Demographic projections for France and French regions / departments to 2030

*Chantal Brutel, Laure Omalek**

Whatever the prevailing assumptions about forthcoming mortality, fertility and migration trends, one thing is sure, France's population is going to age: according to the central model, which involves extrapolating the trends witnessed over the past two decades, the proportion of people aged 60 or above will rise to 31.1% in 2030 versus 20.6% in 2000. This phenomenon will be more or less marked across France's regions and departments owing in part to internal migratory movements. The ageing of the population will affect most the less urbanised departments of Central and Western France and of the Massif Central region, as well as the Northeast of the country. It will be less marked along the Mediterranean coast, in the Rhône-Alpes region and in the Île-de-France region. Among France's overseas territories, only Guyana will be relatively unaffected.

Over the past thirty years, the population of mainland France has grown steadily, from 50.5 million inhabitants in 1970 to 58.7 million in 2000. According to the latest population projections of INSEE based on the 1999 census, France's population growth is most likely to slow down over the next thirty years (see *figure 1* and *box 1* for the methods used in the projections). According to the central model used for population projections, France's population will hit 64 million by 2030; even if the most favourable fertility rate model is used (2.1 children per woman), the population will scarcely exceed 66 million by then.

During any given year, the population in a given territory changes according to the number of births, deaths and the net migratory balance. The projections we're concerned with are based on assumptions about the forthcoming trends for each of these three components. These assumptions are based on the trends observed

* Chantal Brutel works for INSEE's Demographic Surveys and Studies unit and Laure Omalek works for INSEE's Territorial Studies unit.

Figure 1 – **Population projections for France between 2000 and 2050**

Projection horizon	Population on the first of January (in thousands)	Proportion of 0-19 year olds (in %)	Proportion of 20-59 year olds (in %)	Proportion aged 60 or over (in %)	Natural growth differential for the year (in thousands)	Male life expectancy at birth (in years)	Female life expectancy at birth (in years)
Main model: total fertility rate of 1.8 children per woman, trend-based mortality, net migration balance of 50,000							
2000	58,744	25.6	53.8	20.6	209.5	75.2	82.9
2010	61,061	23.8	53.1	23.1	145.9	77.3	84.9
2020	62,734	22.5	50.2	27.3	86.6	79.2	86.7
2030	63,927	21.3	47.6	31.1	45.4	81.0	88.3
2040	64,468	20.6	45.9	33.5	- 56.2	82.7	89.7
2050	64,032	20.1	44.8	35.1	///	84.3	91.0
High mortality model: total fertility rate of 1.8 children per woman, higher mortality, net migration balance of 50,000							
2000	58 744	25.6	53.8	20.6	209.4	75.2	82.9
2010	61 037	23.8	53.1	23.1	139.4	77.2	84.6
2020	62 595	22.6	50.3	27.2	68.3	78.8	85.9
2030	63 537	21.4	47.8	30.8	10.3	80.3	86.8
2040	63 630	20.8	46.4	32.8	- 110.5	81.5	87.4
2050	62 624	20.5	45.7	33.7	///	82.6	87.7
Low mortality model: total fertility rate of 1.8 children per woman, lower mortality, net migration balance of 50,000							
2000	58 744	25.6	53.8	20.6	214.0	75.2	82.9
2010	61 161	23.7	53.0	23.2	162.1	77.5	85.4
2020	63 039	22.4	49.9	27.7	109.2	79.7	87.7
2030	64 466	21.1	47.2	31.7	73.0	81.9	89.9
2040	65 408	20.3	45.3	34.5	-1.5	84.0	92.0
2050	65 520	19.7	43.8	36.5	///	86.0	94.0
High total fertility rate model: total fertility rate of 2.1 children per woman, trend-based mortality, net migration balance of 50,000							
2000	58 744	25,6	53,8	20,6	209,5	75,2	82,9
2010	61 383	24.2	52.8	23.0	221.4	77.3	84.9
2020	64 077	24.1	49.1	26.7	198.8	79.2	86.7
2030	66 413	23.8	46.3	30.0	169.4	81.0	88.3
2040	68 421	23.2	45.2	31.6	122.5	82.7	89.7
2050	69 968	23.4	44.6	32.1	///	84.3	91.0
Low total fertility rate model: total fertility rate of 1.5 children per woman, trend-based mortality, net migration balance of 50,000							
2000	58 744	25.6	53.8	20.6	175.3	75.2	82.9
2010	60 475	23.0	53.6	23.3	58.2	77.3	84.9
2020	61 090	20.4	51.5	28.0	-26.2	79.2	86.7
2030	61 107	18.6	48.8	32.6	-85.4	81.0	88.3
2040	60 173	17.6	46.5	35.9	-222.8	82.7	89.7
2050	57 979	16.6	44.7	38.7	///	84.3	91.0
High net migration balance model: total fertility rate of 1.8 children per woman, trend-based mortality, net migration balance of 100,000							
2000	58,744	25.6	53.8	20.6	209.5	75.2	82.9
2010	61,457	23.8	53.2	23.0	152.2	77.3	84.9
2020	63,717	22.6	50.4	27.0	97.8	79.2	86.7
2030	65,548	21.4	47.9	30.6	62.2	81.0	88.3
2040	66,777	20.7	46.3	33.0	-35.3	82.7	89.7
2050	67,059	20.3	45.2	34.5	///	84.3	91.0

Scope: Mainland France.
Source : INSEE, demographic projections (central model).

