-Europe Migration* simulation are smaller in the rest of Europe, especially in Central and Eastern Europe. Therefore extra-Europe migration would have a beneficial, albeit unequal impact on the balance between the labour force and economically inactive population.

5. Conclusions

In general our research shows that migration, both extra-Europe and migration in general, would have a significant impact on demographic and labour force development of regions.

Migration-induced population changes are not uniform across the regions. Importantly, they would benefit most affluent regions, whereas poor regions would lose population due to migration. Similarly, migration would reduce ageing in affluent regions and increase in poor and remote ones. Therefore we may expect that migration would be a strong factor increasing regional disparities. This is the aspect of regional policies which is not disputed much yet, but perhaps quite crucial for future regional developments. The only way to prevent the demography-related growth of regional disparities is to implement policies reducing incentives to emigrate from poor to wealthy regions and policies allowing poor regions to attract more extra-Europe migrants.

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Appendix A. Population and labour force in three reference scenarios: tables and maps

Table 1. Population and labour force change in three reference scenarios

		Popula-tion	Population change 2005-2050 (%)			Labour force	Labour force change 2005-2050 (%)		
		2005	NMI	NEM	STQ	2005	NMI	NEM	STQ
	Austria								
AT11	Burgenland (A)	278033	-34.4	-15.0	1.1	132256	-45.9	-28.0	-9.7
AT12	Niederösterreich	1568949	-25.8	-10.8	6.4	759585	-36.1	-24.2	-4.9
AT13	Wien	1632568	-27.4	-10.6	16.9	788315	-42.7	-23.2	6.9
AT21	Kärnten	558926	-27.5	-28.7	-17.1	259300	-39.6	-42.4	-29.2
AT22	Steiermark	1196780	-28.9	-22.0	-7.8	570193	-42.2	-35.3	-19.1
AT31	Oberösterreich	1394726	-18.9	-20.0	-3.3	682080	-31.5	-33.9	-15.5
AT32	Salzburg	522369	-19.7	-18.3	0.8	265929	-34.4	-33.0	-11.9
AT33	Tirol	688954	-18.0	-11.7	9.6	343690	-33.7	-27.5	-3.7
AT34	Vorarlberg	360054	-10.9	-9.2	10.3	182119	-25.7	-24.8	-3.5
	Belgium								
BE10	Brussels Hoofdstedelijk Gewest	1006749	6.3	-20.0	8.1	436250	-10.1	-29.7	-0.7
BE21	Prov. Antwerpen	1676858	-15.1	-14.3	0.7	741628	-25.9	-25.2	-9.3
BE22	Prov. Limburg (B)	809942	-21.6	-16.7	-2.9	361106	-35.4	-31.1	-16.8
BE23	Prov. Oost-Vlaanderen	1380072	-19.0	-10.4	-0.6	634512	-30.4	-21.8	-11.3
BE24	Prov. Vlaams Brabant	1037786	-17.8	-11.3	4.7	485071	-28.4	-24.2	-7.8
BE25	Prov. West-Vlaanderen	1138503	-21.8	-16.4	-8.9	508190	-30.2	-25.6	-17.3
BE31	Prov. Brabant Wallon	363776	-9.4	-4.6	12.8	157787	-17.3	-17.5	0.4
BE32	Prov. Hainaut	1286275	-16.2	-13.6	-1.6	512308	-22.8	-21.5	-8.5
BE33	Prov. Liège	1034024	-15.9	-13.2	-1.1	430924	-23.2	-21.2	-8.0
BE34	Prov. Luxembourg (B)	256004	-5.2	2.5	14.7	108629	-12.2	-5.1	8.2
BE35	Prov. Namur	455863	-10.9	-2.9	8.2	193253	-18.4	-11.6	0.4
	Bulgaria								
BG31	Severozapaden	974704	-42.2	-57.9	-58.8	362412	-42.9	-60.3	-60.8
BG32	Severen tsentralen	958755	-44.3	-52.3	-53.5	397728	-49.2	-57.1	-57.6
BG33	Severoiztochen	1001668	-35.7	-45.8	-47.3	440435	-42.5	-52.5	-53.4
BG34	Yugoiztochen	1139926	-33.1	-44.9	-46.5	471966	-38.0	-51.0	-52.0
BG41	Yugozapaden	2114815	-41.3	-40.0	-41.7	992026	-51.1	-48.8	-49.6
BG42	Yuzhen tsentralen	1571181	-38.0	-45.3	-46.7	656577	-44.8	-52.0	-52.7
	Switzerland								
CH01	Région lémanique	1362754	-17.3	-13.9	14.9	727683	-29.3	-25.5	5.4
CH02	Espace Mittelland	1690135	-22.7	-20.8	-2.7	947467	-32.8	-32.2	-12.7
CH03	Nordwestschweiz	1017180	-24.6	-17.4	1.9	572014	-36.7	-30.0	-9.7
CH04	Zürich	1261810	-22.5	-13.8	8.9	739489	-37.5	-27.2	-3.3
CH05	Ostschweiz	1059586	-21.1	-22.7	-4.1	599898	-30.7	-33.9	-13.6
CH06	Zentralschweiz	703706	-17.2	-12.3	6.6	404246	-28.9	-25.0	-4.8
CH07	Ticino	319931	-31.5	-17.1	4.2	158386	-43.6	-28.3	-5.1
CY00	Cyprus	749175	-9.7	-12.4	-45.0	377459	-18.0	-19.0	-46.9
	Czech Republic								
CZ01	Praha	1170571	-34.7	-29.3	-38.1	629948	-48.4	-39.8	-44.1
CZ02	Strední Cechy	1144071	-30.9	-9.7	-23.6	576510	-40.9	-23.8	-34.8
CZ03	Jihozápad	1175330	-32.3	-31.7	-40.6	596478	-42.6	-42.1	-48.3
CZ04	Severozápad	1126721	-30.0	-35.2	-33.1	577830	-39.3	-44.8	-40.1
CZ05	Severovýchod	1480144	-30.4	-33.8	-45.4	732647	-40.2	-43.9	-53.1
CZ06	Jihovýchod	1640354	-30.7	-34.5	-41.3	811012	-41.3	-45.0	-48.7
CZ07	Strední Morava	1225832	-32.2	-37.4	-46.9	601274	-42.7	-47.8	-55.3
CZ08	Moravskoslezsko	1257554	-31.9	-39.4	-43.0	616329	-41.5	-48.8	-50.7
	Germany								
DE11	Stuttgart	4003172	-25.8	-27.8	-19.6	2033171	-37.0	-39.2	-29.8
DE12	Karlsruhe	2727733	-30.2	-27.8	-17.9	1351244	-41.5	-39.6	-28.5
DE13	Freiburg	2185027	-26.3	-24.0	-15.4	1103420	-36.5	-35.7	-25.9
DE14	Tübingen	1801487	-23.2	-26.5	-17.7	901257	-33.4	-38.2	-28.2
DE21	Oberbayern	4211118	-27.6	-5.3	4.9	2171234	-40.5	-18.5	-6.9
DE22	Niederbayern	1196178	-28.7	-33.2	-25.9	613887	-37.8	-42.8	-34.4
DE23	Oberpfalz	1090289	-30.0	-32.5	-26.2	551925	-38.8	-42.1	-34.8
DE24	Oberfranken	1106541	-34.9	-41.5	-36.5	548611	-42.3	-50.2	-44.2
DE25	Mittelfranken	1708972	-31.8	-27.7	-19.5	849221	-41.5	-38.0	-28.5
DE26	Unterfranken	1344629	-29.4	-33.4	-26.9	666178	-38.7	-43.8	-36.2
DE27	Schwaben	1786166	-25.9	-28.4	-21.6	895196	-34.0	-37.9	-30.1

Table 1. continued

		Popula-tion.	Population change 2005-2050 (%)			Labour force	Labour force change 2005-2050 (%)		
		2005	NMI	NEM	STQ	2005	NMI	NEM	STQ
DE30	Berlin	3387828	-36.0	-27.2	-16.4	1758009	-52.3	-39.6	-27.7
DE41	Brandenburg - Nordost	1163924	-40.7	-38.5	-32.0	615898	-53.2	-51.7	-44.3
DE42	Brandenburg - Südwest	1403780	-39.7	-39.0	-33.9	748591	-52.5	-51.9	-46.1
DE50	Bremen	663213	-36.5	-24.2	-14.9	307773	-47.2	-32.6	-21.9
DE60	Hamburg	1734830	-33.1	7.9	17.5	879925	-48.4	-5.1	6.2
DE71	Darmstadt	3775025	-30.2	-25.6	-15.8	1872415	-42.7	-37.3	-26.2
DE72	Gießen	1064228	-30.3	-35.6	-28.7	515550	-40.2	-45.8	-38.0
DE73	Kassel	1258512	-31.9	-40.1	-33.4	589089	-39.4	-49.0	-41.1
DE80	Mecklenburg-Vorpommern	1719653	-38.7	-42.3	-37.6	907196	-51.7	-54.9	-49.6
DE91	Braunschweig	1658918	-34.5	-27.6	4.4	757454	-42.6	-36.2	-1.8
DE92	Hannover	2166626	-33.2	-30.3	-22.2	1024769	-41.6	-39.5	-30.1
DE93	Lüneburg	1702971	-28.6	-23.4	-16.7	794068	-34.6	-32.6	-24.7
DE94	Weser-Ems	2472394	-23.0	-25.2	-16.2	1157707	-30.1	-34.6	-24.2
DEA1	Düsseldorf	5237855	-34.0	-31.5	-24.8	2421573	-41.7	-39.1	-31.3
DEA2	Köln	4363797	-30.1	-24.6	-16.8	2008759	-40.5	-35.0	-26.1
DEA3	Münster	2624489	-27.4	-31.3	-25.2	1198029	-34.7	-39.7	-32.5
DEA4	Detmold	2072488	-23.5	-30.9	-25.3	989075	-30.5	-39.4	-32.6
DEA5	Arnsberg	3776723	-32.1	-37.0	-29.8	1725514	-39.4	-44.4	-36.0
DEB1	Koblenz	1527507	-31.2	-34.9	-29.1	724665	-37.4	-42.2	-35.4
DEB2	Trier	513861	-30.6	-20.9	-12.1	246487	-38.6	-30.0	-19.9
DEB3	Rheinhessen-Pfalz	2019737	-32.7	-28.2	-20.3	955828	-41.9	-38.1	-29.2
DEC0	Saarland	1056417	-39.9	-45.6	-39.4	474676	-47.4	-53.6	-46.4
DED1	Chemnitz	1553406	-42.1	-55.5	-52.1	796819	-52.3	-65.6	-61.5
DED2	Dresden	1667676	-36.4	-38.2	-32.4	857380	-49.0	-50.5	-43.9
DED3	Leipzig	1075202	-39.6	-37.1	-31.6	559813	-53.2	-49.7	-43.2
DEE0	Sachsen-Anhalt	2494437	-43.3	-54.6	-50.0	1254354	-54.3	-64.4	-59.0
DEF0	Schleswig-Holstein	2828760	-31.8	-44.1	-38.6	1366265	-39.1	-52.9	-46.5
DEG0	Thüringen	2355280	-40.8	-52.5	-48.7	1222513	-53.5	-64.1	-59.7
	Denamark								
DK01	Hovedstaden	1631635	-15.1	-14.6	-7.1	899903	-24.3	-20.5	-12.6
DK02	Sjælland	805954	-13.1	-11.7	-5.6	426540	-16.2	-20.1	-13.9
DK03	Syddanmark	1183751	-10.9	-16.5	-9.7	624201	-14.5	-23.7	-16.5
DK04	Midtjylland	1212787	-6.1	-8.4	-0.7	652496	-12.7	-16.6	-8.7
DK05	Nordjylland	577278	-11.5	-19.5	-12.6	304862	-15.5	-25.8	-18.5
EE00	Estonia	1347510	-28.0	-37.5	-40.1	667896	-31.5	-41.4	-43.8
	Spain								
ES11	Galicia	2712162	-38.4	-34.1	-24.1	1254924	-55.1	-50.9	-39.3
ES12	Principado de Asturias	1059133	-44.7	-38.0	-27.5	443542	-61.5	-54.3	-42.8
ES13	Cantabria	551085	-30.9	-20.2	-7.8	256382	-50.3	-40.3	-26.9
ES21	Pais Vasco	2103441	-32.6	-36.6	-32.3	1027849	-51.9	-53.8	-48.2
ES22	Comunidad Foral de Navarra	580616	-22.6	-14.0	2.9	283466	-42.1	-35.0	-17.1
ES23	La Rioja	294347	-25.5	-13.0	5.8	142908	-45.0	-35.5	-15.2
ES24	Aragón	1243464	-31.1	-20.9	-0.7	588225	-47.3	-38.3	-16.4
ES30	Comunidad de Madrid	5821054	-16.9	-14.6	13.7	2984148	-39.6	-34.5	-5.9
ES41	Castilla y León	2469303	-36.7	-29.6	-15.3	1097253	-53.1	-45.8	-30.1
ES42	Castilla-la Mancha	1856787	-21.6	11.3	39.0	816331	-36.8	-8.5	21.4
ES43	Extremadura	1068799	-25.2	-21.8	-9.8	453076	-37.4	-35.1	-21.6
ES51	Cataluña	6784145	-20.7	-18.3	0.5	3488009	-40.1	-37.0	-16.4
ES52	Comunidad Valenciana	4518126	-21.7	1.4	32.9	2215621	-40.2	-19.3	13.1
ES53	Illes Balears	957953	-18.4	4.3	35.7	498880	-39.7	-21.0	10.5
ES61	Andalucia	7670365	-14.4	-5.7	13.5	3383473	-30.5	-23.6	-3.3
ES62	Región de Murcia	1300083	-7.1	11.8	46.8	613258	-26.9	-11.9	23.4
ES63	Ciudad Autónoma de Ceuta (ES)	71372	8.4	-10.0	1.9	29731	-8.1	-27.9	-15.3
ES64	Ciudad Autónoma de Melilla (ES)	67102	12.5	-29.7	-35.4	27060	-1.0	-44.1	-46.5
ES70	Canarias (ES)	1908698	-21.8	-10.1	17.3	931588	-43.6	-32.9	-5.7
	Finland								
FI13	Itä-Suomi	667056	-20.2	-31.2	-25.4	303265	-24.9	-38.3	-32.2
FI18	Etelä-Suomi	2580801	-15.0	-5.1	4.2	1350422	-26.0	-14.8	-5.4
FI19	Länsi-Suomi	1330371	-12.2	-10.9	-3.6	641090	-19.8	-19.7	-12.2
FI1A	Pohjois-Suomi	631853	7.1	-13.5	-6.6	298939	-1.5	-23.5	-16.6
FI20	Åland	26530	-15.9	-13.1	8.4	13932	-23.0	-21.2	0.7

Table 1. continued

		Population	Population change 2005-2050 (%)			Labour force	Labour force change 2005-2050 (%)		
		2005	NMI	NEM	STQ	2005	NMI	NEM	STQ
	France								
FR10	Île de France	11442143	10.7	-10.6	-2.7	5484536	-8.8	-22.5	-14.5
FR21	Champagne-Ardenne	1339400	-4.5	-22.9	-15.3	613938	-14.0	-34.2	-26.2
FR22	Picardie	1889028	2.8	-11.6	-3.4	836310	-6.6	-23.2	-14.6
FR23	Haute-Normandie	1806677	1.4	-11.0	-2.7	828196	-7.7	-21.5	-12.7
FR24	Centre	2507246	-5.3	-7.0	2.1	1135923	-13.2	-18.0	-8.2
FR25	Basse-Normandie	1452425	-4.5	-9.5	-0.7	624076	-10.8	-19.3	-9.7
FR26	Bourgogne	1626190	-12.4	-13.6	-4.9	721510	-18.8	-23.1	-13.6
FR30	Nord - Pas-de-Calais	4015613	6.6	-14.5	-6.9	1760477	-1.3	-23.7	-15.7
FR41	Lorraine	2332468	-7.9	-18.9	-10.9	1031799	-18.0	-29.7	-21.3
FR42	Alsace	1803402	-5.4	-11.1	-2.6	867743	-18.5	-24.7	-15.9
FR43	Franche-Comté	1145744	-0.5	-9.3	-0.4	505494	-10.6	-21.4	-12.0
FR51	Pays de la Loire	3415391	3.5	11.2	21.7	1552983	-6.1	-1.7	9.4
FR52	Bretagne	3066585	-5.8	8.8	19.2	1318231	-12.8	-1.9	9.4
FR53	Poitou-Charentes	1711307	-13.7	0.5	10.5	751972	-20.8	-9.1	1.8
FR61	Aquitaine	3088196	-15.6	6.4	16.9	1323181	-24.3	-4.0	7.4
FR62	Midi-Pyrénées	2743073	-13.9	11.7	22.6	1227180	-23.7	0.7	12.5
FR63	Limousin	727487	-23.8	-8.7	0.7	329251	-30.4	-16.2	-5.6
FR71	Rhône-Alpes	5963736	2.5	5.8	15.7	2739049	-9.3	-6.9	3.5
FR72	Auvergne	1331779	-18.0	-8.1	1.2	593311	-25.8	-17.8	-7.6
FR81	Languedoc-Roussillon	2497718	-10.8	17.2	28.3	1011511	-17.0	9.2	21.7
FR82	Provence-Alpes-Côte d'Azur	4768564	-8.1	3.1	13.0	1991131	-15.5	-5.1	5.7
FR83	Corse	289092	-23.3	1.1	11.3	84342	-33.2	-8.3	3.1
FR91	Guadeloupe (FR)	399178	44.0	41.5	52.3	157335	30.4	27.3	38.3
FR92	Martinique (FR)	395982	6.1	5.1	14.2	154299	-3.6	-5.2	4.6
FR93	Guyane (FR)	199206	165.1	156.9	169.0	55700	145.8	137.0	149.9
FR94	Reunion (FR)	772907	51.3	47.9	57.6	299720	39.9	35.9	46.0
	Greece								
GR11	Anatoliki Makedonia, Thraki	607847	-27.2	-3.2	9.9	261406	-35.7	-14.9	0.1
GR12	Kentriki Makedonia	1911508	-27.8	-26.9	-16.7	820377	-40.1	-41.3	-30.0
GR13	Dytiki Makedonia	294508	-28.8	-27.4	-17.3	120159	-37.7	-34.8	-22.9
GR14	Thessalia	737583	-27.6	-32.6	-23.0	325173	-36.0	-43.4	-32.2
GR21	Ipeiros	341851	-33.2	-28.6	-18.6	139664	-43.4	-33.6	-21.6
GR22	Ionia Nisia	220398	-30.3	-40.5	-31.9	97900	-40.5	-47.7	-37.8
GR23	Dytiki Ellada	732292	-27.8	-34.9	-25.8	299746	-39.5	-43.4	-32.9
GR24	Sterea Ellada	558503	-32.2	-38.7	-30.2	240364	-43.2	-42.0	-31.7
GR25	Peloponnisos	598156	-32.3	-36.5	-27.6	264251	-42.1	-40.8	-30.1
GR30	Attiki	3973326	-29.6	-26.0	-15.7	1782490	-46.0	-42.4	-31.6
GR41	Voreio Aigaio	202402	-30.4	17.9	33.6	76589	-41.0	6.8	25.3
GR42	Notio Aigaio	303114	-16.4	-8.4	3.7	131317	-32.2	-24.4	-11.4
GR43	Kriti	601263	-15.0	-19.1	-8.2	275388	-28.6	-34.0	-21.9
	Hungary								
HU10	Közép-Magyarország	2840972	-36.7	-28.4	-29.1	1294486	-45.7	-35.8	-37.1
HU21	Közép-Dunántúl	1110897	-35.5	-35.2	-36.4	486261	-42.7	-42.5	-43.5
HU22	Nyugat-Dunántúl	1000348	-38.0	-35.2	-33.9	448385	-46.3	-44.0	-42.5
HU23	Dél-Dunántúl	977465	-37.2	-43.0	-42.5	382897	-42.7	-49.1	-48.6
HU31	Észak-Magyarország	1271111	-32.1	-46.3	-46.1	472825	-34.7	-50.7	-50.4
HU32	Észak-Alföld	1541818	-27.7	-42.5	-42.4	566344	-31.6	-47.8	-47.6
HU33	Dél-Alföld	1354938	-36.9	-41.0	-40.5	526284	-42.2	-47.2	-46.6
	Ireland								
IE01	Border, Midland and Western	1098144	11.6	36.9	39.0	513898	3.8	25.6	28.5
IE02	Southern and Eastern	3011029	11.9	22.4	23.9	1480112	-2.3	9.0	11.2
IS00	Iceland	293577	18.1	7.6	11.6	173035	12.2	0.6	4.6
	Italy								
ITC1	Piemonte	4330172	-38.3	-29.1	7.3	1911479	-51.2	-42.0	-3.1
ITC2	Valle d'Aosta/Vallée d'Aoste	122868	-34.5	-21.2	8.0	56898	-49.0	-37.8	-8.0
ITC3	Liguria	1592309	-46.0	-31.6	1.8	649915	-55.8	-40.4	-2.6
ITC4	Lombardia	9393092	-31.0	-17.3	26.5	4359444	-46.9	-33.4	12.3
ITD1	Provincia Autonoma Bolzano-Bozen	477067	-15.1	-7.8	23.0	228804	-30.0	-23.5	8.5
ITD2	Provincia Autonoma Trento	497546	-23.0	-8.4	33.0	224380	-37.7	-24.7	17.2
ITD3	Veneto	4699950	-29.4	-16.5	28.1	2146075	-45.9	-34.1	11.7
ITD4	Friuli-Venezia Giulia	1204718	-40.4	-27.8	4.8	523088	-53.8	-42.2	-7.5
ITD5	Emilia-Romagna	4151369	-35.9	-12.2	31.7	1937107	-50.5	-28.5	17.6
ITE1	Toscana	3598269	-37.3	-21.4	17.1	1583398	-50.8	-35.5	5.9
ITE2	Umbria	858938	-34.9	-14.0	34.7	364211	-47.6	-27.6	24.0
ITE3	Marche	1518780	-33.1	-16.3	23.5	668074	-46.9	-31.0	11.4

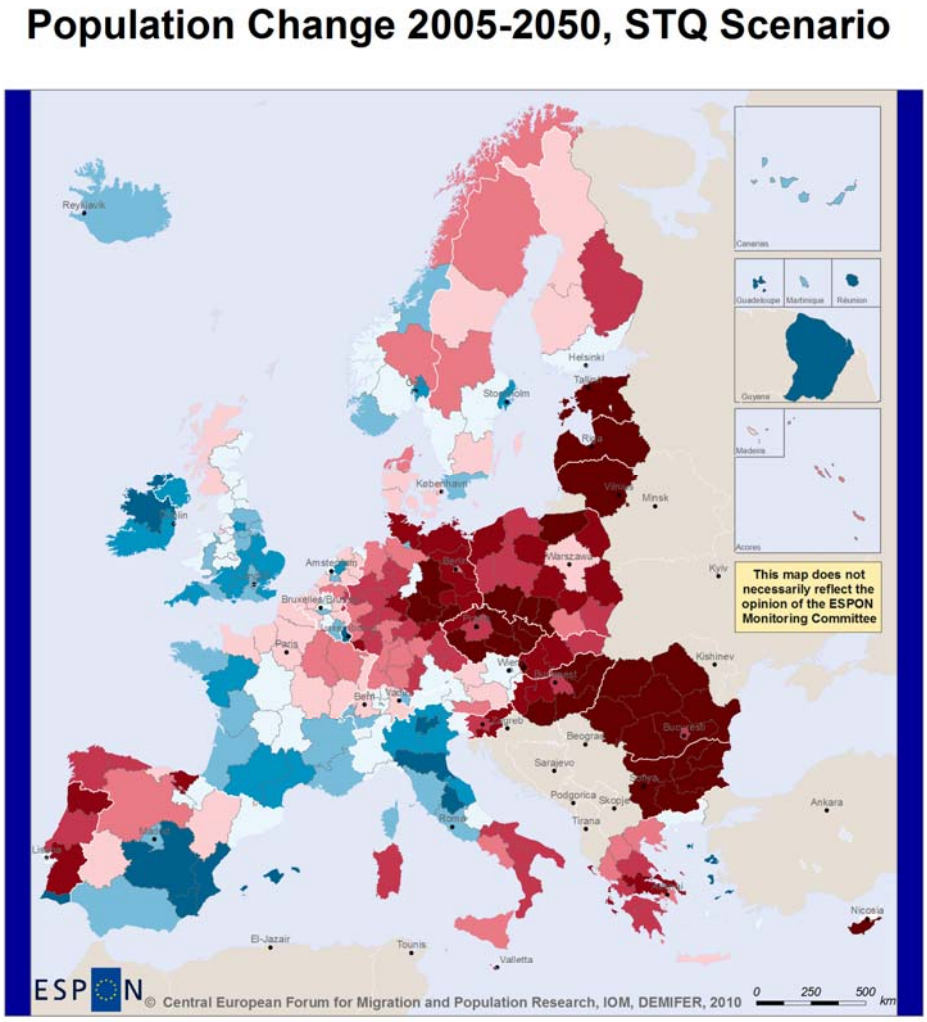
Table 1. continued

		Popula-tion	Population change 2005-2050 (%)			Labour force	Labour force change 2005-2050 (%)		
		2005	NMI	NEM	STQ	2005	NMI	NEM	STQ
ITE4	Lazio	5269972	-30.4	-21.1	15.5	2262497	-45.1	-35.3	2.8
ITF1	Abruzzo	1299272	-32.5	-21.8	6.8	528112	-46.2	-35.5	-4.8
ITF2	Molise	321953	-34.5	-36.7	-20.8	121329	-46.7	-47.8	-30.3
ITF3	Campania	5788986	-15.4	-27.6	-10.0	2062117	-26.7	-40.3	-22.7
ITF4	Puglia	4068167	-22.2	-31.7	-20.9	1449118	-35.3	-45.5	-33.4
ITF5	Basilicata	596546	-29.0	-39.8	-28.3	221173	-41.7	-51.9	-39.1
ITF6	Calabria	2009268	-24.5	-39.2	-22.4	714486	-37.1	-51.7	-33.4
ITG1	Sicilia	5013081	-20.3	-30.1	-17.9	1748363	-30.5	-41.6	-27.5
ITG2	Sardegna	1650052	-34.4	-32.5	-21.3	687538	-52.3	-50.4	-38.6
LI00	Liechtenstein	34600	-15.4	-14.5	-14.8	20318	-30.4	-30.1	-29.8
LT00	Lithuania	3425324	-33.2	-42.8	-44.1	1621433	-35.2	-45.6	-46.4
LU00	Luxembourg (Grand-Duché)	461230	-13.0	24.2	30.3	206250	-27.0	10.2	16.3
LV00	Latvia	2306434	-37.4	-42.0	-49.2	1138276	-40.4	-44.5	-51.3
MT00	Malta	402668	-19.8	-20.6	-28.4	161850	-32.6	-32.7	-38.8
	Netherlands								
NL11	Groningen	575072	-16.9	-10.6	0.9	294296	-29.6	-21.5	-9.2
NL12	Friesland (NL)	642977	-7.1	-12.0	-1.2	324538	-15.0	-21.9	-10.4
NL13	Drenthe	483369	-12.9	-10.1	-1.2	243120	-18.5	-18.1	-8.2
NL21	Overijssel	1109432	-3.3	-9.4	-1.3	565136	-12.2	-19.7	-10.8
NL22	Gelderland	1972010	-10.6	-14.5	-6.5	1021554	-19.1	-24.6	-16.0
NL23	Flevoland	365859	12.5	10.5	23.8	193649	-1.1	-3.3	10.3
NL31	Utrecht	1171291	-4.1	2.3	11.9	628941	-17.4	-10.2	-0.1
NL32	Noord-Holland	2599103	-12.8	-6.4	7.3	1395721	-25.6	-18.3	-4.0
NL33	Zuid-Holland	3458381	-10.4	-15.3	-2.9	1804577	-21.9	-25.5	-12.3
NL34	Zeeland	379978	-13.2	-15.8	-6.4	185499	-18.7	-24.1	-13.7
NL41	Noord-Brabant	2411359	-14.0	-20.1	-12.6	1270794	-23.8	-31.0	-22.8
NL42	Limburg (NL)	1136695	-25.6	-33.7	-27.6	574154	-33.5	-43.2	-36.3
	Norway								
NO01	Oslo og Akershus	1024064	-2.0	9.3	25.4	559233	-15.3	0.8	17.3
NO02	Hedmark og Oppland	371550	-18.3	-22.7	-12.2	184108	-20.7	-27.8	-16.4
NO03	Sør-Østlandet	889058	-11.8	-8.1	3.7	449547	-16.6	-15.4	-2.9
NO04	Agder og Rogaland	657976	6.0	2.3	15.7	336219	0.1	-5.3	8.6
NO05	Vestlandet	800064	3.8	-11.7	0.2	410361	-1.9	-19.3	-6.9
NO06	Trøndelag	401011	-1.7	-1.8	10.4	201537	-7.5	-9.2	3.7
NO07	Nord-Norge	462640	-5.8	-27.4	-15.0	234477	-10.5	-34.4	-21.5
	Poland								
PL11	Lódzkie	2587702	-35.9	-39.5	-38.3	1350926	-44.3	-47.8	-46.4
PL12	Mazowieckie	5145997	-28.7	-13.1	-8.1	2310865	-39.1	-23.5	-18.2
PL21	Malopolskie	3260201	-21.6	-16.8	-10.7	1466834	-31.2	-26.4	-19.7
PL22	Slaskie	4700771	-34.7	-64.6	-66.8	2034626	-45.8	-73.8	-75.1
PL31	Lubelskie	2185156	-23.8	-33.1	-31.2	1081165	-30.8	-40.5	-38.5
PL32	Podkarpackie	2097975	-19.0	-27.7	-24.3	889924	-27.5	-36.5	-32.5
PL33	Swietokrzyskie	1288693	-29.2	-38.1	-36.3	616439	-37.2	-46.5	-44.4
PL34	Podlaskie	1202425	-25.2	-37.4	-34.8	500756	-33.6	-46.0	-42.9
PL41	Wielkopolskie	3365283	-22.9	-22.5	-21.0	1535134	-33.1	-32.8	-31.0
PL42	Zachodniopomorskie	1694865	-28.5	-35.9	-34.1	715964	-39.2	-46.1	-44.0
PL43	Lubuskie	1009168	-26.0	-31.5	-27.2	491749	-36.5	-41.5	-36.7
PL51	Dolnoslaskie	2893055	-33.8	-41.8	-40.0	1282282	-44.9	-51.9	-49.6
PL52	Opolskie	1051531	-34.3	-74.8	-72.4	407979	-46.1	-81.8	-77.9
PL61	Kujawsko-Pomorskie	2068258	-25.6	-34.2	-33.8	953328	-35.0	-43.5	-42.9
PL62	Warminsko-Mazurskie	1428714	-20.6	-42.6	-42.2	604189	-30.2	-51.8	-50.9
PL63	Pomorskie	2194041	-20.6	-30.5	-29.4	853960	-31.2	-41.5	-40.2
	Portugal								
PT11	Norte	3727310	-23.1	-32.1	-32.6	1958166	-31.7	-41.0	-41.4
PT15	Algarve	411468	-20.8	6.1	56.9	206849	-30.6	-5.3	45.3
PT16	Centro (PT)	2376609	-30.6	-32.7	-27.9	1340463	-37.0	-39.8	-34.7
PT17	Lisboa	2760697	-21.4	-19.8	4.3	1407099	-31.9	-29.7	-5.6
PT18	Alentejo	767679	-33.7	-35.2	-30.2	377725	-38.7	-41.0	-35.7
PT20	Região Autónoma dos Açores (PT)	241206	-9.2	-18.7	-15.8	109210	-12.0	-22.4	-18.8
PT30	Região Autónoma da Madeira (PT)	244286	-17.5	-21.1	-6.2	119924	-22.6	-26.7	-11.0
	Romania								
RO11	Nord-Vest	2742676	-30.2	-57.6	-62.4	1187972	-33.0	-59.7	-64.1
RO12	Centru	2533421	-28.7	-65.6	-71.3	1072694	-33.1	-67.7	-72.8
RO21	Nord-Est	3735512	-17.8	-50.8	-54.9	1795589	-18.7	-52.7	-56.6
RO22	Sud-Est	2849959	-32.3	-51.7	-54.3	1253187	-36.4	-54.7	-56.8
RO31	Sud - Muntenia	3338195	-34.6	-45.3	-45.9	1553414	-37.0	-47.8	-48.0
RO32	Bucuresti - Ilfov	2209768	-39.7	-37.5	-21.1	1032778	-48.3	-41.7	-23.3
RO41	Sud-Vest Oltenia	2313903	-36.8	-51.4	-53.1	1115216	-38.6	-53.5	-54.9
RO42	Vest	1935094	-36.9	-60.6	-64.6	848366	-40.3	-62.2	-65.4

