

## European Population Profiles

Earlier in the year NCB carried out a detailed study of the importance of changes in demographics for the Irish economy. Recently we have looked at the population profile of the other EU countries, using UN population data and projections. As may be seen from Table 1 the birth rate in Ireland is the highest in the EU at more than 15 per 1000 population compared to an EU average of just over 10 in the years immediately ahead to 2010. In 11 of the 25 countries the birth rate is below 10 per 1000. This is mainly because fertility rates are low and the number of people in the 20-34 age groups is set to fall in the next few years in all but eight of the 25 countries. Table 2 shows death rates per 1000 population. The average death rate in the 2005-10 period is expected to be over 10 per 1000, equalling births and giving no natural increase in the EU population, as may be seen in Table 3. In Ireland the death rate is the lowest in the EU at 7.3, equalled only by Cyprus. This is because the population in Ireland is concentrated in the younger age groups. The combination of a high birth rate and low death rate mean that the natural increase in the population in Ireland in the next few years is likely to be the highest in the EU at over 8 per 1000, as may be seen from Table 3. This is very much faster than the next country, which is Cyprus at 4.9 per 1000. The overall population in Ireland is expected to continue to grow in the next fifteen years but by then populations in 15 of the 25 countries are expected to be in decline. By 2020 only Ireland, Cyprus and Luxembourg are expected to be showing any substantive increase in population.

The economic effects of population change are closely related to changes in the age structure of the population more than to the overall total change in numbers. As people's economic behaviour and needs vary at different stages of life, changes in a country's age structure can have significant effects on its economic performance. In countries where the proportion of children is high a considerable proportion of resources is devoted to their care. They are not producing, though they may be "investing" in human capital through education for the future. But if a large proportion of the population is of working age the output of this group can produce

**Table 1 - Birth Rate per 1,000 population**

	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020
<b>Ireland</b>	<b>14.2</b>	<b>15.3</b>	<b>15.4</b>	<b>13.9</b>	<b>12.2</b>
Cyprus	14.0	12.1	12.2	12.1	12.0
Luxembourg	13.2	12.6	12.0	11.6	11.5
Denmark	12.6	11.9	11.0	10.6	10.9
France	12.5	12.5	12.0	11.4	11.1
Netherlands	12.4	12.1	10.8	10.2	10.3
United Kingdom	12.3	11.4	10.9	11.0	11.6
Malta	12.2	10.1	10.4	10.6	10.7
Finland	11.5	10.7	10.4	10.6	10.9
Belgium	11.2	10.9	10.3	10.1	10.1
Portugal	11.2	10.9	10.3	9.7	9.3
Slovakia	10.8	9.5	9.4	9.2	8.9
Lithuania	10.6	9.0	9.1	9.5	9.6
Poland	10.6	9.5	9.7	9.6	9.3
Sweden	10.3	10.6	10.7	11.0	11.5
Austria	10.1	9.4	8.8	8.7	8.9
Hungary	9.9	9.5	9.2	8.8	8.7
Greece	9.7	9.3	8.9	8.6	8.3
Germany	9.5	8.5	8.1	8.4	8.9
Spain	9.5	10.4	10.6	9.9	8.8
Italy	9.2	9.2	8.9	8.0	7.5
Estonia	9.1	9.7	10.5	10.9	10.5
Slovenia	9.1	8.8	8.6	8.3	8.0
Czech Republic	8.8	8.9	8.9	8.7	8.4
Latvia	8.0	8.8	9.3	9.6	9.3
<b>EU-10</b>	<b>10.3</b>	<b>9.6</b>	<b>9.7</b>	<b>9.7</b>	<b>9.5</b>
<b>EU-15</b>	<b>11.3</b>	<b>11.0</b>	<b>10.6</b>	<b>10.2</b>	<b>10.1</b>
<b>EU-25</b>	<b>10.9</b>	<b>10.5</b>	<b>10.3</b>	<b>10.0</b>	<b>9.9</b>