Box 1

Methods and models used for the national and regional projections

Demographic projections are generated by INSEE upon each population census.

• **Methods**

The national projections are based on the components method and as such must be distinguished from forecasts. Based on the gender and age distribution of the population on the 1st of January 2000 (estimated on the basis of the 1999 census), the number of survivors on the 1st of January 2001 is calculated by factoring in the projected risk of dying of each generation. The number of births during the year is then calculated by factoring in the projected fertility rates per age group of women of childbearing age as well as the survival rates of the new-born children (see *box 2*). As a second step, the number of survivors in each age group is incremented with the projected net migratory balance per gender and age group. The process is repeated year after year until the 1st of January of the projection horizon.

Regional and departmental projections (including those for the French overseas territories) were performed based on the Omphale model developed by INSEE. As with the national projections, the principle involves determining the gender and age distribution of the population in a given year based on the figures for the previous year, by allowing for ageing, mortality and migration and factoring in new births. In a given area (region or department), the number of deaths in a given year is obtained by applying the mortality rates for each gender and age to the relevant population group. The net migratory balance for the year is obtained by applying the net migration balance for each gender and age to the relevant population group in the area, after taking into account any deaths that may occur in that year. This balance is negative where the number of emigrants is greater than the number of immigrants. Finally, the number of births is obtained by applying the age-related fertility rates to all women aged 15 to 50 who are likely to have children in the area during the year under consideration.

The factors used are first calculated based on census and public registry data, and thereafter these factors are projected year on year in accordance with the retained models. An adjustment is performed for each scenario so that the sum of all the regional populations excluding the French overseas territories is equal to the national population.

• **Models**

Models retained for national projections

Mortality models

Over the past thirty years there has been a clear and unmistakable trend for mortality rates to drop. Thus a projected trend-based mortality model was adopted. This consists in extrapolating over the next fifty years the rate of decline of the risk of dying for each gender and at each age witnessed over the past thirty years. According to this model, life expectancy at birth will be 81 years for men and 88.3 years for women in 2030. Given that the trend model might appear too optimistic, a higher mortality model was developed: this consists of slowing down the trend's rate of decline of mortality for each age and more so for women than for men. The gap between male and female life expectancies at birth in 2030 is thus reduced to 6.5 years compared with 7.3 years had we stuck to the established trend. A lower mortality model, the most optimistic of the three, was also developed; this involves extending to the 75-plus age group the rate of decline of mortality witnessed for the 65-to-74 age group over the past thirty years. According to this model, life expectancy at birth will be 81.9 years for men and 89.9 years for women in 2030. Depending on which model one bases one's calculations upon, the average yearly increase in life expectancy between 2000 and 2030 will amount to one and a half months in the case of the most pessimistic model, two months for the central model and three months for the most optimistic model.

Fertility models

The irregular fluctuation of fertility rates over time makes it harder to project this element. Over the past twenty years, total fertility rates have averaged out at 1.8 children per woman. We have therefore retained this rate as the central fertility model. We also use a low fertility model involving a rate of 1.5 children per woman, which is the prevailing rate in Japan and the European Union as a whole nowadays. And finally, for our high fertility model, we use a higher rate of 2.1 children per woman, which is the rate that is needed to replenish the population in the long term. It should be noted that among the most recent generations to have come to the end of their childbearing years, none has produced less than two children per woman on average. For each of the three fertility models, it is assumed that the average age of maternity will increase to 30 years then stabilise at that level from 2005 onwards.

Migration models

The net migratory balance, i.e. the difference between the inflow to and outflow from France, is the hardest parameter to forecast, particularly given the absence of any statistics on the outflow. The central model assumes a net migratory balance of 50,000 per year, i.e. the estimated average level over the 1990-1999 period; this is broken down by gender and age to work out the average age and gender distribution of net migratory flows over the last inter-census period; a second model assumes a net migratory balance of 100,000 per annum from 2005 onwards. The 50,000 additional immigrants are broken down by gender and age according to the distribution witnessed among the inflow into mainland France between 1990 and 1999.

Models retained for regional and departmental projections

The projections used are based on the so-called "central" model, itself founded on an extrapolation of past trends for each component. These are not to be confused with forecasts:

– it is assumed that the **fertility rates** of each region and department remain at their 1999 level, which means that each area's total fertility rate is held at its current level.

– it is assumed that **Mortality** in each area will decline at an identical rate as in the country as a whole (trend-based model).

– The standard migration factors used are the average yearly net flows calculated between the censuses of 1982 and 1999; they are maintained at that level throughout the projection period. In the case of the French overseas territories, the standard migration flows used are based on the figures for 1990-1999.

The possible variants in terms of fertility and mortality have, for each region, an impact close to that projected for France as a whole. They do not alter the regional balances relative to the central model and are thus not featured in this article.