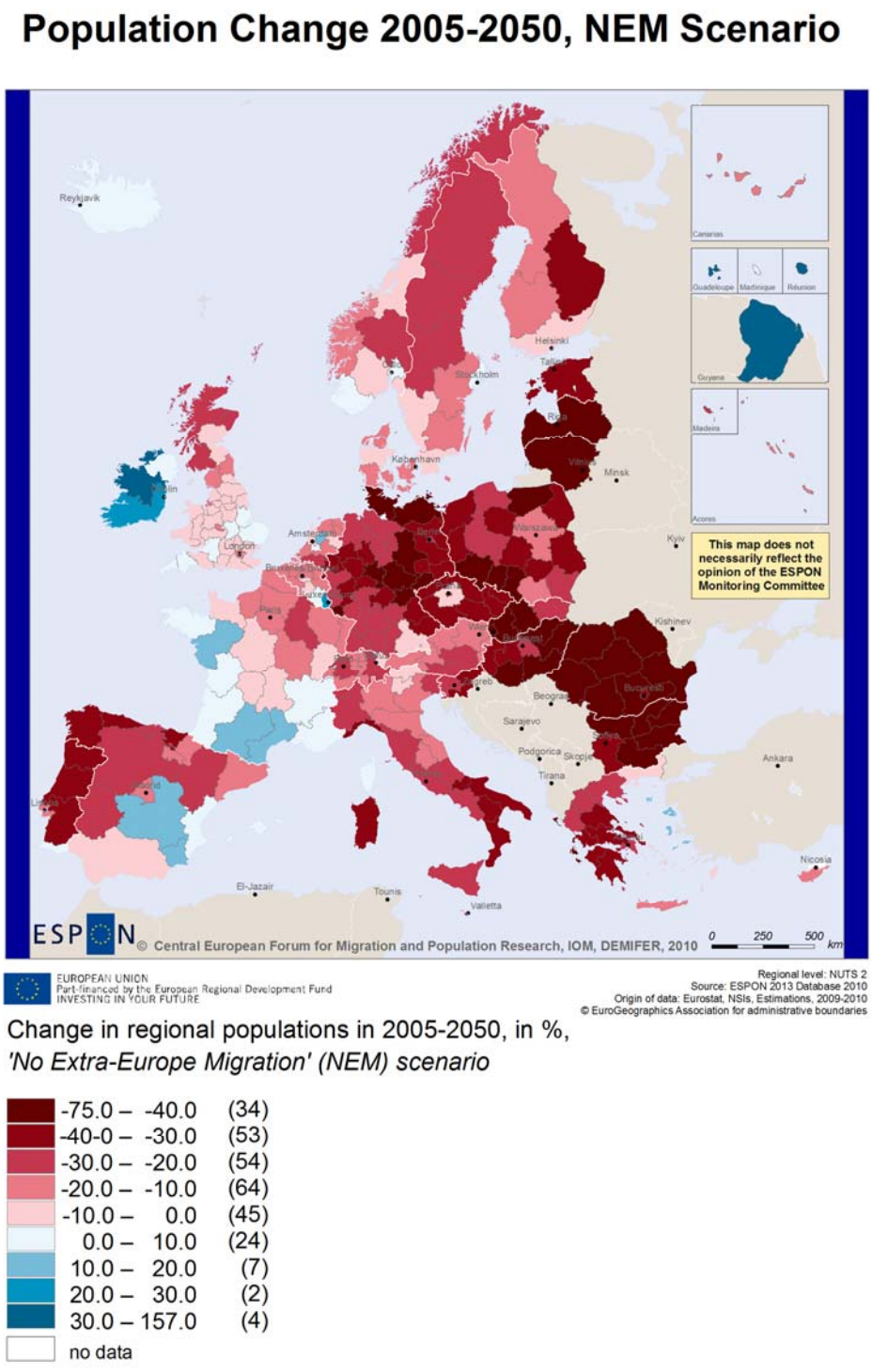
Table 1. continued

		Popula-tion	Population change 2005-2050 (%)			Labour force	Labour force change 2005-2050 (%)		
		2005	NMI	NEM	STQ	2005	NMI	NEM	STQ
	Sweden								
SE11	Stockholm	1872900	-3.9	5.2	25.6	1020868	-16.5	-3.0	18.1
SE12	Östra Mellansverige	1514549	-12.5	-13.6	1.8	762777	-17.2	-19.6	-3.1
SE21	Småland med öarna	799739	-12.1	-17.2	-1.5	415717	-14.2	-21.6	-4.5
SE22	Sydsverige	1311254	-12.8	-2.6	19.0	657655	-18.7	-8.4	14.6
SE23	Västsverige	1805683	-10.6	-6.9	9.6	931023	-16.6	-13.4	4.3
SE31	Norra Mellansverige	826188	-18.3	-25.2	-10.8	408341	-19.9	-29.5	-13.8
SE32	Mellersta Norrland	371619	-17.4	-23.6	-9.4	185540	-19.2	-27.7	-12.3
SE33	Övre Norrland	509460	-16.4	-26.9	-12.5	255080	-20.4	-33.0	-17.7
	Slovenia								
SI01	Vzhodna Slovenija	1077922	-34.6	-36.4	-32.4	541288	-48.0	-49.0	-43.9
SI02	Zahodna Slovenija	919668	-28.4	-27.4	-21.6	464250	-44.2	-41.4	-34.2
	Slovakia								
SK01	Bratislavský kraj	601132	-34.1	-51.6	-45.4	330587	-48.9	-61.2	-53.7
SK02	Západné Slovensko	1863940	-35.3	-41.1	-34.7	929469	-46.5	-50.1	-42.1
SK03	Stredné Slovensko	1352497	-26.9	-42.5	-39.8	658735	-36.3	-50.4	-46.6
SK04	Východné Slovensko	1567253	-13.1	-25.7	-22.1	730051	-21.0	-32.9	-28.5
	United Kingdom								
UKC1	Tees Valley and Durham	1153300	-11.0	-8.7	5.1	526925	-14.9	-14.5	1.2
UKC2	Northumberland, Tyne and Wear	1394700	-17.9	-14.6	0.4	646779	-23.4	-21.1	-3.9
UKD1	Cumbria	495200	-20.2	-10.2	2.9	256736	-24.0	-15.3	-0.3
UKD2	Cheshire	995500	-12.4	-7.8	5.3	496238	-18.1	-15.4	-0.5
UKD3	Greater Manchester	2538700	-3.8	-9.5	9.0	1219849	-11.0	-16.5	4.2
UKD4	Lancashire	1443500	-7.5	-5.9	8.6	688386	-11.6	-11.0	5.4
UKD5	Merseyside	1359000	-13.3	-19.6	-7.3	621927	-16.6	-24.4	-10.2
UKE1	East Yorkshire and Northern Lincolnshire	897800	-12.0	-5.7	15.3	426287	-16.8	-10.6	13.3
UKE2	North Yorkshire	773300	-18.4	-5.0	18.0	390324	-24.3	-11.3	15.1
UKE3	South Yorkshire	1283800	-9.9	-9.2	10.8	606345	-16.1	-16.3	6.1
UKE4	West Yorkshire	2130400	-1.5	-1.7	25.1	1051787	-9.2	-10.0	19.5
UKF1	Derbyshire and Nottinghamshire	2028400	-13.9	-6.2	14.2	991095	-20.9	-14.7	8.2
UKF2	Leicestershire, Rutland and Northants	1603800	-4.8	0.3	25.7	826586	-13.2	-10.1	17.7
UKF3	Lincolnshire	678400	-19.3	4.1	23.0	341639	-21.9	2.1	24.1
UKG1	Herefordshire, Worcestershire and Warks	1243700	-15.1	-7.5	7.7	639405	-20.4	-14.7	2.4
UKG2	Shropshire and Staffordshire	1507200	-11.8	-8.1	5.1	753115	-17.4	-15.0	-0.1
UKG3	West Midlands	2588600	4.4	-12.3	9.1	1208616	-1.1	-18.3	5.6
UKH1	East Anglia	2255100	-13.3	3.1	27.7	1142556	-19.6	-5.5	22.5
UKH2	Bedfordshire, Hertfordshire	1631800	-2.6	-4.4	19.5	858213	-11.3	-14.5	11.8
UKH3	Essex	1650700	-9.8	-0.2	22.9	841994	-15.4	-7.8	18.1
UKI1	Inner London	2925500	6.0	-14.3	24.7	1436209	-20.1	-27.2	14.0
UKI2	Outer London	4497400	2.2	-13.5	19.3	2297093	-12.1	-24.5	10.9
UKJ1	Berkshire, Bucks and Oxfordshire	2134300	-3.4	-3.2	22.1	1170455	-15.1	-15.7	12.1
UKJ2	Surrey, East and West Sussex	2589800	-15.2	-3.3	19.6	1307770	-20.4	-12.6	13.6
UKJ3	Hampshire and Isle of Wight	1812200	-12.4	-0.4	21.3	941963	-20.2	-9.0	15.7
UKJ4	Kent	1618600	-8.1	-0.7	22.6	803682	-12.5	-8.5	17.8
UKK1	Gloucestershire, Wiltshire and Bristol/Bath area	2227800	-11.0	2.1	24.8	1166598	-19.4	-7.2	18.5
UKK2	Dorset and Somerset	1210900	-18.7	-0.4	15.8	591090	-20.3	-3.9	15.6
UKK3	Cornwall and Isles of Scilly	520800	-22.0	7.4	23.6	248190	-23.8	6.1	25.1
UKK4	Devon	1106200	-18.3	6.8	27.7	528775	-22.0	3.1	27.6
UKL1	West Wales and The Valleys	1877600	-13.2	-3.8	7.6	839097	-15.1	-7.0	6.3
UKL2	East Wales	1072500	-10.4	-2.9	12.8	532466	-15.8	-9.1	8.8
UKM2	Eastern Scotland	1933520	-20.1	-10.0	9.5	1002389	-27.2	-16.9	5.3
UKM3	South Western Scotland	2262930	-20.6	-23.4	-9.4	1043776	-25.9	-29.0	-13.1
UKM5	North Eastern Scotland	439340	-22.3	-20.9	0.5	237057	-29.6	-27.9	-4.0
UKM6	Highlands and Islands	459010	-17.0	-23.8	-9.3	293390	-22.2	-31.5	-15.3
UKN0	Northern Ireland	1724408	2.9	2.1	21.4	773160	-2.2	-4.0	17.4

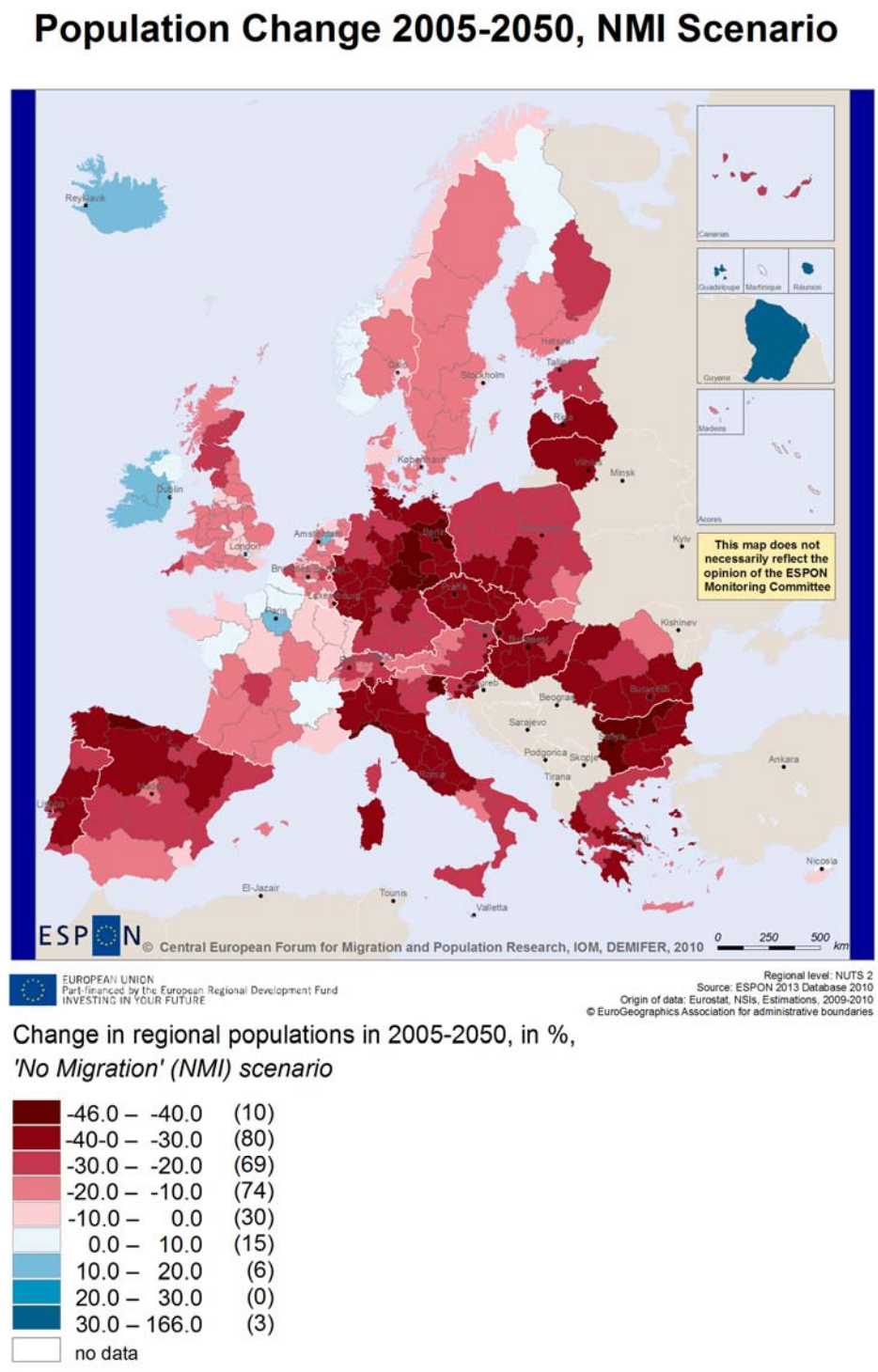
Map 1. Population change 2005-2050, NUTS2, *Status Quo* projection



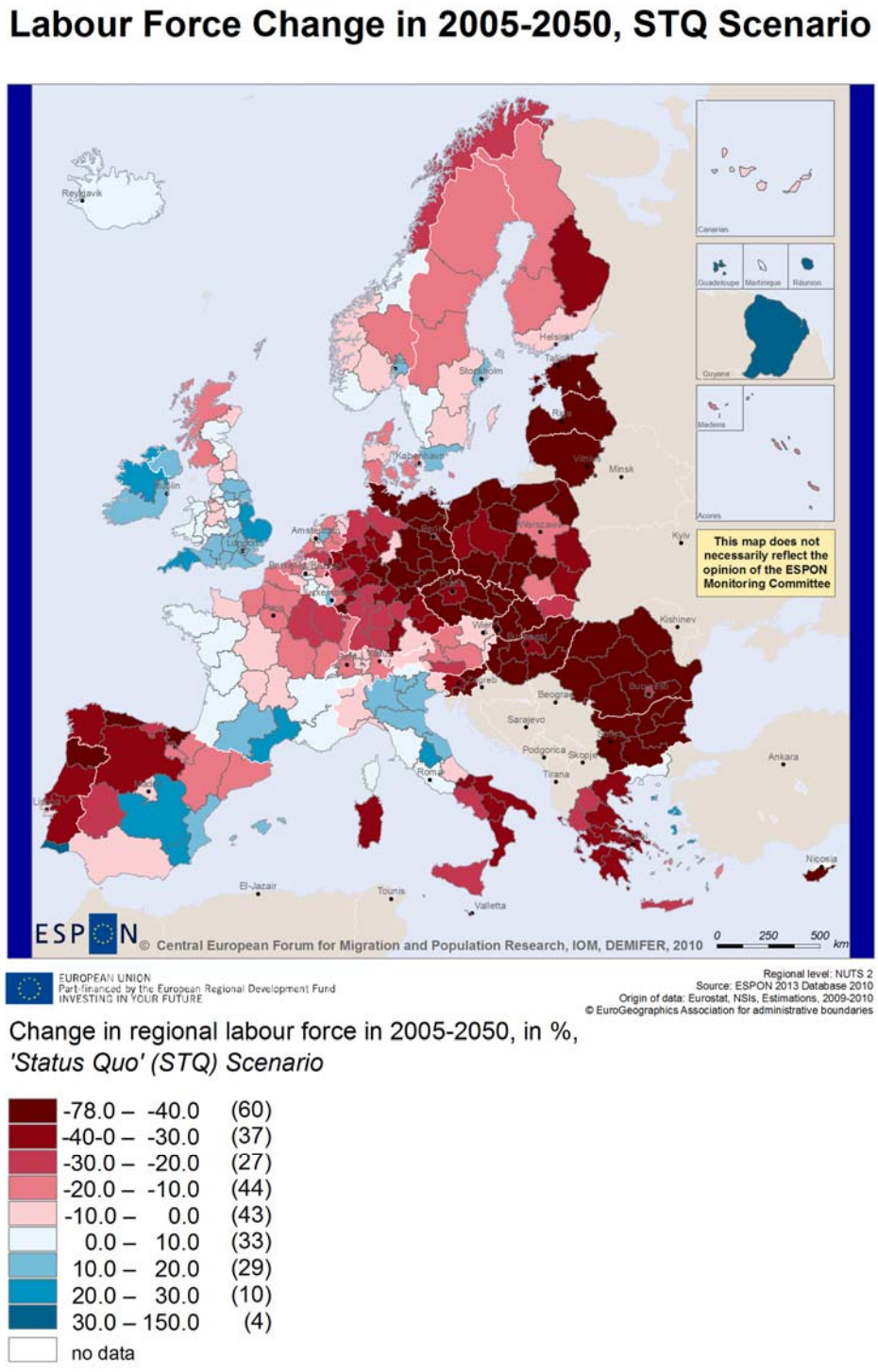
Map 2. Population change 2005-2050, NUTS2, *No Extra-Europe Migration* simulation



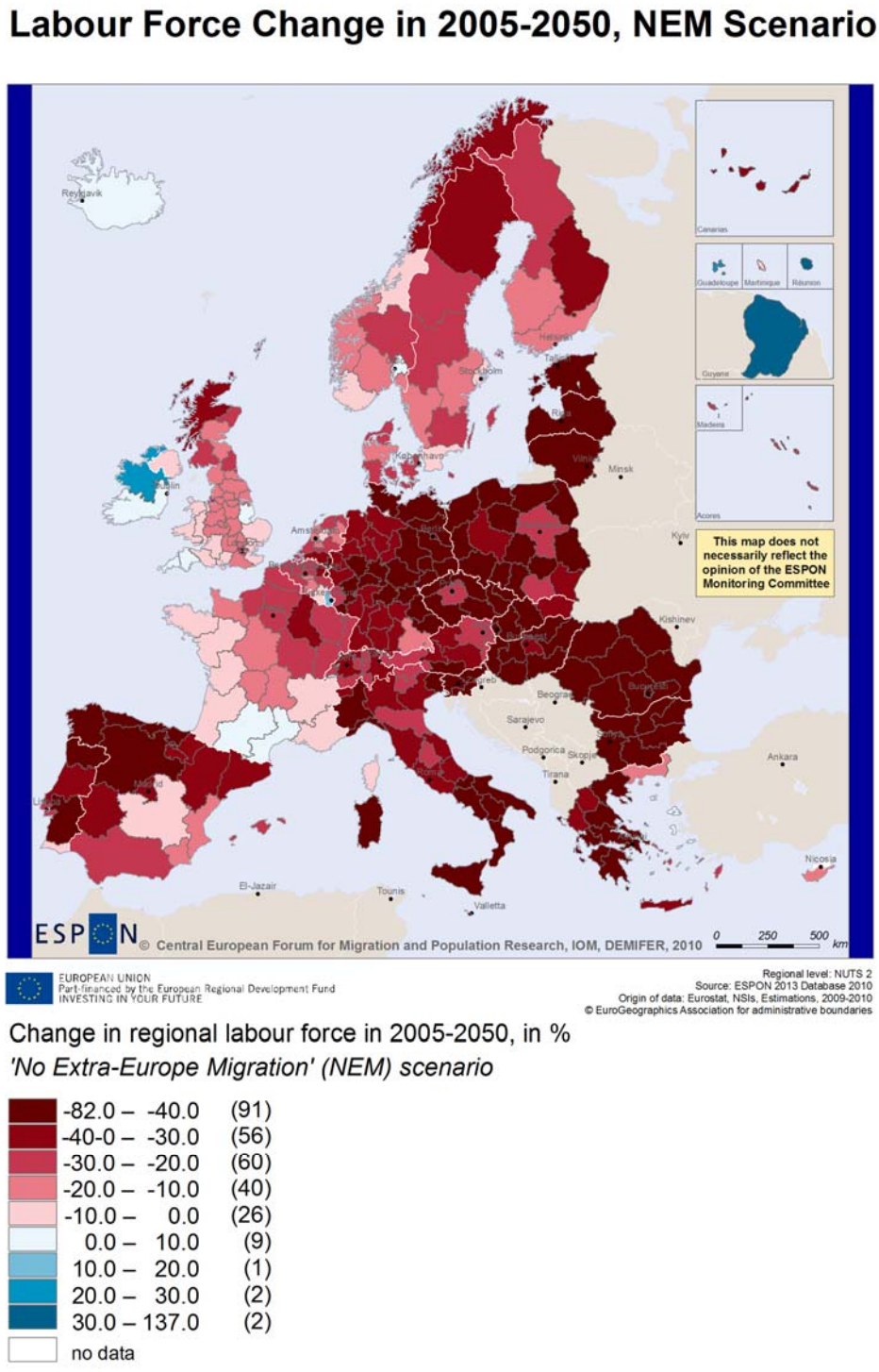
Map 3. Population change 2005-2050, NUTS2, *No Migration* simulation



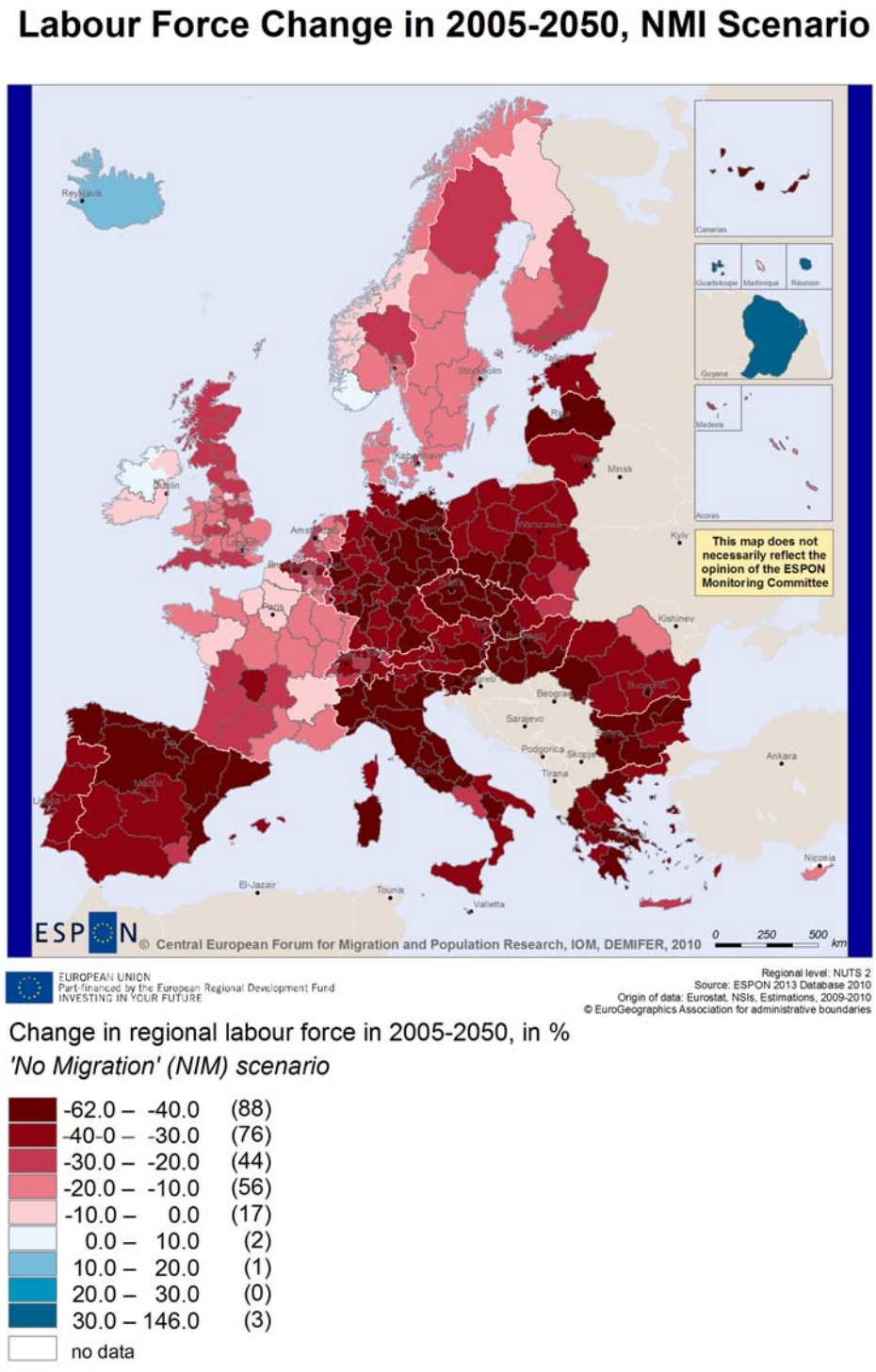
Map 4. Labour force change 2005-2050, NUTS2, *Status Quo* projection



Map 5. Labour force change 2005-2050, NUTS2, *No Extra-Europe Migration* simulation



Map 6. Labour force change 2005-2050, NUTS2, *No Migration* simulation



Appendix B. Impact of migration on population change: tables and figures

Table 2. Population change components and impact of migration in the *Status Quo* projection

					Population change components			Impact of migration		
		Population 2005 (1000)	Population 2050 (1000)	Population change (%)	Natural change (%)	Intra-Europe migration (%)	Extra-Europe migration (%)	*No migration* effect	*Intra-Europe migration* effect	*Extra-Europe migration* effect
	Austria									
AT11	Burgenland (A)	278.0	281.1	1.1	-32.3	24.6	8.8	-34.4	19.4	16.1
AT12	Niederösterreich	1568.9	1669.5	6.4	-23.3	21.6	8.1	-25.8	15.0	17.2
AT13	Wien	1632.6	1909.1	16.9	-10.0	-1.8	28.8	-27.4	16.8	27.6
AT21	Kärnten	558.9	463.2	-17.1	-26.7	1.9	7.7	-27.5	-1.2	11.6
AT22	Steiermark	1196.8	1103.8	-7.8	-24.7	6.7	10.2	-28.9	6.9	14.2
AT31	Oberösterreich	1394.7	1348.8	-3.3	-16.0	-0.2	12.9	-18.9	-1.1	16.7
AT32	Salzburg	522.4	526.8	0.8	-12.5	-2.3	15.6	-19.7	1.4	19.1
AT33	Tirol	689.0	755.1	9.6	-9.4	1.8	17.1	-18.0	6.3	21.3
AT34	Vorarlberg	360.1	397.1	10.3	-1.9	-1.6	13.9	-10.9	1.7	19.5
	Belgium									
BE10	Brussels Hoofdstedelijk Gewest	1006.7	1088.6	8.1	12.4	-46.2	41.9	6.3	-26.4	28.2
BE21	Prov. Antwerpen	1676.9	1687.9	0.7	-12.6	0.4	12.8	-15.1	0.7	15.0
BE22	Prov. Limburg (B)	809.9	786.7	-2.9	-20.7	6.2	11.6	-21.6	4.9	13.9
BE23	Prov. Oost-Vlaanderen	1380.1	1371.6	-0.6	-17.2	10.4	6.2	-19.0	8.7	9.8
BE24	Prov. Vlaams Brabant	1037.8	1086.8	4.7	-15.7	12.4	8.0	-17.8	6.6	16.0
BE25	Prov. West-Vlaanderen	1138.5	1036.8	-8.9	-20.5	6.9	4.7	-21.8	5.4	7.5
BE31	Prov. Brabant Wallon	363.8	410.3	12.8	-11.2	15.5	8.5	-9.4	4.8	17.4
BE32	Prov. Hainaut	1286.3	1266.2	-1.6	-16.3	6.5	8.3	-16.2	2.5	12.0
BE33	Prov. Liège	1034.0	1022.7	-1.1	-15.1	4.4	9.5	-15.9	2.7	12.1
BE34	Prov. Luxembourg (B)	256.0	293.6	14.7	-3.6	10.2	8.1	-5.2	7.7	12.2
BE35	Prov. Namur	455.9	493.4	8.2	-9.8	12.5	5.5	-10.9	8.0	11.1
	Bulgaria									
BG31	Severozapaden	974.7	401.2	-58.8	-41.0	-16.0	-1.8	-42.2	-15.7	-0.9
BG32	Severen tsentralen	958.8	445.8	-53.5	-43.9	-7.5	-2.1	-44.3	-8.0	-1.2
BG33	Severoiztochen	1001.7	527.5	-47.3	-37.1	-7.8	-2.5	-35.7	-10.0	-1.6
BG34	Yugoiztochen	1139.9	610.0	-46.5	-35.6	-8.5	-2.4	-33.1	-11.8	-1.6
BG41	Yugozapaden	2114.8	1233.6	-41.7	-40.8	1.7	-2.5	-41.3	1.3	-1.7
BG42	Yuzhen tsentralen	1571.2	836.8	-46.7	-37.5	-6.9	-2.4	-38.0	-7.3	-1.5
	Switzerland									
CH01	Région lémanique	1362.8	1565.8	14.9	-9.6	-2.8	27.3	-17.3	3.4	28.8
CH02	Espace Mittelland	1690.1	1644.5	-2.7	-20.8	4.9	13.2	-22.7	1.9	18.1
CH03	Nordwestschweiz	1017.2	1036.8	1.9	-20.6	7.9	14.6	-24.6	7.2	19.3
CH04	Zürich	1261.8	1373.8	8.9	-13.6	3.6	18.8	-22.5	8.7	22.6
CH05	Ostschweiz	1059.6	1016.6	-4.1	-20.3	1.2	15.0	-21.1	-1.7	18.7
CH06	Zentralschweiz	703.7	750.0	6.6	-13.8	7.1	13.3	-17.2	4.9	18.9
CH07	Ticino	319.9	333.5	4.2	-25.5	12.8	16.9	-31.5	14.5	21.3
CY00	Cyprus	749.2	412.4	-45.0	-17.6	18.7	-46.0	-9.7	-2.7	-32.5
	Czech Republic									
CZ01	Praha	1170.6	725.1	-38.1	-24.5	6.7	-20.3	-34.7	5.4	-8.7
CZ02	Střední Cechy	1144.1	873.6	-23.6	-27.8	25.3	-21.1	-30.9	21.3	-14.0
CZ03	Jihozápad	1175.3	697.9	-40.6	-30.3	2.7	-13.0	-32.3	0.6	-8.9
CZ04	Severozápad	1126.7	754.2	-33.1	-26.8	-6.1	-0.2	-30.0	-5.2	2.1
CZ05	Severovýchod	1480.1	807.8	-45.4	-28.4	-0.4	-16.6	-30.4	-3.5	-11.6
CZ06	Jihovýchod	1640.4	963.3	-41.3	-28.5	-2.3	-10.5	-30.7	-3.8	-6.8
CZ07	Střední Morava	1225.8	650.4	-46.9	-29.7	-3.3	-13.9	-32.2	-5.3	-9.5
CZ08	Moravskoslezsko	1257.6	716.6	-43.0	-29.9	-6.6	-6.5	-31.9	-7.5	-3.6
	Germany									
DE11	Stuttgart	4003.2	3216.8	-19.6	-22.8	-3.1	6.2	-25.8	-2.0	8.2
DE12	Karlsruhe	2727.7	2238.4	-17.9	-27.8	0.7	9.1	-30.2	2.4	9.8
DE13	Freiburg	2185.0	1847.9	-15.4	-25.2	3.5	6.2	-26.3	2.3	8.6
DE14	Tübingen	1801.5	1482.6	-17.7	-23.0	-1.9	7.3	-23.2	-3.3	8.8
DE21	Oberbayern	4211.1	4418.5	4.9	-19.0	16.5	7.5	-27.6	22.3	10.2
DE22	Niederbayern	1196.2	886.6	-25.9	-28.6	-3.1	5.8	-28.7	-4.4	7.3
DE23	Oberpfalz	1090.3	805.0	-26.2	-29.6	-1.1	4.5	-30.0	-2.5	6.3
DE24	Oberfranken	1106.5	702.9	-36.5	-35.4	-4.3	3.2	-34.9	-6.6	5.0
DE25	Mittelfranken	1709.0	1375.9	-19.5	-29.3	2.9	6.9	-31.8	4.1	8.2
DE26	Unterfranken	1344.6	982.8	-26.9	-30.9	-0.9	4.8	-29.4	-4.0	6.5
DE27	Schwaben	1786.2	1399.8	-21.6	-25.9	-0.1	4.4	-25.9	-2.6	6.8

Table 2. continued

					Population change components			Impact of migration		
		Population 2005 (1000)	Population 2050 (1000)	Population change (%)	Natural change (%)	Intra-Europe migration (%)	Extra-Europe migration (%)	*No migration* effect	*Intra-Europe migration* effect	*Extra-Europe migration* effect
DE30	Berlin	3387.8	2830.9	-16.4	-27.9	0.6	10.9	-36.0	8.9	10.7
DE41	Brandenburg - Nordost	1163.9	791.6	-32.0	-43.4	7.3	4.1	-40.7	2.2	6.5
DE42	Brandenburg - Südwest	1403.8	927.9	-33.9	-41.0	5.2	2.0	-39.7	0.7	5.1
DE50	Bremen	663.2	564.4	-14.9	-29.7	6.3	8.5	-36.5	12.3	9.3
DE60	Hamburg	1734.8	2039.1	17.5	-22.5	34.5	5.6	-33.1	41.0	9.6
DE71	Darmstadt	3775.0	3177.3	-15.8	-23.6	-0.8	8.5	-30.2	4.7	9.8
DE72	Gießen	1064.2	758.4	-28.7	-30.5	-3.2	5.0	-30.3	-5.3	6.8
DE73	Kassel	1258.5	838.6	-33.4	-32.6	-5.4	4.7	-31.9	-8.2	6.7
DE80	Mecklenburg-Vorpommern	1719.7	1072.9	-37.6	-41.2	0.5	3.1	-38.7	-3.7	4.7
DE91	Braunschweig	1658.9	1732.4	4.4	-28.0	-15.0	47.5	-34.5	6.9	32.0
DE92	Hannover	2166.6	1685.9	-22.2	-31.1	4.0	4.9	-33.2	2.9	8.2
DE93	Lüneburg	1703.0	1418.3	-16.7	-29.1	9.2	3.2	-28.6	5.2	6.7
DE94	Weser-Ems	2472.4	2072.5	-16.2	-23.5	-0.3	7.7	-23.0	-2.3	9.1
DEA1	Düsseldorf	5237.9	3939.1	-24.8	-30.2	0.4	5.0	-34.0	2.5	6.7
DEA2	Köln	4363.8	3631.0	-16.8	-26.7	4.0	5.9	-30.1	5.5	7.8
DEA3	Münster	2624.5	1963.8	-25.2	-27.6	-1.9	4.4	-27.4	-3.9	6.1
DEA4	Detmold	2072.5	1548.9	-25.3	-24.4	-4.4	3.6	-23.5	-7.5	5.7
DEA5	Arnsberg	3776.7	2652.3	-29.8	-30.3	-5.7	6.2	-32.1	-4.9	7.3
DEB1	Koblenz	1527.5	1083.6	-29.1	-30.7	-2.3	3.9	-31.2	-3.8	5.9
DEB2	Trier	513.9	451.5	-12.1	-28.5	9.2	7.1	-30.6	9.7	8.8
DEB3	Rheinhessen-Pfalz	2019.7	1609.4	-20.3	-31.3	5.2	5.8	-32.7	4.5	7.9
DEC0	Saarland	1056.4	640.1	-39.4	-40.1	-4.6	5.3	-39.9	-5.7	6.2
DED1	Chemnitz	1553.4	744.0	-52.1	-45.0	-9.7	2.6	-42.1	-13.3	3.4
DED2	Dresden	1667.7	1126.5	-32.4	-37.4	0.5	4.5	-36.4	-1.8	5.7
DED3	Leipzig	1075.2	736.0	-31.6	-38.7	3.3	3.9	-39.6	2.5	5.6
DEE0	Sachsen-Anhalt	2494.4	1248.4	-50.0	-43.8	-9.6	3.5	-43.3	-11.3	4.6
DEF0	Schleswig-Holstein	2828.8	1736.5	-38.6	-32.3	-10.7	4.4	-31.8	-12.3	5.5
DEG0	Thüringen	2355.3	1208.7	-48.7	-43.1	-8.1	2.5	-40.8	-11.7	3.8
	Denmark									
DK01	Hovedstaden	1631.6	1515.8	-7.1	-8.1	-4.0	5.0	-15.1	0.4	7.5
DK02	Sjælland	806.0	760.8	-5.6	-19.3	11.2	2.5	-13.1	1.4	6.1
DK03	Syddanmark	1183.8	1069.3	-9.7	-16.2	2.2	4.3	-10.9	-5.6	6.8
DK04	Midtjylland	1212.8	1204.0	-0.7	-7.1	1.4	5.0	-6.1	-2.3	7.6
DK05	Nordjylland	577.3	504.8	-12.6	-15.2	-2.2	4.8	-11.5	-8.0	6.9
EE00	Estonia	1347.5	807.1	-40.1	-29.0	-7.5	-3.6	-28.0	-9.5	-2.6
	Spain									
ES11	Galicia	2712.2	2057.2	-24.1	-36.9	6.1	6.7	-38.4	4.3	10.0
ES12	Principado de Asturias	1059.1	768.2	-27.5	-43.4	8.5	7.5	-44.7	6.7	10.5
ES13	Cantabria	551.1	508.3	-7.8	-29.7	13.1	8.9	-30.9	10.7	12.5
ES21	Pais Vasco	2103.4	1424.9	-32.3	-28.2	-3.7	-0.4	-32.6	-4.0	4.4
ES22	Comunidad Foral de Navarra	580.6	597.6	2.9	-18.9	9.2	12.6	-22.6	8.6	16.9
ES23	La Rioja	294.3	311.5	5.8	-21.3	11.8	15.4	-25.5	12.5	18.8
ES24	Aragón	1243.5	1235.0	-0.7	-26.9	8.9	17.3	-31.1	10.2	20.2
ES30	Comunidad de Madrid	5821.1	6620.6	13.7	-6.1	-8.1	27.9	-16.9	2.3	28.3
ES41	Castilla y León	2469.3	2090.7	-15.3	-34.0	8.0	10.7	-36.7	7.1	14.3
ES42	Castilla-la Mancha	1856.8	2581.1	39.0	-17.7	39.4	17.3	-21.6	32.8	27.8
ES43	Extremadura	1068.8	964.0	-9.8	-22.5	6.2	6.5	-25.2	3.4	12.0
ES51	Cataluña	6784.1	6820.5	0.5	-13.0	-1.3	14.8	-20.7	2.3	18.9
ES52	Comunidad Valenciana	4518.1	6003.9	32.9	-13.5	19.8	26.6	-21.7	23.1	31.5
ES53	Illes Balears	958.0	1299.8	35.7	-13.5	20.5	28.7	-18.4	22.7	31.4
ES61	Andalucia	7670.4	8707.4	13.5	-10.9	9.8	14.6	-14.4	8.7	19.2
ES62	Región de Murcia	1300.1	1908.1	46.8	0.2	16.4	30.1	-7.1	19.0	34.9
ES63	Ciudad Autónoma de Ceuta (ES)	71.4	72.8	1.9	10.3	-12.3	4.0	8.4	-18.4	11.9
ES64	Ciudad Autónoma de Melilla (ES)	67.1	43.4	-35.4	3.8	6.7	-45.8	12.5	-42.2	-5.7
ES70	Canarias (ES)	1908.7	2238.1	17.3	-18.1	9.5	25.9	-21.8	11.7	27.3
	Finland									
FI13	Itä-Suomi	667.1	497.8	-25.4	-25.3	-4.2	4.2	-20.2	-11.0	5.9
FI18	Etelä-Suomi	2580.8	2689.5	4.2	-8.6	5.5	7.3	-15.0	9.9	9.3
FI19	Länsi-Suomi	1330.4	1282.2	-3.6	-13.6	5.1	4.9	-12.2	1.3	7.3
FI1A	Pohjois-Suomi	631.9	590.0	-6.6	-1.3	-10.0	4.7	7.1	-20.6	6.9
FI20	Åland	26.5	28.8	8.4	-14.0	-2.1	24.5	-15.9	2.8	21.6