*Low fertility and declining numbers of young people*

**Table 2 - Death Rate per 1,000 population**

	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020
Estonia	13.9	13.7	13.6	13.6	13.6
Latvia	13.6	13.4	13.6	13.8	14.1
Hungary	13.8	13.0	12.9	13.1	13.3
Lithuania	11.7	11.8	12.2	12.6	12.9
Czech Republic	11.0	10.8	11.1	11.6	12.1
Portugal	10.8	10.5	10.9	11.3	11.6
Germany	10.6	10.3	10.7	11.3	11.8
Denmark	11.5	10.8	10.6	10.6	10.8
Italy	9.9	10.0	10.6	11.3	12.0
Greece	9.3	9.9	10.5	11.2	11.7
Slovenia	9.7	9.8	10.4	11.1	11.7
United Kingdom	10.8	10.3	10.2	10.2	10.2
Belgium	9.9	10.0	10.2	10.5	10.8
Sweden	10.6	10.4	10.1	10.0	9.9
Poland	9.9	9.7	10.1	10.5	11.0
Austria	10.0	9.6	9.8	10.1	10.5
Slovakia	9.8	9.7	9.8	10.2	10.6
Finland	9.6	9.5	9.8	10.1	10.5
France	9.5	9.4	9.6	9.8	10.1
Spain	8.9	8.8	9.1	9.6	9.9
Netherlands	8.8	9.0	9.1	9.4	9.8
Malta	7.8	7.9	8.4	9.0	9.6
Luxembourg	8.2	8.2	8.2	8.1	8.1
<b>Ireland</b>	<b>8.6</b>	<b>7.6</b>	<b>7.3</b>	<b>7.2</b>	<b>7.3</b>
Cyprus	7.1	7.2	7.3	7.5	7.7
<b>EU-10</b>	<b>10.8</b>	<b>10.7</b>	<b>10.9</b>	<b>11.3</b>	<b>11.7</b>
<b>EU-15</b>	<b>9.8</b>	<b>9.6</b>	<b>9.8</b>	<b>10.0</b>	<b>10.3</b>
<b>EU-25</b>	<b>10.2</b>	<b>10.1</b>	<b>10.2</b>	<b>10.5</b>	<b>10.9</b>

*Many countries have large numbers in older age groups*

a "demographic dividend" of economic growth, assuming that policies are in place which do not impede development. The combination of a large working age population and good health, labour, family and financial policies can affect virtuous circles of wealth creation. A large proportion in the older age groups has a dampening effect on growth similar to that of children.

A "boom" in population of working age is brought about by a fall from high to low rates of fertility. (In less developed countries this may be augmented by a fall in mortality, particularly infant mortality.) In EU countries mortality rates had fallen a long way in the last century and are now on a slowly declining trend. Following a generation in which there were a large number of births a fall in fertility reduces dependency and a relatively large generation of working age is formed. This generation is usually larger than that which came before or is following and can produce a large increase in income and wealth as it has fewer dependents and many workers. As fertility declines and education increases female participation in the workforce tends to increase. Reduced family size allows for larger expenditures per child on education and this can help set up a virtuous circle for growth. Productivity in the economy on average is enhanced as relatively well-educated young people replace the generally much less well-educated retirees. Rising female participation tends to augment the impact on the size of the labour force of the "boom" generation. Lower dependency allows for greater discretionary spending and a rise in the size of the domestic market for goods and services. A large working population can generate more savings than heavily dependent populations, especially as the boom generation enters the 35-54 age groups. These are the years in which earnings and expenditure are highest.

