



Northern Ireland  
Assembly

## Research and Library Service Research Paper

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# A demographic portrait of Northern Ireland: some implications for public policy.

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This research paper considers population trends in Northern Ireland during two ten-year periods, namely: 2001 – 2011 and 2011 – 2021. Comparisons will also be made with demographic trends in other jurisdictions, including the constituent regions of the UK, Ireland and the European Union. The paper will conclude with some brief observations concerning the implications of demographic change for public spending in the areas of health and state-funded pensions.

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## Key Points

### Northern Ireland

- Over the past century there have been marked changes in the composition of the Northern Ireland population. In line with global trends, one of the most significant has been the relative ageing of the population.
- The population of Northern Ireland continues to grow, and is projected to reach over 1.8 million in 2011.
- During the period 2001 – 2011, Northern Ireland had the fastest growing population of any UK region, with an estimated increase of 7.5 per cent.
- Population projections indicate that the most significant change in age structure will occur in the older age bands. In 2008, the median age in Northern Ireland was 36.5 years. It is projected to reach 37.0 years in 2011, 38.8 years in 2021 and 41.9 years in 2031.
- The changing age structure of the Northern Ireland population has largely resulted from a decline in both fertility and mortality (natural change). Since 2004, net migration, particularly from the EU A-8 countries, has also been a contributory factor.

### Comparisons with UK, Ireland and EU-27

- Northern Ireland has a younger population than the UK as a whole, while fertility rates are higher than equivalent rates in Great Britain.
- Ireland has the youngest population in the EU-27.
- Northern Ireland has a younger age distribution than the EU as a whole.

### Implications of an Ageing Population (Health and Pensions)

- The relationship between ageing and public expenditure is not straightforward. Whilst it is true that older people consume more health services per head than any other group, health care expenditure increases rapidly *only in the latter days of life*.
- With regard to state-funded pensions, although the projected increase in the number of pensioners is expected to have significant funding implications, the “demographic effect” may be less pronounced than feared. Legislative factors, such as the Age Regulations, abolition of the Default Retirement age, the planned increase in Pension Age, and the Hutton proposals on public service pensions, will all combine to reduce the number of pensioners and their associated costs.



# Executive Summary

## 1 Introduction

The demographic profile of Northern Ireland is changing, with a marked shift towards an older population. This paper will outline the available evidence of demographic change, comparing and contrasting it with data from other jurisdictions, notably countries of the UK, Ireland and the EU-27. The paper concludes with some brief observations concerning the public policy implications of an ageing population in the areas of healthcare and pension provision.

## 2 Demographic change in Northern Ireland

During the period 2001 – 2011, Northern Ireland had the fastest growing population of any UK region. Population growth over the past decade, however, has not been evenly spread. The largest percentage increases have occurred in the pension age population (60+/65+, 17.7 per cent), with the number of those aged 85+ growing by over a third (35.4 per cent). These trends are expected to continue in the coming decade. Between 2011 – 2021, the number of persons 85+ is expected to increase by half (51.1 per cent) to 47,900. By 2031, the 85 + population is projected to reach 75,800, or 3.8 per cent of the total population. The median age is projected to reach 37.0 years in 2011, 38.8 years in 2021 and 41.9 years in 2031.

In brief, the Northern Ireland population is ageing. The changing age structure has largely resulted from a decline in both fertility and mortality (natural change). Since 2004, net migration has also been a contributory factor to population growth.

## 3 Comparisons with other UK regions, Ireland and EU-27

During the period 2001 – 20011, Northern Ireland had the fastest growing and youngest population of all UK countries. The fertility rate in Northern Ireland is higher than equivalent rates in Great Britain. In 2008, for example, the fertility rate in Northern Ireland was 2.11 births per woman, higher than those in England (1.97), Scotland (1.80), Wales (1.96) and similar to the rate in the Republic of Ireland (2.10).

The population of Ireland declined in the post-war period to reach a low point of 2.8 million in 1961. Since the early 1990s, both natural increase and significant net inward migration have contributed to record population growth, with the result that the 2006 population of 4.24 million was the highest recorded since 1871. The latest population estimate (April 2010) is 4.47 million. While Northern Ireland has the youngest population in the UK, Ireland has the youngest population in the EU-27.