Table 2. continued

					Population change components			Impact of migration		
		Population 2005 (1000)	Population 2050 (1000)	Population change (%)	Natural change (%)	Intra-Europe migration (%)	Extra-Europe migration (%)	*No migration* effect	*Intra-Europe migration* effect	*Extra-Europe migration* effect
	France									
FR10	Île de France	11442.1	11130.3	-2.7	17.7	-26.7	6.3	10.7	-21.2	7.8
FR21	Champagne-Ardenne	1339.4	1133.9	-15.3	-9.9	-12.0	6.5	-4.5	-18.4	7.6
FR22	Picardie	1889.0	1825.2	-3.4	-2.1	-8.0	6.7	2.8	-14.4	8.3
FR23	Haute-Normandie	1806.7	1758.1	-2.7	-1.4	-7.9	6.7	1.4	-12.3	8.3
FR24	Centre	2507.2	2559.3	2.1	-7.7	2.7	7.0	-5.3	-1.7	9.1
FR25	Basse-Normandie	1452.4	1442.8	-0.7	-8.3	0.7	6.9	-4.5	-5.0	8.8
FR26	Bourgogne	1626.2	1546.5	-4.9	-14.9	3.1	6.9	-12.4	-1.2	8.7
FR30	Nord - Pas-de-Calais	4015.6	3738.7	-6.9	1.9	-15.1	6.3	6.6	-21.1	7.6
FR41	Lorraine	2332.5	2078.1	-10.9	-9.9	-7.6	6.5	-7.9	-10.9	8.0
FR42	Alsace	1803.4	1757.1	-2.6	-6.1	-3.2	6.8	-5.4	-5.7	8.5
FR43	Franche-Comté	1145.7	1140.7	-0.4	-3.7	-3.6	6.9	-0.5	-8.8	8.9
FR51	Pays de la Loire	3415.4	4156.4	21.7	2.6	11.7	7.4	3.5	7.7	10.5
FR52	Bretagne	3066.6	3654.3	19.2	-7.1	18.9	7.3	-5.8	14.6	10.4
FR53	Poitou-Charentes	1711.3	1890.5	10.5	-13.3	16.5	7.3	-13.7	14.2	10.0
FR61	Aquitaine	3088.2	3609.1	16.9	-13.3	22.8	7.4	-15.6	22.0	10.4
FR62	Midi-Pyrénées	2743.1	3361.7	22.6	-10.4	25.5	7.5	-13.9	25.6	10.8
FR63	Limousin	727.5	732.4	0.7	-22.8	16.4	7.1	-23.8	15.1	9.4
FR71	Rhône-Alpes	5963.7	6897.3	15.7	4.0	4.5	7.1	2.5	3.3	9.8
FR72	Auvergne	1331.8	1348.1	1.2	-18.3	12.5	7.1	-18.0	9.9	9.3
FR81	Languedoc-Roussillon	2497.7	3205.2	28.3	-6.9	27.7	7.6	-10.8	28.0	11.1
FR82	Provence-Alpes-Côte d'Azur	4768.6	5389.5	13.0	-4.5	10.3	7.2	-8.1	11.2	9.9
FR83	Corse	289.1	321.7	11.3	-20.2	24.1	7.3	-23.3	24.4	10.2
FR91	Guadeloupe (FR)	399.2	607.9	52.3	45.1	-0.3	7.4	44.0	-2.4	10.8
FR92	Martinique (FR)	396.0	452.3	14.2	7.0	0.2	7.1	6.1	-1.0	9.2
FR93	Guyane (FR)	199.2	535.9	169.0	162.8	-2.0	8.2	165.1	-8.2	12.1
FR94	Reunion (FR)	772.9	1217.9	57.6	51.2	-0.8	7.2	51.3	-3.4	9.6
	Greece									
GR11	Anatoliki Makedonia, Thraki	607.8	667.8	9.9	-31.3	31.0	10.2	-27.2	24.0	13.0
GR12	Kentriki Makedonia	1911.5	1591.9	-16.7	-31.1	5.3	9.2	-27.8	0.9	10.2
GR13	Dytiki Makedonia	294.5	243.6	-17.3	-29.1	2.9	8.9	-28.8	1.4	10.1
GR14	Thessalia	737.6	567.8	-23.0	-30.5	-1.4	8.8	-27.6	-5.0	9.6
GR21	Ipeiros	341.9	278.2	-18.6	-26.9	-0.5	8.8	-33.2	4.6	10.0
GR22	Ionia Nisia	220.4	150.1	-31.9	-26.4	-13.7	8.2	-30.3	-10.1	8.5
GR23	Dytiki Ellada	732.3	543.1	-25.8	-23.3	-10.9	8.4	-27.8	-7.1	9.0
GR24	Sterea Ellada	558.5	390.0	-30.2	-18.1	-20.0	8.0	-32.2	-6.6	8.6
GR25	Peloponnisos	598.2	433.2	-27.6	-20.4	-15.4	8.2	-32.3	-4.2	8.9
GR30	Attiki	3973.3	3348.0	-15.7	-28.8	3.9	9.2	-29.6	3.6	10.2
GR41	Voreio Aigaio	202.4	270.4	33.6	-33.6	55.8	11.4	-30.4	48.3	15.7
GR42	Notio Aigaio	303.1	314.3	3.7	-16.5	10.4	9.8	-16.4	8.0	12.1
GR43	Kriti	601.3	551.8	-8.2	-17.9	0.3	9.4	-15.0	-4.1	10.9
	Hungary									
HU10	Közép-Magyarország	2841.0	2013.6	-29.1	-28.9	5.6	-5.8	-36.7	8.3	-0.7
HU21	Közép-Dunántúl	1110.9	706.5	-36.4	-34.8	1.6	-3.3	-35.5	0.3	-1.2
HU22	Nyugat-Dunántúl	1000.3	660.8	-33.9	-38.8	3.9	1.0	-38.0	2.7	1.3
HU23	Dél-Dunántúl	977.5	561.8	-42.5	-36.9	-5.4	-0.3	-37.2	-5.8	0.4
HU31	Észak-Magyarország	1271.1	685.3	-46.1	-34.3	-11.6	-0.2	-32.1	-14.2	0.2
HU32	Észak-Alföld	1541.8	888.8	-42.4	-29.3	-12.3	-0.8	-27.7	-14.7	0.1
HU33	Dél-Alföld	1354.9	805.6	-40.5	-37.6	-2.4	-0.5	-36.9	-4.1	0.5
	Ireland									
IE01	Border, Midland and Western	1098.1	1526.0	39.0	12.7	27.7	-1.5	11.6	25.4	2.0
IE02	Southern and Eastern	3011.0	3732.1	23.9	15.5	10.2	-1.7	11.9	10.6	1.5
IS00	Iceland	293.6	327.6	11.6	10.1	-0.7	2.2	18.1	-10.6	4.0
	Italy									
ITC1	Piemonte	4330.2	4644.1	7.3	-30.2	5.0	32.4	-38.3	9.2	36.4
ITC2	Valle d'Aosta/Vallée d'Aoste	122.9	132.7	8.0	-29.0	15.2	21.7	-34.5	13.3	29.2
ITC3	Liguria	1592.3	1621.4	1.8	-37.4	11.1	28.1	-46.0	14.4	33.4
ITC4	Lombardia	9393.1	11884.5	26.5	-20.7	8.3	38.9	-31.0	13.7	43.8
ITD1	Provincia Autonoma Bolzano-Bozen	477.1	586.6	23.0	-5.8	4.9	23.8	-15.1	7.3	30.8
ITD2	Provincia Autonoma Trento	497.5	661.6	33.0	-11.5	12.1	32.3	-23.0	14.7	41.3
ITD3	Veneto	4700.0	6022.6	28.1	-19.7	9.1	38.7	-29.4	12.9	44.6
ITD4	Friuli-Venezia Giulia	1204.7	1262.4	4.8	-33.9	11.1	27.6	-40.4	12.6	32.6
ITD5	Emilia-Romagna	4151.4	5469.1	31.7	-26.4	20.9	37.2	-35.9	23.7	43.9
ITE1	Toscana	3598.3	4212.9	17.1	-29.1	13.3	32.8	-37.3	15.9	38.5
ITE2	Umbria	858.9	1156.6	34.7	-23.8	17.4	41.0	-34.9	20.9	48.6
ITE3	Marche	1518.8	1875.6	23.5	-24.5	14.7	33.3	-33.1	16.8	39.8

Table 2. continued

					Population change components			Impact of migration		
		Population 2005 (1000)	Population 2050 (1000)	Population change (%)	Natural change (%)	Intra-Europe migration (%)	Extra-Europe migration (%)	*No migration* effect	*Intra-Europe migration* effect	*Extra-Europe migration* effect
ITE4	Lazio	5270.0	6088.0	15.5	-19.9	3.3	32.2	-30.4	9.4	36.6
ITF1	Abruzzo	1299.3	1387.7	6.8	-26.4	10.2	23.0	-32.5	10.7	28.6
ITF2	Molise	322.0	254.9	-20.8	-30.8	-2.6	12.6	-34.5	-2.2	15.9
ITF3	Campania	5789.0	5208.9	-10.0	-12.1	-11.8	13.8	-15.4	-12.3	17.6
ITF4	Puglia	4068.2	3218.9	-20.9	-21.0	-7.3	7.5	-22.2	-9.5	10.8
ITF5	Basilicata	596.5	427.6	-28.3	-25.9	-11.3	8.8	-29.0	-10.8	11.5
ITF6	Calabria	2009.3	1558.7	-22.4	-20.8	-15.4	13.8	-24.5	-14.8	16.8
ITG1	Sicilia	5013.1	4118.1	-17.9	-19.0	-7.4	8.5	-20.3	-9.8	12.2
ITG2	Sardegna	1650.1	1298.0	-21.3	-33.3	5.3	6.7	-34.4	1.9	11.2
LI00	Liechtenstein	34.6	29.5	-14.8	-17.1	6.1	-3.8	-15.4	1.0	-0.3
LT00	Lithuania	3425.3	1915.9	-44.1	-34.8	-7.4	-1.9	-33.2	-9.6	-1.2
LU00	Luxembourg (Grand-Duché)	461.2	600.9	30.3	-3.7	37.1	-3.1	-13.0	37.2	6.1
LV00	Latvia	2306.4	1171.7	-49.2	-33.8	-4.9	-10.5	-37.4	-4.5	-7.2
MT00	Malta	402.7	288.2	-28.4	-20.9	2.3	-9.8	-19.8	-0.8	-7.8
	Netherlands									
NL11	Groningen	575.1	580.5	0.9	-14.5	5.8	9.7	-16.9	6.3	11.6
NL12	Friesland (NL)	643.0	635.2	-1.2	-8.4	-0.3	7.5	-7.1	-4.9	10.8
NL13	Drenthe	483.4	477.8	-1.2	-7.5	2.0	4.4	-12.9	2.7	9.0
NL21	Overijssel	1109.4	1095.5	-1.3	-4.3	-0.8	3.9	-3.3	-6.0	8.1
NL22	Gelderland	1972.0	1844.5	-6.5	-9.7	-1.0	4.2	-10.6	-3.8	8.0
NL23	Flevoland	365.9	453.1	23.8	21.8	-5.5	7.5	12.5	-2.0	13.3
NL31	Utrecht	1171.3	1310.3	11.9	2.3	5.9	3.6	-4.1	6.5	9.6
NL32	Noord-Holland	2599.1	2789.3	7.3	-4.4	1.3	10.4	-12.8	6.3	13.8
NL33	Zuid-Holland	3458.4	3356.4	-2.9	-5.0	-7.4	9.4	-10.4	-4.9	12.3
NL34	Zeeland	380.0	355.5	-6.4	-12.8	0.7	5.6	-13.2	-2.6	9.3
NL41	Noord-Brabant	2411.4	2108.7	-12.6	-13.9	-2.7	4.0	-14.0	-6.1	7.5
NL42	Limburg (NL)	1136.7	823.3	-27.6	-27.1	-3.4	2.9	-25.6	-8.1	6.1
	Norway									
NO01	Oslo og Akershus	1024.1	1284.2	25.4	14.4	-1.0	12.1	-2.0	11.3	16.1
NO02	Hedmark og Oppland	371.6	326.3	-12.2	-20.4	0.7	7.6	-18.3	-4.4	10.5
NO03	Sør-Østlandet	889.1	921.9	3.7	-11.7	8.0	7.4	-11.8	3.6	11.8
NO04	Agder og Rogaland	658.0	761.0	15.7	6.8	-0.2	9.1	6.0	-3.7	13.3
NO05	Vestlandet	800.1	801.4	0.2	0.9	-9.4	8.7	3.8	-15.5	11.9
NO06	Trøndelag	401.0	442.7	10.4	-1.1	3.7	7.8	-1.7	-0.1	12.2
NO07	Nord-Norge	462.6	393.0	-15.0	-9.6	-16.8	11.4	-5.8	-21.6	12.3
	Poland									
PL11	Lódzkie	2587.7	1597.0	-38.3	-36.8	-2.5	1.1	-35.9	-3.6	1.2
PL12	Mazowieckie	5146.0	4729.7	-8.1	-28.0	15.5	4.4	-28.7	15.6	5.0
PL21	Malopolskie	3260.2	2911.8	-10.7	-21.8	5.6	5.4	-21.6	4.8	6.1
PL22	Slaskie	4700.8	1561.5	-66.8	-32.6	-28.1	-6.0	-34.7	-29.9	-2.2
PL31	Lubelskie	2185.2	1502.4	-31.2	-25.7	-7.1	1.6	-23.8	-9.3	1.9
PL32	Podkarpackie	2098.0	1589.0	-24.3	-20.7	-6.3	2.8	-19.0	-8.7	3.5
PL33	Swietokrzyskie	1288.7	821.3	-36.3	-31.2	-6.7	1.6	-29.2	-8.9	1.8
PL34	Podlaskie	1202.4	784.4	-34.8	-27.0	-9.8	2.0	-25.2	-12.3	2.7
PL41	Wielkopolskie	3365.3	2659.2	-21.0	-23.7	1.5	1.2	-22.9	0.4	1.5
PL42	Zachodniopomorskie	1694.9	1117.4	-34.1	-28.9	-6.5	1.3	-28.5	-7.4	1.8
PL43	Lubuskie	1009.2	734.7	-27.2	-27.7	-3.5	4.0	-26.0	-5.5	4.3
PL51	Dolnoslaskie	2893.1	1735.2	-40.0	-33.8	-7.2	1.0	-33.8	-8.0	1.8
PL52	Opolskie	1051.5	290.5	-72.4	-30.5	-38.8	-3.1	-34.3	-40.5	2.4
PL61	Kujawsko-Pomorskie	2068.3	1369.3	-33.8	-26.5	-7.3	0.0	-25.6	-8.6	0.4
PL62	Warminsko-Mazurskie	1428.7	826.4	-42.2	-23.2	-18.2	-0.7	-20.6	-22.0	0.4
PL63	Pomorskie	2194.0	1548.2	-29.4	-21.2	-8.1	-0.1	-20.6	-9.9	1.1
	Portugal									
PT11	Norte	3727.3	2512.1	-32.6	-23.9	-7.1	-1.6	-23.1	-9.0	-0.5
PT15	Algarve	411.5	645.8	56.9	-9.3	21.1	45.1	-20.8	26.9	50.8
PT16	Centro (PT)	2376.6	1712.8	-27.9	-30.6	0.5	2.2	-30.6	-2.1	4.7
PT17	Lisboa	2760.7	2878.7	4.3	-13.2	-3.7	21.2	-21.4	1.6	24.1
PT18	Alentejo	767.7	535.7	-30.2	-33.4	1.9	1.4	-33.7	-1.6	5.0
PT20	Região Autónoma dos Açores (PT)	241.2	203.0	-15.8	-13.6	-3.8	1.6	-9.2	-9.5	2.8
PT30	Região Autónoma da Madeira (PT)	244.3	229.3	-6.1	-18.0	-1.4	13.3	-17.5	-3.6	15.0
	Romania									
RO11	Nord-Vest	2742.7	1030.5	-62.4	-29.7	-25.1	-7.7	-30.2	-27.3	-4.9
RO12	Centru	2533.4	727.8	-71.3	-28.4	-32.0	-10.9	-28.7	-36.9	-5.7
RO21	Nord-Est	3735.5	1683.5	-54.9	-21.3	-27.4	-6.3	-17.8	-33.0	-4.1
RO22	Sud-Est	2850.0	1301.9	-54.3	-31.9	-18.3	-4.1	-32.3	-19.4	-2.6
RO31	Sud - Muntenia	3338.2	1807.4	-45.9	-36.9	-7.4	-1.6	-34.6	-10.6	-0.6
RO32	Bucuresti - Ilfov	2209.8	1743.6	-21.1	-36.0	-7.7	22.7	-39.7	2.2	16.4
RO41	Sud-Vest Oltenia	2313.9	1085.7	-53.1	-37.1	-13.5	-2.5	-36.8	-14.6	-1.7
RO42	Vest	1935.1	685.8	-64.6	-34.4	-22.7	-7.4	-36.9	-23.7	-3.9

Table 2. continued

					Population change components			Impact of migration		
		Population 2005 (1000)	Population 2050 (1000)	Population change (%)	Natural change (%)	Intra-Europe migration (%)	Extra-Europe migration (%)	*No migration* effect	*Intra-Europe migration* effect	*Extra-Europe migration* effect
	Sweden									
SE11	Stockholm	1872.9	2351.6	25.6	12.9	-2.7	15.4	-3.9	9.0	20.4
SE12	Östra Mellansverige	1514.5	1541.9	1.8	-10.1	1.2	10.8	-12.5	-1.1	15.4
SE21	Småland med öarna	799.7	787.5	-1.5	-12.7	-0.5	11.6	-12.1	-5.1	15.7
SE22	Sydsverige	1311.3	1559.7	19.0	-5.1	6.0	18.1	-12.8	10.2	21.5
SE23	Västsverige	1805.7	1979.0	9.6	-6.6	4.4	11.7	-10.6	3.7	16.5
SE31	Norra Mellansverige	826.2	737.1	-10.8	-19.6	-2.7	11.5	-18.3	-6.9	14.4
SE32	Mellersta Norrland	371.6	336.6	-9.4	-19.1	-0.8	10.5	-17.4	-6.2	14.2
SE33	Övre Norrland	509.5	445.7	-12.5	-18.7	-5.8	12.0	-16.4	-10.5	14.3
	Slovenia									
SI01	Vzhodna Slovenija	1077.9	728.2	-32.4	-35.7	-0.3	3.5	-34.6	-1.8	3.9
SI02	Zahodna Slovenija	919.7	720.6	-21.6	-27.2	0.4	5.2	-28.4	1.0	5.7
	Slovakia									
SK01	Bratislavský kraj	601.1	328.2	-45.4	-26.0	-28.5	9.1	-34.1	-17.6	6.2
SK02	Západné Slovensko	1863.9	1217.7	-34.7	-35.4	-7.6	8.3	-35.3	-5.8	6.4
SK03	Stredné Slovensko	1352.5	813.8	-39.8	-25.9	-16.9	3.0	-26.9	-15.7	2.7
SK04	Východné Slovensko	1567.3	1220.7	-22.1	-13.9	-12.3	4.1	-13.1	-12.6	3.6
	United Kingdom									
UKC1	Tees Valley and Durham	1153.3	1212.7	5.1	-8.6	9.2	4.6	-11.0	2.3	13.8
UKC2	Northumberland, Tyne and Wear	1394.7	1400.6	0.4	-13.7	6.9	7.3	-17.9	3.3	15.0
UKD1	Cumbria	495.2	509.6	2.9	-14.9	14.2	3.6	-20.2	10.1	13.1
UKD2	Cheshire	995.5	1048.3	5.3	-5.7	8.2	2.8	-12.4	4.6	13.1
UKD3	Greater Manchester	2538.7	2766.6	9.0	3.8	-5.4	10.6	-3.8	-5.6	18.4
UKD4	Lancashire	1443.5	1567.0	8.6	-2.1	6.0	4.7	-7.5	1.6	14.5
UKD5	Merseyside	1359.0	1260.4	-7.3	-10.1	-2.3	5.1	-13.3	-6.3	12.3
UKE1	East Yorkshire and Northern Lincolnshire	897.8	1035.2	15.3	-3.1	5.7	12.7	-12.0	6.3	21.1
UKE2	North Yorkshire	773.3	912.4	18.0	-7.8	9.0	16.8	-18.4	13.5	23.0
UKE3	South Yorkshire	1283.8	1422.5	10.8	-4.8	3.5	12.1	-9.9	0.7	20.0
UKE4	West Yorkshire	2130.4	2665.4	25.1	8.3	-3.3	20.2	-1.5	-0.2	26.8
UKF1	Derbyshire and Nottinghamshire	2028.4	2316.1	14.2	-8.2	10.1	12.3	-13.9	7.7	20.4
UKF2	Leicestershire, Rutland and Northants	1603.8	2015.5	25.7	2.7	6.0	17.0	-4.8	5.2	25.3
UKF3	Lincolnshire	678.4	834.2	23.0	-6.4	24.8	4.5	-19.3	23.4	18.9
UKG1	Herefordshire, Worcestershire and Warks	1243.7	1339.8	7.7	-7.9	12.8	2.8	-15.1	7.7	15.2
UKG2	Shropshire and Staffordshire	1507.2	1584.7	5.1	-7.9	10.2	2.8	-11.8	3.6	13.3
UKG3	West Midlands	2588.6	2824.5	9.1	11.0	-17.2	15.3	4.4	-16.7	21.4
UKH1	East Anglia	2255.1	2880.2	27.7	-3.9	17.5	14.2	-13.3	16.5	24.6
UKH2	Bedfordshire, Hertfordshire	1631.8	1950.3	19.5	8.6	1.6	9.3	-2.6	-1.8	23.9
UKH3	Essex	1650.7	2028.0	22.9	1.3	15.1	6.4	-9.8	9.6	23.0
UKI1	Inner London	2925.5	3648.8	24.7	36.9	-69.2	57.0	6.0	-20.4	39.1
UKI2	Outer London	4497.4	5365.4	19.3	22.0	-29.5	26.8	2.2	-15.7	32.8
UKJ1	Berkshire, Bucks and Oxfordshire	2134.3	2606.3	22.1	7.0	-0.9	16.0	-3.4	0.2	25.3
UKJ2	Surrey, East and West Sussex	2589.8	3098.2	19.6	-6.1	17.5	8.2	-15.2	11.8	22.9
UKJ3	Hampshire and Isle of Wight	1812.2	2198.3	21.3	-2.9	13.7	10.6	-12.4	12.0	21.7
UKJ4	Kent	1618.6	1983.7	22.6	-1.0	15.7	7.8	-8.1	7.5	23.2
UKK1	Gloucestershire, Wiltshire and Bristol/Bath area	2227.8	2781.0	24.8	-1.6	13.1	13.3	-11.0	13.1	22.7
UKK2	Dorset and Somerset	1210.9	1402.4	15.8	-8.2	23.7	0.4	-18.7	18.3	16.2
UKK3	Cornwall and Isles of Scilly	520.8	643.5	23.6	-8.4	32.1	-0.2	-22.0	29.4	16.1
UKK4	Devon	1106.2	1412.3	27.7	-6.1	24.4	9.4	-18.3	25.1	20.8
UKL1	West Wales and The Valleys	1877.6	2019.6	7.6	-9.2	15.5	1.3	-13.2	9.4	11.4
UKL2	East Wales	1072.5	1209.7	12.8	-3.9	9.6	7.1	-10.4	7.5	15.7
UKM2	Eastern Scotland	1933.5	2117.4	9.5	-10.8	8.8	11.5	-20.1	10.1	19.5
UKM3	South Western Scotland	2262.9	2050.3	-9.4	-16.1	-0.9	7.6	-20.6	-2.9	14.1
UKM5	North Eastern Scotland	439.3	441.5	0.5	-12.7	-4.1	17.4	-22.3	1.4	21.4
UKM6	Highlands and Islands	459.0	416.2	-9.3	-17.7	1.0	7.3	-17.0	-6.8	14.5
UKN0	Northern Ireland	1724.4	2093.0	21.4	10.5	0.5	10.3	2.9	-0.8	19.3