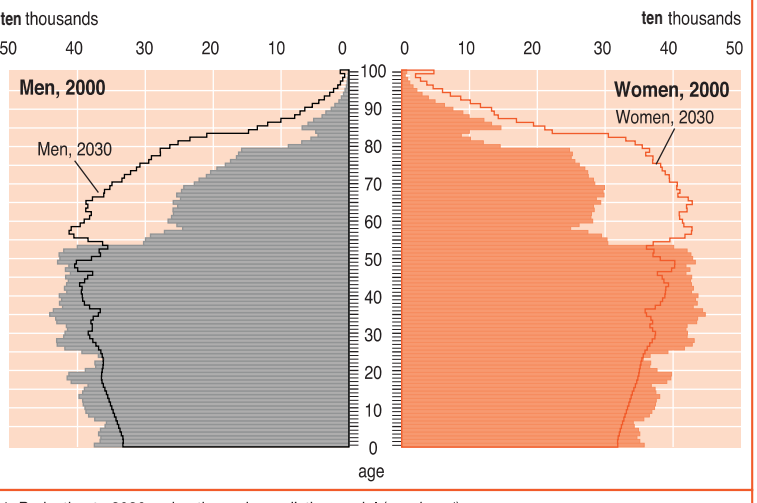
On the other hand, the different models chosen for migratory flows do have a significant impact on the distribution of the population across the country. A possible variant on the central model consists in taking the 1990-1999 inter-census period rather than 1982-1999 as the basis for calculating the standard net migratory flows. This model, which is based on a more recent period, tends to limit the ageing effect relative to the main model in departments hosting major cities and to accelerate it in neighbouring departments, with the exception of certain atypical ones such as the departments of Creuse and Lozère in particular. However, in spite of these differences, the change in the regional balances remains relatively close to the changes projected using the main or central model (see *figure 3*).

in the recent past (see *box 1*). Fertility rates and net migratory balance are harder to extrapolate than mortality. Three models have been retained for mortality and for fertility and two models have been retained for migration to France. It is the uncertainty over fertility rates that results in the greatest discrepancy in projections of the total population. A mere 0.3 point rise in the fertility rate (from 1.8 to 2.1) would result in 100,000 additional births per year, i.e. 2.5 million additional inhabitants by 2030 (4% of the total population). On the other hand, a doubling of the net migratory balance from 50,000 to 100,000 would only result in population growth of 1.6 million over thirty years. This 1.6 million increase comprises a direct effect of 1.5 million inhabitants (50,000 additional immigrants per annum over 30 years) and an induced effect of 100,000 inhabitants (the difference between the births and deaths that they would generate). The regularity of mortality trends makes it simpler to project the evolution of this component, and depending on the model we choose to retain, the population we end up with in 2030 varies between 63.5 and 64.5 million inhabitants, a differential of 1 million. The more the projection horizon is moved forward in time, the greater the margin of error or uncertainty. However, given the current gender and age distribution of the population and the small degree of uncertainty as to mortality rates, 30 year projections are relatively reliable (see *box 1*).

The inevitable ageing of France's population

Between 1970 and 2000, the number of people aged 60 and above rose from 9.1 to 12.1 million, an increase of 3 million people. During the next thirty years, the number of people aged 60 and above is likely to increase

Figure 2 – **Age distribution pyramids in 2000 and 2030**[1]



1. Projection to 2030, using the main predictive model (see *box 1*).
Scope : mainland France.
Source : Demographic projections, Insee.

by over 7 million, amounting to a rise of between 60 and 68% depending almost solely on the mortality model we retain. The degree of uncertainty is low, because all the people who will reach the age of 60 by 2030 have already been born. Thus, the ageing of the large baby boom generations, born in the years between 1945 and 1965, is going to weigh even more than mortality as a factor in the ageing of the population. Even if one assumes that mortality rates will remain at the same level as in 2000 over the entire period covered by the projection (which is utterly unrealistic in view of past experience), the number of people aged 60 or above would increase by 43% between 2000 and 2030. However, according to the models retained for mortality rates, the number of people aged 60 or above would rise to between 19.5 and 20.4 million by 2030. This means that one person in three would be aged 60 or above, compared with one in five in 2000.

The growth in the number of older people is even more spectacular the higher one looks in the age pyramid (see *figure 2*): between 2000 and 2030, the number of people aged 75 or above will increase from 4.2 to 8.3 million and the number of people aged 85 or above will increase from 1.2 to 2.4 million. The extrapolation of these projections to 2050 suggests that the number of people aged 60 or above will have doubled over 2000, the number of those aged 75 or above will treble and the number of those aged 85 or above will increase five-fold.

The growth in the number of seniors between 2000 and 2030 is unlikely to be linear. Between 2000 and 2005, the number of people aged 60 or above will in-

Box 2

Definitions

Population

The total population comprises all people (both French and foreign) living in the territory.

Generation

All the people born in the same year.

Natural growth differential

The difference between the number of births and the number of deaths.

Fertility rate (for a given age)

The fertility rate at a given age (between 15 and 50 years of age), is the probability that surviving women of that age will give birth to a child during that year.

Total fertility rate

The total fertility rate is the average number of children that would be born live to a woman during her lifetime if she were to pass through her childbearing years conforming to the age-specific fertility rates of a given year.
Note: *it should be borne in mind that the rates used in the calculations are those that were witnessed during a given year for the entire female population (consisting of many generations) and thus do not represent the fertility rate of a true generation of women. It is likely that no real generation would have the fertility rates observed at any given age. The total fertility rate thus basically summarises the demographic position in a given year.*

Completed fertility rate

The completed fertility rate is the average number of children that would be born live to a generation of women throughout their childbearing years if they were all to survive to the end of this period. It is the sum of the fertility rates in any given age of a generation of women.

Life expectancy

The life expectancy at birth, or average life-span, is the average age at death of a fictive generation subject to the mortality conditions of the year under consideration.

Mortality rate

The mortality rate at a given age measures the probability, for people who have survived to that age, of dying prior to reaching the next age.