The total population of the EU-27 was provisionally estimated to be 501.1 million in 2010, and is projected to reach 513.8 million by 2020, an increase of 2.5 per cent. Northern Ireland has a younger age distribution than the EU as a whole.

## 4 Implications of Ageing Population for Spending on Health and Pensions

The population of Northern Ireland, and indeed Europe as a whole, is progressively ageing. The baby boomer generations, born between the late 1940s and early 1960s, are approaching retirement, and this will have important consequences for society at large.

As there is little published work which directly examines the fiscal impact of demographic ageing on public policy or expenditure in Northern Ireland, the Paper is confined to some general observations concerning health care and pensions, two of the areas most likely to be affected by an ageing population.

The relationship between ageing and public expenditure, however, is not linear. Whilst it is true that older people consume more health services per head than any other group, health care expenditure increases rapidly *only in the latter days of life*. In particular, it is proximity-to-death that increases costs, rather than age per se.

Over the last thirty years the death rate has fallen by around a quarter. Thus, as mortality decreases, and fewer old people are near the end of life, cost pressures may also be reduced. Death rates, however, and the crude number of deaths, are projected to rise, particularly from 2021 onwards.

In brief, health care costs associated with approaching death are likely to rise modestly in the coming decade. However, in the *following decade* (2021 – 2031), such costs may rise more steeply in line with the growing number of deaths.

With regard to pensions, again the impact on pension provision of the sharp increase in the projected number of pensioners in Northern Ireland may be considerable. However, there are some trends which may modify the effect. For example, anti-discrimination legislation, the abolition of the Default Retirement Age (DRA) in October 2011, the upcoming rise in pension age, and the Hutton Report on public service pensions (2011), will all serve to reduce the projected number of pensioners and their associated costs.

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## 1 Introduction

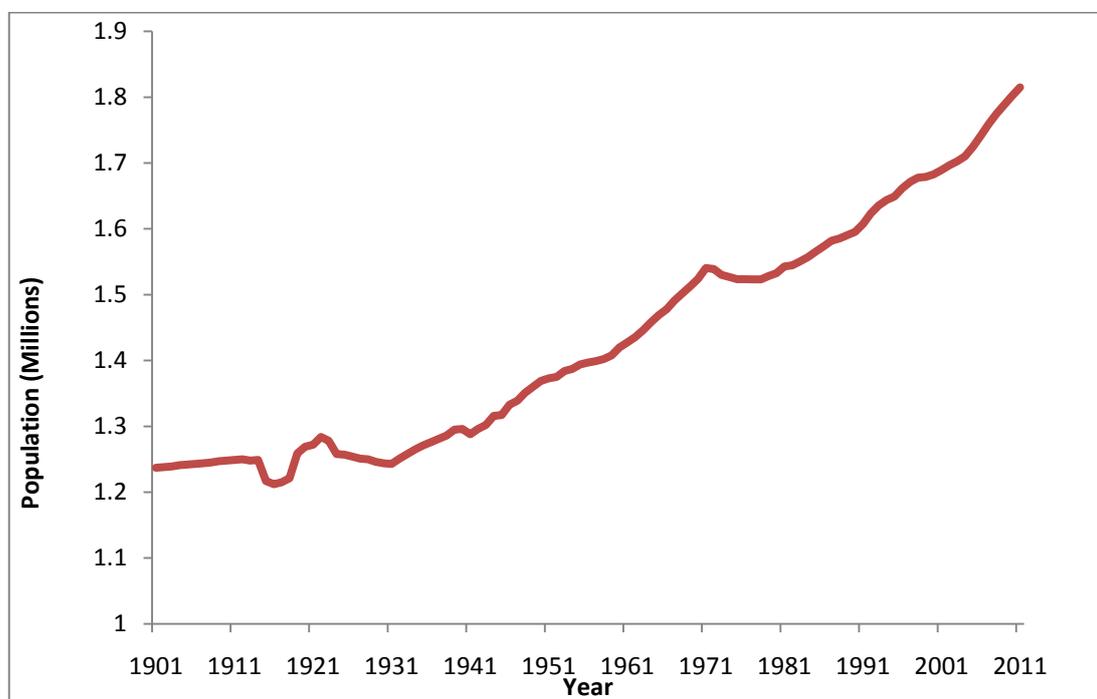
Over the past century there have been some marked changes in the composition of the Northern Ireland population. In line with global trends, one of the most significant has been the relative ageing of the population.