Figure 9. Austria: Impact of migration on population change, NUTS2

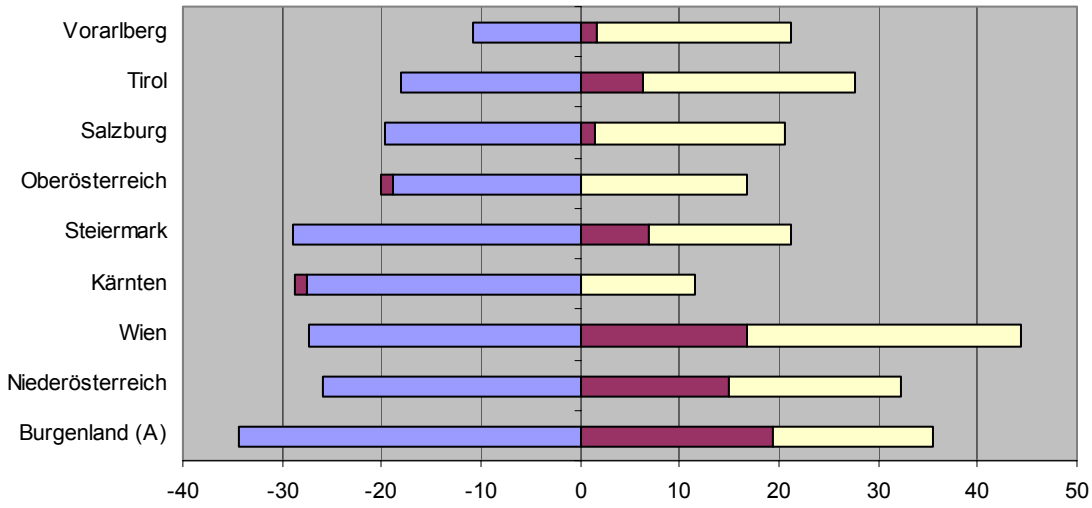


Figure 10. Belgium: Impact of migration on population change, NUTS2

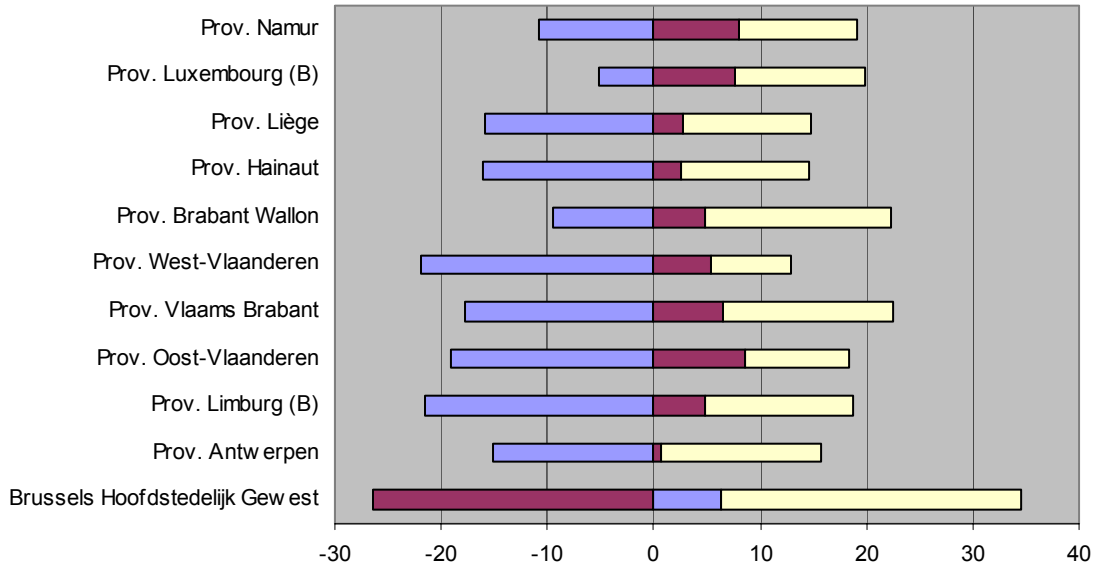


Figure 11. Bulgaria: Impact of migration on population change, NUTS2

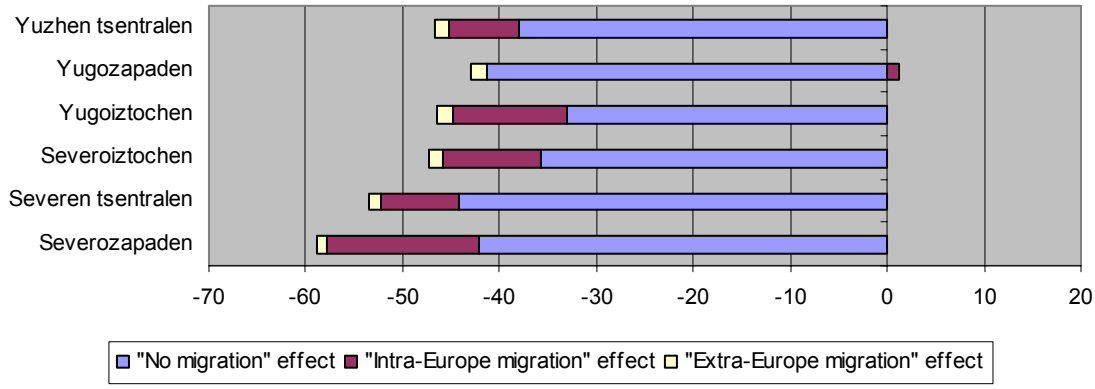


Figure 12. Cyprus: Impact of migration on population change, NUTS2

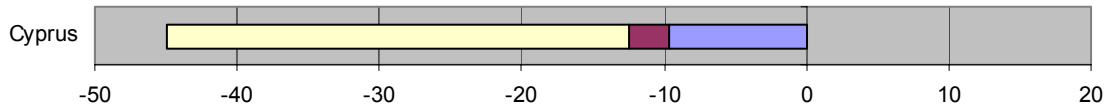


Figure 13. Czech Republic: Impact of migration on population change, NUTS2

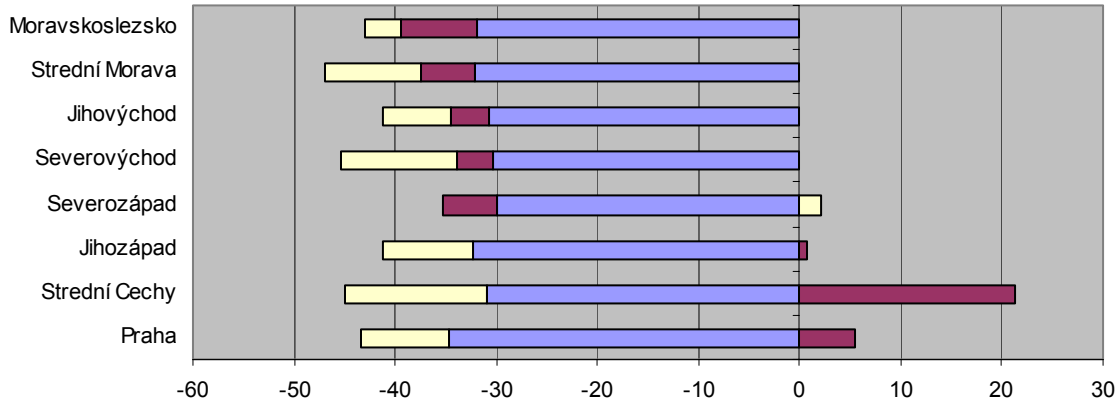


Figure 14. Denmark: Impact of migration on population change, NUTS2

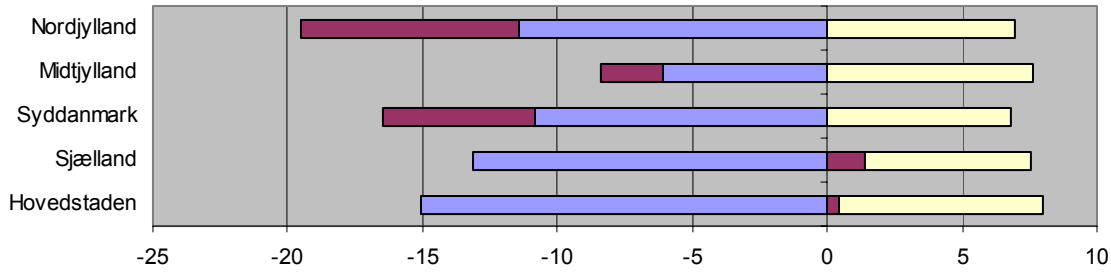


Figure 15. Estonia: Impact of migration on population change, NUTS2

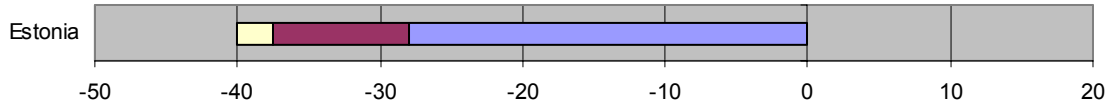


Figure 16. Finland: Impact of migration on population change, NUTS2

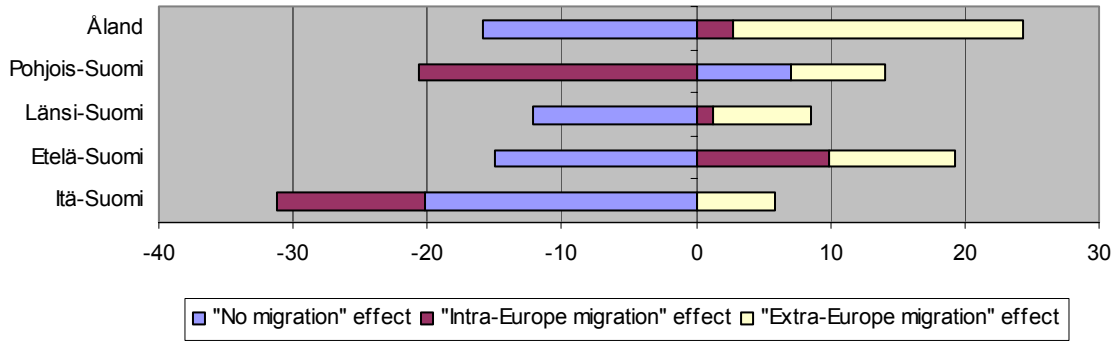


Figure 17. France: Impact of migration on population change, NUTS2

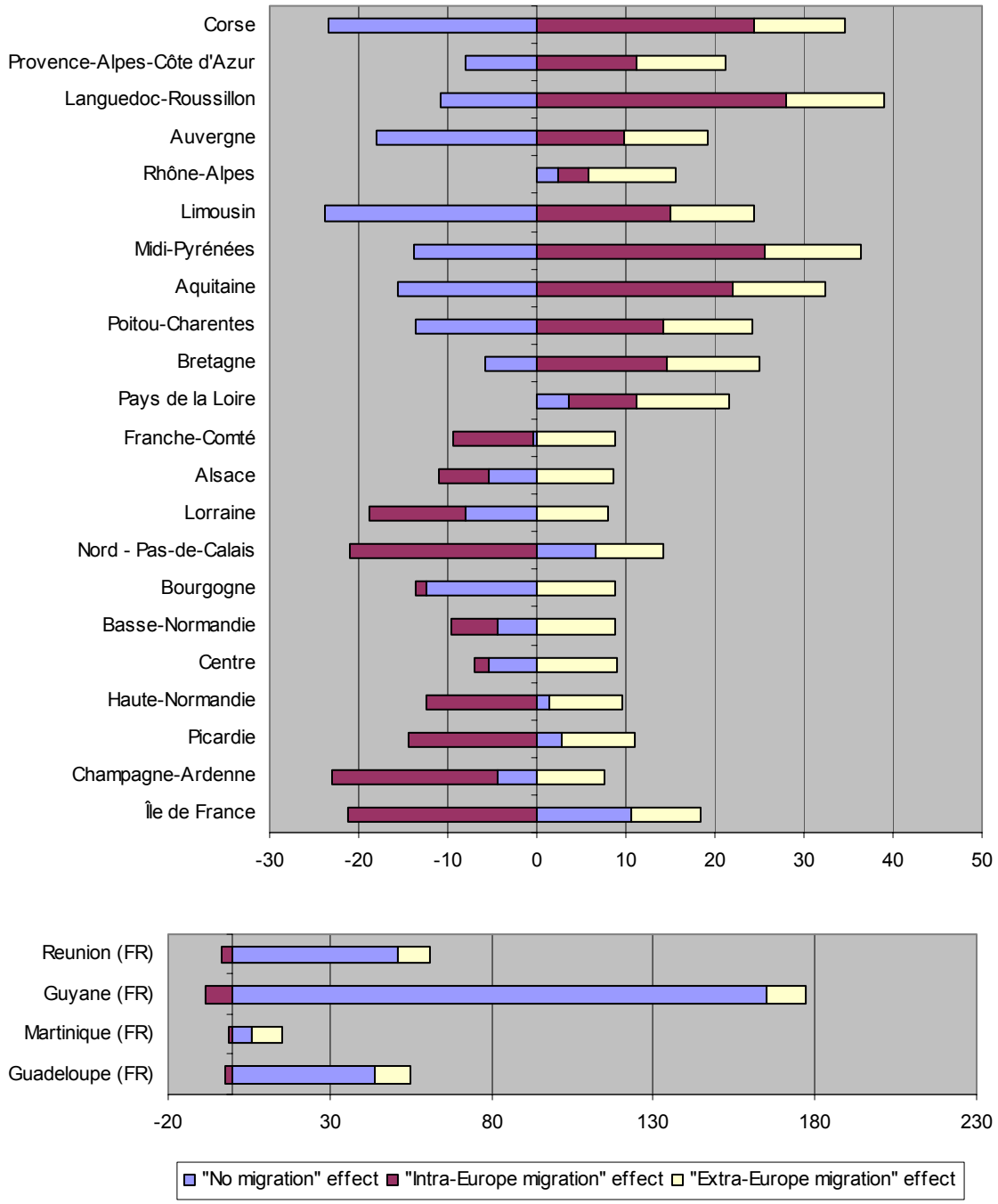


Figure 18. Germany: Impact of migration on population change, NUTS2

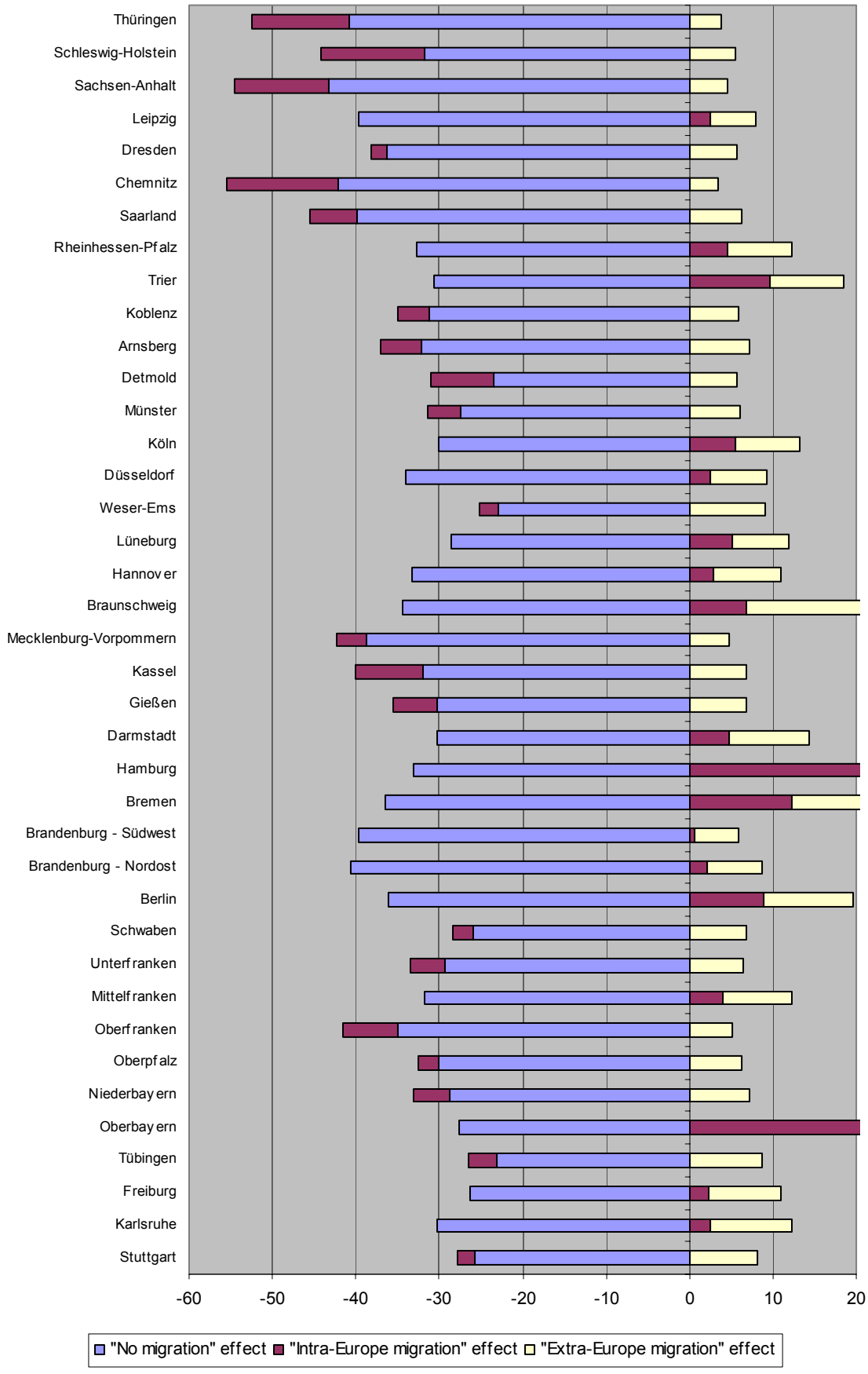


Figure 19. Greece: Impact of migration on population change, NUTS2

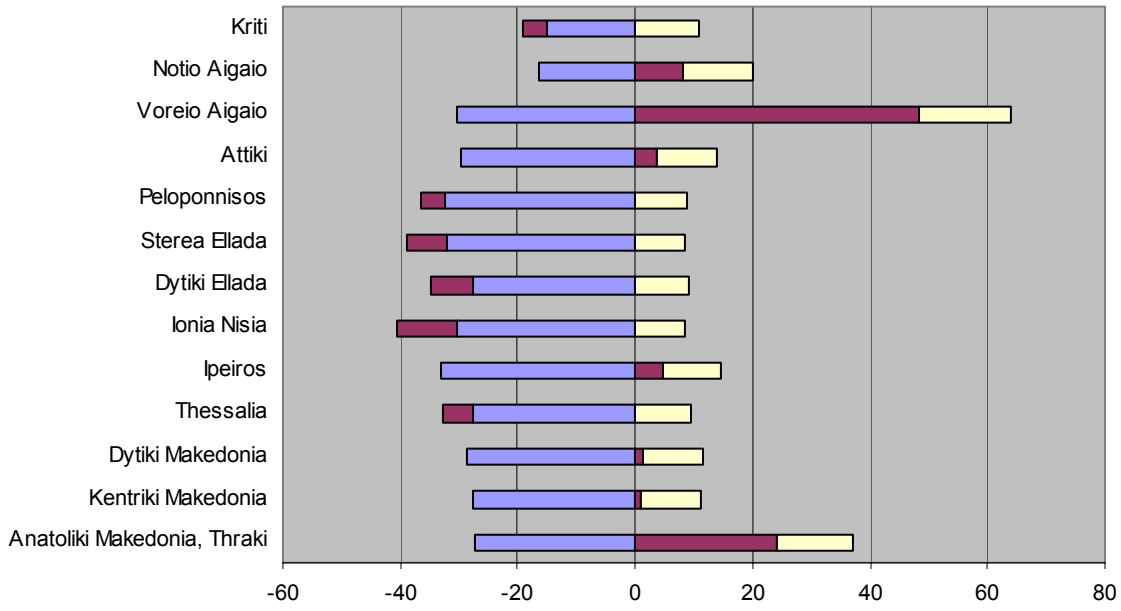


Figure 20. Hungary: Impact of migration on population change, NUTS2

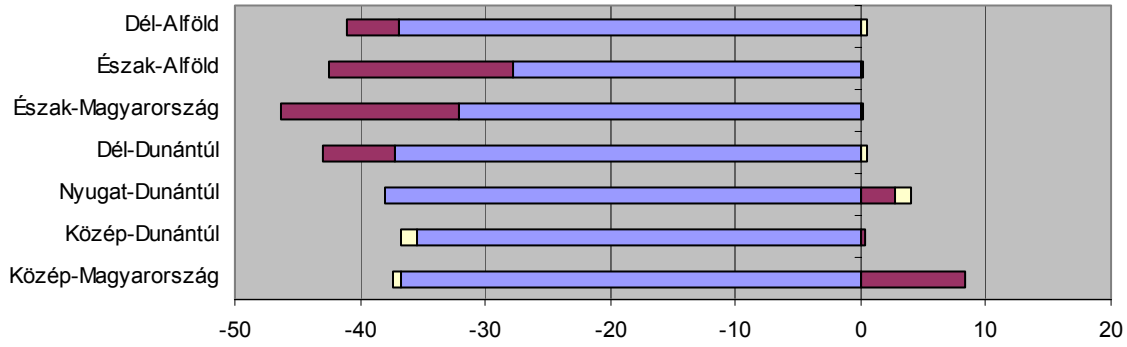


Figure 21. Iceland: Impact of migration on population change, NUTS2

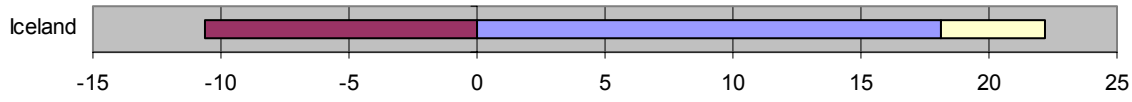


Figure 22. Ireland: Impact of migration on population change, NUTS2

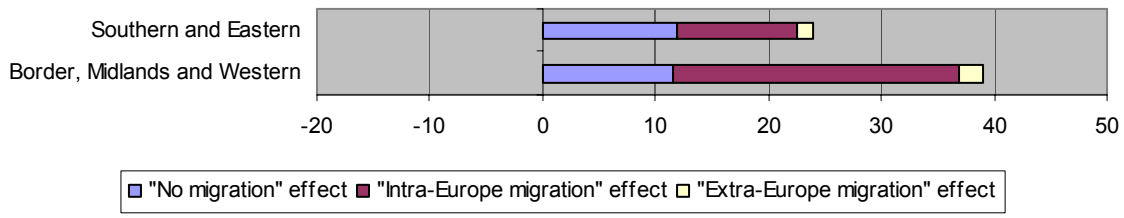


Figure 23. Italy: Impact of migration on population change, NUTS2

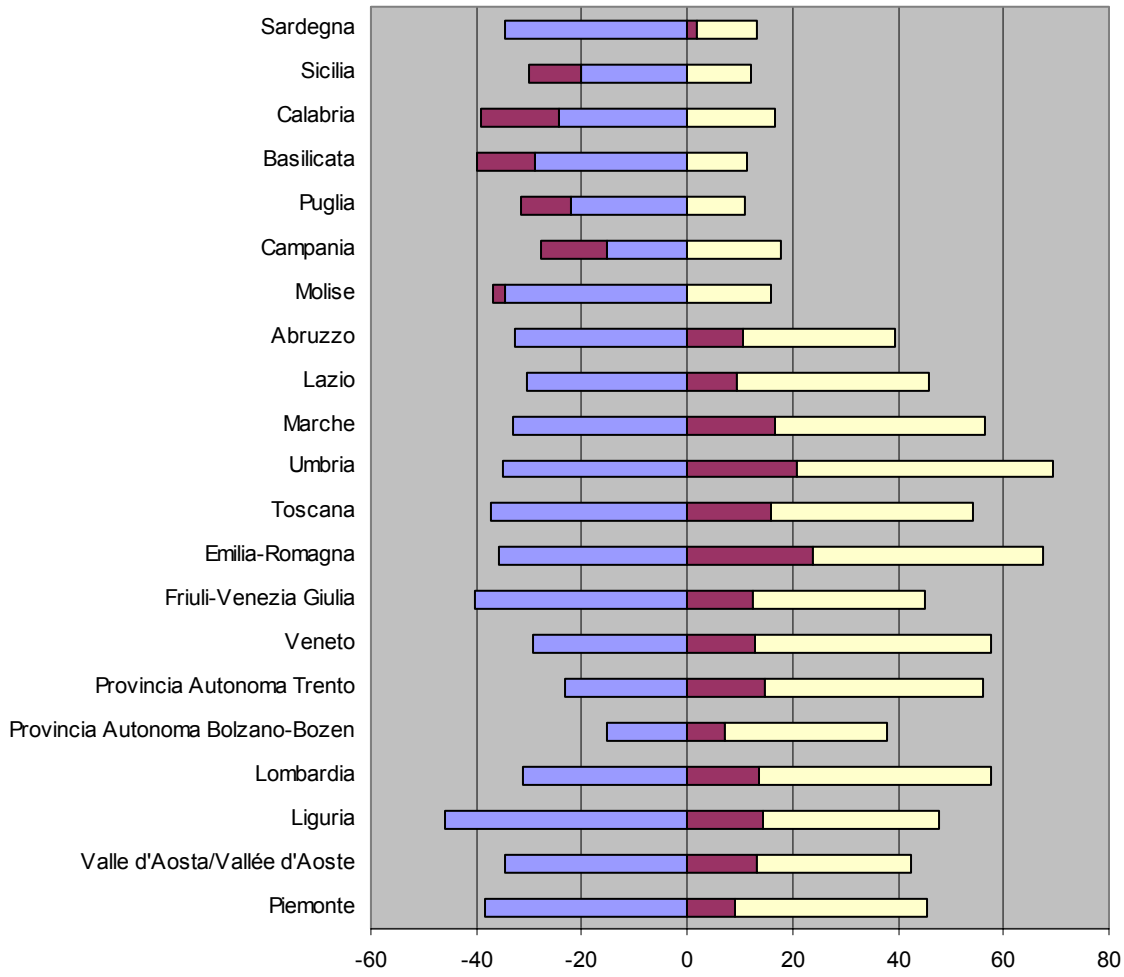


Figure 24. Latvia: Impact of migration on population change, NUTS2

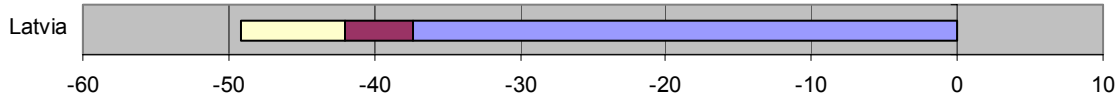


Figure 25. Liechtenstein: Impact of migration on population change, NUTS2

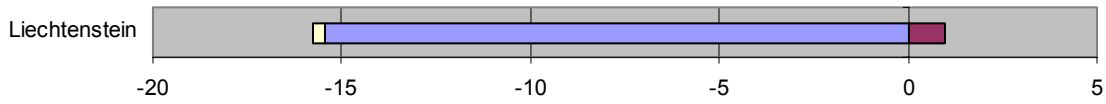


Figure 26. Lithuania: Impact of migration on population change, NUTS2

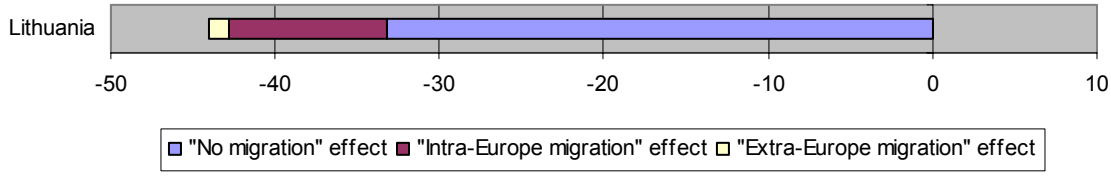


Figure 27. Luxembourg: Impact of migration on population change, NUTS2

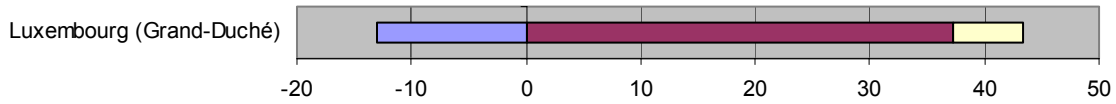


Figure 28. Malta: Impact of migration on population change, NUTS2

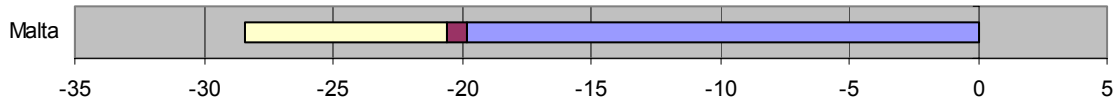


Figure 29. Netherlands: Impact of migration on population change, NUTS2

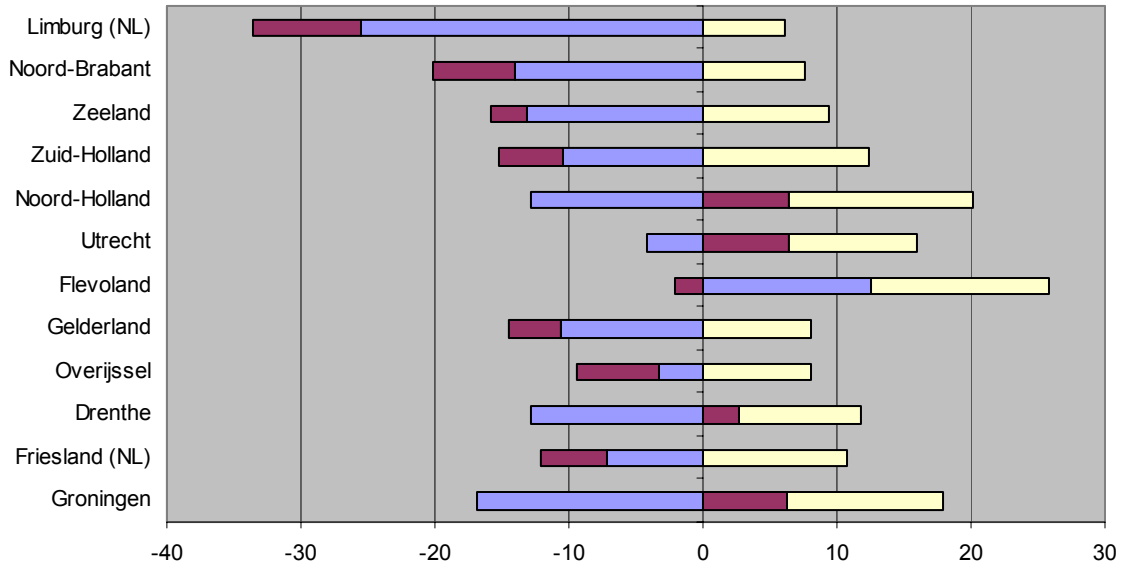


Figure 30. Norway: Impact of migration on population change, NUTS2

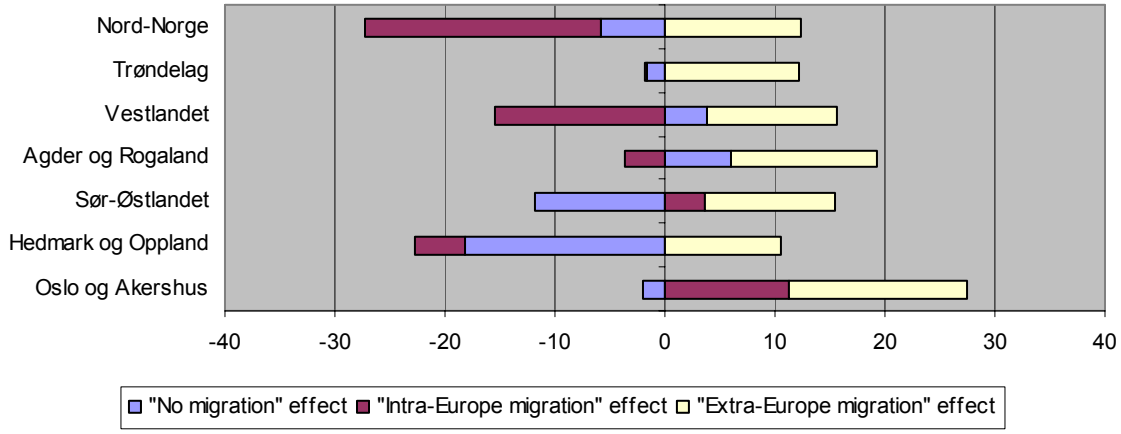


Figure 31. Poland: Impact of migration on population change, NUTS2

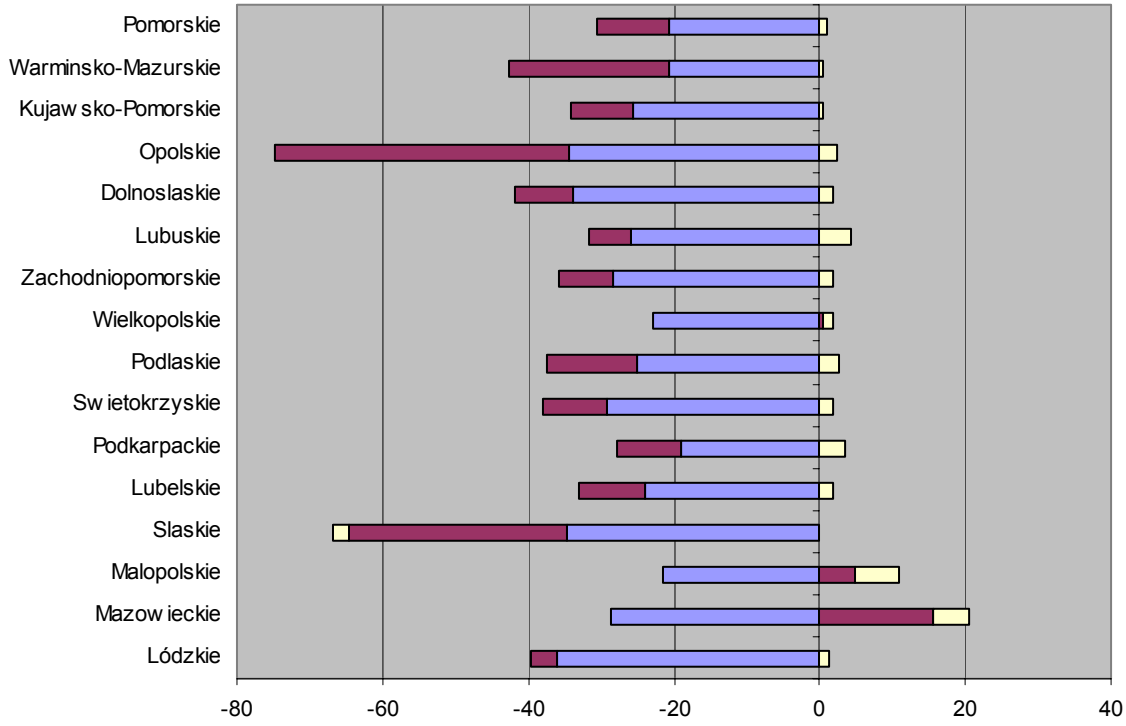


Figure 32 .Portugal: Impact of migration on population change, NUTS2

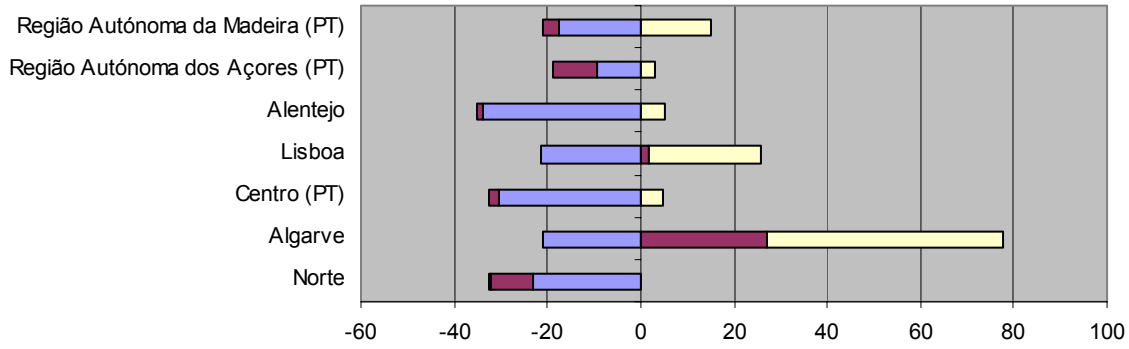


Figure 33. Romania: Impact of migration on population change, NUTS2

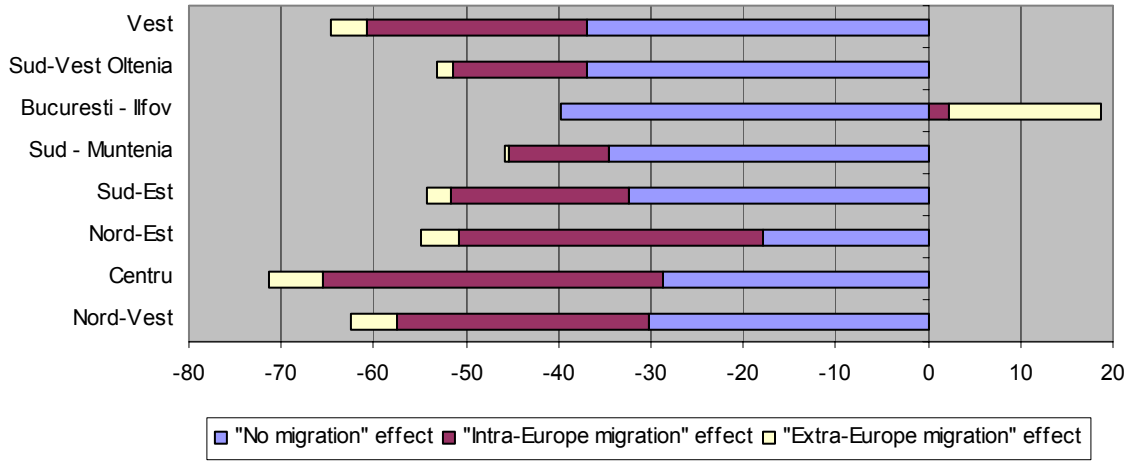


Figure 34. Slovakia: Impact of migration on population change, NUTS2

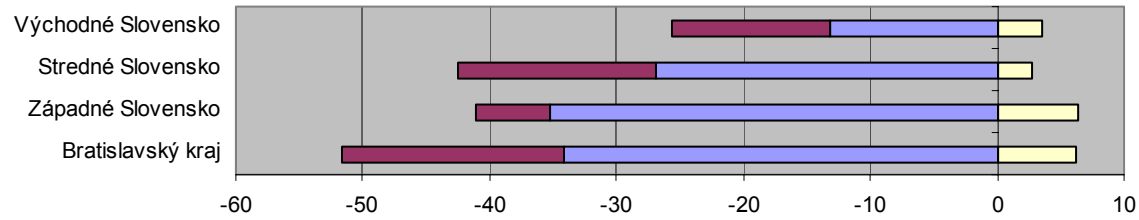


Figure 35. Slovenia: Impact of migration on population change, NUTS2

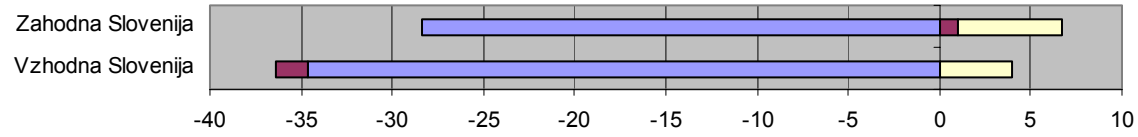


Figure 36. Spain: Impact of migration on population change, NUTS2

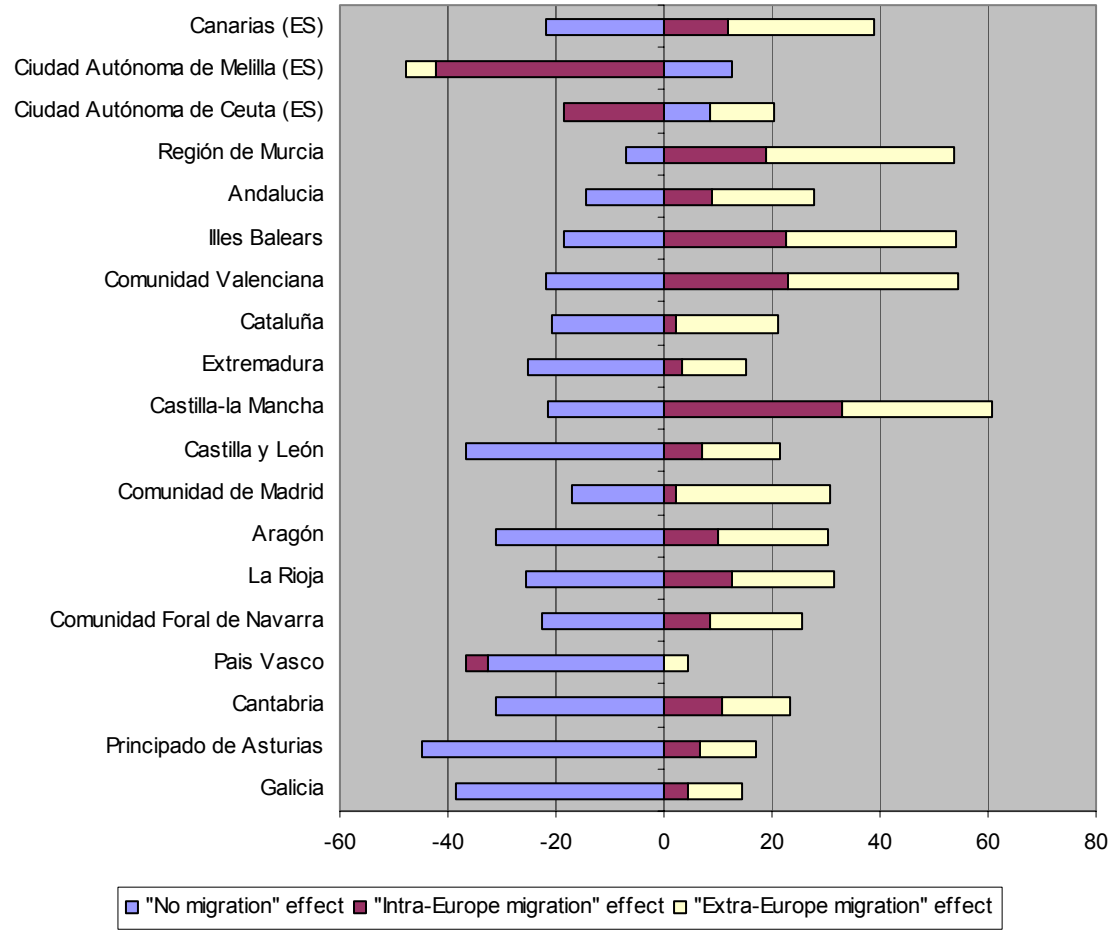


Figure 37. Sweden: Impact of migration on population change, NUTS2

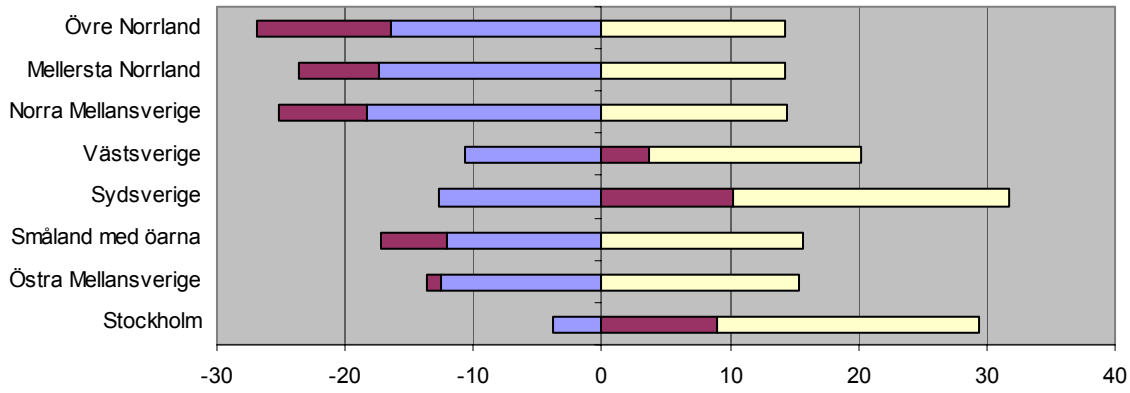


Figure 38. Switzerland: Impact of migration on population change, NUTS2

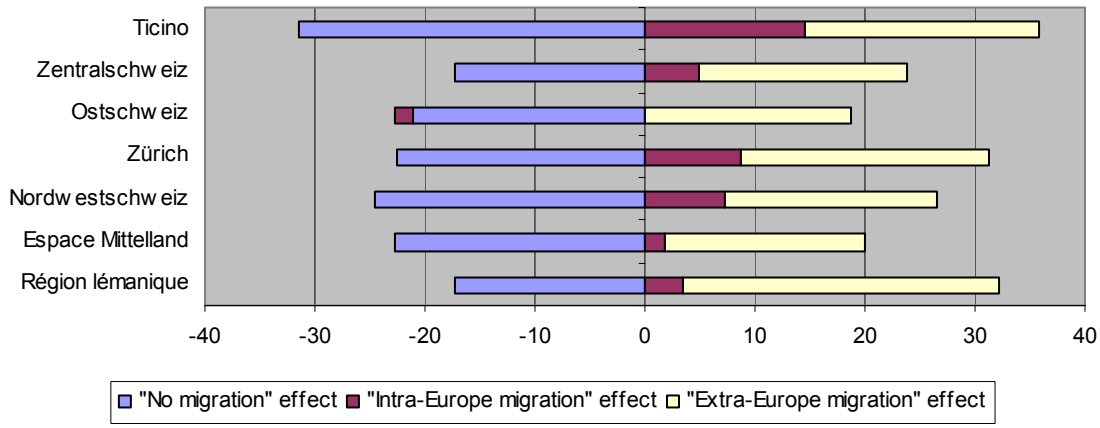
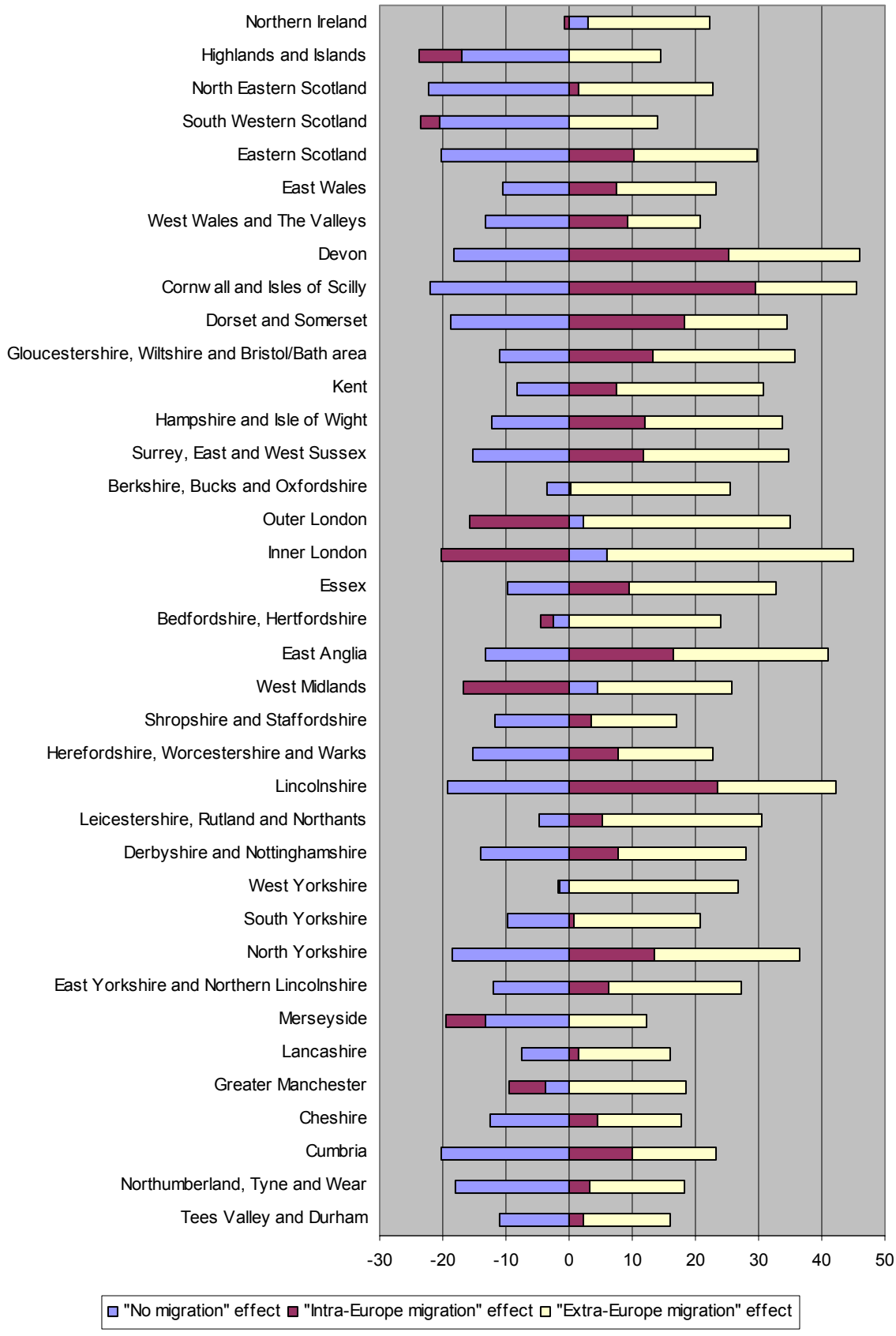
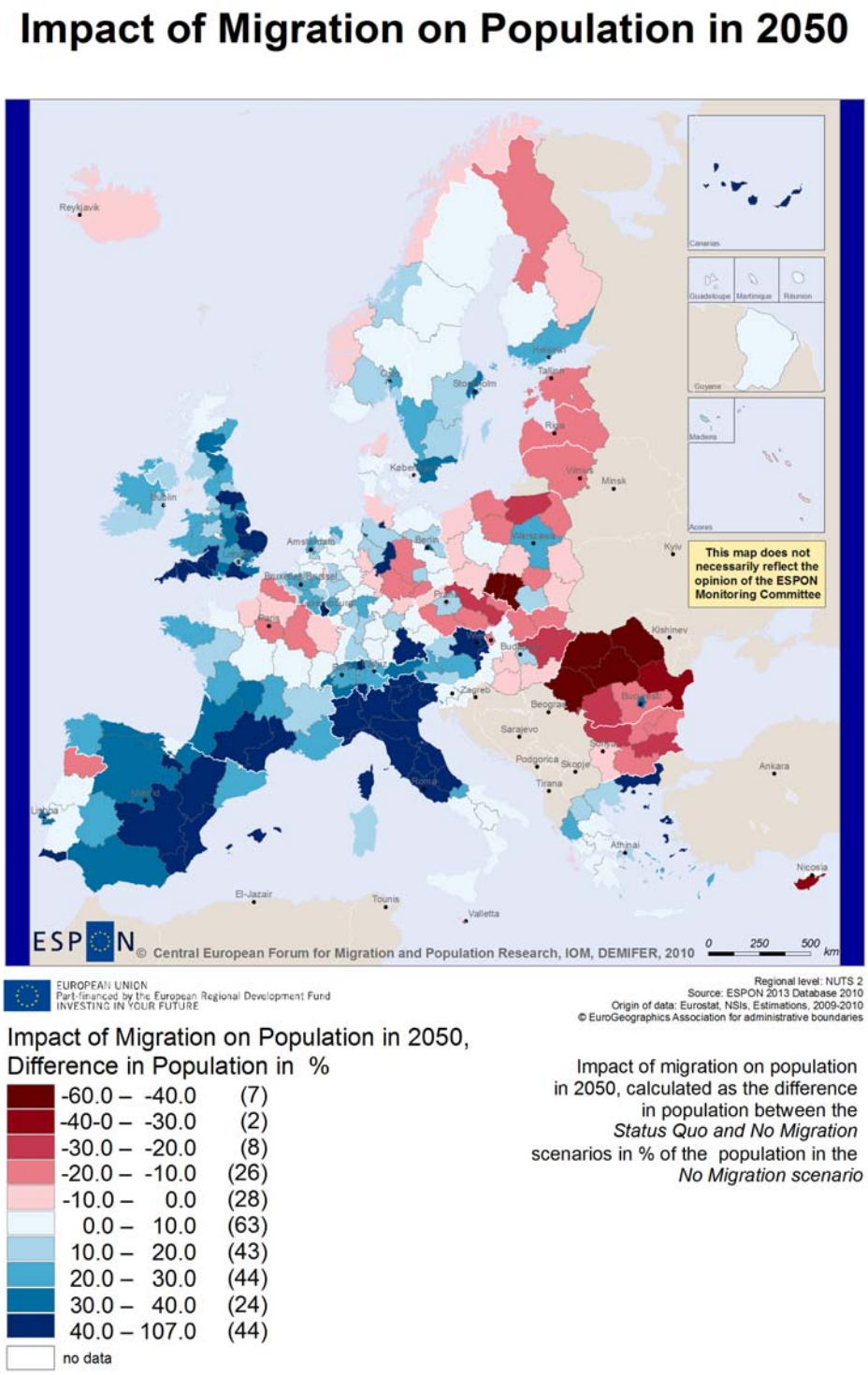


Figure 39. United Kingdom: Impact of migration on population change, NUTS2

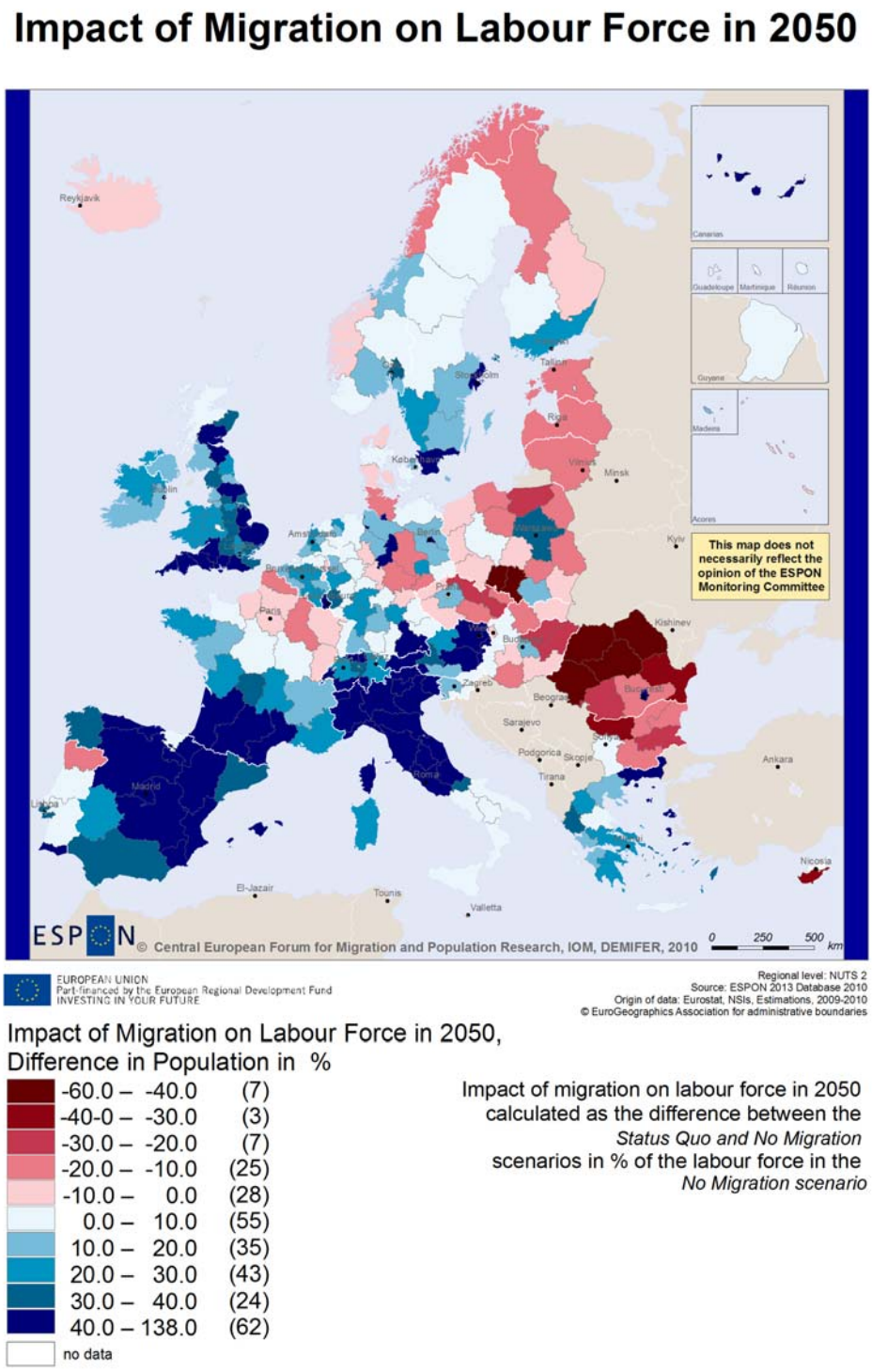


Appendix C. Impact of migration on population and labour force: maps

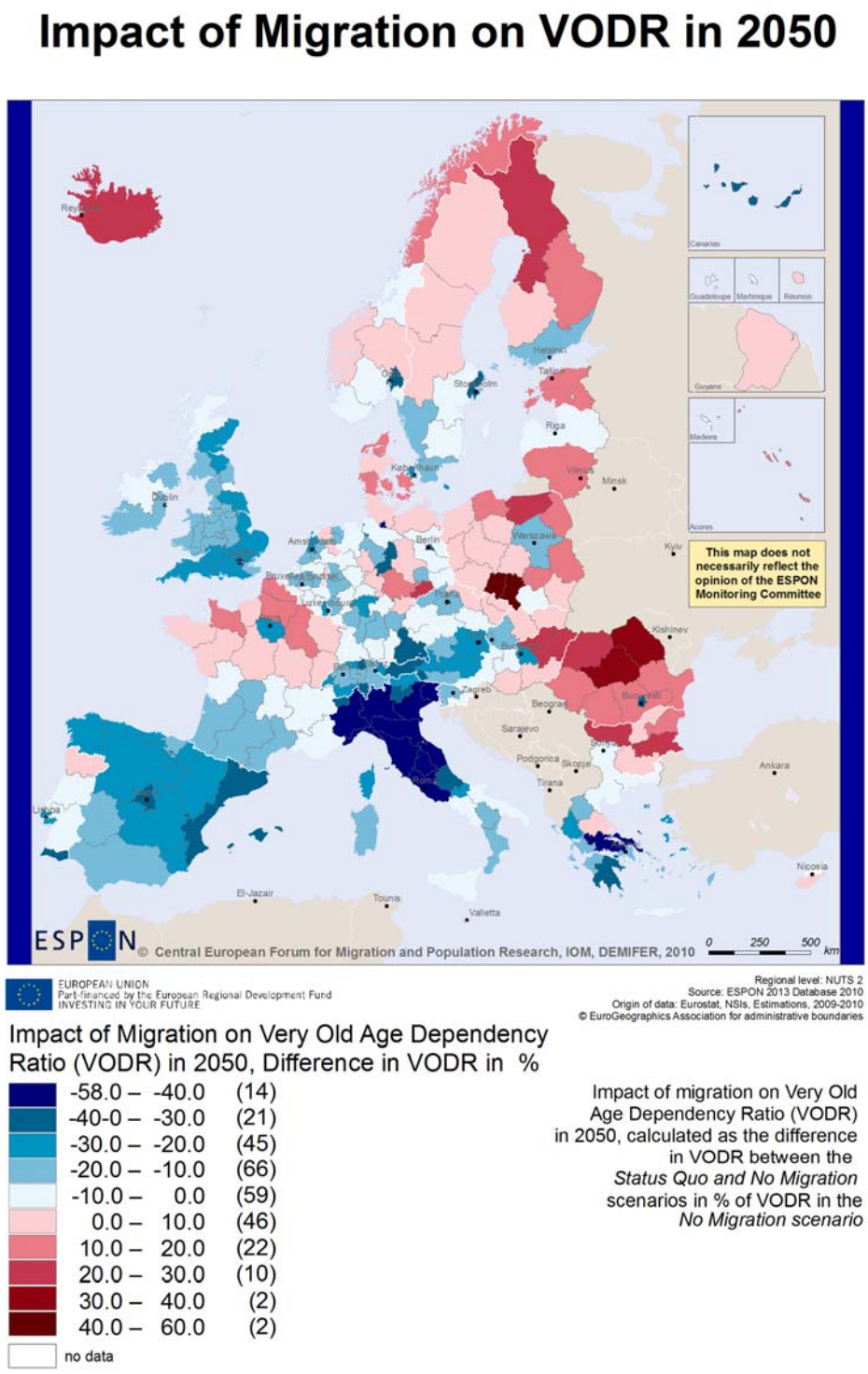
Map 7. Impact of migration on population, 2050



Map 8. Impact of migration on labour force, 2050



Map 9. Impact of migration on Very-Old-Age Dependency Ratio, 2050



Appendix D. Dependency ratios in three reference scenarios: tables and maps

Table 3. Old-Age Dependency Ratios and Very-Old-Age Dependency Ratio according to three reference scenarios

		Old-Age Dependency Ratio				Very-Old-Age Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
	Austria								
AT11	Burgenland (A)	28.4	54.2	51.0	43.1	18.6	44.4	39.0	31.6
AT12	Niederösterreich	25.3	47.5	49.0	41.3	16.2	38.4	37.1	29.9
AT13	Wien	22.1	57.8	42.7	33.8	16.5	46.5	32.3	24.0
AT21	Kärnten	25.7	52.4	57.5	48.9	18.1	44.7	48.9	40.0
AT22	Steiermark	25.5	55.6	52.6	44.3	17.4	45.1	41.8	33.7
AT31	Oberösterreich	23.2	47.3	50.9	42.4	14.8	37.2	39.8	31.6
AT32	Salzburg	20.6	51.6	50.5	40.6	13.0	40.0	38.3	29.2
AT33	Tirol	20.7	53.3	50.6	40.3	13.0	42.7	39.1	29.4
AT34	Vorarlberg	19.5	47.2	47.2	38.1	11.5	36.2	35.4	27.1
	Belgium								
BE10	Brussels Hoofdstedelijk Gewest	23.3	38.7	37.0	31.7	18.4	31.1	30.9	24.8
BE21	Prov. Antwerpen	26.9	43.0	43.4	39.6	18.2	35.6	35.8	31.3
BE22	Prov. Limburg (B)	22.8	49.0	48.3	43.8	14.1	41.1	40.9	35.6
BE23	Prov. Oost-Vlaanderen	27.3	45.6	43.6	40.9	17.5	36.5	34.4	31.3
BE24	Prov. Vlaams Brabant	26.6	44.5	46.3	41.9	17.0	36.3	36.5	31.6
BE25	Prov. West-Vlaanderen	30.5	46.0	45.9	43.4	20.0	37.4	37.1	34.2
BE31	Prov. Brabant Wallon	23.4	37.3	43.6	39.7	16.4	31.8	36.5	31.7
BE32	Prov. Hainaut	26.1	35.8	38.1	35.4	20.9	31.2	32.8	29.4
BE33	Prov. Liège	26.7	37.9	38.9	36.2	19.7	31.6	32.3	29.0
BE34	Prov. Luxembourg (B)	25.2	34.8	36.0	33.9	18.0	28.9	28.6	26.1
BE35	Prov. Namur	25.2	35.5	36.9	34.8	18.2	29.3	29.7	27.1
	Bulgaria								
BG31	Severozapaden	32.8	34.2	42.3	41.4	24.6	26.7	32.7	32.2
BG32	Severen tsentralen	25.6	42.7	45.6	44.3	17.0	27.4	30.6	30.1
BG33	Severoiztochen	21.9	39.9	43.8	42.8	13.4	25.3	29.2	28.9
BG34	Yugoiztochen	24.6	35.5	42.0	41.2	15.6	24.0	29.5	29.2
BG41	Yugozapaden	23.1	51.9	47.9	46.5	14.5	30.7	29.6	29.1
BG42	Yuzhen tsentralen	24.2	42.7	45.3	44.2	15.5	29.3	32.0	31.6
	Switzeralnd								
CH01	Région lémanique	22.3	53.4	52.4	41.0	13.6	39.1	37.1	27.4
CH02	Espace Mittelland	24.9	52.8	56.7	47.7	14.8	36.2	38.0	30.6
CH03	Nordwestschweiz	23.5	57.2	54.6	46.0	13.4	39.5	37.9	30.5
CH04	Zürich	22.6	60.3	53.2	43.7	12.7	41.2	34.9	27.3
CH05	Ostschweiz	23.0	51.5	57.6	47.9	13.4	34.7	37.9	30.1
CH06	Zentralschweiz	21.3	52.2	53.2	45.2	11.6	35.5	35.3	28.7
CH07	Ticino	27.8	67.1	58.0	47.9	17.7	55.5	45.6	35.8
CY00	Cyprus	17.3	44.9	47.5	44.8	9.9	27.3	28.7	28.4
	Czech Republic								
CZ01	Praha	21.9	59.0	46.9	36.1	14.0	34.7	26.9	22.5
CZ02	Strední Cechy	20.0	46.1	45.0	38.8	12.3	27.3	25.9	24.3
CZ03	Jihozápad	20.1	48.6	48.7	43.3	11.9	28.6	28.8	27.1
CZ04	Severozápad	17.3	41.9	43.8	36.3	10.0	23.8	25.2	21.2
CZ05	Severovýchod	20.0	47.6	49.2	44.8	12.5	28.9	30.4	29.6
CZ06	Jihovýchod	20.5	50.0	51.0	44.8	13.0	30.5	31.7	29.2
CZ07	Strední Morava	20.0	50.2	51.8	48.3	12.5	31.0	32.9	32.6
CZ08	Moravskoslezsko	18.0	44.9	47.6	43.9	11.0	28.1	30.4	28.9
	Germany								
DE11	Stuttgart	26.2	54.4	54.5	48.8	14.7	41.8	41.4	36.1
DE12	Karlsruhe	27.0	56.7	55.4	49.2	15.9	44.3	43.2	37.1
DE13	Freiburg	27.1	53.4	55.4	49.6	15.5	40.5	41.8	36.5
DE14	Tübingen	25.5	51.3	55.7	49.7	14.6	39.5	42.8	37.2
DE21	Oberbayern	25.2	57.8	47.5	43.0	14.5	44.4	34.5	30.4
DE22	Niederbayern	26.7	49.8	52.8	47.9	15.2	36.5	38.5	34.0
DE23	Oberpfalz	26.8	50.1	52.4	48.1	15.3	37.1	38.9	34.9
DE24	Oberfranken	30.0	51.3	57.2	52.6	17.5	38.3	43.4	39.1
DE25	Mittelfranken	27.6	53.8	52.6	47.5	16.2	41.3	39.6	34.8
DE26	Unterfranken	27.7	52.2	57.3	52.2	16.3	39.3	43.9	39.1
DE27	Schwaben	27.2	48.5	52.4	48.0	15.9	36.5	39.0	34.9