Net migratory balance or migratory flows

The net migratory balance is the difference between the number of people who entered the territory and the number of people who left it during a given year. This concept is not related to nationality.

The net migratory balance of mainland France relates to the flows of immigrants between the country and the rest of the world: French overseas territories and dependencies and foreign countries.

The net migratory balance of a region (or of a department) reflects the flows between that region and the rest of the world: other French regions (or departments) and foreign countries.

Net migration rates

Net migration rates are obtained by dividing the net migratory balances (inflows –outflows) for a given territory during the year by the total population of that territory. They are broken down by gender and by age and are negative in the event where the number of emigrants is greater than the number of immigrants. The rates used for the projections are the average rates estimated between two censuses. They are smoothed from one age to the next so as to obtain a rational profile per age.

crease by around 100,000 per annum. Each year, around 530,000 people, i.e. the remnants of the relatively small generations born during the second world war who did not die prior to reaching the age of 60, will reach that age; meanwhile, 440,000 people aged 60 or above will pass away. Over the next twenty years, from 2005 to 2025, the increase in the number of people aged 60 or above will accelerate to 305,000 per annum: the relatively large baby boom generations born between 1945 and 1965 who did not die prior to reaching the age of 60 (around 790,000 people per year) will enter this age bracket. After increasing by 500,000 over five years (2000 to 2005), the number of people aged 60 or above will increase by 6.1 million over twenty years. Finally, between 2025 and 2030, the increase in the number of people in this age group will slow down to a rate of 250,000 per annum. This is because the first relatively large post-war generations that will have contributed to the substantial swelling in the number of people in the over 60s age group will begin to reach ages of high mortality.

Although the actual number of people that will be aged 60 or above between now and 2030

Figure 3 - **Regional population and population change between 2000 and 2030[1]**

Regions	Central model[2]			Central model[2]			Alternative model[3]	
	Population on the 1st of January (in thousands)		Change (in %)	Proportion aged 60 or above (in %)		Impact of migration[4] (in %)	Proportion aged 60 or above (in %)	Impact of migration[4] (in %)
	2000	2030		2000	2030		2030	
Alsace	1,743	1,957	12	18.4	29.7	- 2.3	29.1	- 2.9
Aquitaine	2,925	3,309	13	24.1	35.2	0.2	35.9	0.8
Auvergne	1,308	1,209	- 8	24.8	38.1	2.3	38.0	2.2
Lower Normandy	1,425	1,449	2	22.2	35.1	4.1	35.5	4.5
Burgundy	1,611	1,561	- 3	24.0	37.3	3.9	37.6	4.2
Brittany	2,919	3,163	8	23.1	35.0	3.5	34.5	3.0
Centre	2,450	2,667	9	22.6	34.9	2.0	35.4	2.4
Champagne-Ardenne	1,341	1,237	-8	20.3	33.7	2.6	33.3	2.2
Corsica	261	287	10	24.1	34.7	- 1.2	36.0	0.1
Franche-Comté	1,118	1,088	- 3	20.6	33.7	2.0	33.2	1.5
Upper-Normandy	1,785	1,870	5	18.9	31.3	1.3	31.3	1.4
Île-de-France	10,992	12,096	10	15.9	23.2	- 7.9	23.2	- 7.9
Languedoc-Roussillon	2,321	3,114	34	24.3	33.2	0.0	33.7	0.5
Limousin	710	655	-8	28.6	40.0	2.1	39.2	1.3
Lorraine	2,307	2,085	- 10	20.3	33.5	1.6	32.7	0.9
Midi-Pyrénées	2,569	2,986	16	24.2	33.6	- 1.7	33.8	- 1.5
Nord - Pas-de-Calais	3,994	3,866	- 3	18.1	28.4	1.4	27.6	0.6
The Loire valley	3,238	3,584	11	21.1	33.8	2.6	33.0	1.8
Picardy	1,862	1,968	6	18.5	30.5	1.0	31.0	1.5
Poitou-Charentes	1,645	1,689	3	25.1	38.5	3.5	37.7	2.8
Provence - Alpes - Côte d'Azur	4,540	5,501	21	23.4	32.6	- 0.6	32.9	- 0.4
Rhône-Alpes	5,680	6,586	16	19.4	29.4	- 2.1	29.8	- 1.7
Mainland France	58,744	63,927	9	20.6	31.1	- 0.7	31.1	- 0.7

1. The data shown, including that for the year 2000, is the result of projections.
2. The central model factors in the average migratory flows between the 1982 and 1999 censuses (see *box 1*).
3. The alternative model factors in average migratory flows between the 1990 and 1999 censuses (see *box 1*).
4. The impact of migration is calculated by subtracting the variation that would be obtained were there no migration from the actually anticipated variation between 2000 and 2030. For instance, in the Alsace region, the proportion of inhabitants aged 50 or above is expected to increase from 18.4% to 29.7% between 2000 and 2030, a rise of 11.3 percentage points. In the absence of migration, the projected increase would be 13.6 percentage points. The impact of migration is thus – 2.3 percentage points (11.3 – 13.6).

Source : Omphale 2000 model, INSEE.