This brief paper will consider population trends in Northern Ireland during two ten-year periods, namely: 2001 – 2011 and 2011 – 2021, plus the underlying reasons for such trends. Comparisons will also be made with other jurisdictions, including the constituent regions of the UK, Ireland and the European Union. The paper will conclude with some brief observations concerning the implications of demographic change for public spending on health and pensions in Northern Ireland.

### 1.1 Background

The population of Northern Ireland continues to grow. In 1901, the region of Ireland which eventually formed Northern Ireland in 1922, had a combined population of 1.24 million. By the 1937 Census, the population of Northern Ireland had increased to 1.28 million. It reached 1.4 million in 1956, 1.5 million by 1968, and 1.6 million in 1990. The population grew to 1.7 million by 2002, and is projected to reach over 1.8 million in 2011<sup>1</sup> (Chart 1).

*Chart 1: Northern Ireland Population (1901 – 2011), non-zero Y-axis.*



<sup>1</sup> McCrory, G. O'Neill, N. Ijpelaar, J. and Marshal, D. (2010). **Chapter 2 - Northern Ireland: An Ageing Population**, in Registrar General Northern Ireland Annual Report 2009, pp. 37 – 64. Available from: [http://www.nisra.gov.uk/archive/demography/publications/annual\\_reports/2009/RG2009.pdf](http://www.nisra.gov.uk/archive/demography/publications/annual_reports/2009/RG2009.pdf) [Accessed on February 15th, 2011].

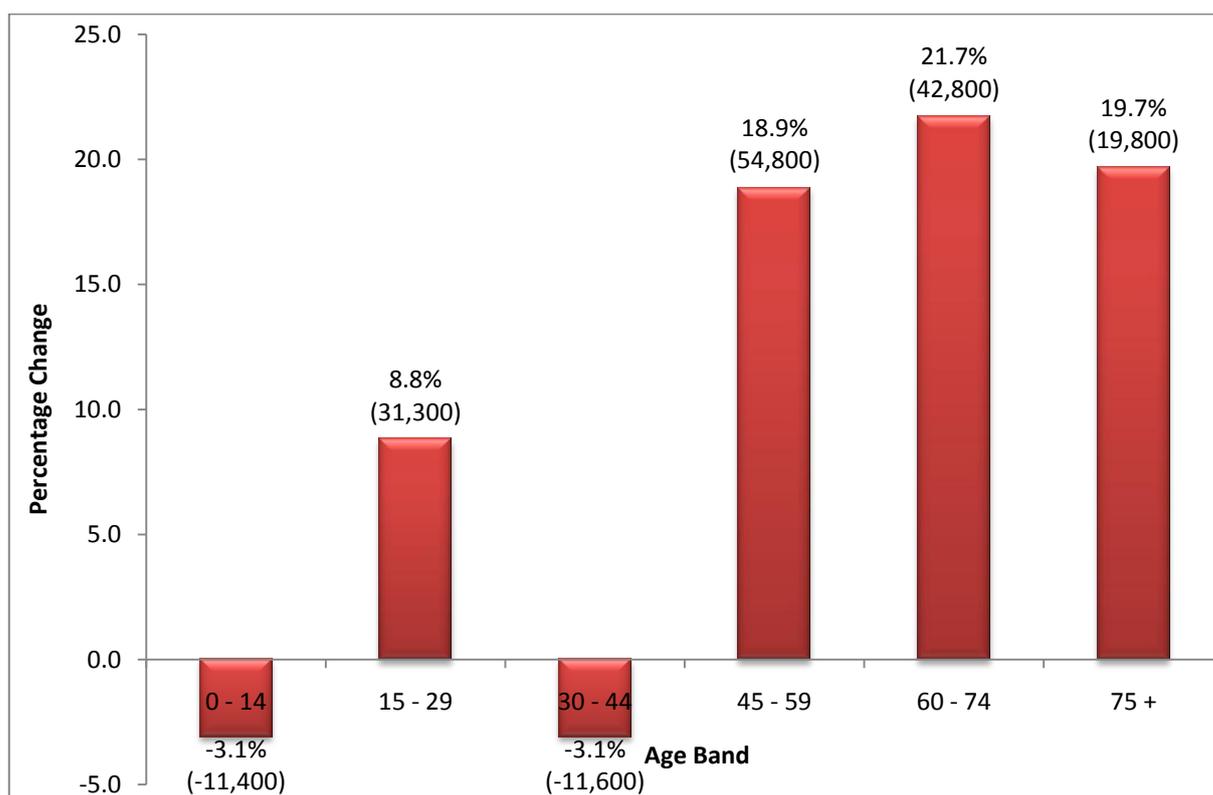
## 2 Population trends in Northern Ireland, 2001 – 2011