Table 3. continued

		Old-Age Dependency Ratio				Very-Old-Age Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
DE30	Berlin	23.3	69.1	50.6	44.6	13.0	51.5	37.1	31.9
DE41	Brandenburg - Nordost	26.5	56.3	62.2	56.2	12.7	41.5	43.9	38.7
DE42	Brandenburg - Südwest	27.1	59.1	62.3	56.9	13.3	42.5	44.3	39.8
DE50	Bremen	29.9	60.8	48.4	43.9	19.5	47.8	38.4	33.9
DE60	Hamburg	26.0	67.9	43.4	39.7	16.0	50.8	30.9	27.8
DE71	Darmstadt	26.0	57.1	50.8	45.0	15.5	46.4	39.8	34.1
DE72	Gießen	27.5	53.5	56.2	50.8	16.7	40.9	44.4	39.1
DE73	Kassel	30.9	50.9	58.5	52.7	19.5	41.0	47.2	41.5
DE80	Mecklenburg-Vorpommern	26.7	56.5	62.3	57.4	12.8	39.5	44.9	40.6
DE91	Braunschweig	30.5	53.8	52.0	42.1	19.5	43.5	40.1	30.2
DE92	Hannover	30.2	53.6	53.4	48.3	18.5	43.3	42.3	37.2
DE93	Lüneburg	28.5	45.2	50.5	46.7	17.0	37.7	39.2	35.4
DE94	Weser-Ems	26.7	44.7	50.0	45.3	15.8	35.6	39.4	34.6
DEA1	Düsseldorf	29.7	50.2	48.3	44.4	17.9	41.3	38.5	34.6
DEA2	Köln	26.5	53.5	49.8	45.4	16.3	44.5	40.9	36.4
DEA3	Münster	27.2	46.8	50.3	46.5	16.9	38.2	41.0	37.1
DEA4	Detmold	29.1	46.8	52.5	48.5	17.4	36.2	40.9	37.0
DEA5	Arnsberg	29.5	48.8	50.5	46.0	18.3	39.4	40.8	36.1
DEB1	Koblenz	30.4	47.3	51.6	47.7	18.6	37.2	39.7	35.9
DEB2	Trier	30.1	51.2	49.9	45.6	18.6	39.0	37.3	33.3
DEB3	Rheinhessen-Pfalz	28.0	52.4	52.1	47.4	17.0	42.3	41.5	36.8
DEC0	Saarland	31.1	52.6	57.2	51.6	19.4	43.2	48.1	42.3
DED1	Chemnitz	33.6	58.5	73.2	67.3	19.2	40.3	53.8	48.6
DED2	Dresden	31.0	60.9	63.7	58.1	17.2	42.0	45.3	40.5
DED3	Leipzig	29.6	65.5	61.5	56.0	16.3	45.5	43.9	39.2
DEE0	Sachsen-Anhalt	30.1	58.6	67.9	61.1	16.6	42.6	51.4	45.2
DEF0	Schleswig-Holstein	29.1	49.9	58.8	53.6	16.8	40.1	47.4	42.3
DEG0	Thüringen	28.4	60.6	71.3	65.3	15.5	42.0	52.9	47.6
	Denamrk								
DK01	Hovedstaden	21.4	41.5	35.1	32.8	12.7	25.6	22.2	20.4
DK02	Sjælland	23.9	29.8	40.8	38.7	13.2	21.6	26.6	24.8
DK03	Syddanmark	24.2	33.0	41.5	39.1	13.8	22.3	27.5	25.4
DK04	Midtjylland	21.3	35.1	38.6	36.4	12.1	22.6	25.3	23.4
DK05	Nordjylland	24.7	33.2	40.0	37.6	14.4	21.5	26.1	24.1
EE00	Estonia	24.3	36.2	39.1	38.9	13.4	21.0	23.5	23.8
	Spain								
ES11	Galicia	31.5	82.8	77.8	64.9	22.2	65.1	62.1	50.9
ES12	Principado de Asturias	32.1	90.3	78.8	66.2	26.0	80.5	70.4	57.9
ES13	Cantabria	27.3	76.1	69.7	59.1	20.2	62.2	56.9	47.3
ES21	Pais Vasco	26.5	76.9	71.8	62.2	17.5	62.7	58.9	50.7
ES22	Comunidad Foral de Navarra	26.1	67.9	65.7	54.2	18.3	54.7	51.7	41.6
ES23	La Rioja	27.6	71.2	68.6	54.2	19.3	56.1	54.1	41.6
ES24	Aragón	31.4	70.7	65.8	52.9	22.4	56.0	51.4	39.7
ES30	Comunidad de Madrid	20.6	67.1	56.9	44.2	12.9	51.8	42.6	31.7
ES41	Castilla y León	34.3	81.3	74.8	62.0	26.3	69.2	62.9	50.7
ES42	Castilla-la Mancha	29.0	61.6	58.9	48.6	21.5	50.8	46.2	36.8
ES43	Extremadura	28.9	57.3	58.2	50.4	21.2	47.0	47.3	40.0
ES51	Cataluña	24.6	63.5	58.6	45.7	15.6	46.9	42.9	32.4
ES52	Comunidad Valenciana	23.1	62.0	53.8	42.6	14.8	45.9	38.6	29.3
ES53	Illes Balears	19.8	63.6	58.9	46.3	12.5	48.0	43.2	32.6
ES61	Andalucia	21.3	52.0	51.4	43.8	14.6	40.6	39.9	32.9
ES62	Región de Murcia	20.4	53.3	51.9	42.0	13.3	39.9	38.7	29.9
ES63	Ciudad Autónoma de Ceuta (ES)	17.4	39.1	43.6	38.7	11.5	31.9	37.6	32.5
ES64	Ciudad Autónoma de Melilla (ES)	16.8	37.0	50.9	42.3	12.0	30.7	45.9	37.7
ES70	Canarias (ES)	16.7	66.3	59.8	47.2	10.0	54.2	48.1	36.3
	Finland								
FI13	Itä-Suomi	28.8	35.0	43.5	41.4	18.9	25.8	33.0	30.8
FI18	Etelä-Suomi	21.6	42.1	37.4	35.5	12.7	28.5	24.6	22.9
FI19	Länsi-Suomi	26.5	38.4	40.9	39.0	16.9	26.3	28.6	26.9
FI1A	Pohjois-Suomi	22.4	30.7	38.5	36.8	13.6	20.8	27.4	25.9
FI20	Åland	25.3	40.1	43.2	39.2	16.1	29.1	29.5	25.6

Table 3. continued

		Old-Age Dependency Ratio				Very-Old-Age Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
	France								
FR10	Île de France	18.0	42.0	34.2	32.6	12.3	34.3	27.7	25.9
FR21	Champagne-Ardenne	25.5	37.9	46.2	43.6	17.7	30.3	38.8	35.6
FR22	Picardie	22.7	33.9	40.8	38.8	16.1	28.1	34.4	31.8
FR23	Haute-Normandie	23.7	35.5	40.3	38.4	16.2	28.4	33.0	30.6
FR24	Centre	29.0	38.8	44.9	42.5	20.4	32.2	37.1	34.1
FR25	Basse-Normandie	29.4	37.1	44.2	41.9	21.0	31.5	38.0	35.1
FR26	Bourgogne	31.2	39.7	46.1	43.5	22.5	33.2	38.6	35.4
FR30	Nord - Pas-de-Calais	22.3	31.7	36.7	35.2	15.9	24.4	30.0	28.0
FR41	Lorraine	24.8	38.9	43.1	40.8	17.0	31.7	36.3	33.5
FR42	Alsace	21.8	41.6	43.9	41.4	13.7	32.8	35.2	32.4
FR43	Franche-Comté	25.6	37.9	43.6	41.2	18.0	31.7	37.2	34.3
FR51	Pays de la Loire	26.6	37.4	41.5	39.4	18.3	30.3	33.7	31.2
FR52	Bretagne	29.4	37.5	41.4	39.3	20.9	31.3	34.5	31.9
FR53	Poitou-Charentes	32.6	42.4	44.9	42.4	23.5	36.0	37.4	34.4
FR61	Aquitaine	30.2	44.9	44.0	41.5	22.8	39.7	37.6	34.6
FR62	Midi-Pyrénées	29.9	46.1	43.4	41.0	21.5	38.7	35.4	32.6
FR63	Limousin	37.5	46.5	46.6	43.8	27.0	37.6	36.9	33.8
FR71	Rhône-Alpes	23.6	39.7	40.5	38.5	16.2	32.5	33.1	30.7
FR72	Auvergne	31.6	43.0	45.2	42.5	22.6	35.8	37.2	34.1
FR81	Languedoc-Roussillon	30.4	41.0	40.7	38.6	23.4	36.7	35.1	32.5
FR82	Provence-Alpes-Côte d'Azur	29.6	40.8	41.0	39.0	22.5	36.4	35.5	32.8
FR83	Corse	30.1	50.5	45.6	42.9	32.0	69.5	58.4	53.4
FR91	Guadeloupe (FR)	18.5	26.6	27.7	27.3	14.1	27.1	28.1	26.7
FR92	Martinique (FR)	20.2	36.7	38.0	36.6	15.1	39.4	40.5	37.7
FR93	Guyane (FR)	6.6	14.6	15.5	15.9	6.1	16.4	17.5	17.3
FR94	Reunion (FR)	11.6	24.0	25.0	24.7	7.9	21.5	22.5	21.6
	Greece								
GR11	Anatoliki Makedonia, Thraki	30.3	50.9	51.6	46.6	17.0	34.2	36.4	32.1
GR12	Kentriki Makedonia	26.5	57.0	62.5	55.6	15.2	43.8	49.3	42.8
GR13	Dytiki Makedonia	31.0	54.2	54.7	49.2	19.3	43.2	42.1	36.9
GR14	Thessalia	30.8	51.2	61.9	55.0	18.0	37.5	45.2	39.1
GR21	Ipeiros	33.5	63.9	53.2	47.6	23.1	48.7	39.4	34.6
GR22	Ionia Nisia	32.2	56.7	56.9	50.8	20.5	45.6	42.7	37.2
GR23	Dytiki Ellada	28.1	58.6	54.7	48.9	19.1	46.1	42.6	37.2
GR24	Sterea Ellada	31.8	59.1	43.8	39.5	19.9	46.9	31.3	27.5
GR25	Peloponnisos	35.2	59.0	47.4	42.7	22.5	46.4	34.2	30.0
GR30	Attiki	22.9	64.0	59.7	53.2	14.5	51.6	48.3	41.9
GR41	Voreio Aigaio	34.1	62.7	53.3	48.1	26.9	48.9	44.3	39.1
GR42	Notio Aigaio	21.7	53.8	52.7	47.7	14.7	44.4	43.3	38.2
GR43	Kriti	25.9	52.3	59.4	53.1	16.5	39.0	44.3	38.6
	Hungary								
HU10	Közép-Magyarország	23.2	48.9	39.0	36.1	16.1	32.7	26.0	24.9
HU21	Közép-Dunántúl	21.0	41.0	41.3	39.5	13.2	27.1	27.6	27.0
HU22	Nyugat-Dunántúl	22.4	45.8	45.9	43.6	15.1	30.2	30.9	29.6
HU23	Dél-Dunántúl	23.1	39.4	42.3	40.4	16.8	28.9	32.1	31.0
HU31	Észak-Magyarország	23.6	33.4	40.5	39.0	17.4	24.9	32.1	31.3
HU32	Észak-Alföld	21.2	33.9	39.9	38.2	16.3	25.7	32.0	31.1
HU33	Dél-Alföld	24.1	40.6	43.8	41.6	18.3	30.1	33.8	32.6
	Ireland								
IE01	Border, Midland and Western	18.4	34.0	37.5	36.0	12.0	22.6	23.5	22.6
IE02	Southern and Eastern	15.7	38.2	35.9	34.4	9.4	24.0	22.3	21.5
IS00	Iceland	17.9	34.8	43.4	43.2	9.4	19.1	23.6	23.4
	Italy								
ITC1	Piemonte	33.9	68.4	61.2	45.4	23.1	63.1	54.2	36.5
ITC2	Valle d'Aosta/Vallée d'Aoste	29.8	64.7	60.4	47.8	20.0	59.1	53.2	39.0
ITC3	Liguria	42.4	73.0	61.2	45.9	31.9	72.7	56.4	38.4
ITC4	Lombardia	28.4	65.9	57.5	42.9	18.1	59.9	49.3	33.1
ITD1	Provincia Autonoma Bolzano-Bozen	24.5	52.7	50.8	41.6	15.8	45.0	42.1	31.9
ITD2	Provincia Autonoma Trento	27.9	57.0	53.4	41.8	20.1	52.7	47.2	33.8
ITD3	Veneto	28.1	66.4	60.3	44.6	19.4	61.7	53.6	35.8
ITD4	Friuli-Venezia Giulia	33.7	72.1	64.4	48.4	25.1	69.2	59.4	40.8
ITD5	Emilia-Romagna	34.8	72.0	61.1	45.9	23.9	64.9	51.3	35.1
ITE1	Toscana	35.5	72.0	62.8	47.0	25.8	66.6	55.1	37.7
ITE2	Umbria	36.1	68.6	59.7	44.1	27.2	62.9	52.0	35.0
ITE3	Marche	34.6	69.6	62.1	47.1	24.9	62.3	53.4	37.1