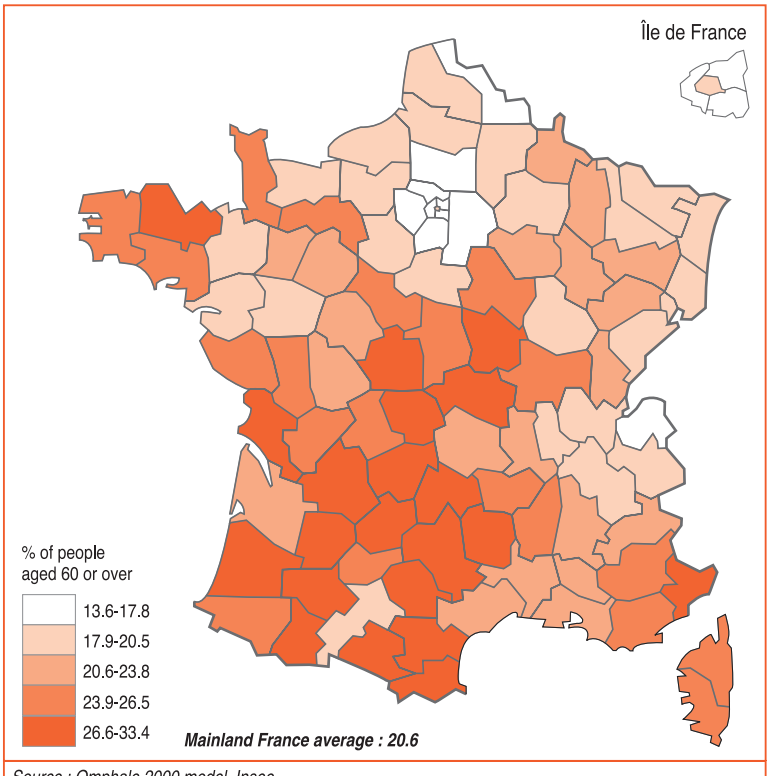
does not depend on any assumptions as to fertility rates and very little on migration considerations, the size of this age group as a proportion of the total population does. Whatever model one retains, the proportion of people aged 60 or above is going to increase significantly. If we base our calculations on a total fertility rate of 1.8 children per woman over the period, the proportion of people aged 60 or over will increase from 20.6% of the total population in 2000 to 31.2% in 2030. If we assume fertility rates of 2.1 or 1.5 children per woman, the proportion of over-60s will be 30% and 32.5% respectively. Even a hypothetical doubling of the net migratory balance involving an additional 50,000 immigrants per annum from 2005 onwards will only have a marginal effect on these figures.

The rate at which the population ages will differ from one region to another

The ageing of the French population as a whole over the next thirty years will affect all the regions of France. Throughout the country, the relatively large generations of people born between 1945 and 1965 will gradually swell the ranks of the over-60s age group from 2005 onwards.

However, the effects of past and future internal migration within France will substantially affect the impact of this phenomenon from one region to the next. Past migration, characterised in particular by the drift from the land to the cities, explains to a large extent current differences in the age distribution of the population in different regions. Thus in 2000, whereas one in five people was aged 60 or above nation-wide, the proportion varied from 16% in the Île-de-France region to 29% in the Limousin region (see *figure 3*). If we look at variance on a department by department basis, the rate reaches a peak of 33% in the Creuse department. The old industrial regions of Northern and Eastern France, from Normandy to Franche-Comté, as well as the Rhône-Alpes region, are younger overall than the national average (see *figure 4*). The opposite is true of Brittany and the South-west quarter of the country, which have witnessed a mass exodus of young adults since the post-war years, some of whom tend to return home upon retirement. In these regions, departments hosting regional capitals tend to be younger on average than neighbouring ones: take for instance the department of Haute-Garonne, where the bustling Toulouse conurbation exerts a strong pull on neighbouring departments.

Figure 4 – **Proportion of people aged 60 or over on the 1st of January 2002**



Source : Omphale 2000 model, Insee.

By 2030, should the migratory trends witnessed over the past two decades continue at a similar pace and should recent fertility and mortality trends continue as is, the proportion of people aged 60 or above should vary from 23% in the Île-de-France region to 40% in the Limousin region (see *figure 3*). The department of Cantal will have the highest proportion of people in that age group: close to one in every two people living there (47%) will be aged 60 or above.

The contrast between the extremes will be more marked than nowadays. The proportion of Île-de-France residents aged 60 or above, even

though it is slated to increase by 7 percentage points, will be particularly low relative to that of the other regions. It will be 5 percentage points lower than the corresponding rate anticipated in the Nord - Pas-de-Calais region and 8 percentage points lower than the national average (31%). In 2030, the Île-de-France region will be the only one where the average age of the inhabitants is lower than 40 years.

Conversely, the relatively undeveloped departments of Central France, in the Massif Central region and the Midi-Pyrénées region, already among the oldest in the country, will be among those that are set to age the most (see *figure 5*). Thus in the departments of Lot, Aveyron, Cantal, Corrèze, Creuse, Dordogne, Gers, Hautes-Pyrénées, Nièvre, Indre and Allier, more than 4 in 10 inhabitants will be aged 60 or above come 2030 (the figures for the various departments range from 42% to 47%), and the average age of the population will often exceed 50 years. The situation will be nearly as pronounced in a number of departments of Western France such as the departments of Landes, Charentes, Vendée, Deux-Sèvres and Côtes-d'Armor.

So on the one hand the population of the Île-de-France region is expected to get younger and younger relative to the national average, while of the other, the population of the Central and Western regions (Limousin, Auvergne, Poitou-Charentes, Burgundy, Brittany), whose average ages are already high, will become even older, with the exception of a few departments hosting university cities such as Limoges or Poitiers (see *figure 6*). In the Midi-Pyrénées region, which encompasses many ageing departments, the average age will increase at a slower pace than the national average, due to the strong prevailing attraction of Toulouse for young adults.