During the period 2001 – 2011, Northern Ireland had the fastest growing population of any UK region <sup>2</sup>, with an estimated increase of 7.5 per cent.

Chart 2 presents the estimated <sup>3</sup> percentage change in age structure (15-year bands) during the period 2001 - 2011. It shows that population growth over the past decade has been unevenly spread. While the youngest age band (0 – 14 years) has declined by 3.1 per cent, the 60 – 74 age band has increased by 21.7 per cent and the 75+ age band by 19.7 per cent. In brief, the population of Northern Ireland is getting older.

A broadly similar picture emerges when population trends are examined by selected age bands (Chart 3). The chart shows that the only age groups which are estimated to have decreased in size during the past decade are the 5 – 11 and 11 – 16 groups. The largest percentage increases have occurred in the older age bands; in particular, those aged 85+ (35.4 per cent).

*Chart 2: Estimated Percentage Change in Age Structure in Northern Ireland Population, 2001 – 2011, by 15-year age bands.*

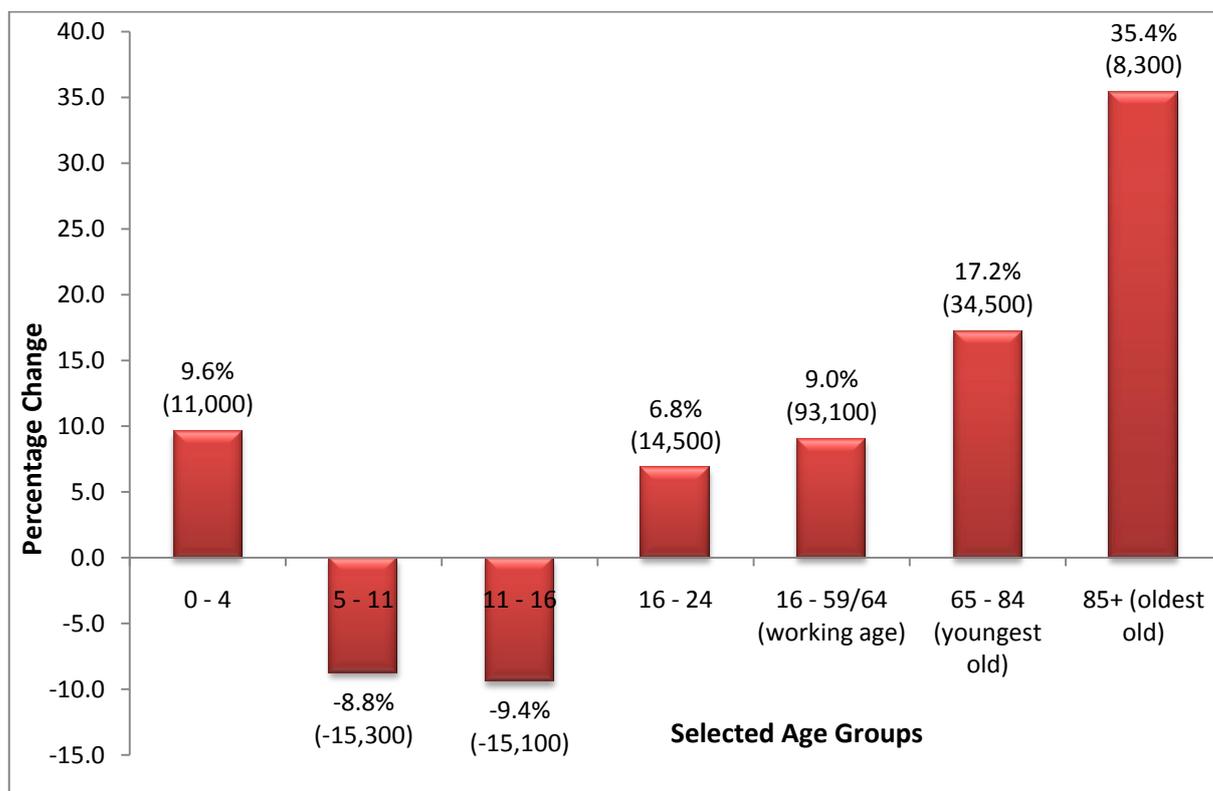


**Note:** Bracketed figures show increase in raw counts, 2001 – 2011.

<sup>2</sup> Office for National Statistics (2010). **National Population Projections, 2008 based. Series PP2 No. 27.** Available from: [http://www.statistics.gov.uk/downloads/theme\\_population/pp2no27.pdf](http://www.statistics.gov.uk/downloads/theme_population/pp2no27.pdf) [Accessed on February 10th, 2011].

<sup>3</sup> Mid-year Estimates (MYE) used for 2001 – 2009 and population projections adopted for 2010 – 11.

*Chart 3: Estimated Percentage Change in Age Structure in Northern Ireland by Selected Population Groups, 2001 – 2011*



**Note:** Bracketed figures show estimated increase in raw counts, 2001 – 2011.

### 3 Population Projections for Northern Ireland, 2011 – 2021

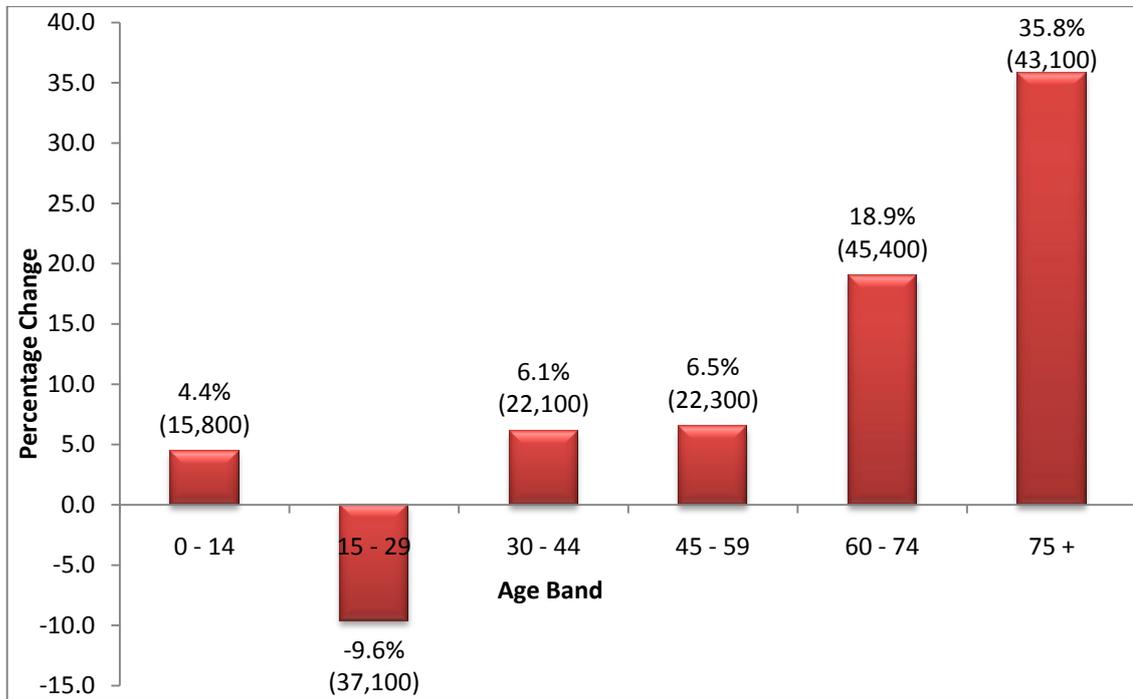
Chart 4 presents 2008-based population projections<sup>4</sup> for the decade, 2011 – 2021. The chart reveals that the most significant change in age structure will occur in the older age bands.