In general these "boom" generations were a post war phenomenon experienced by most EU countries in the middle of the last century. Ireland was an exception because emigration on a substantial scale persisted until the 1970s. Most European countries "boom" generations are now in the later years of their working lives. Table 4 shows the growth rates forecast for the 20-34 age cohort for all EU countries. There will only be growth in the numbers in this generation in 8 or 9 EU countries in the next ten years and the rate of growth will be just a fraction of the

**Table 3 - Natural Increase per 1,000 Population**

	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020
<b>Ireland</b>	<b>5.6</b>	<b>7.7</b>	<b>8.1</b>	<b>6.7</b>	<b>4.9</b>
Cyprus	6.9	4.9	4.9	4.6	4.3
Luxembourg	5.0	4.4	3.8	3.5	3.4
France	3.0	3.1	2.4	1.6	1.0
Malta	4.4	2.2	2.0	1.6	1.1
Netherlands	3.6	3.1	1.7	0.8	0.5
Spain	0.6	1.6	1.5	0.3	-1.1
United Kingdom	1.5	1.1	0.7	0.8	1.4
Finland	1.9	1.2	0.6	0.5	0.4
Sweden	-0.3	0.2	0.6	1.0	1.6
Denmark	1.1	1.1	0.4	0.0	0.1
Belgium	1.3	0.9	0.1	-0.4	-0.7
Slovakia	1.0	-0.2	-0.4	-1.0	-1.7
Poland	0.7	-0.2	-0.4	-0.9	-1.7
Portugal	0.4	0.4	-0.6	-1.6	-2.3
Austria	0.1	-0.2	-1.0	-1.4	-1.6
Greece	0.4	-0.6	-1.6	-2.6	-3.4
Italy	-0.7	-0.8	-1.7	-3.3	-4.5
Slovenia	-0.6	-1.0	-1.8	-2.8	-3.7
Czech Republic	-2.2	-1.9	-2.2	-2.9	-3.7
Germany	-1.1	-1.8	-2.6	-2.9	-2.9
Lithuania	-1.1	-2.8	-3.1	-3.1	-3.3
Estonia	-4.8	-4.0	-3.1	-2.7	-3.1
Hungary	-3.9	-3.5	-3.7	-4.3	-4.6
Latvia	-5.6	-4.6	-4.3	-4.2	-4.8
<b>EU-10</b>	<b>-0.5</b>	<b>-1.1</b>	<b>-1.2</b>	<b>-1.6</b>	<b>-2.1</b>
<b>EU-15</b>	<b>1.5</b>	<b>1.4</b>	<b>0.8</b>	<b>0.2</b>	<b>-0.2</b>
<b>EU-25</b>	<b>0.7</b>	<b>0.4</b>	<b>0.0</b>	<b>-0.5</b>	<b>-1.0</b>

*Births less deaths expected to be negative in many countries*

**Table 4 - Annual Growth Rates 20-34 Age Groups**

	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020
Cyprus	0.6	1.1	1.4	0.4	-1.2
<b>Ireland</b>	<b>2.5</b>	<b>2.5</b>	<b>1.2</b>	<b>-0.4</b>	<b>-1.2</b>
Latvia	-1.6	0.3	0.5	-1.1	-4.0
Finland	-1.0	-0.4	0.3	0.0	-0.7
Lithuania	-1.9	-0.6	0.3	-0.3	-2.1
Malta	0.8	1.5	0.2	-0.7	-1.2
Estonia	-1.0	0.3	0.2	-1.9	-4.1
Poland	1.3	2.0	0.2	-1.6	-3.3
Sweden	-1.2	-1.4	-0.1	1.1	-0.5
Luxembourg	0.2	-0.4	-0.2	0.9	1.4
Slovakia	1.3	1.2	-0.3	-1.8	-2.7
Belgium	-1.6	-1.1	-0.5	0.1	-0.3
France	-0.9	-0.5	-0.6	-0.2	-0.3
UK	0.1	-0.8	-0.7	0.5	0.8
Netherlands	-1.9	-2.2	-0.8	0.6	0.6
Austria	-2.6	-2.3	-0.9	0.5	-0.7
Slovenia	-0.2	-0.4	-0.9	-2.5	-2.8
Spain	1.5	0.5	-1.2	-3.0	-3.4
Denamrk	-1.2	-2.4	-1.5	0.5	1.3
Hungary	2.0	-0.4	-1.6	-2.4	-1.7
Czech Republic	1.7	0.1	-1.6	-2.6	-2.5
Greece	0.9	-0.8	-1.9	-2.3	-1.9
Germany	-1.1	-2.7	-2.2	0.2	0.2
Portugal	0.6	-0.8	-2.6	-2.4	-1.1
Italy	-1.3	-2.7	-3.0	-1.8	-0.9
<b>EU-10</b>	<b>1.1</b>	<b>1.1</b>	<b>-0.3</b>	<b>-1.8</b>	<b>-2.9</b>
<b>EU-15</b>	<b>-1.2</b>	<b>-1.5</b>	<b>-1.0</b>	<b>-0.5</b>	<b>-0.5</b>
<b>EU-25</b>	<b>-0.8</b>	<b>-1.0</b>	<b>-0.9</b>	<b>-0.8</b>	<b>-0.9</b>