Table 3. continued

		Old-Age Dependency Ratio				Very-Old-Age Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
ITE4	Lazio	27.9	63.4	55.5	42.6	19.4	59.4	49.8	34.9
ITF1	Abruzzo	32.2	67.4	61.2	48.4	25.1	63.8	56.4	41.6
ITF2	Molise	33.6	66.4	64.4	53.2	27.9	65.4	64.2	50.4
ITF3	Campania	22.4	47.5	51.7	44.1	18.6	46.6	53.7	43.8
ITF4	Puglia	25.2	58.0	62.5	54.6	21.4	58.5	66.3	55.7
ITF5	Basilicata	29.9	62.0	65.1	55.2	24.2	61.4	67.2	54.5
ITF6	Calabria	27.0	58.0	62.9	50.6	23.2	58.2	67.9	51.4
ITG1	Sicilia	26.8	51.1	55.8	48.5	23.3	51.1	58.5	48.5
ITG2	Sardegna	24.6	75.3	73.0	62.8	18.5	72.8	71.4	59.2
LI00	Liechtenstein	15.6	51.5	53.9	52.8	8.6	35.6	36.5	35.6
LT00	Lithuania	22.3	37.9	41.7	41.3	12.8	24.6	28.0	27.9
LU00	Luxembourg (Grand-Duché)	20.9	43.2	36.0	35.3	13.9	38.3	28.7	27.8
LV00	Latvia	24.1	38.4	38.1	37.2	13.3	22.3	22.2	22.0
MT00	Malta	19.3	45.4	45.8	45.3	13.5	36.0	36.7	37.3
	Netherlands								
NL11	Groningen	21.2	46.3	40.7	36.9	13.5	30.5	29.5	26.0
NL12	Friesland (NL)	22.5	36.3	42.1	38.5	13.4	26.4	30.0	26.6
NL13	Drenthe	24.7	36.0	39.4	36.4	14.4	28.3	28.1	25.3
NL21	Overijssel	21.2	35.6	39.9	36.7	12.3	24.6	27.9	25.1
NL22	Gelderland	21.2	37.6	41.3	38.0	12.2	27.0	29.3	26.4
NL23	Flevoland	12.7	33.3	33.6	30.5	7.2	24.4	23.2	20.4
NL31	Utrecht	18.4	41.0	37.7	34.6	10.8	28.5	26.2	23.5
NL32	Noord-Holland	19.9	43.7	39.8	35.6	11.9	31.9	28.3	24.3
NL33	Zuid-Holland	20.6	41.5	40.3	35.8	12.6	29.3	28.8	24.7
NL34	Zeeland	26.0	38.1	44.5	40.6	16.5	29.8	33.2	29.5
NL41	Noord-Brabant	20.6	39.9	43.9	40.1	11.0	28.7	31.7	28.2
NL42	Limburg (NL)	23.6	41.2	48.6	44.0	13.4	31.2	37.1	32.7
	Norway								
NO01	Oslo og Akershus	19.0	43.4	34.2	30.9	12.3	30.1	22.3	19.5
NO02	Hedmark og Oppland	28.2	38.3	44.3	40.4	19.4	27.3	31.7	28.1
NO03	Sør-Østlandet	24.3	38.3	42.4	38.7	16.3	27.4	29.7	26.4
NO04	Agder og Rogaland	20.4	35.3	39.2	35.9	13.4	23.9	26.7	23.8
NO05	Vestlandet	23.5	36.6	43.0	39.3	15.8	24.9	30.3	27.0
NO06	Trøndelag	22.8	37.0	40.7	37.4	15.6	25.6	28.3	25.3
NO07	Nord-Norge	22.9	36.0	44.9	40.2	14.8	25.1	32.5	28.1
	Poland								
PL11	Lódzkie	21.2	44.7	46.4	45.5	12.3	24.6	26.2	25.6
PL12	Mazowieckie	20.8	46.9	42.7	41.2	13.7	31.4	27.5	26.3
PL21	Malopolskie	19.2	43.7	42.9	40.8	11.8	28.1	27.7	26.2
PL22	Slaskie	17.9	48.2	64.8	63.1	11.1	33.6	53.9	53.5
PL31	Lubelskie	20.7	39.7	43.2	42.3	12.4	22.4	25.6	25.0
PL32	Podkarpackie	18.6	40.7	43.8	42.2	12.2	27.8	31.4	30.1
PL33	Swietokrzyskie	21.5	43.1	47.6	46.5	13.2	25.8	30.1	29.3
PL34	Podlaskie	21.0	43.1	48.0	46.2	14.7	31.4	37.2	35.6
PL41	Wielkopolskie	16.7	42.0	42.5	41.7	10.7	26.1	26.6	26.2
PL42	Zachodniopomorskie	16.7	43.9	45.9	44.5	11.1	30.0	32.7	31.7
PL43	Lubuskie	16.2	42.2	44.1	41.9	9.5	24.4	26.6	25.2
PL51	Dolnoslaskie	18.7	48.5	50.3	48.1	12.4	31.4	34.4	33.0
PL52	Opolskie	18.7	50.6	73.8	58.6	12.4	40.8	76.6	58.5
PL61	Kujawsko-Pomorskie	17.3	41.9	44.6	44.1	10.7	26.3	29.2	28.9
PL62	Warminsko-Mazurskie	16.2	38.9	46.0	44.8	10.6	26.9	35.3	34.4
PL63	Pomorskie	16.7	42.0	45.2	43.9	11.8	32.0	36.4	35.6
	Portugal								
PT11	Norte	21.5	53.5	57.7	56.8	11.9	32.6	36.0	35.7
PT15	Algarve	28.1	47.9	44.9	36.1	16.6	31.3	28.4	21.7
PT16	Centro (PT)	30.5	56.3	58.8	54.7	16.0	30.5	32.5	30.2
PT17	Lisboa	23.9	51.3	47.5	39.8	13.2	33.1	30.6	24.9
PT18	Alentejo	35.9	53.6	55.9	51.8	21.1	32.0	34.2	31.7
PT20	Região Autónoma dos Açores (PT)	18.5	34.7	38.6	37.3	11.8	19.8	23.1	22.2
PT30	Região Autónoma da Madeira (PT)	19.3	38.5	40.7	36.1	11.0	21.9	23.7	20.6
	Romania								
RO11	Nord-Vest	19.2	36.6	40.8	40.2	11.3	21.2	26.5	27.0
RO12	Centru	19.3	40.1	46.6	46.1	12.2	25.0	33.5	34.3
RO21	Nord-Est	21.2	33.6	40.2	39.6	10.9	18.5	24.8	25.0
RO22	Sud-Est	20.4	41.1	44.9	44.1	11.6	25.9	30.2	30.0
RO31	Sud - Muntenia	24.2	39.7	44.6	43.8	13.1	23.4	27.1	26.7
RO32	Bucuresti - Ilfov	19.8	57.8	42.1	34.2	12.6	34.7	27.0	21.6
RO41	Sud-Vest Oltenia	23.8	40.2	44.9	44.4	12.1	22.0	26.0	25.9
RO42	Vest	20.3	39.2	41.2	39.8	12.0	24.1	27.7	27.3

Table 3. continued

		Old-Age Dependency Ratio				Very-Old-Age Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
	Sweden								
SE11	Stockholm	20.8	42.8	34.0	30.3	13.3	30.2	22.5	19.2
SE12	Östra Mellansverige	26.7	40.1	42.0	37.6	17.7	27.1	29.2	25.2
SE21	Småland med öarna	30.0	37.6	43.2	38.6	19.1	24.6	28.4	24.4
SE22	Sydsverige	27.5	42.1	40.4	35.6	18.2	28.8	27.4	23.2
SE23	Västsverige	26.4	40.9	41.6	37.2	17.1	27.7	28.1	24.2
SE31	Norra Mellansverige	31.3	36.8	44.2	39.4	20.7	25.6	30.6	26.2
SE32	Mellersta Norrland	31.8	35.8	42.9	38.4	20.7	24.5	28.9	24.9
SE33	Övre Norrland	28.1	40.3	45.9	40.6	17.5	25.6	31.9	27.2
	Slovenia								
SI01	Vzhodna Slovenija	21.4	52.4	52.8	49.5	12.2	35.5	36.1	33.0
SI02	Zahodna Slovenija	22.3	56.0	52.5	48.6	12.7	40.4	37.0	33.3
	Slovakia								
SK01	Bratislavský kraj	16.3	54.5	46.1	39.5	9.8	30.0	28.6	24.3
SK02	Západné Slovensko	17.1	48.3	46.7	41.9	10.3	28.0	28.2	25.0
SK03	Stredné Slovensko	16.4	40.4	42.1	39.3	10.0	23.5	26.2	24.3
SK04	Východné Slovensko	15.2	34.2	35.5	34.0	9.2	19.9	21.5	20.5
	United Kingdom								
UKC1	Tees Valley and Durham	25.4	33.5	37.1	32.4	16.3	24.8	27.0	22.8
UKC2	Northumberland, Tyne and Wear	26.1	39.1	39.9	33.7	17.2	27.3	28.8	23.5
UKD1	Cumbria	29.2	37.5	39.7	34.7	16.9	27.2	26.3	22.3
UKD2	Cheshire	25.0	36.6	38.8	33.6	15.2	27.5	27.4	22.9
UKD3	Greater Manchester	22.2	34.7	35.2	29.1	14.4	23.4	24.4	19.3
UKD4	Lancashire	25.7	33.6	35.8	31.1	16.4	23.9	24.8	20.9
UKD5	Merseyside	26.0	35.2	37.9	32.5	16.9	24.6	27.5	22.9
UKE1	East Yorkshire and Northern Lincolnshire	26.2	36.0	36.7	30.7	16.5	26.2	25.7	20.5
UKE2	North Yorkshire	27.9	42.0	41.6	34.0	17.2	30.1	28.3	22.0
UKE3	South Yorkshire	24.7	37.4	39.3	32.6	16.1	26.0	27.8	22.0
UKE4	West Yorkshire	22.5	36.7	37.3	30.0	14.3	23.9	25.1	19.1
UKF1	Derbyshire and Nottinghamshire	24.6	40.5	41.4	34.2	15.9	28.5	29.2	23.0
UKF2	Leicestershire, Rutland and Northants	22.3	37.5	41.1	33.2	13.7	25.8	27.7	21.2
UKF3	Lincolnshire	30.3	37.8	36.6	31.4	18.0	27.2	23.9	19.7
UKG1	Herefordshire, Worcestershire and Warks	26.8	38.2	40.5	34.7	16.0	28.0	27.5	22.7
UKG2	Shropshire and Staffordshire	25.1	36.0	38.8	34.0	15.2	26.1	26.9	22.8
UKG3	West Midlands	24.0	33.3	35.7	29.1	15.8	22.6	25.4	19.7
UKH1	East Anglia	27.9	41.5	43.5	35.2	17.2	29.2	29.6	22.7
UKH2	Bedfordshire, Hertfordshire	22.3	38.1	39.8	31.8	13.2	27.0	26.8	20.3
UKH3	Essex	26.1	38.3	40.3	32.8	16.1	27.3	27.1	21.0
UKI1	Inner London	13.3	52.9	33.5	22.2	9.1	38.1	26.1	16.1
UKI2	Outer London	19.8	42.1	38.5	27.8	12.7	30.1	27.1	18.2
UKJ1	Berkshire, Bucks and Oxfordshire	20.3	41.7	42.6	33.4	11.8	28.3	28.3	21.0
UKJ2	Surrey, East and West Sussex	29.2	41.7	45.9	36.6	19.0	31.0	32.0	24.3
UKJ3	Hampshire and Isle of Wight	25.2	43.2	42.0	34.3	15.7	29.0	28.4	22.2
UKJ4	Kent	25.7	35.9	41.3	33.8	16.0	25.9	28.2	21.9
UKK1	Gloucestershire, Wiltshire and Bristol/Bath area	24.8	42.5	41.7	34.0	15.4	29.1	27.9	21.8
UKK2	Dorset and Somerset	34.2	39.2	41.8	35.4	22.4	29.7	28.7	23.4
UKK3	Cornwall and Isles of Scilly	32.0	39.1	36.8	31.9	20.7	29.9	25.6	21.4
UKK4	Devon	31.6	40.9	39.2	32.8	21.1	29.6	27.2	21.9
UKL1	West Wales and The Valleys	28.6	34.3	36.1	32.2	19.6	25.5	26.2	22.8
UKL2	East Wales	25.0	38.3	38.1	32.7	15.9	25.9	26.2	21.7
UKM2	Eastern Scotland	24.5	41.8	39.4	32.1	14.5	27.4	25.6	20.0
UKM3	South Western Scotland	24.3	36.6	37.7	31.8	15.6	26.0	27.1	22.0
UKM5	North Eastern Scotland	22.9	39.7	39.2	30.7	13.2	25.1	24.5	18.2
UKM6	Highlands and Islands	27.8	38.7	50.1	41.7	12.7	24.1	28.7	23.1
UKN0	Northern Ireland	20.9	33.5	35.6	30.1	13.9	24.5	25.9	21.0

Table 4. Economic Old-Age Dependency Ratio and Labour Market Dependency Ratio according to three reference scenarios

		Economic Old-Age Dependency Ratio				Labour Market Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
	Austria								
AT11	Burgenland (A)	38.7	61.2	73.2	78.6	79.8	108.9	122.6	129.5
AT12	Niederösterreich	33.9	57.1	68.3	66.3	72.8	100.6	113.5	111.2
AT13	Wien	31.2	48.2	61.8	83.0	76.7	96.1	111.8	132.4
AT21	Kärnten	36.1	71.4	84.9	77.3	81.5	122.9	138.3	130.4
AT22	Steiermark	35.1	63.2	76.0	80.6	77.9	111.5	126.2	131.4
AT31	Oberösterreich	30.9	58.9	71.5	66.2	69.2	103.2	117.7	111.8
AT32	Salzburg	27.1	54.9	69.0	70.4	63.0	95.2	111.3	112.3
AT33	Tirol	27.6	55.5	70.6	74.4	65.7	98.5	115.8	119.6
AT34	Vorarlberg	25.5	51.8	64.7	64.3	61.0	92.8	107.4	106.1
	Belgium								
BE10	Brussels Hoofdstedelijk Gewest	35.0	49.2	57.8	60.5	88.5	108.1	118.1	120.9
BE21	Prov. Antwerpen	39.1	59.2	65.4	64.8	88.4	113.2	120.4	119.9
BE22	Prov. Limburg (B)	34.1	67.9	75.5	76.9	87.7	127.7	136.4	138.3
BE23	Prov. Oost-Vlaanderen	38.3	59.2	63.5	66.6	82.0	108.4	113.4	117.0
BE24	Prov. Vlaams Brabant	36.5	59.8	66.4	63.7	77.6	107.0	114.3	111.2
BE25	Prov. West-Vlaanderen	43.0	62.8	66.7	66.9	88.1	111.9	116.6	116.7
BE31	Prov. Brabant Wallon	34.6	60.6	66.9	56.9	86.8	117.6	124.6	113.6
BE32	Prov. Hainaut	41.9	58.4	63.1	59.5	106.3	127.4	133.1	129.5
BE33	Prov. Liège	40.9	56.9	61.5	59.9	97.9	118.1	123.7	122.4
BE34	Prov. Luxembourg (B)	37.3	51.8	55.2	53.6	89.2	108.6	112.9	111.8
BE35	Prov. Namur	38.0	53.9	57.5	55.4	92.5	113.0	117.5	115.6
	Bulgaria								
BG31	Severozapaden	55.7	71.0	72.9	58.9	131.8	148.8	151.7	137.4
BG32	Severen tsentralen	41.5	71.2	73.5	69.1	109.2	138.6	141.9	138.1
BG33	Severoiztochen	33.8	66.3	68.1	62.0	94.0	127.8	130.4	124.2
BG34	Yugoiztochen	39.4	66.6	68.3	57.6	105.2	135.1	137.7	126.1
BG41	Yugozapaden	33.8	68.4	70.7	76.6	85.8	122.3	125.4	131.3
BG42	Yuzhen tsentralen	38.9	71.8	73.9	69.7	105.6	140.7	143.8	139.8
	Switzerland								
CH01	Région lémanique	26.2	47.7	60.9	62.5	55.4	77.1	90.4	92.4
CH02	Espace Mittelland	27.5	52.2	62.0	58.2	49.5	74.9	85.0	81.4
CH03	Nordwestschweiz	26.2	51.3	61.0	63.9	50.1	75.9	85.7	88.8
CH04	Zürich	24.5	47.3	57.7	65.3	44.8	68.6	79.2	86.8
CH05	Ostschweiz	25.1	51.8	62.4	56.4	46.3	73.5	84.4	78.9
CH06	Zentralschweiz	23.1	49.0	57.8	57.0	43.8	70.7	79.7	79.2
CH07	Ticino	34.9	59.7	72.4	83.9	72.8	97.5	110.3	122.1
CY00	Cyprus	21.0	49.8	54.4	52.9	60.4	82.5	90.1	91.4
	Czech Republic								
CZ01	Praha	28.1	45.9	59.5	74.9	62.6	79.5	94.2	109.9
CZ02	Strední Cechy	27.0	53.7	61.4	62.3	68.5	99.1	105.8	105.3
CZ03	Jihozápad	26.9	58.0	65.4	65.3	67.6	99.4	107.7	107.6
CZ04	Severozápad	23.2	48.6	59.0	56.3	64.1	89.7	101.7	98.4
CZ05	Severovýchod	27.4	61.6	67.4	65.0	70.8	106.2	112.1	109.5
CZ06	Jihovýchod	28.2	61.1	70.0	68.4	71.8	104.8	115.2	113.3
CZ07	Strední Morava	27.8	67.5	72.1	69.7	73.2	114.5	119.3	116.6
CZ08	Moravskoslezsko	25.4	61.6	67.0	63.2	72.5	109.1	115.6	111.6
	Germany								
DE11	Stuttgart	33.4	63.5	71.3	70.8	65.8	98.7	107.4	106.2
DE12	Karlsruhe	35.4	66.0	74.9	76.2	71.6	105.5	115.3	115.8
DE13	Freiburg	34.4	64.5	72.4	69.4	66.5	99.7	108.3	104.7
DE14	Tübingen	32.8	65.4	73.6	67.7	66.6	102.1	111.1	104.8
DE21	Oberbayern	32.1	56.0	62.2	75.0	64.5	91.4	98.3	109.7
DE22	Niederbayern	33.4	61.5	68.1	64.3	63.7	95.0	102.4	98.5
DE23	Oberpfalz	34.1	62.8	68.8	65.6	66.2	98.5	105.3	101.9
DE24	Oberfranken	38.4	69.0	75.4	67.5	71.6	105.5	112.6	104.3
DE25	Mittelfranken	35.9	63.0	70.2	71.7	71.1	101.0	109.0	110.0
DE26	Unterfranken	35.9	69.1	76.2	69.4	70.5	106.6	114.7	107.9
DE27	Schwaben	34.6	62.1	68.1	63.0	66.9	96.7	103.2	97.9

Table 4. continued

		Economic Old-Age Dependency Ratio				Labour Market Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
DE30	Berlin	31.0	59.9	68.3	93.4	69.3	99.4	108.9	134.4
DE41	Brandenburg - Nordost	34.1	73.2	81.5	75.4	68.4	109.0	118.5	115.3
DE42	Brandenburg - Südwest	34.3	73.2	80.5	77.4	66.7	107.3	115.5	114.3
DE50	Bremen	41.8	62.1	68.8	86.1	86.9	108.7	116.2	133.1
DE60	Hamburg	34.3	53.4	58.6	90.8	71.3	92.9	99.0	130.1
DE71	Darmstadt	34.4	61.2	69.5	77.5	72.1	102.0	111.4	118.2
DE72	Gießen	36.6	69.3	77.1	73.2	75.0	111.1	119.6	115.5
DE73	Kassel	41.6	72.4	80.8	70.3	81.6	115.0	124.4	113.5
DE80	Mecklenburg-Vorpommern	34.4	75.2	82.2	75.6	68.8	111.8	119.8	115.3
DE91	Braunschweig	42.6	59.6	74.1	76.5	87.2	106.4	122.2	124.1
DE92	Hannover	40.6	66.3	73.7	73.5	80.2	108.6	116.8	115.7
DE93	Lüneburg	38.5	64.5	70.1	62.6	79.3	107.9	114.3	105.9
DE94	Weser-Ems	36.2	62.7	69.7	62.1	77.0	106.3	114.3	105.9
DEA1	Düsseldorf	41.1	62.6	68.3	71.0	84.6	108.6	115.1	117.4
DEA2	Köln	37.5	65.8	72.5	77.4	84.1	115.7	123.1	127.4
DEA3	Münster	38.1	66.5	72.2	67.1	83.1	114.5	121.0	115.7
DEA4	Detmold	38.2	65.0	70.6	62.9	74.7	104.1	110.4	102.2
DEA5	Arnsberg	41.1	65.3	72.1	69.6	85.7	112.3	120.0	117.5
DEB1	Koblenz	40.3	64.4	70.0	64.4	78.0	104.7	110.9	105.5
DEB2	Trier	39.6	61.7	67.8	69.3	76.4	102.2	109.1	110.1
DEB3	Rheinhessen-Pfalz	38.2	66.1	73.0	73.5	79.8	110.9	118.6	119.0
DEC0	Saarland	44.3	75.1	83.7	77.1	92.1	125.9	135.3	129.1
DED1	Chemnitz	42.6	86.1	94.3	75.7	74.8	120.0	129.2	111.0
DED2	Dresden	39.8	74.9	82.7	79.3	73.6	109.5	118.3	115.6
DED3	Leipzig	38.0	72.8	80.4	86.0	72.1	108.3	117.0	123.4
DEE0	Sachsen-Anhalt	39.9	81.3	91.1	80.0	78.1	120.2	131.4	122.5
DEF0	Schleswig-Holstein	38.3	71.8	79.1	66.9	75.1	110.9	119.0	105.8
DEG0	Thüringen	36.9	86.0	94.5	80.9	72.2	123.6	133.1	120.7
	Denmark								
DK01	Hovedstaden	24.8	38.2	40.9	48.0	48.8	63.4	66.0	72.6
DK02	Sjælland	27.8	45.4	47.8	35.3	53.2	71.7	74.2	61.5
DK03	Syddanmark	28.1	45.8	48.7	38.8	53.3	72.0	75.0	64.9
DK04	Midtjylland	24.7	42.6	45.3	41.0	49.3	68.6	71.4	66.6
DK05	Nordjylland	28.7	44.0	46.9	38.9	54.0	70.0	73.0	65.0
EE00	Estonia	30.0	47.2	47.4	43.8	70.6	85.7	86.0	82.2
	Spain								
ES11	Galicia	45.1	95.3	114.7	121.9	91.3	146.1	166.2	173.5
ES12	Principado de Asturias	51.4	109.0	129.9	149.3	114.8	177.3	198.8	219.1
ES13	Cantabria	39.8	88.6	104.6	114.6	88.9	142.4	158.8	169.3
ES21	Pais Vasco	37.0	90.1	103.8	110.5	79.8	138.5	152.3	158.0
ES22	Comunidad Foral de Navarra	35.7	77.2	93.6	96.4	75.7	123.3	140.1	142.1
ES23	La Rioja	37.9	78.2	99.0	101.7	78.7	126.1	147.4	148.6
ES24	Aragón	43.3	75.5	94.4	100.9	84.4	121.9	141.8	147.6
ES30	Comunidad de Madrid	27.9	61.8	79.7	93.6	66.1	105.1	123.6	136.7
ES41	Castilla y León	50.0	92.7	112.3	122.9	98.9	146.2	166.4	178.1
ES42	Castilla-la Mancha	42.6	73.6	89.5	94.3	92.8	129.0	145.4	151.3
ES43	Extremadura	44.0	79.1	91.6	90.5	99.8	139.9	153.1	152.5
ES51	Cataluña	32.3	62.4	80.3	86.1	66.7	102.4	120.9	125.6
ES52	Comunidad Valenciana	32.0	61.1	77.5	88.9	73.8	108.3	125.3	136.2
ES53	Illes Balears	26.2	64.0	81.8	88.2	61.9	105.9	124.4	130.6
ES61	Andalucia	32.6	69.0	81.4	82.0	89.0	130.3	143.7	143.6
ES62	Región de Murcia	29.2	62.7	78.1	79.4	75.5	115.8	132.4	132.2
ES63	Ciudad Autónoma de Ceuta (ES)	27.9	65.3	74.0	64.9	91.7	137.6	147.4	134.5
ES64	Ciudad Autónoma de Melilla (ES)	27.3	72.5	87.1	62.1	93.0	147.5	161.8	133.5
ES70	Canarias (ES)	24.2	71.3	90.9	100.9	72.2	126.2	146.8	157.2
	Finland								
FI13	Itä-Suomi	40.1	58.1	61.2	49.3	84.2	103.8	107.2	95.4
FI18	Etelä-Suomi	27.2	45.2	47.7	53.8	57.8	77.8	80.5	86.6
FI19	Länsi-Suomi	34.9	52.0	54.6	51.2	71.9	90.7	93.5	89.7
FI1A	Pohjois-Suomi	30.2	50.3	52.7	41.9	70.1	92.4	95.0	83.6
FI20	Åland	30.7	47.8	52.8	49.4	56.6	75.0	80.3	77.4

Table 4. continued

		Economic Old-Age Dependency Ratio				Labour Market Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
	France								
FR10	Île de France	25.2	47.1	49.5	61.0	67.7	93.6	96.3	108.5
FR21	Champagne-Ardenne	35.8	63.0	67.1	54.7	78.2	110.0	114.6	101.3
FR22	Picardie	33.0	58.4	61.6	50.8	81.0	111.1	114.9	103.3
FR23	Haute-Normandie	33.2	55.2	58.2	51.0	75.7	101.2	104.8	97.1
FR24	Centre	40.2	60.4	64.1	55.1	80.9	104.9	109.2	99.6
FR25	Basse-Normandie	42.6	62.3	66.1	55.2	89.9	113.6	118.0	106.2
FR26	Bourgogne	43.9	62.7	66.7	57.2	86.9	109.2	113.8	103.6
FR30	Nord - Pas-de-Calais	32.8	53.0	55.5	47.6	81.9	105.9	109.1	100.0
FR41	Lorraine	36.4	61.7	65.6	59.0	85.4	115.5	120.0	113.0
FR42	Alsace	29.9	58.9	62.6	59.2	69.3	103.4	107.7	104.0
FR43	Franche-Comté	37.1	61.5	65.3	56.5	84.5	113.2	117.5	107.8
FR51	Pays de la Loire	36.9	56.4	59.6	53.4	77.9	101.7	105.5	98.4
FR52	Bretagne	42.8	58.8	62.2	56.0	90.5	110.8	114.7	107.8
FR53	Poitou-Charentes	46.1	61.3	65.1	61.4	89.7	108.1	112.6	108.6
FR61	Aquitaine	44.6	62.6	66.5	68.1	94.4	115.7	120.3	122.1
FR62	Midi-Pyrénées	42.2	59.4	63.1	67.3	85.9	106.6	110.9	115.5
FR63	Limousin	50.8	60.5	64.6	64.8	88.6	101.1	105.8	106.3
FR71	Rhône-Alpes	33.2	55.4	58.5	57.2	76.0	101.6	105.2	103.8
FR72	Auvergne	44.7	61.6	65.7	62.5	88.4	108.8	113.4	110.1
FR81	Languedoc-Roussillon	47.0	60.2	63.6	64.3	104.0	118.5	122.5	123.2
FR82	Provence-Alpes-Côte d'Azur	44.6	59.2	62.6	62.4	97.6	113.6	117.5	117.6
FR83	Corse	66.4	95.2	101.7	114.2	189.3	219.5	227.1	242.9
FR91	Guadeloupe (FR)	30.0	45.2	46.2	44.2	94.0	113.2	114.7	112.4
FR92	Martinique (FR)	33.5	62.2	64.9	62.8	101.9	134.4	138.0	135.9
FR93	Guyane (FR)	14.1	35.1	34.5	32.4	130.4	158.8	158.7	156.3
FR94	Reunion (FR)	19.4	42.1	42.8	41.0	88.6	114.6	115.8	113.8
	Greece								
GR11	Anatoliki Makedonia, Thraki	44.1	68.5	76.4	74.8	97.8	124.5	133.6	131.4
GR12	Kentriki Makedonia	39.8	85.2	96.4	87.6	98.4	147.4	159.9	150.0
GR13	Dytiki Makedonia	47.3	74.7	83.6	84.8	108.2	135.6	145.4	150.5
GR14	Thessalia	43.6	78.0	88.3	73.6	93.5	128.7	140.3	125.9
GR21	Ipeiros	51.4	71.0	79.5	97.9	112.6	128.8	138.0	161.0
GR22	Ionia Nisia	45.2	71.1	80.0	82.1	93.1	119.5	129.2	135.0
GR23	Dytiki Ellada	43.9	76.1	85.6	93.3	108.1	140.7	151.3	162.0
GR24	Sterea Ellada	46.3	57.2	63.7	88.9	100.3	110.2	117.6	148.4
GR25	Peloponnisos	48.9	59.4	66.3	84.6	95.5	106.5	114.4	136.7
GR30	Attiki	34.4	82.0	92.6	98.3	92.2	144.6	156.3	160.5
GR41	Voreio Aigaio	55.9	78.6	87.6	103.1	127.3	151.1	161.0	179.0
GR42	Notio Aigaio	32.8	73.4	81.6	84.0	91.7	136.0	145.2	149.4
GR43	Kriti	36.0	75.1	84.5	74.7	82.3	125.0	135.4	125.9
	Hungary								
HU10	Közép-Magyarország	34.8	55.1	59.1	73.6	88.0	111.3	114.5	128.1
HU21	Közép-Dunántúl	32.8	62.7	65.4	65.1	92.6	125.2	127.9	128.1
HU22	Nyugat-Dunántúl	34.2	67.8	71.4	71.2	90.1	127.1	131.0	130.9
HU23	Dél-Dunántúl	39.8	70.9	74.2	68.9	115.7	150.2	153.7	147.9
HU31	Észak-Magyarország	42.0	70.0	72.8	59.7	123.5	153.4	156.4	142.4
HU32	Észak-Alföld	38.5	70.6	73.6	62.2	123.8	159.2	162.3	149.8
HU33	Dél-Alföld	41.5	72.6	76.5	70.7	117.7	151.2	155.3	149.0
	Ireland								
IE01	Border, Midland and Western	24.1	46.5	48.4	44.3	68.0	91.0	92.9	89.0
IE02	Southern and Eastern	20.2	44.2	46.0	49.1	61.8	87.5	89.2	92.2
IS00	Iceland	16.3	37.9	38.0	30.9	31.8	52.6	52.8	46.1
	Italy								
ITC1	Piemonte	48.6	67.2	91.4	101.6	98.5	121.9	147.6	157.1
ITC2	Valle d'Aosta/Vallée d'Aoste	41.6	70.1	89.1	94.5	87.5	123.4	143.4	147.1
ITC3	Liguria	63.0	69.6	93.5	111.9	118.2	128.1	153.3	171.8
ITC4	Lombardia	39.7	62.0	84.1	96.2	86.4	113.5	137.3	148.9
ITD1	Provincia Autonoma Bolzano-Bozen	32.8	57.7	71.0	73.5	73.0	103.3	117.7	119.7
ITD2	Provincia Autonoma Trento	39.6	62.0	79.6	84.5	87.9	116.9	135.1	139.4
ITD3	Veneto	40.0	66.0	90.1	98.8	88.8	120.9	146.5	154.3
ITD4	Friuli-Venezia Giulia	49.5	73.4	98.5	109.3	103.0	131.9	158.3	167.8
ITD5	Emilia-Romagna	46.9	64.5	86.3	101.1	88.0	111.7	134.6	148.2
ITE1	Toscana	50.7	69.1	92.9	106.1	100.0	122.8	147.9	160.3
ITE2	Umbria	53.1	66.7	90.6	103.8	106.6	125.0	149.7	162.3
ITE3	Marche	49.2	69.2	92.0	102.7	97.7	123.3	147.2	157.5