During the next decade the population aged 60 – 74 is projected to increase by 18.9 per cent, while the proportion of those aged 75+ is likely to grow by 35.8 per cent. Taken together, there are projected to be an additional 88,000 older people in Northern Ireland by 2021 compared with 2011.

A similar picture emerges in Chart 5, which considers selected groups. While the youngest age group (0 – 4) is projected to decrease by 2.7 per cent during the decade, the number of 'youngest old' (65 – 84) are projected to grow by 23.6 per cent. Most striking of all, the 'oldest old' (85+ years) are expected to increase by 51 per cent, or an additional 16,000 persons.

<sup>4</sup> **Population projections** are not forecasts. They are solely based on historical trends and long-term assumptions relating to fertility, mortality and migration. They do not take into account planned policy changes and other social and economic factors which may influence population distribution. The further into the future that projections are taken, the greater the degree of uncertainty associated with them.

*Chart 4: Projected Percentage Change in Age Structure in Northern Ireland by 15-year age bands, 2011 – 2021.*



**Note:** Bracketed figures show projected increase in raw counts, 2011 – 2021.

*Chart 5: Projected Percentage Change in Age Structure in Northern Ireland by Selected Population Groups, 2011 – 2021.*

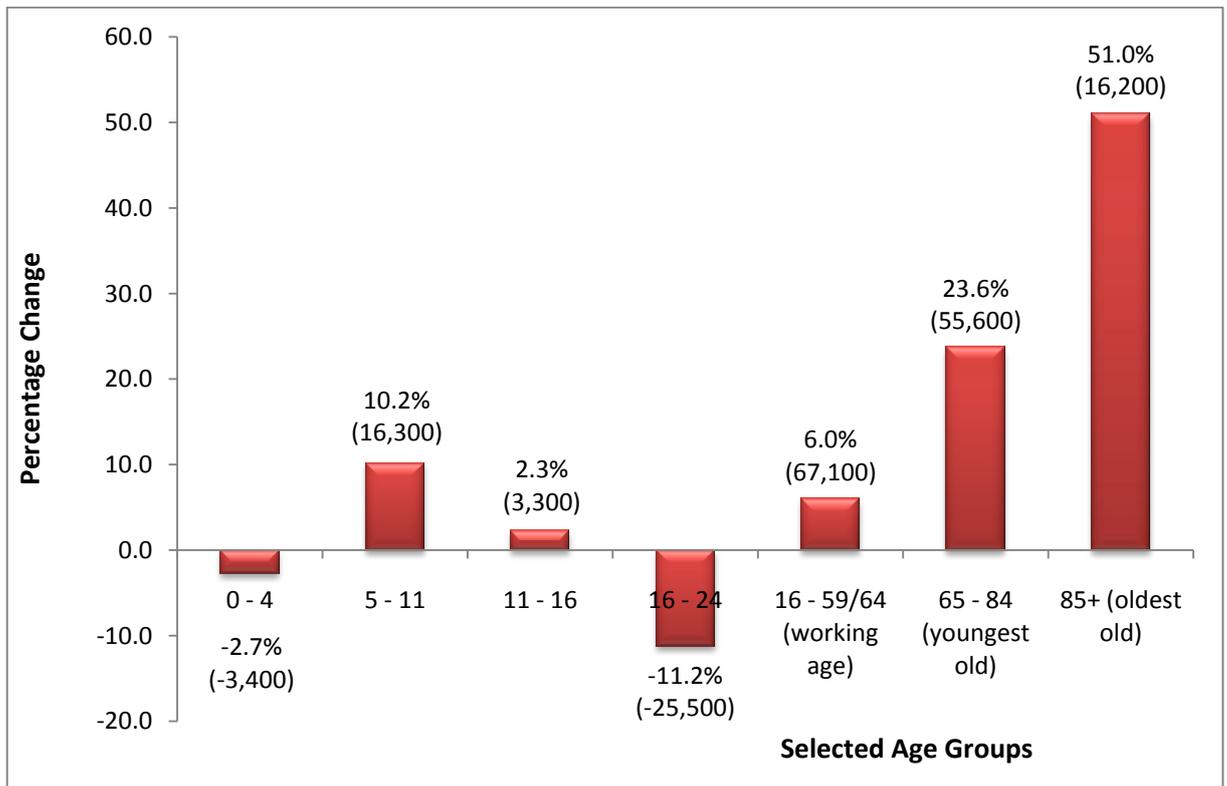