*Poor prospects for growth in labour force*

pace expected in Ireland and Cyprus. Thus growth in the labour force will depend heavily on immigration and changes in participation rates in most countries. On average the EU population in this age group is expected to decline by almost 1% per annum over the next ten to fifteen years.

Table 5 shows the rates of growth expected in the 35-54 age cohort in EU countries. These are peak earning and spending years in the life cycle. Overall the number in this age group is forecast to decline in Europe over the next ten to fifteen years. However, this age group is expected to grow at about 3% per annum over the next ten years in Ireland. The next fastest will be Luxembourg and Germany in the period to 2010 at 1.7% per annum but this cohort will then begin to decline in Germany in the years to 2015.

The numbers in the over 65 population are about 17% of the EU population and this is expected to reach 20% by 2020 (Table 6). In 19 of the 25 countries the percentage over 65 is expected to exceed 15% of the population by 2010. In Ireland the percentage is around 11 currently and will only approach 14% by 2020. Next are Slovakia and Poland.

In summary, the outlook in most countries in the EU is for static to declining populations in the ten to fifteen years ahead. The notable exception is Ireland where strong growth is expected during most of this period. Countries like Cyprus and Luxembourg will see some natural increase in population. The only large country expected to show a reasonable natural increase in population is France. The populations in the younger age groups of working age and also in the numbers in the peak earning and spending years of their lives are expected to decline. Ireland is expected to see growth in the younger population of working age in the immediate years ahead and very strong growth in the numbers in peak earning and spending phase of their lives. There is already quite a large proportion of populations in the EU aged over 65 and this is set to rise by 2020. Again, Ireland is exceptional having the lowest percentage the older age groups.

The growth prospects in the EU are generally not well underpinned by prospective demographic developments in the EU. This holds across a broad range of countries, including the ten which joined in 2004.