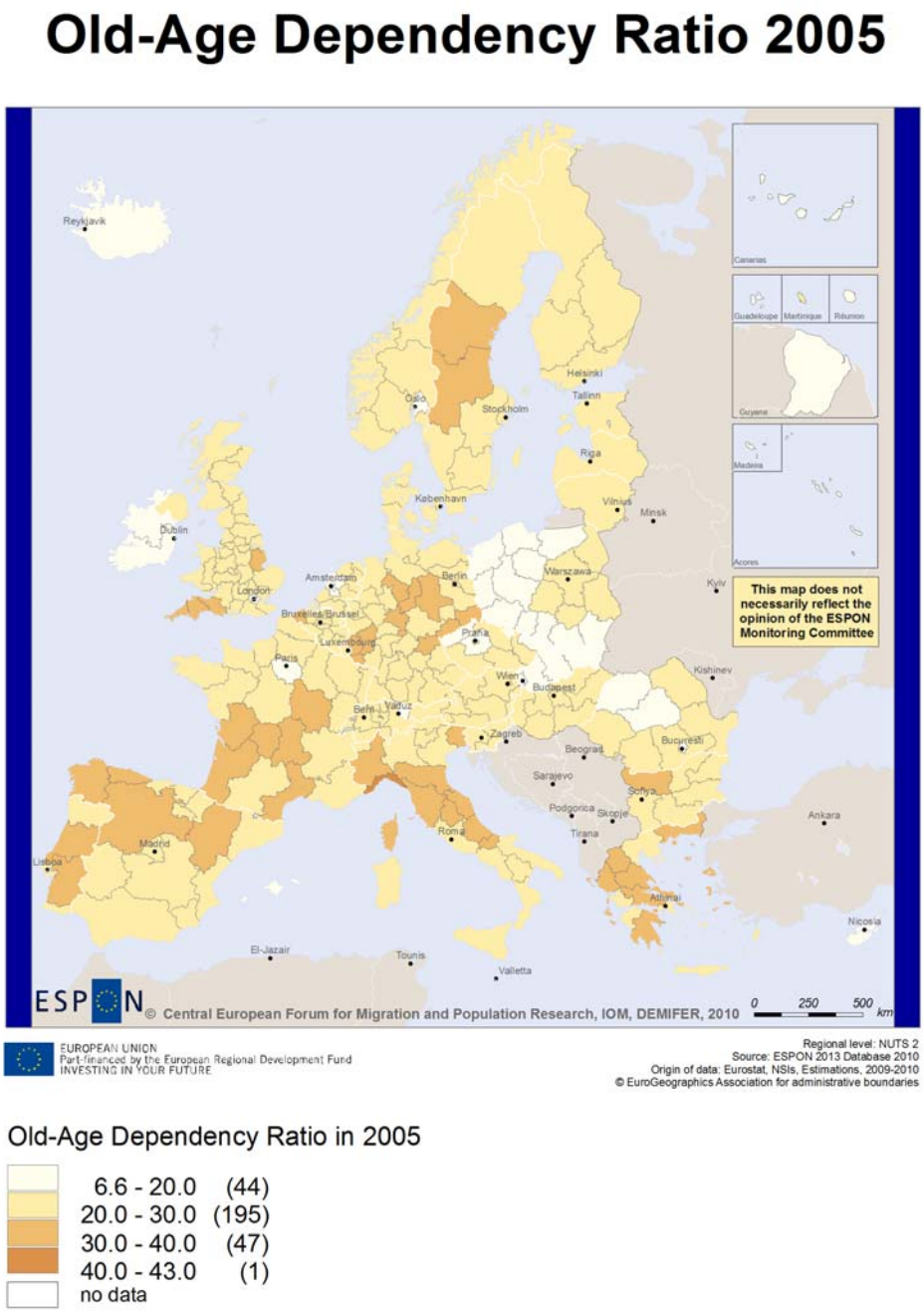
Table 4. continued

		Economic Old-Age Dependency Ratio				Labour Market Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
ITE4	Lazio	42.3	66.6	87.6	99.4	100.6	130.0	152.3	163.3
ITF1	Abruzzo	50.2	77.8	99.1	109.3	112.8	146.0	168.5	179.1
ITF2	Molise	56.0	91.6	111.5	115.4	129.4	171.5	192.5	197.3
ITF3	Campania	41.0	84.5	98.8	88.9	130.9	183.4	197.8	183.7
ITF4	Puglia	46.1	102.1	117.7	107.8	135.9	196.9	214.2	201.8
ITF5	Basilicata	51.3	98.5	117.1	110.7	129.8	184.8	205.1	197.4
ITF6	Calabria	49.1	95.1	119.5	108.4	137.5	191.0	217.1	203.3
ITG1	Sicilia	49.3	90.8	105.7	95.3	139.7	185.7	202.8	189.7
ITG2	Sardegna	39.8	105.0	122.8	126.6	108.6	180.2	199.0	203.1
LI00	Liechtenstein	17.4	58.3	59.6	57.3	40.3	82.1	83.5	81.5
LT00	Lithuania	30.6	55.3	56.1	51.0	75.2	96.4	97.9	93.0
LU00	Luxembourg (Grand-Duché)	31.2	55.3	56.4	68.5	82.0	113.4	114.8	128.7
LV00	Latvia	30.2	45.7	46.7	47.2	72.6	85.9	87.2	88.0
MT00	Malta	32.5	78.6	80.1	80.2	104.9	156.6	159.9	161.9
	Netherlands								
NL11	Groningen	27.3	48.3	53.4	60.4	62.7	86.4	91.9	99.4
NL12	Friesland (NL)	28.2	48.9	53.7	46.3	60.7	83.5	88.7	80.7
NL13	Drenthe	30.6	45.8	49.6	45.5	62.0	78.6	82.9	78.5
NL21	Overijssel	26.5	46.8	50.9	45.3	58.1	81.5	85.9	79.5
NL22	Gelderland	26.2	47.9	52.1	47.4	56.4	81.0	85.5	80.4
NL23	Flevoland	15.7	39.1	43.0	42.6	45.5	74.1	78.3	77.2
NL31	Utrecht	22.4	43.0	47.0	50.9	50.5	74.5	78.6	82.2
NL32	Noord-Holland	24.3	44.3	49.8	54.5	52.8	76.0	81.8	86.2
NL33	Zuid-Holland	25.6	45.4	51.2	52.7	56.4	79.2	85.5	87.0
NL34	Zeeland	33.1	52.2	57.4	49.1	67.4	88.0	93.6	84.5
NL41	Noord-Brabant	25.2	50.3	55.3	50.0	54.9	83.2	88.4	82.7
NL42	Limburg (NL)	30.2	57.4	63.6	54.0	65.2	95.1	101.9	92.3
	Norway								
NO01	Oslo og Akershus	21.7	35.3	39.1	49.8	48.0	63.3	67.1	77.8
NO02	Hedmark og Oppland	33.6	47.8	52.5	45.5	65.3	80.1	85.0	77.9
NO03	Sør-Østlandet	28.9	45.8	50.2	45.6	60.3	78.1	82.5	77.9
NO04	Agder og Rogaland	23.9	41.9	45.8	41.2	53.7	72.6	76.6	71.9
NO05	Vestlandet	27.2	45.3	49.6	42.1	55.1	74.2	78.7	70.9
NO06	Trøndelag	27.2	44.4	48.4	44.0	59.3	77.3	81.5	76.8
NO07	Nord-Norge	27.0	47.4	53.1	42.6	58.0	79.2	85.0	74.5
	Poland								
PL11	Lódzkie	26.6	57.8	59.0	56.9	62.3	97.9	99.5	97.5
PL12	Mazowieckie	30.5	61.1	63.5	70.2	87.0	121.8	124.8	132.4
PL21	Malopolskie	27.7	59.9	63.1	64.6	82.6	118.9	123.0	125.2
PL22	Slaskie	28.2	103.0	106.3	77.8	96.0	178.4	183.1	152.4
PL31	Lubelskie	26.9	55.5	56.7	52.0	66.8	99.7	101.3	96.1
PL32	Podkarpackie	28.4	65.8	68.8	63.9	91.5	134.2	138.2	133.6
PL33	Swietokrzyskie	29.0	64.1	65.8	59.5	74.2	115.1	117.3	110.7
PL34	Podlaskie	32.7	73.4	76.6	69.0	98.1	144.7	148.9	141.6
PL41	Wielkopolskie	24.5	61.8	63.0	62.4	80.8	122.5	124.1	123.8
PL42	Zachodniopomorskie	26.8	72.8	75.3	72.0	97.4	149.1	152.3	149.1
PL43	Lubuskie	22.3	58.2	61.6	59.2	70.2	110.0	114.4	112.8
PL51	Dolnoslaskie	28.6	74.6	78.3	75.7	91.2	142.3	147.0	145.0
PL52	Opolskie	32.6	103.6	133.4	92.2	117.3	191.6	226.3	188.1
PL61	Kujawsko-Pomorskie	25.0	64.6	65.6	61.4	79.2	123.9	125.3	120.8
PL62	Warminsko-Mazurskie	25.6	72.3	74.6	62.7	93.2	145.7	149.0	136.3
PL63	Pomorskie	28.7	77.4	79.8	73.6	111.4	165.8	168.6	161.5
	Portugal								
PT11	Norte	23.0	58.8	59.5	55.2	58.7	95.1	95.7	91.2
PT15	Algarve	30.8	39.8	48.9	52.1	69.7	81.1	89.8	92.6
PT16	Centro (PT)	28.5	49.7	53.0	50.7	51.6	73.6	76.7	74.2
PT17	Lisboa	26.4	43.9	52.0	55.6	65.9	84.9	92.5	95.3
PT18	Alentejo	38.5	54.9	58.7	56.1	76.0	93.4	96.7	94.1
PT20	Região Autónoma dos Açores (PT)	23.2	44.7	46.3	41.8	76.7	96.2	98.3	94.5
PT30	Região Autónoma da Madeira (PT)	22.5	40.9	45.8	43.4	66.4	84.7	89.5	87.2
	Romania								
RO11	Nord-Vest	24.8	48.6	49.5	45.1	93.1	112.5	114.3	111.7
RO12	Centru	25.8	56.0	57.1	51.1	98.5	120.7	123.2	122.0
RO21	Nord-Est	22.5	40.5	41.1	34.7	69.3	86.0	86.9	80.9
RO22	Sud-Est	25.8	52.4	53.6	50.1	91.8	114.2	116.4	115.5
RO31	Sud - Muntenia	27.5	47.6	48.6	44.1	81.6	100.2	101.7	98.4
RO32	Bucuresti - Ilfov	24.8	39.9	49.0	66.4	88.5	97.6	107.8	127.3
RO41	Sud-Vest Oltenia	25.8	46.1	46.7	42.4	74.7	94.4	95.5	92.1
RO42	Vest	26.0	47.4	49.5	48.6	93.4	108.8	112.4	115.9

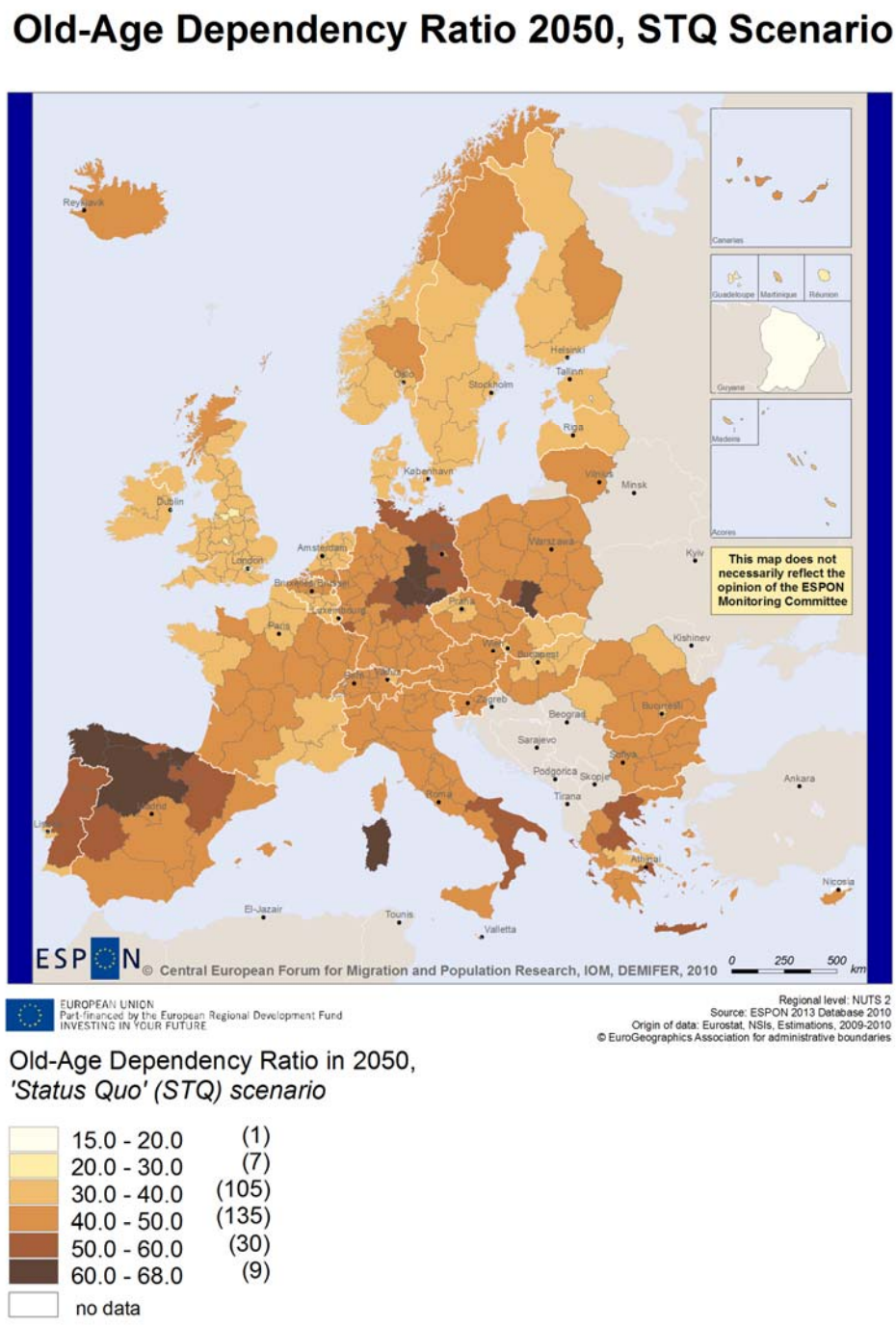
Table 4. continued

		Economic Old-Age Dependency Ratio				Labour Market Dependency Ratio			
		2005	2050 NMI	2050 NEM	2050 STQ	2005	2050 NMI	2050 NEM	2050 STQ
	Sweden								
SE11	Stockholm	24.4	35.6	40.1	50.6	49.7	62.0	66.5	77.2
SE12	Östra Mellansverige	32.7	45.5	50.9	48.4	63.6	75.7	81.2	78.5
SE21	Småland med öarna	34.6	43.8	49.2	42.9	58.7	66.8	72.4	66.1
SE22	Sydsverige	33.7	43.3	49.1	51.2	65.0	74.2	80.1	82.0
SE23	Västsverige	31.5	44.1	49.4	48.6	59.4	71.8	77.2	76.4
SE31	Norra Mellansverige	38.1	47.3	53.2	44.5	68.7	76.9	82.9	74.5
SE32	Mellersta Norrland	38.2	45.7	51.2	42.9	67.2	74.0	79.7	71.8
SE33	Övre Norrland	34.4	49.4	55.8	48.6	66.1	80.3	86.9	79.2
	Slovenia								
SI01	Vzhodna Slovenija	29.7	70.8	76.4	76.3	70.7	117.0	124.3	125.0
SI02	Zahodna Slovenija	30.5	68.1	74.5	80.3	69.5	111.1	119.2	126.4
	Slovakia								
SK01	Bratislavský kraj	20.4	49.7	58.7	68.8	57.3	89.3	100.5	111.8
SK02	Západné Slovensko	23.0	56.1	63.4	66.7	69.3	105.3	115.1	121.2
SK03	Stredné Slovensko	22.2	53.7	58.1	56.0	69.5	105.0	111.1	109.8
SK04	Východné Slovensko	21.2	47.4	49.8	48.1	72.1	101.6	105.1	103.8
	United Kingdom								
UKC1	Tees Valley and Durham	34.2	43.8	50.3	45.4	79.1	89.5	96.1	91.3
UKC2	Northumberland, Tyne and Wear	35.0	45.3	53.8	52.5	79.1	90.5	99.3	97.9
UKD1	Cumbria	33.9	40.5	46.3	44.3	60.5	67.4	73.5	71.7
UKD2	Cheshire	30.8	41.8	48.4	45.9	64.3	76.3	83.2	80.6
UKD3	Greater Manchester	29.0	38.1	46.1	45.3	69.1	79.0	87.6	86.6
UKD4	Lancashire	32.9	39.9	45.9	43.2	71.1	78.5	84.8	82.0
UKD5	Merseyside	34.8	43.7	51.0	47.2	79.3	88.8	96.2	92.1
UKE1	East Yorkshire and Northern Lincolnshire	33.8	39.6	47.4	46.8	73.1	79.0	87.2	87.0
UKE2	North Yorkshire	33.8	41.1	50.3	51.2	65.1	72.2	81.9	83.6
UKE3	South Yorkshire	32.4	42.8	51.7	49.1	73.8	85.0	94.2	91.4
UKE4	West Yorkshire	28.3	37.9	47.3	46.1	64.2	74.8	84.6	82.9
UKF1	Derbyshire and Nottinghamshire	31.3	43.7	53.0	51.7	68.7	82.0	91.7	90.2
UKF2	Leicestershire, Rutland and Northants	27.0	40.3	50.0	45.7	58.0	72.3	82.4	77.9
UKF3	Lincolnshire	35.9	37.0	43.2	45.0	65.0	65.3	71.6	74.1
UKG1	Herefordshire, Worcestershire and Warks	31.7	41.3	48.3	45.9	60.3	70.5	77.7	75.4
UKG2	Shropshire and Staffordshire	31.0	42.0	48.0	44.8	64.6	75.9	82.0	79.1
UKG3	West Midlands	31.4	38.2	47.0	43.6	72.0	79.7	88.9	84.9
UKH1	East Anglia	33.4	42.3	52.4	50.1	63.2	72.7	83.2	80.7
UKH2	Bedfordshire, Hertfordshire	26.2	37.9	47.4	45.6	53.4	67.0	76.8	74.5
UKH3	Essex	31.1	39.3	48.3	46.1	60.1	69.2	78.3	76.0
UKI1	Inner London	18.7	31.8	48.3	75.2	68.5	84.9	102.2	128.0
UKI2	Outer London	24.8	35.2	49.0	53.3	58.9	72.0	86.2	89.7
UKJ1	Berkshire, Bucks and Oxfordshire	23.4	38.8	49.6	48.6	47.9	65.1	76.4	75.1
UKJ2	Surrey, East and West Sussex	34.8	44.0	55.1	50.2	63.4	74.2	85.6	80.0
UKJ3	Hampshire and Isle of Wight	30.0	40.8	50.1	51.3	58.7	70.2	79.7	81.0
UKJ4	Kent	31.4	41.4	50.7	44.3	63.6	74.2	83.8	77.2
UKK1	Gloucestershire, Wiltshire and Bristol/Bath area	29.4	40.3	49.5	50.5	57.1	69.1	78.6	79.7
UKK2	Dorset and Somerset	41.0	42.3	50.0	47.4	70.8	71.7	79.6	77.5
UKK3	Cornwall and Isles of Scilly	39.9	39.5	45.5	48.8	75.1	73.5	79.4	83.4
UKK4	Devon	39.6	40.9	48.8	51.1	75.0	75.7	83.9	86.6
UKL1	West Wales and The Valleys	38.7	43.4	48.6	46.3	84.0	88.5	93.9	91.5
UKL2	East Wales	30.9	40.5	47.2	47.4	64.7	74.7	81.6	81.7
UKM2	Eastern Scotland	29.6	38.9	47.8	50.7	60.4	70.4	79.7	82.7
UKM3	South Western Scotland	33.1	43.6	51.7	50.3	79.7	91.1	99.6	98.1
UKM5	North Eastern Scotland	26.9	36.1	46.2	46.9	54.2	64.8	75.2	76.2
UKM6	Highlands and Islands	24.8	37.4	44.9	35.4	29.6	42.4	49.8	40.3
UKN0	Northern Ireland	28.8	41.5	49.2	46.3	77.1	90.3	98.1	95.1

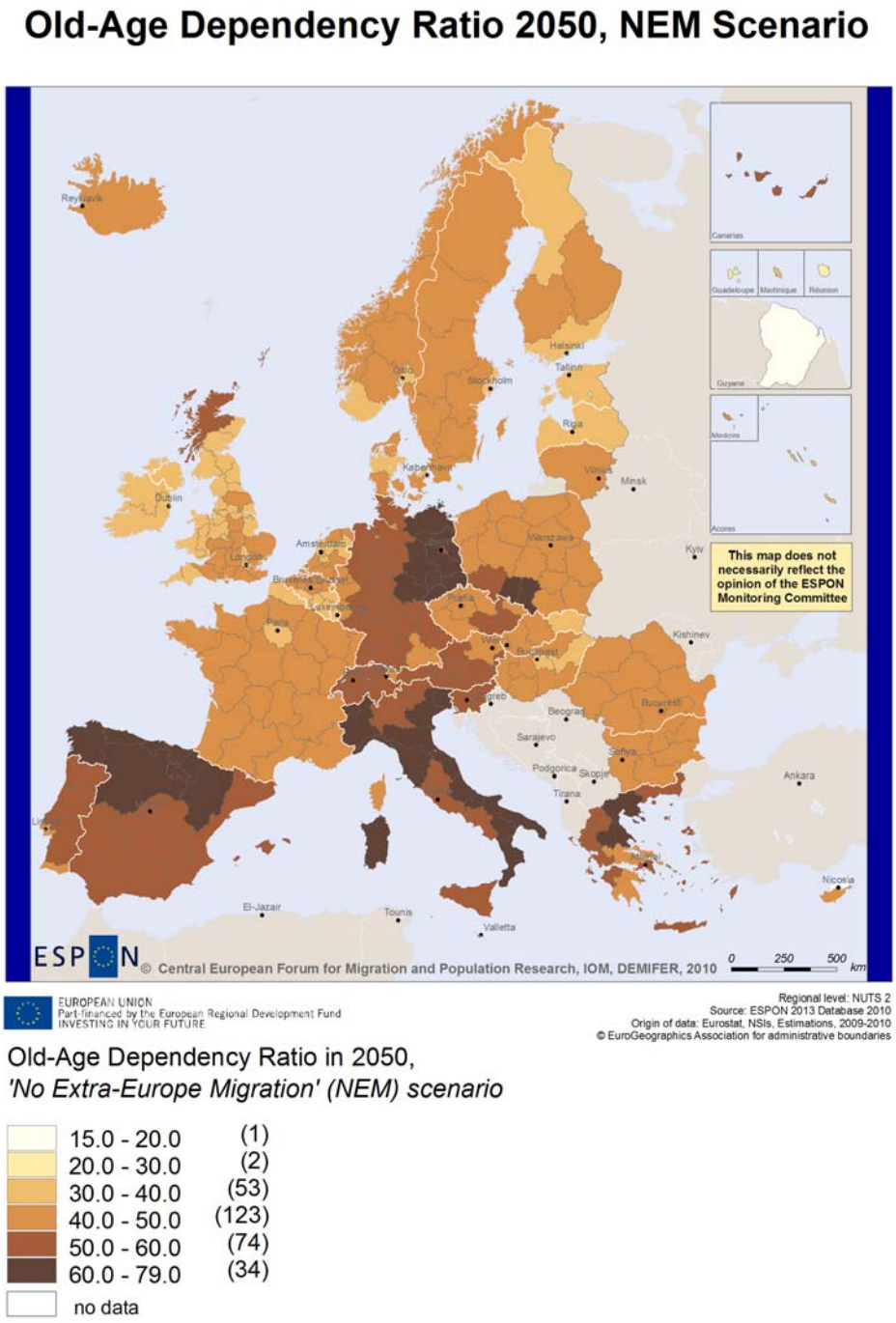
Map 10. Old-Age Dependency Ratio, 2005



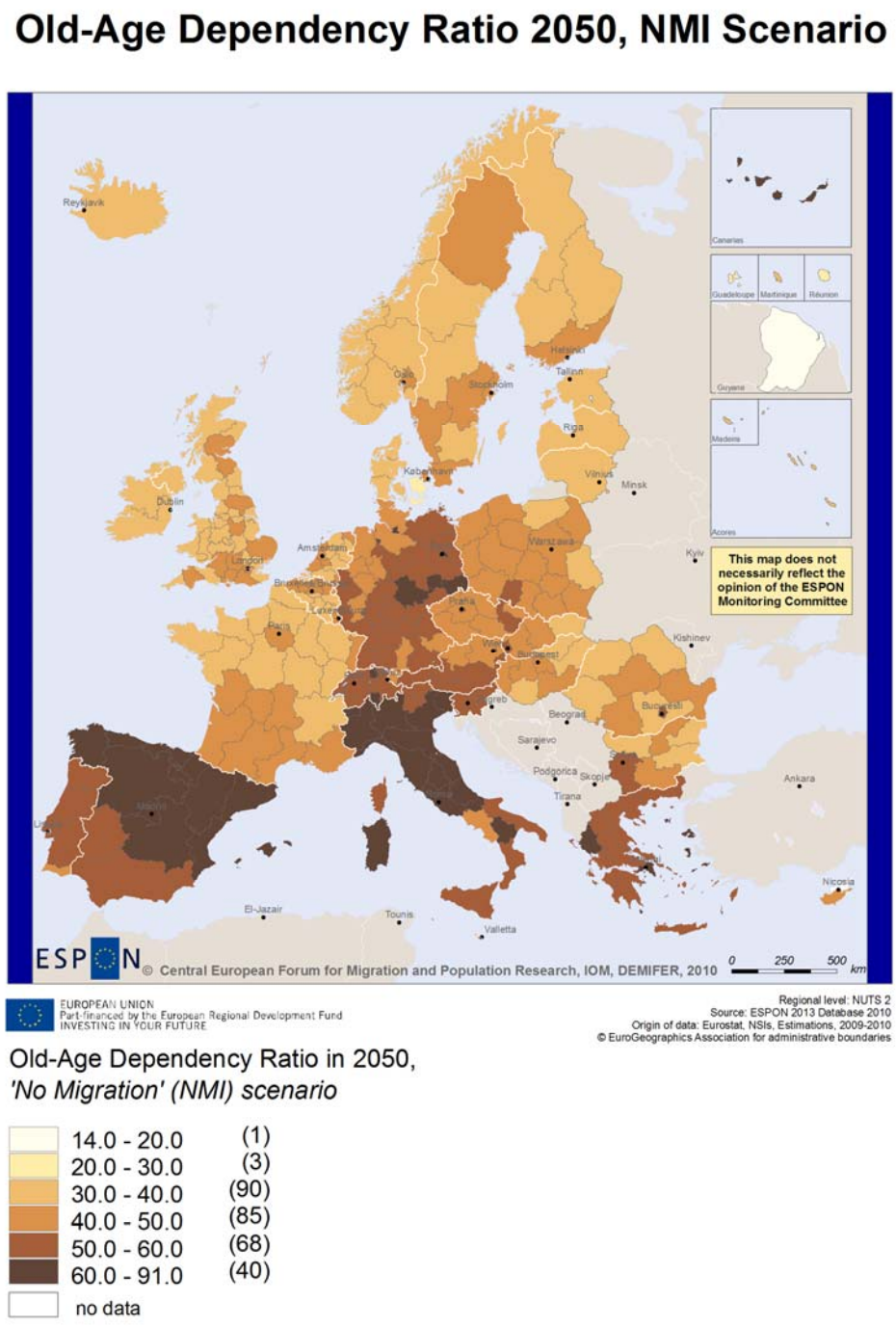
Map 11. Old-Age Dependency Ratio, *Status Quo* projection, 2050



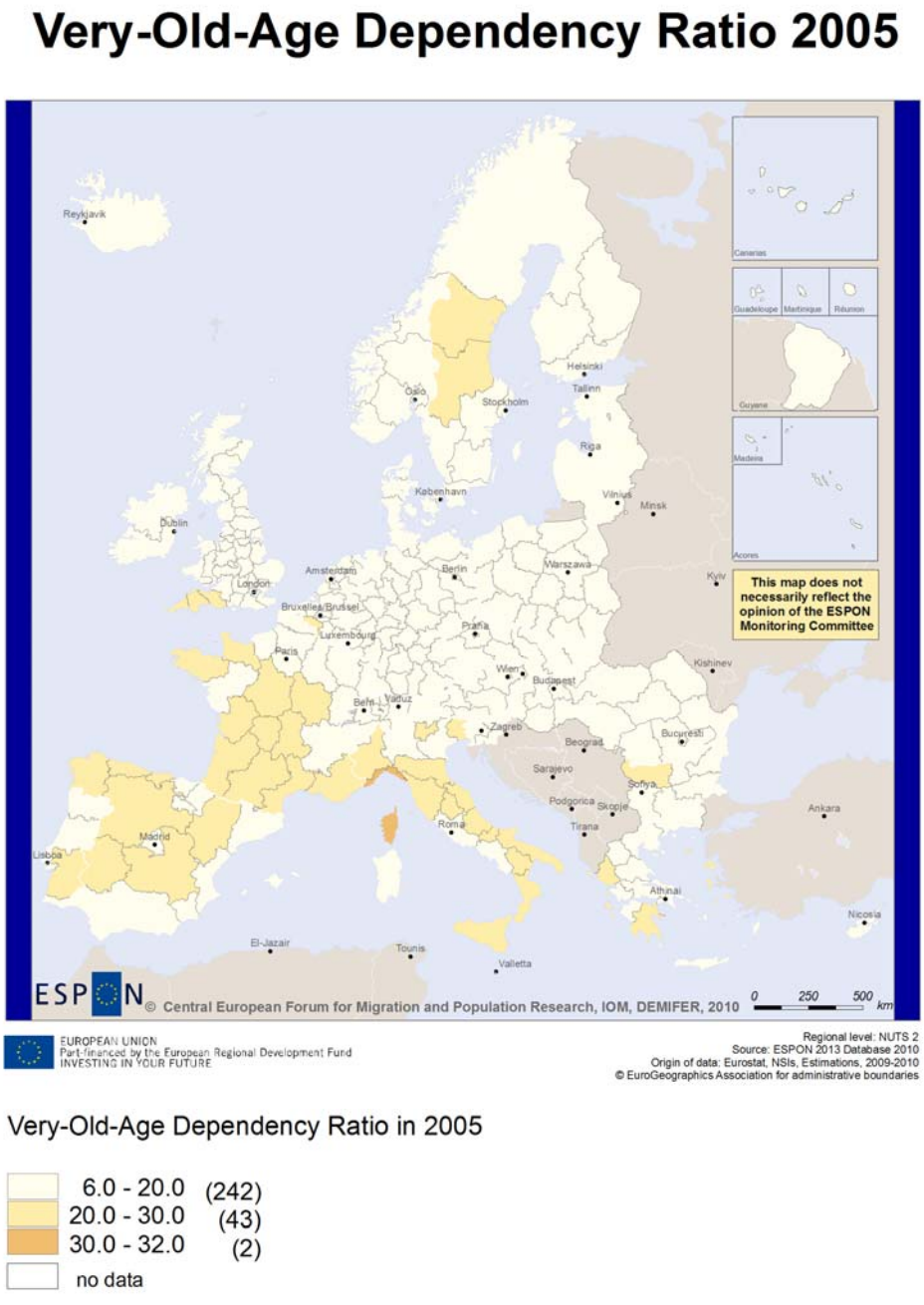
Map 12. Old-Age Dependency Ratio, *No Extra-Europe Migration* simulation, 2050



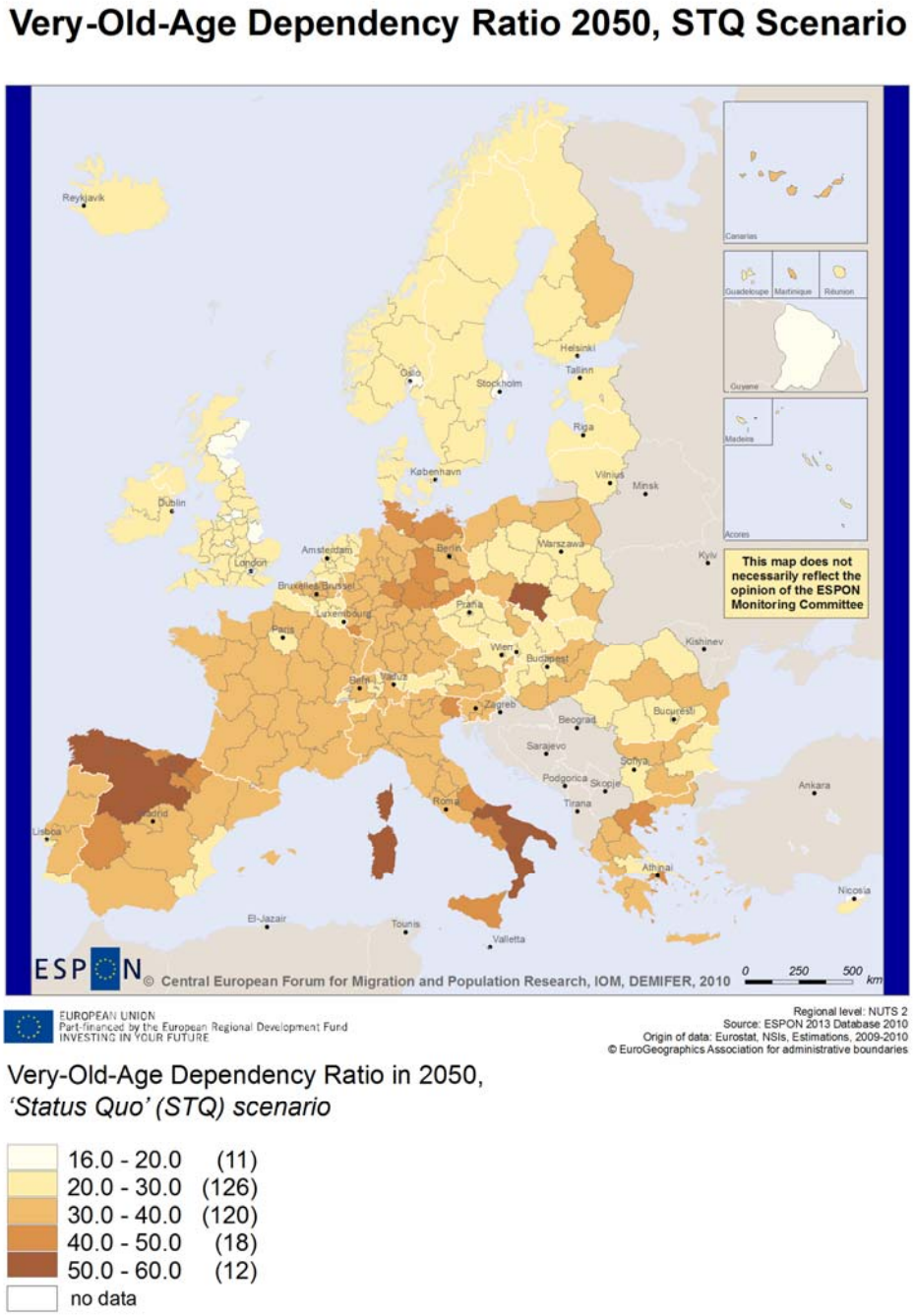
Map 13. Old-Age Dependency Ratio, *No Migration* simulation, 2050



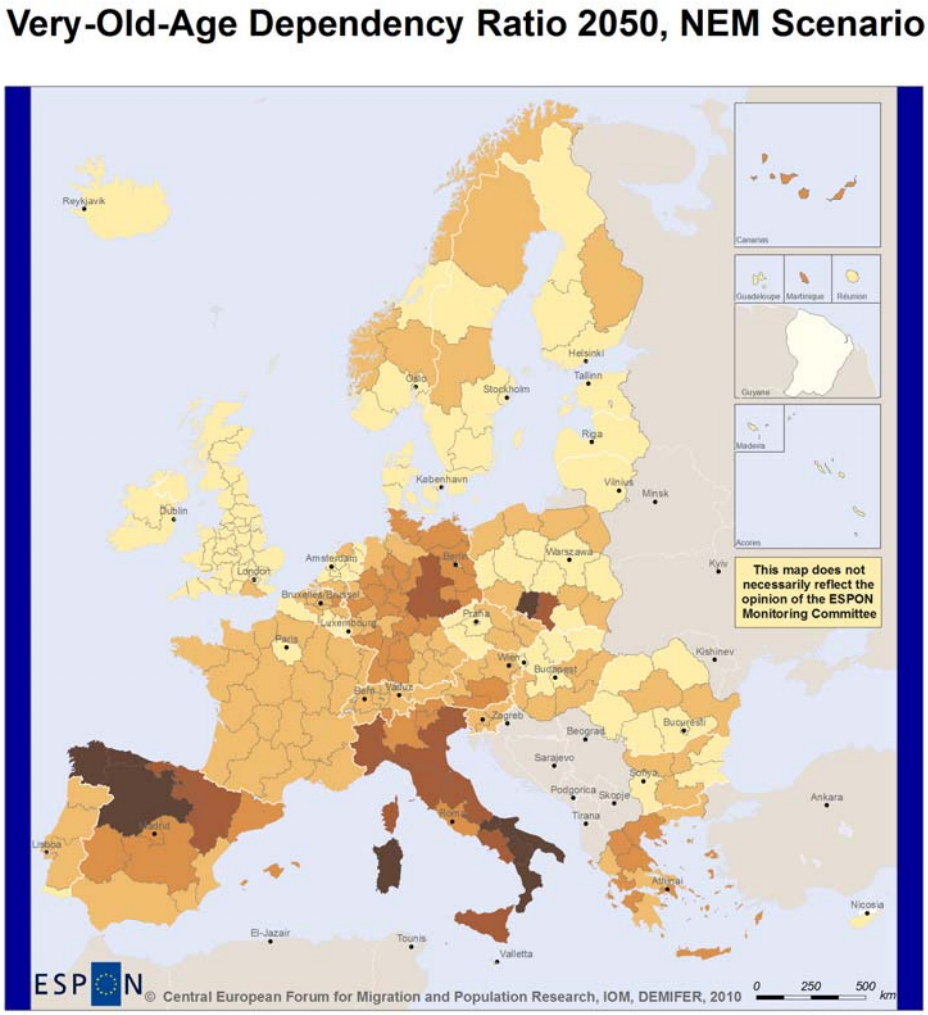
Map 14. Very-Old-Age Dependency Ratio, 2005