Chart 5 contains further findings of note. While the age band which approximates to primary school age (5 – 11 years) is projected to rise by 10.2 per cent (16,300) in the coming decade, the secondary education group (11 – 16 years) is projected to experience a modest increase (2.3 per cent, 3,300). In contrast, the age band corresponding to further and higher education (16 – 24) is projected to fall by 11.2 per cent (25,500). Taken together, these findings may have important implications for the provision of primary and tertiary education in Northern Ireland.

Having examined demographic change in general during the period 2001 – 2021, it is now appropriate to focus on the age band where the most significant changes are predicted to occur, namely the 85+ age group.

#### 4 Population Projections for Northern Ireland, 85 +

According to the 2008-based population projections for Northern Ireland, the growth in the 'oldest old' population (those aged 85 + ) will continue unabated through the next 20 years. Between 2011 – 2021, the number of persons 85+ is expected to increase by 51.1 per cent to 47,900. By 2031 the 85 + population is projected to reach 75,800, or 3.8 per cent of the total population <sup>5</sup> (see Table 2 and Chart 6).

*Table 2: Northern Ireland Population Projections for those aged 85 +, 2011 - 2031*

Year	No. of Persons aged 85+
2011	31,700
2016	39,100
2021	47,900
2026	59,700
2031	75,800
% change 2011 – 2021	51.1
% change 2011 – 2031	139.1

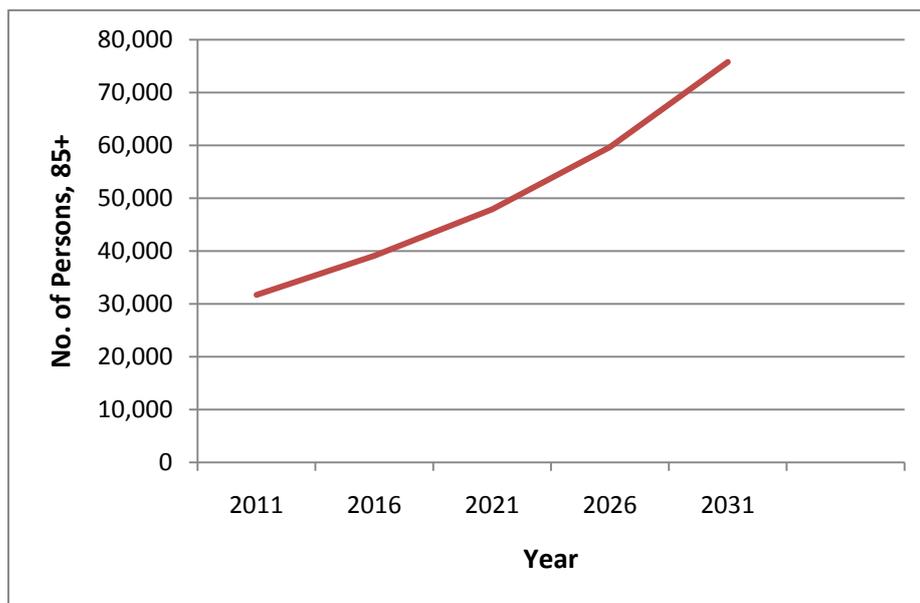
Further confirmation that the Northern Ireland population will continue to age can be found by examining data on the median age <sup>6</sup>. In 2008 the median age was 36.5 years. It is projected to reach 37.0 years in 2011, 38.8 years in 2021 and 41.9 years in 2031. By 2051 the median age is predicted to be 44.4 years <sup>7</sup>.