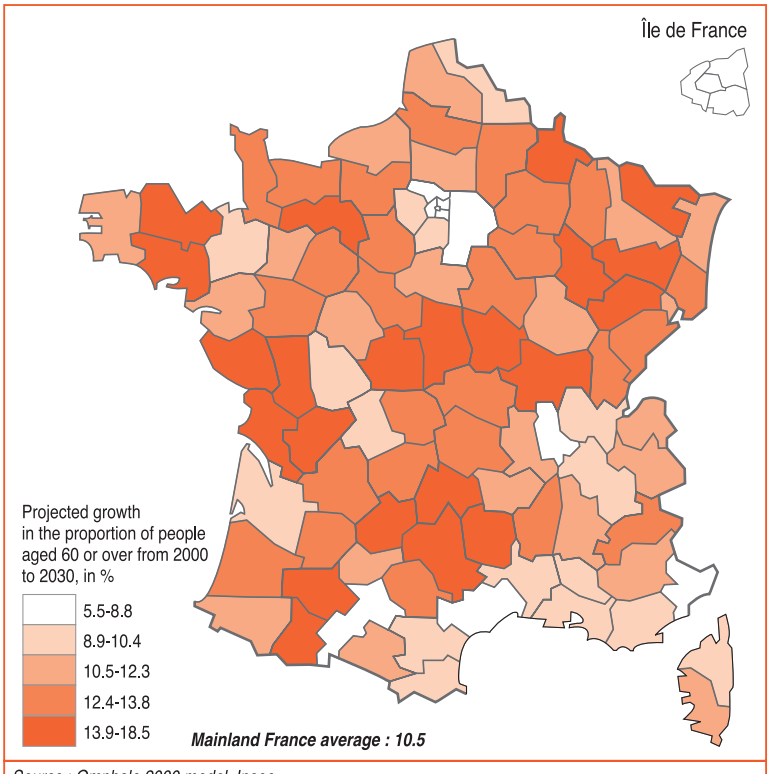
Furthermore, the average ages of the Northern and North Eastern fringes of the country, whose population is currently younger than average, and the Southern fringe, which is older, are expected to converge. In the North East in particular, i.e. the Lorraine, Champagne-Ardenne and Franche-Comté regions, the proportion of people aged 60 or above is expected to increase by 13 percentage points to reach a third of the population by 2030, comparable to the anticipated proportion in the Languedoc-Roussillon, Midi-Pyrénées and Provence - Alpes - Côte d'Azur regions, where the proportion of people aged 60 and above is expected to increase by only 9 percentage points.

Internal migration will upset the natural process of replenishment of the generations

These diverging trends from one region to the next can be explained by looking at each region's current age distribution, fertility and mortality rates, and by the phenomenon of internal migration.

Were it not for migration, the age differences between the various regions would have a tendency to decrease, by virtue

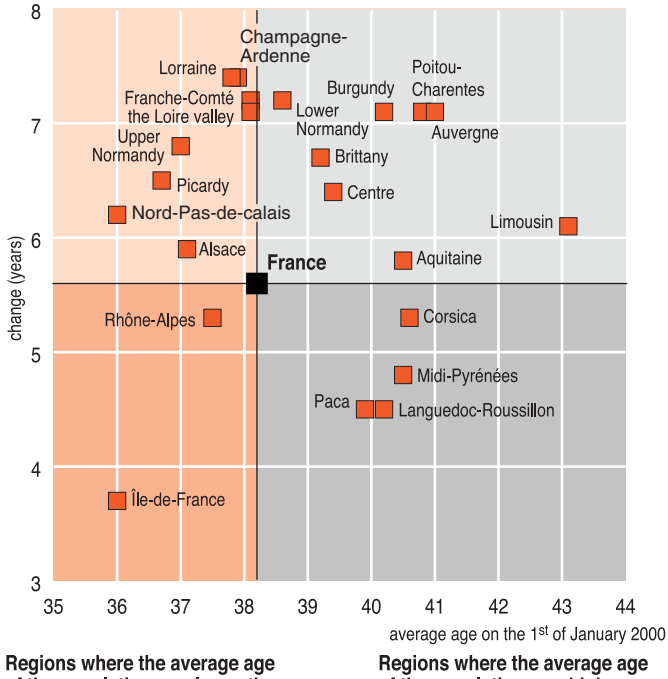
Figure 5 – **Projected growth in the proportion of people aged 60 or over between 2000 and 2030**



Source : Omphale 2000 model, Insee.

of the current age distribution of the population. Were the many people in the active age group in the Île-de-France region to stay put as they get older, they would eventually cause an ageing of the population in that region. In the South and West, on the other hand, the generations that are currently over the age of retirement and are over-represented would gradually die off and be replaced by generations that are relatively less numerous than elsewhere, resulting in a relative reduction in the overall age of the population in these regions. Let's assume for a moment that fertility and mortality rates in these regions are identical to the national average; the proportion of people aged 60 or above would increase by 6 to 8 percentage points in the departments that are currently the oldest (4 points only in the department of Creuse), 12 points in the department of Rhône-Alpes and 15 points in the Île-de-France region.