**Table 5 - Annual Growth Rates 35-54 Age Groups**

	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020
<b>Ireland</b>	<b>2.1</b>	<b>2.2</b>	<b>3.1</b>	<b>3.0</b>	<b>1.8</b>
Luxembourg	2.8	2.2	1.7	0.7	0.2
Germany	0.1	1.4	1.7	-0.4	-1.2
Spain	2.0	1.9	1.6	1.8	0.7
Portugal	1.2	0.9	1.2	0.7	-0.4
Greece	1.9	1.1	0.8	0.4	-0.3
Italy	1.5	0.9	0.8	-0.4	-1.8
UK	1.1	1.3	0.6	0.5	0.0
Austria	1.7	1.6	0.4	-1.0	-1.6
Czech Republic	0.0	-1.0	0.3	1.3	0.2
Denamrk	0.7	0.0	0.2	-0.5	-1.6
Netherlands	1.8	0.6	0.1	-0.9	-1.4
Cyprus	1.6	0.8	0.1	0.1	0.4
Slovakia	1.4	0.2	0.1	0.7	0.7
France	1.7	0.1	0.0	-0.5	-0.5
Sweden	0.2	-0.2	0.0	-0.6	-1.0
Belgium	1.8	0.4	-0.2	-0.9	-1.1
Lithuania	1.0	0.3	-0.2	-1.5	-1.1
Hungary	-0.8	-0.4	-0.4	0.7	0.3
Latvia	-0.2	-0.4	-0.5	-1.3	-0.5
Malta	0.7	-1.2	-0.6	0.0	0.4
Slovenia	1.1	0.4	-0.6	-0.1	-0.5
Poland	1.3	-0.5	-0.7	0.0	1.3
Estonia	-0.5	-1.1	-1.1	-1.3	-0.3
Finland	0.8	-1.1	-1.4	-0.8	-0.7
<b>EU-10</b>	<b>0.1</b>	<b>0.6</b>	<b>0.3</b>	<b>-0.9</b>	<b>-2.3</b>
<b>EU-15</b>	<b>0.5</b>	<b>1.0</b>	<b>1.0</b>	<b>1.2</b>	<b>1.6</b>
<b>EU-25</b>	<b>0.7</b>	<b>0.1</b>	<b>-0.1</b>	<b>-0.4</b>	<b>-0.8</b>

*Static or declining numbers of peak earners*

**Table 6 - Over 65s as % of Total Population**

	1995	2000	2005	2010	2015	2020
Italy	16.6	18.1	19.6	20.6	22.3	23.7
Germany	15.5	16.3	18.6	20.2	20.8	22.1
Greece	15.6	17.5	19.0	19.8	20.9	22.3
Sweden	17.5	17.4	17.7	19.3	21.4	22.7
Spain	15.3	16.8	17.2	18.1	19.2	20.5
Austria	15.1	15.5	16.5	18.1	19.5	20.9
Belgium	15.9	17.0	17.7	18.0	19.5	21.1
Latvia	13.8	15.1	16.8	17.8	18.3	19.5
Estonia	13.8	15.1	16.7	17.1	18.2	19.7
Finland	14.2	14.9	15.8	17.1	20.3	22.7
Portugal	14.5	15.6	16.4	17.0	18.0	19.3
Denamrk	15.3	15.0	15.3	16.9	19.2	20.7
Slovenia	12.3	14.0	15.4	16.7	18.5	21.5
France	15.1	16.0	16.3	16.5	18.5	20.3
UK	16.0	15.9	15.9	16.4	17.8	18.6
Lithuania	12.6	14.0	15.2	16.0	16.4	17.3
Hungary	14.1	14.6	15.1	16.0	17.4	19.7
Czech Republic	13.2	13.8	14.2	15.8	18.6	21.3
Netherlands	13.2	13.6	14.1	15.1	17.4	19.3
Malta	11.4	12.3	13.3	14.9	18.0	20.2
Luxembourg	13.3	14.0	13.8	14.0	14.4	15.2
Cyprus	11.0	11.4	12.2	13.5	14.9	16.5
Poland	11.1	12.1	12.9	13.0	14.8	17.6
Slovakia	10.9	11.3	11.7	12.2	13.6	16.0
<b>Ireland</b>	<b>11.4</b>	<b>11.3</b>	<b>11.2</b>	<b>11.4</b>	<b>12.5</b>	<b>13.9</b>
<b>EU-10</b>	<b>12.0</b>	<b>12.9</b>	<b>13.6</b>	<b>14.2</b>	<b>15.9</b>	<b>18.4</b>
<b>EU-15</b>	<b>15.5</b>	<b>16.3</b>	<b>17.3</b>	<b>18.2</b>	<b>19.6</b>	<b>20.9</b>
<b>EU-25</b>	<b>14.9</b>	<b>15.8</b>	<b>16.7</b>	<b>17.6</b>	<b>19.0</b>	<b>20.5</b>

*Majority of countries to have more than 15% aged over 65 by 2010*

Eunan King