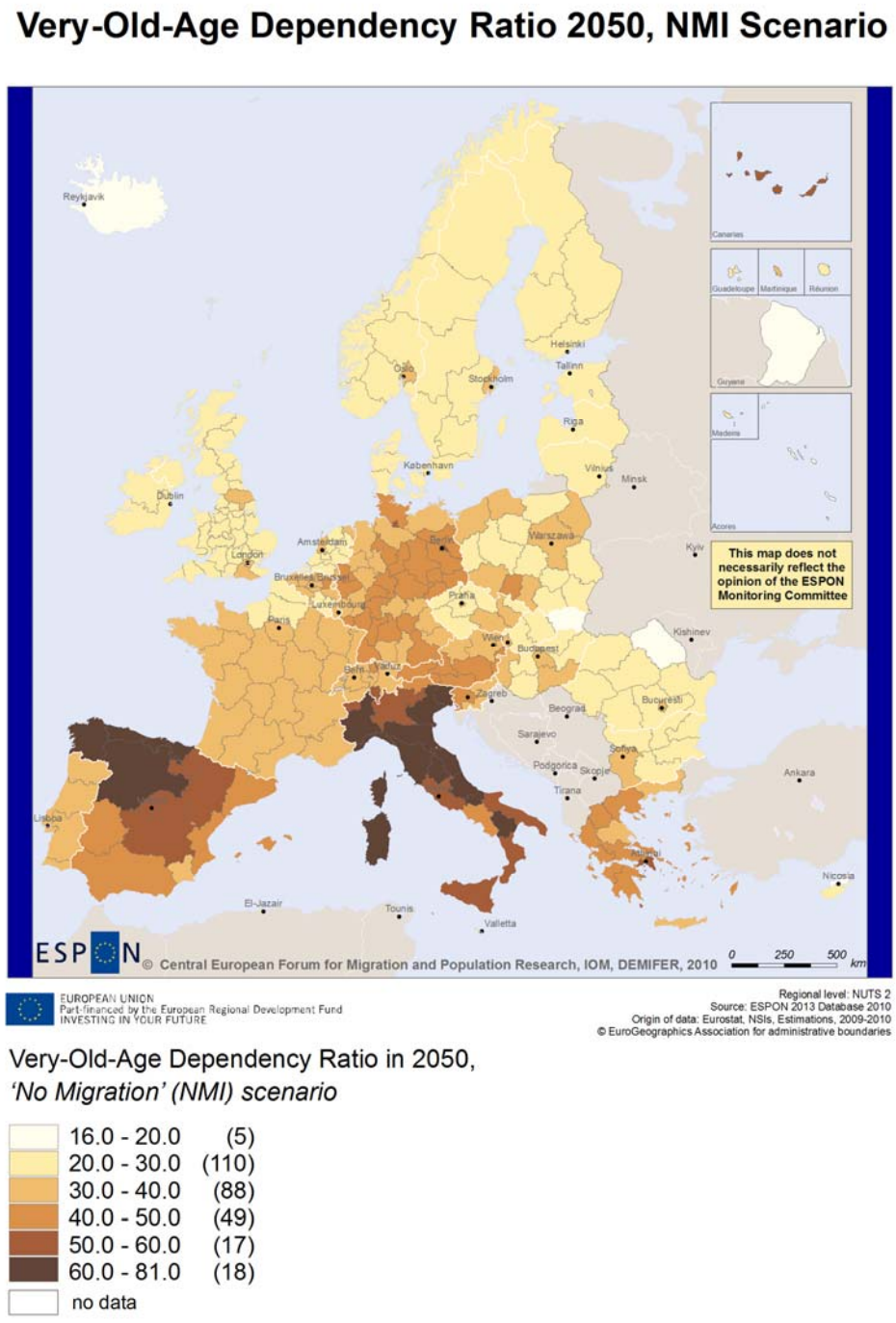
Map 15. Very-Old-Age Dependency Ratio, *Status Quo* projection, 2050



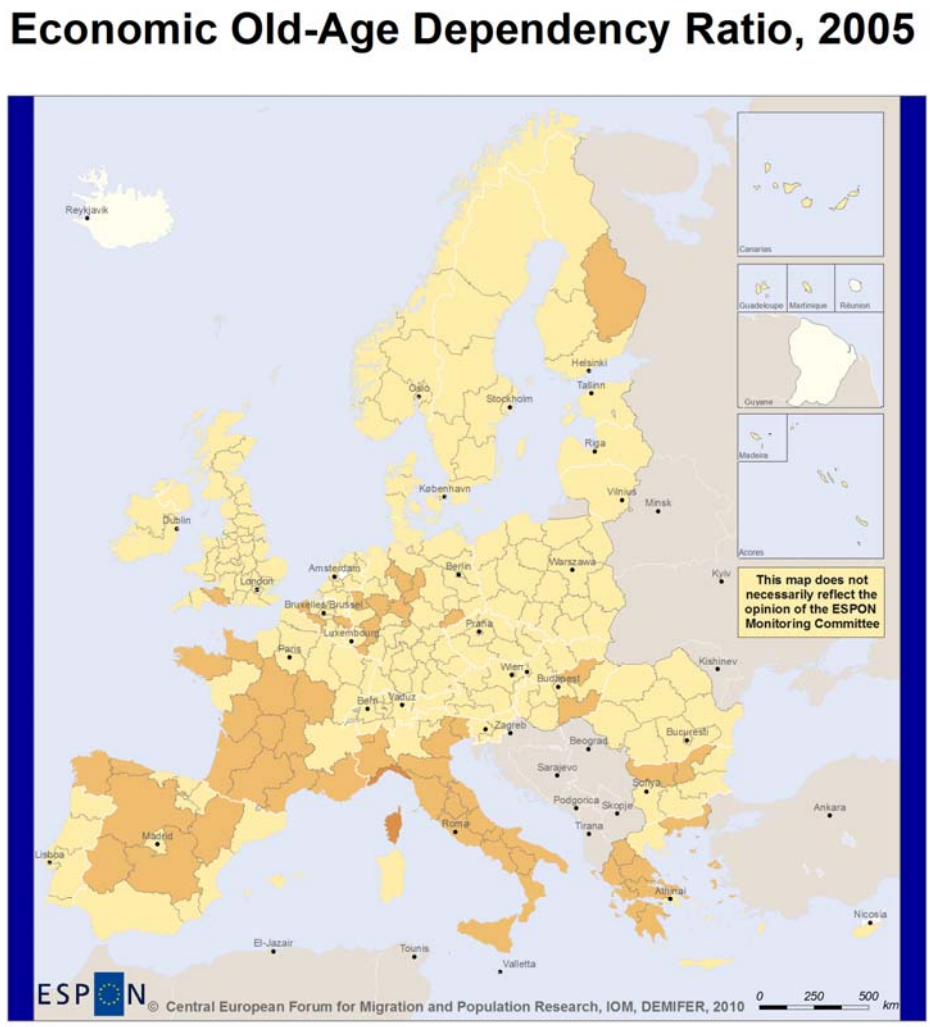
Map 16. Very-Old-Age Dependency Ratio, *No Extra-Europe Migration* simulation, 2050



Map 17. Very-Old-Age Dependency Ratio, *No Migration* simulation, 2050



Map 18. Economic Old-Age Dependency Ratio, 2005



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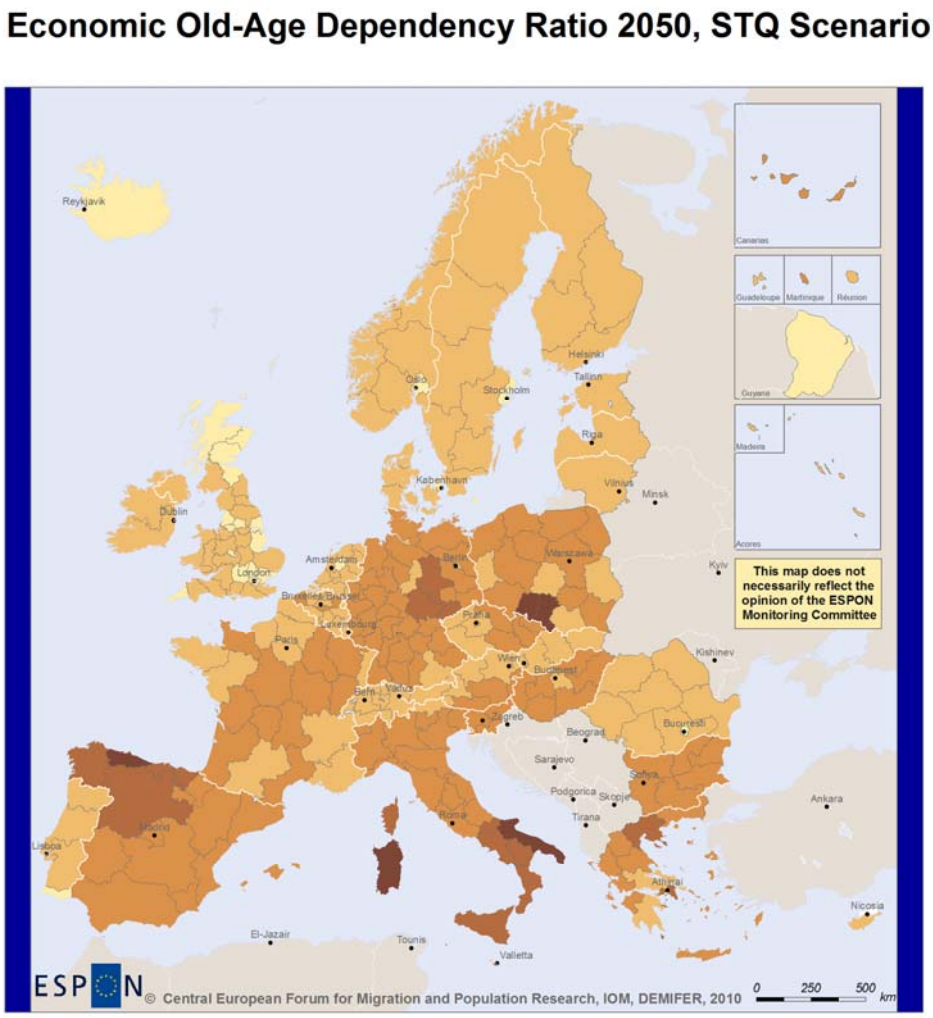
Regional level: NUTS 2
Source: ESPON 2013 Database 2010
Origin of data: Eurostat, NSIs, Estimations, 2009-2010
© EuroGeographics Association for administrative boundaries

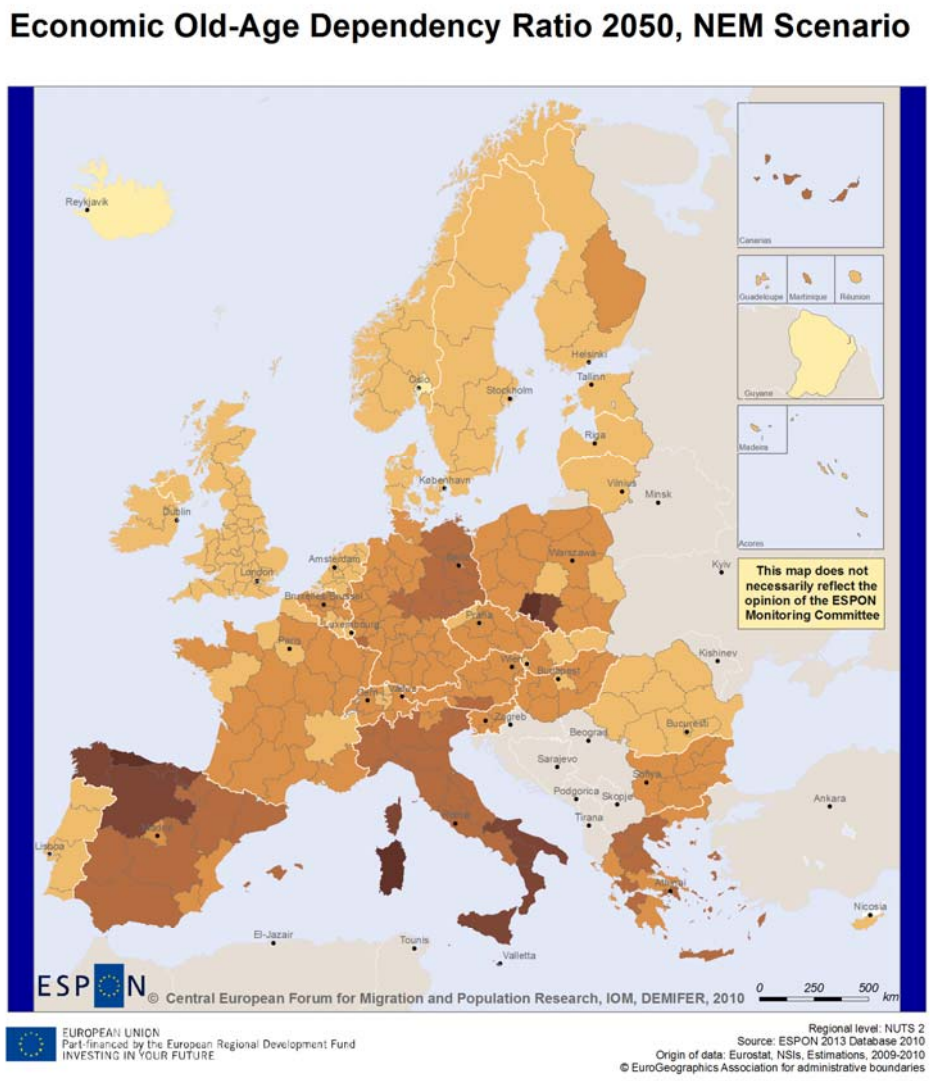
Economic Old-Age Dependency Ratio, 2005

14.0 - 20.0	(6)
20.0 - 40.0	(219)
40.0 - 60.0	(60)
60.0 - 67.0	(2)
no data	

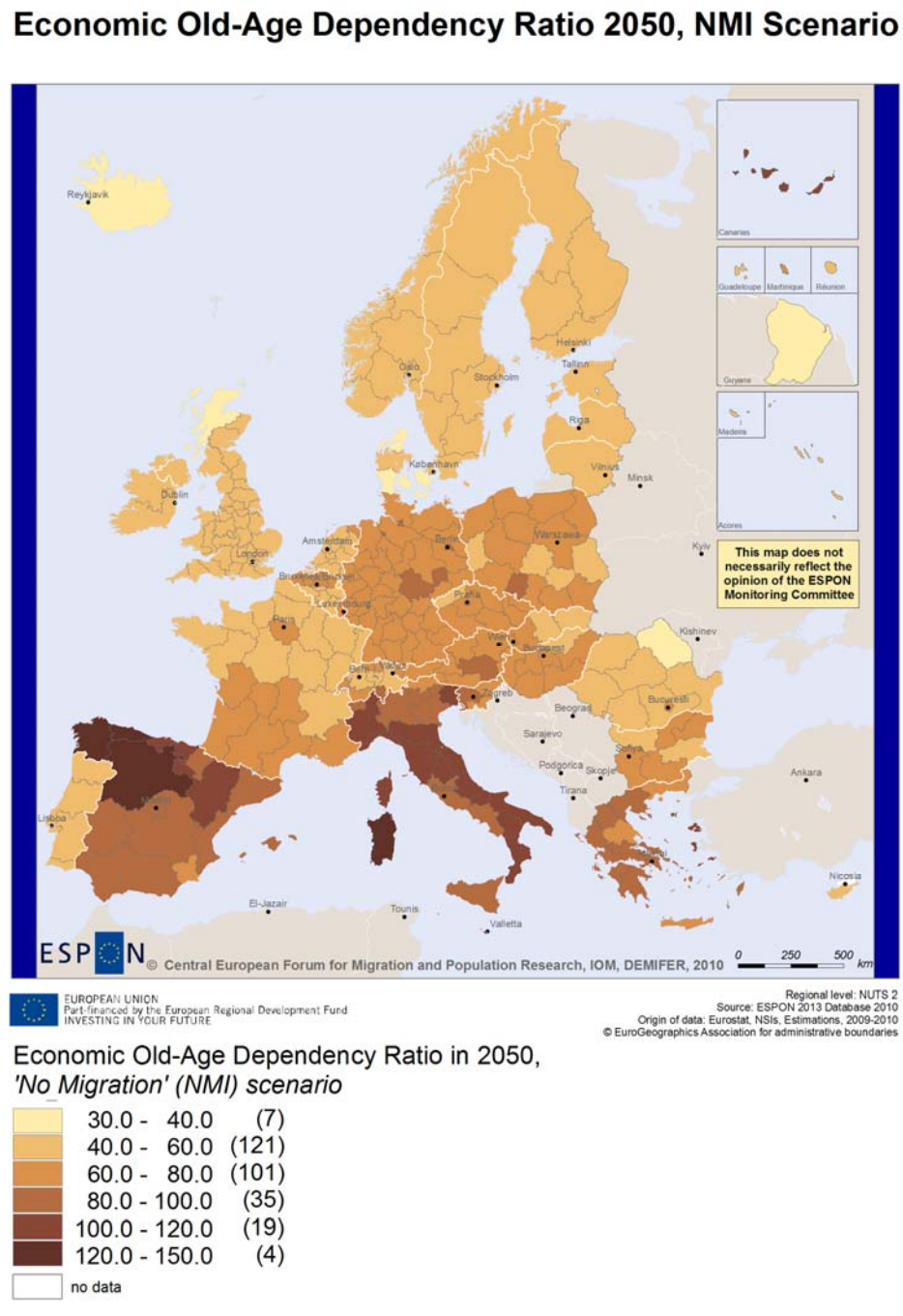
Map 19. Economic Old-Age Dependency Ratio, *Status Quo* projection, 2050



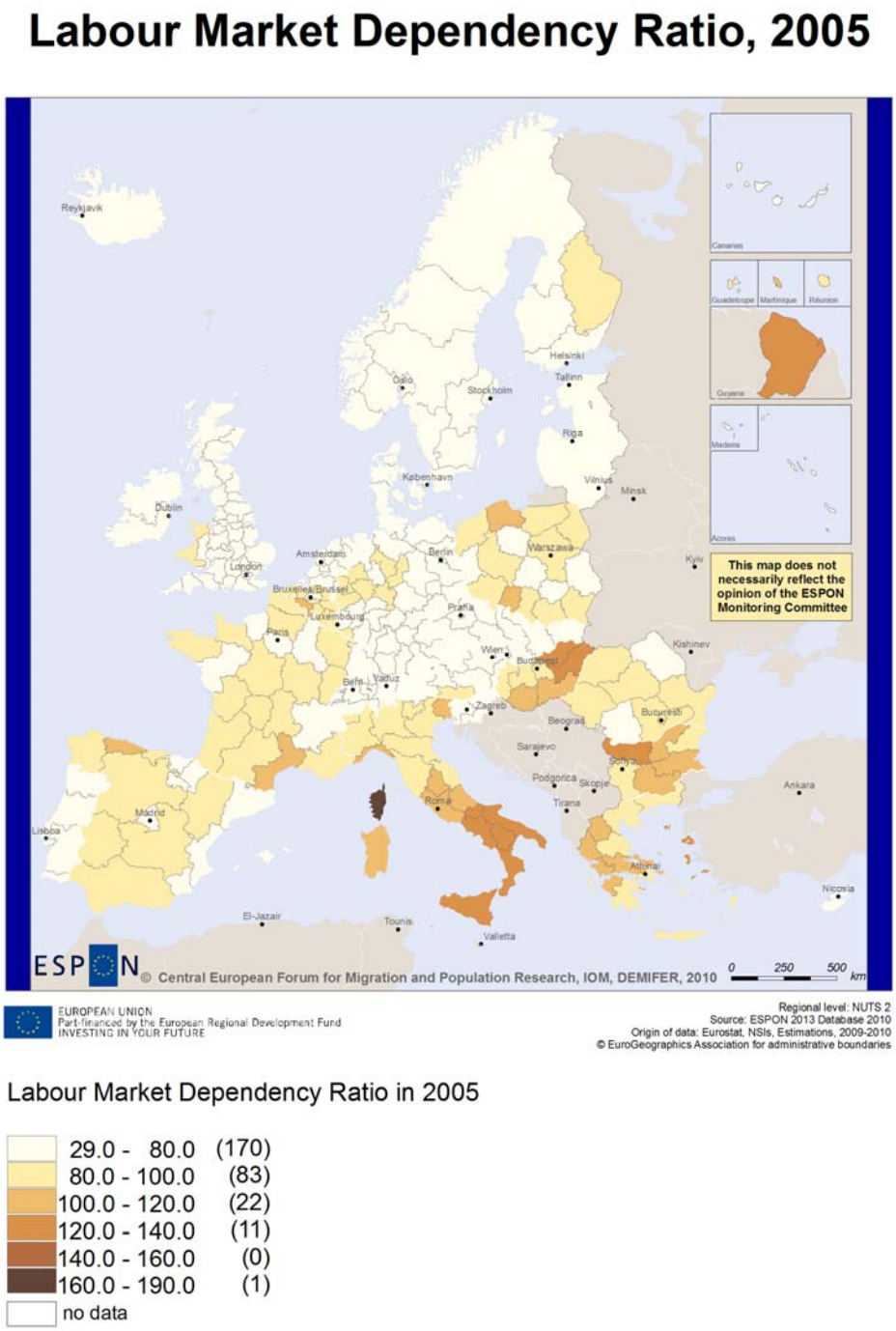
Map 20. Economic Old-Age Dependency Ratio, *No Extra-Europe Migration* simulation, 2050



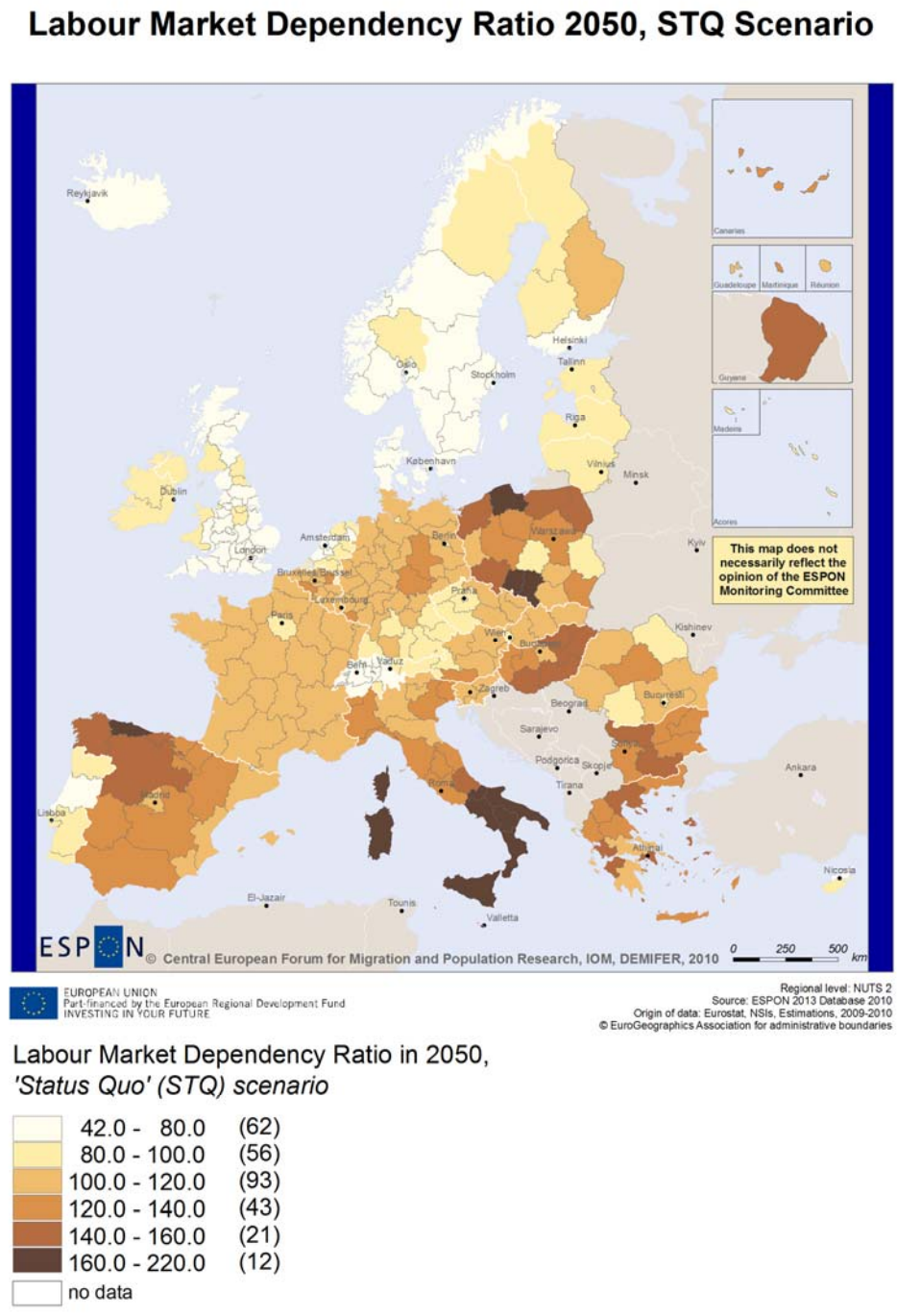
Map 21. Economic Old-Age Dependency Ratio, *No Migration* simulation, 2050



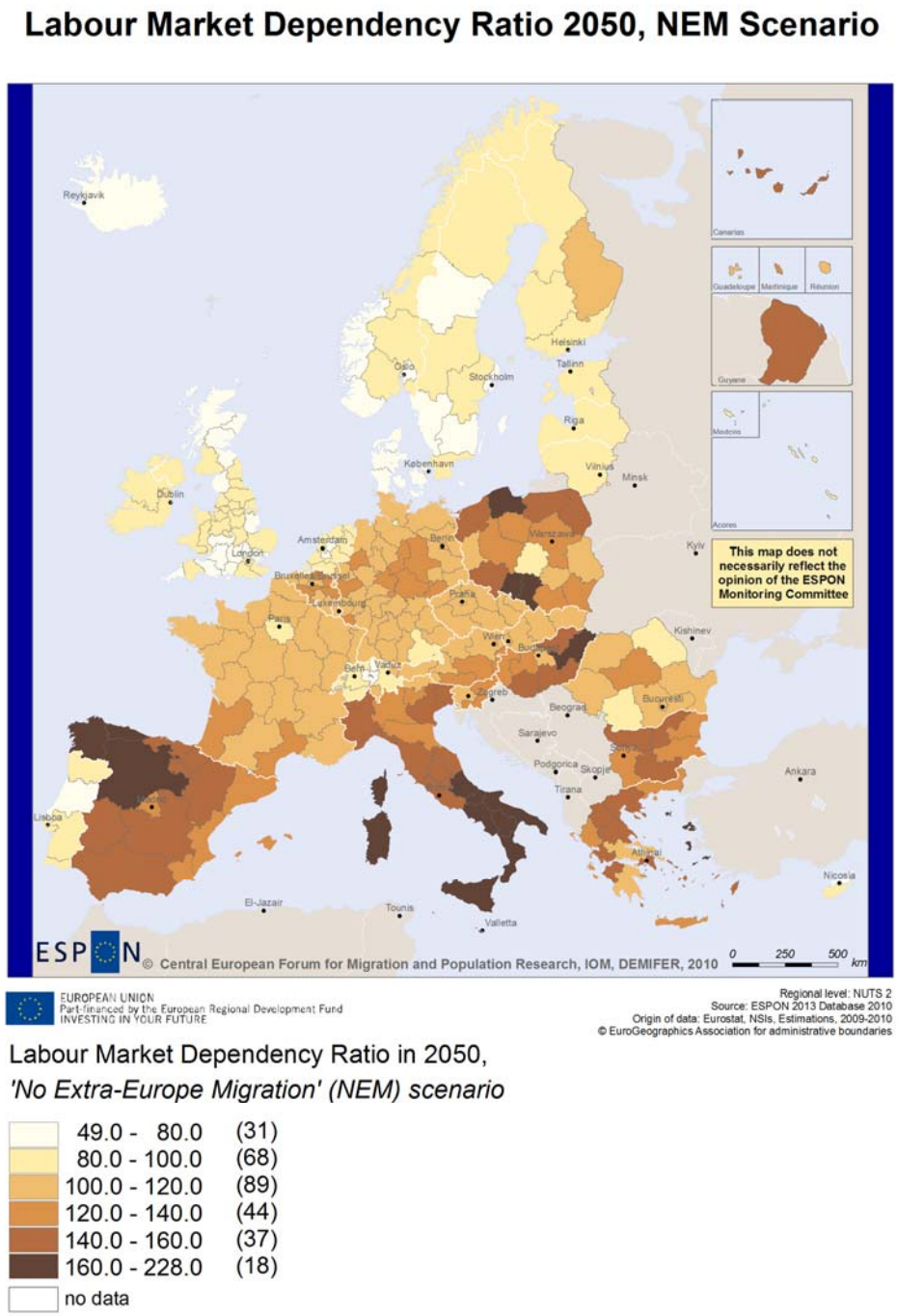
Map 22. Labour Market Dependency Ratio, 2005



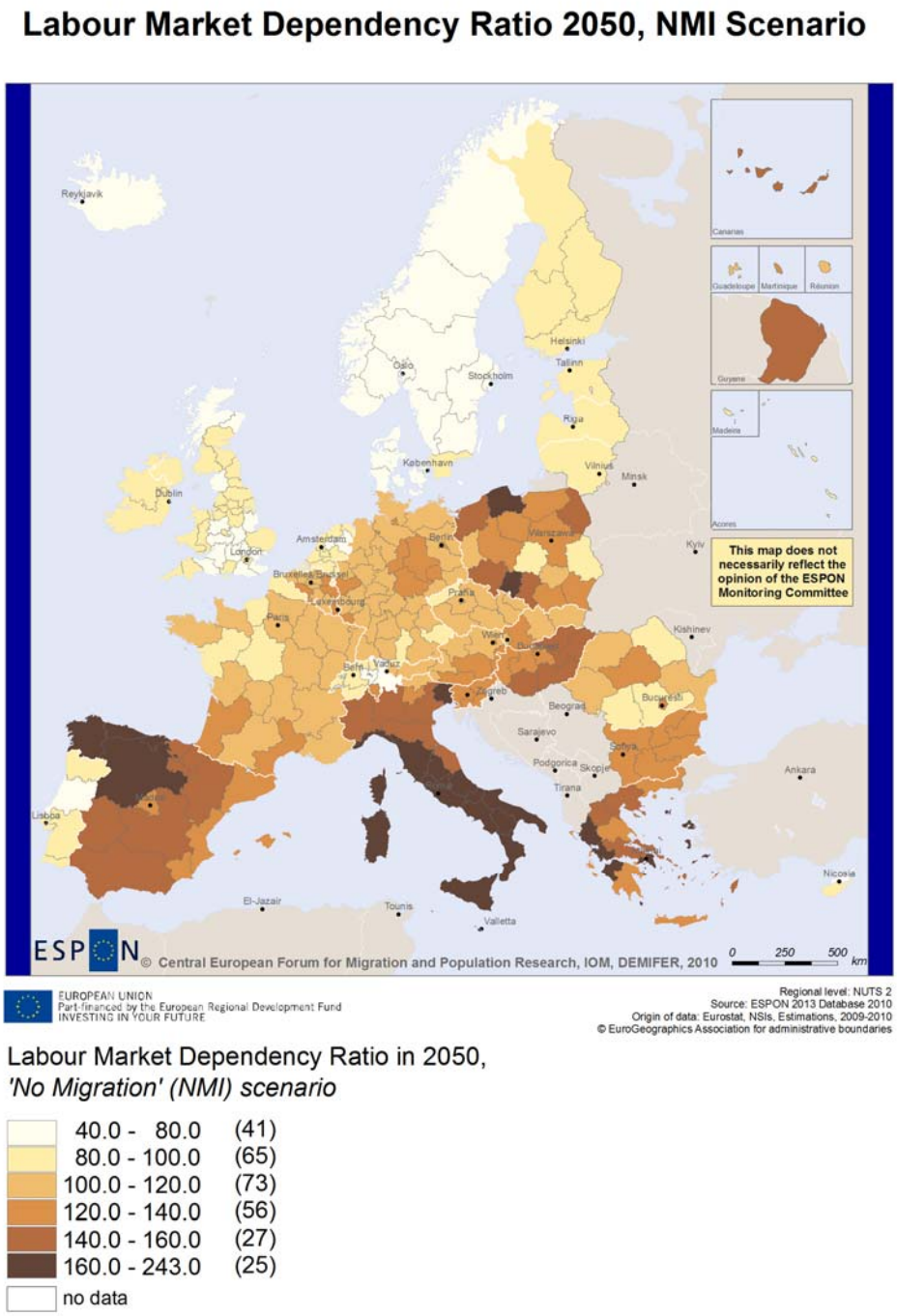
Map 23. Labour Market Dependency Ratio, *Status Quo* projection, 2050



Map 24. Labour Market Dependency Ratio, *No Extra-Europe Migration* simulation, 2050



Map 25. Labour Market Dependency Ratio, *No Migration* simulation, 2050



Appendix E. List of the data prepared within the reference scenarios

1. MULTIPOLES input data

- Population on 1 January 2005, by region, sex and 5-year age group (to 100+)
- *Status Quo* (2005) demographic rates and labour force participation rates:
  - Mortality rates by region, sex and 5-year age group (to 100+)
  - Fertility rates by region and 5-year age group (15-49)
  - Internal out-migration rates by region, sex and 5-year age group (to 100+)
  - Emigration rates by region, sex and 5-year age-group (to 100+)
  - Percentage distribution of emigrants from each origin country among the destination countries (including the Rest of the world)
  - Distribution of immigrants to each country among the destination regions
  - Annual number of immigrants from the Rest of the world (i.e. from outside the 31 European countries) arriving to each country
  - Age distribution of immigrants from the Rest of the world, by destination country.
  - Share of males among the immigrants from the Rest of the world, by destination country.
  - Activity rates by region, sex and 5-year age group (15-75+).
- Specific *No Extra-Europe Migration* data
  - Emigration rates by region, sex and 5-year age-group (to 100+)
  - Percentage distribution of emigrants from each origin country among the destination countries

2. MULTIPOLES output files with the results of the reference projections

The following files are available for each of the three reference simulations (*Status Quo*, *No Migration* and *No Extra-Europe Migration*):

- Total population by country and sex (total, males, females), 2005-2050.
- Total population by region and sex, 2005-2050.
- Total labour force (active population, composed of employed and unemployed) and labour force in four broad age groups (15-25 , 25-40, 40-65 and 65+), by country and sex (total, males, females), 2005-2050.
- Total labour force and labour force in four broad age groups (15-25 , 25-40, 40-65 and 65+) by region and sex, 205-2050.
- Population by country, sex and 5-year age group, 2005-2050.
- Population by region, sex and 5-year age group, 2005-2050.
- Labour force by country, sex and 5-year age group (15-75+) , 2005-2050.
- Labour force by region, sex and 5-year age group (15-75+), 2005-2050.
- Labour force dependency ratios ODR, EODR and LMDR for all the countries, 2005-2050.
- Labour force dependency ratios ODR, EODR and LMDR for all the regions, 2005-2050.
- Population accounts for the countries by sex (males, females, total) and projection step, showing the values of initial and final population in each 5-year projection step (2005-2010 until 2045-2050) and the values of the components of population change (births, deaths, natural increase, immigration from the 31 ESPON countries, emigration to the 31 ESPON countries ,immigration from the Rest of the world, emigration to the Rest of the world, Net migration, total population change.
- Population accounts for the regions by sex (males, females, total) and projection step, showing the values of initial and final population in each 5-year projection step (2005-

2010 until 2045-2050) and the values of the components of population change (births, deaths, natural increase, internal in-migration, internal out-migration, immigration from the 31 ESPON countries, emigration to the 31 ESPON countries ,immigration from the Rest of the world, emigration to the Rest of the world, net migration, total population change).