Figure 6 – **Average age per region on the 1st of January 2000 and projected change between 2000 and 2030**



This diagram should be read as follows : the average age of the population in the Ile-de-France region was lower than the national average in 2000, being 36 years, compared to 38.2 years for France as a whole. Between 2000 and 2030, the region will age at a lower rate than the national average: the average age of the region's population will increase by 3.7 years, compared with an increase of 5.6 years nation-wide.
Source : Omphale model, Insee.

Come 2030, differences in fertility rates and life expectancy from one region to the next will also have an impact, albeit a weaker one. In the North of France and in Picardy, fertility rates are higher than the national average and life expectancy is lower than the national average. Should these two trends be maintained, their combined effect will slow down the ageing of the local population. Conversely, in the Southwest, fertility rates are markedly lower than the threshold level required for replenishment of the population and life expectancy is higher, both of which would tend to raise the average age of the local population. If one discounts the effects of migration, the increase in the proportion of people aged 60 or above by 2030 owing to such disparities would amount to 2 or 3 percentage points in some departments such as Haute-Vienne, Vienne and Cantal, whereas there would be an actual decrease of 1 or 2 percentage points in the Nord - Pas-de-Calais region and in the outer suburbs of greater Paris.

The impact of migration

At a regional and departmental level, inter-regional migration generally has a far greater impact than fertility and mortality differentials between regions. It has a direct bearing on the age distribution of certain regions, as well as an induced, indirect effect, for it affects the number of births in the regions involved. This influence often counteracts the natural replenishment of the population, which helps explain why the projection appears to accentuate the contrasts between the youngest and oldest regions.

Of all the regions in France, the Nord - Pas-de-Calais, Lorraine, Champagne-Ardenne and Île-de-France regions have experienced the greatest negative migratory balances relative to their overall population over the past twenty years.

The Île-de-France region is in fact a case apart. Migration flows are characterised by an influx of students and young members of the active population and by a vast exodus of older people, particularly upon retirement (see *figure* 7). The continuation of these flows will tend to limit the ageing of the region's population.

The Alsace and Rhône-Alpes regions feature a migratory balance that is positive overall, involving a substantial influx of young adults and to a lesser extent older age groups, being similar in that respect to the situation in the Île-de-France region. These movements, just like in the Île-de-France region, will contribute to slowing down the ageing of the local population.

Conversely, the entire North-Eastern sector of the country, from Normandy to Franche-Comté (with the exception of Alsace), feature a negative migratory balance of young people. Assuming that these migratory flows persist, this will result in the accelerated ageing of these regions, which is already inevitable given their intrinsic age distribution.

As for the South, particularly the Mediterranean coast, which has been the most attractive destination for migratory flows over the past two decades, the region has seen a net migratory influx involving literally all age groups. The continuation of this balanced influx will not hinder the relative rejuvenation of these regions compared to the national average, a trend that is also inevitable given the current age distribution of the local population.

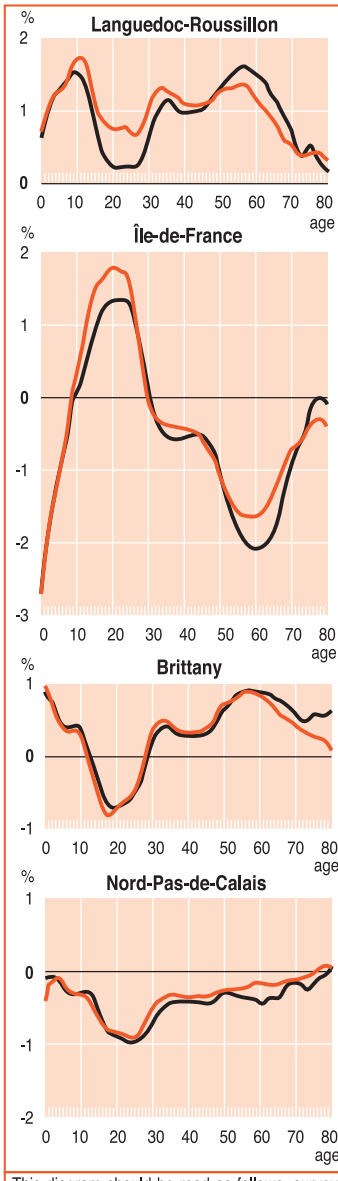
The Centre-West regions (Brittany, Poitou-Charentes, Centre, Limousin and the Loire valley) are attracting young graduates and a far greater influx of retired people, particularly in the case of Brittany and the Poitou-Charentes region. But many more young people aged in their late teens and early 20s leave these regions than come to live there. The continuation of these trends will result in an accelerated ageing of the populations of these regions, which are already relatively old (with the exception of the Loire Valley) compared to the national average.

This model may appear to be extreme in some cases but it is not inevitable. It is a demographic projection based on an extrapolation of current trends. Even though to some extent the ageing of the population is already written into the current age distribution, one may foresee that the high proportion of older people that is anticipated in certain departments may spur the creation of jobs likely to attract young members of the active population, thus limiting the ageing of the departments involved.

The situation in France's overseas territories varies widely

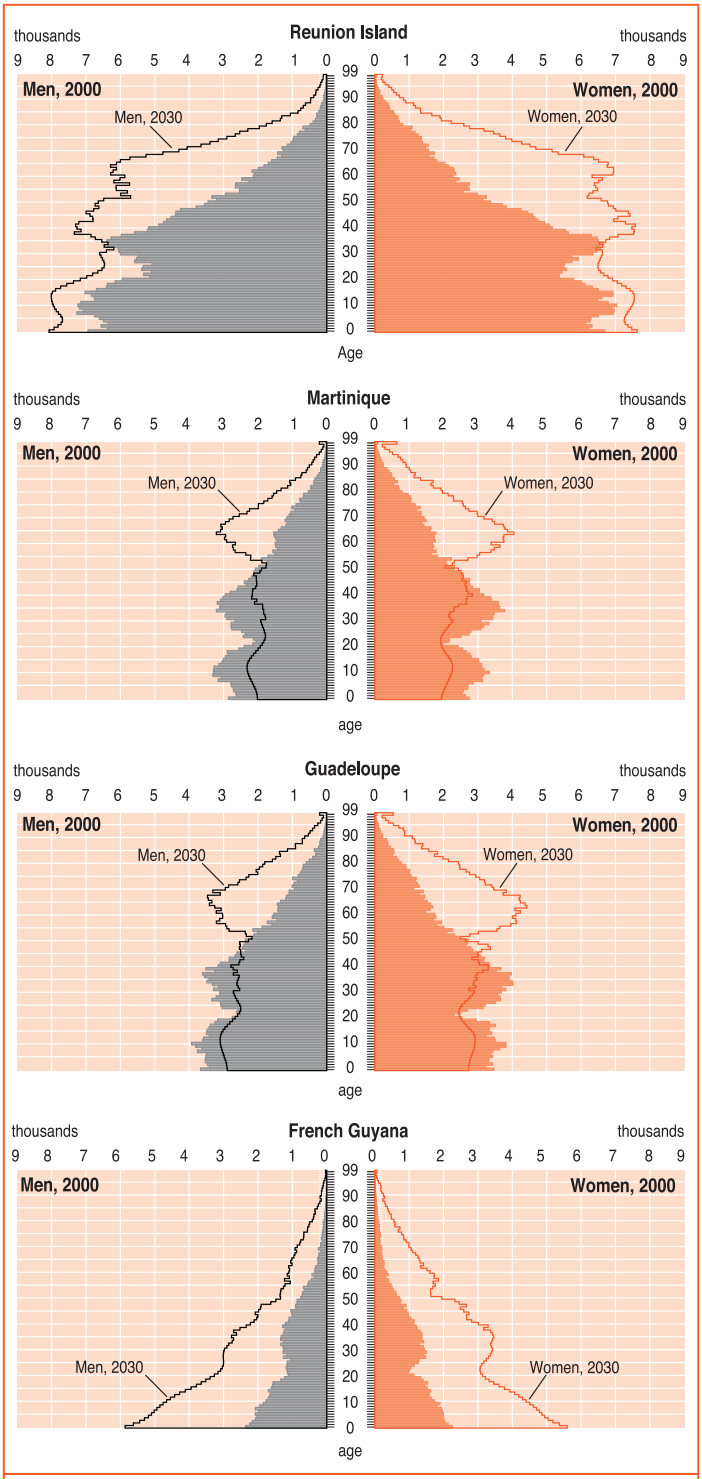
In France's overseas territories, the impact of migration on the local population is far greater than in the case of mainland

***Figure 7* – Migration factors per age in four regions**



This diagram should be read as follows: surveys of age-specific migration profiles show that the country's regions broadly fall into 4 categories (see *box 2* for a definition of migration factors). The Île-de-France region occupies a category of its own, with a large influx of students and young members of the active population, combined with a greater net outflow of people in older age groups, particularly around the 60 year mark.
The opposite is true of Brittany where migration factors are negative for young adults, and positive for older people, particularly around retirement age.
In the Languedoc-Roussillon region, migration factors are positive for all ages (though a little less so for young adults), whereas they are negative across the board in Lorraine, and most dramatically so for young adults.
Source : Omphale 2000 model, Insee.

Figure 8 – **Age distribution pyramids in France's overseas territories in 2000 and 2030[1]**



1. The data shown, including that for the year 2000, is the result of projections using the main central model (see *box 1*).
Source : Demographic projections, Insee.

France as a whole. An extrapolation of the migratory trends witnessed over the last inter-census period (1990-1999) reveals contrasting situations. The populations of Martinique and Guadeloupe are set to age even faster than that of mainland France (see *figure 8*). Although their age distribution was quite similar in 2000, these two overseas departments will see the proportion of people aged 60 or over increase from 15% in 2000 to around 33% in 2030. It is estimated that around 60% of this ageing trend is written into the current age distribution of the islands, with the remaining 40% being due to the retained models as to migration. Indeed, were we to assume zero net migration, by 2030 only 26.3% of Guadeloupe's population and 29.4% of Martinique's population would be aged 60 or above. On Reunion Island, the ageing of the population will be less marked. The proportion of people aged 60 or over will increase from 10% in 2000 to over 21% in 2030, i.e. the level attained by mainland France in 2000. The population of this department is still relatively young (30% of its population is under the age of 15) and it has witnessed an influx of young couples with children over the past ten years.

The population of French Guyana will remain very young and will hardly be affected by the ageing phenomenon. In 2000, there were some 57,500 children under 15 years of age in this department out of a total population of 161,000 inhabitants. This is due to a high fertility rate in 2000, amounting to 3.6 children per woman, and to an influx of men and women aged between 20 and 40, in some cases with children. How-

ever, the proportion of people aged 60 or above in Guyana will increase from 5.7% in 2000 to 10.9% in 2030 (see *figure 8*). ■

For further information

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