<sup>5</sup>NISRA (2010). **Population Estimates for those aged 85 and over, Northern Ireland (2002 – 2009) - Statistical Report.** Available at: <http://www.nisra.gov.uk/archive/demography/population/OldestOld/Statistical%20Report%20-%20Estimates%20of%20the%20Population%20Aged%2085%20and%20Over,2002-2009.pdf> [ Accessed on February 22nd, 2011]

<sup>6</sup> **Median** age is the estimated "middle" age of the population, where half of the population is younger than the median and half the population is older than the median.

<sup>7</sup> NISRA (2009). **Components of change, 2008 – 2058.** Available at: <http://www.nisra.gov.uk/archive/demography/population/projections/wni08cc.xls> [Accessed on February 23rd, 2011).

Chart 6: Northern Ireland Population Projections for those aged 85 +, 2011 – 2031.



Having presented evidence that the Northern Ireland population is gradually ageing, the next section will consider the primary reasons for this demographic shift.

## 5 Components of change: reasons why population structure is changing

Population change is dependent upon four factors, namely: the number of *births*, *deaths*, *immigrants* and *emigrants*. There are two ways a population can transform itself. The first is by a change in births and deaths, otherwise known as *natural change*. The second is by a change in *net migration*, which is the difference between the number of immigrants and emigrants. An ageing population is ultimately caused by the interaction of these four variables<sup>8</sup>. “Lower fertility, combined with gradually decreasing mortality, and no significant gains or losses from migration, results in the redistribution of the population away from the younger to the older age groups”<sup>9</sup>.

In Northern Ireland, there have been significant falls in **total period fertility rates**<sup>10</sup> over the past thirty years, from 2.82 births per woman in 1979 to a record low of 1.75 in 2000. Since then the rate has recovered to 2.04<sup>11</sup> in 2009, partially driven by in-

<sup>8</sup> Scottish Parliament Information Centre (SPICe, 2010). Financial Scrutiny Unit Briefing, SB 10 - 60. **The spending implications of demographic change**. Available at: <http://www.scottish.parliament.uk/business/research/briefings-10/SB10-60.pdf> [Accessed February 6th, 2011].

<sup>9</sup> Economic and Social Research Council. ( 2004). **The Demographic Trends in Scotland: A Shrinking and Ageing Population**, ESRC Seminar Series. Available at: [http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Images/demography\\_seminar\\_tcm6-7919.pdf](http://www.esrcsocietytoday.ac.uk/ESRCInfoCentre/Images/demography_seminar_tcm6-7919.pdf) [Accessed February 6th, 2011].

<sup>10</sup> The **total period fertility rate** is the average number of children that would be born to a cohort of women who experienced, throughout their childbearing years, the fertility rate of the calendar year in question.

<sup>11</sup> This figure is just below the replacement level of 2.1 births per woman.

migration (12 babies were born to women from the European Union A8<sup>12</sup> countries in 2001, compared with 1,235 such births in 2010)<sup>13</sup>.

The decline in fertility has been coupled with increased life expectancy, with improvements to public health, health care provision, nutrition and sanitation being important contributory factors. **Mortality rates** fell from 10.6 per thousand population in 1981 to 8.1 in 2009 (the crude number of deaths fell by 11.7% during this period)<sup>14</sup>.

Between 2001 and 2004 the population of Northern Ireland grew by around 7,000 people or 0.4 per cent each year. This increase was due to natural change (more births than deaths) with virtually no change in the size of the population due to migration. In recent years, however, a different pattern has emerged, with migration becoming a net contributor to population growth<sup>15</sup>. After a period through the 1970s and 1980s of emigration exceeding immigration, and balanced migration in the 1990s, the period since 2004 has seen immigration exceeding emigration.

The European Union expansion in 2004 resulted in increased migration to Northern Ireland, reaching a peak in 2007. Since 2007, the numbers of people migrating to Northern Ireland has been on a downward trend. The 2009 figure (2,100 net residents to the Northern Ireland population) is lower than the previous annual figure - 5,700 in 2007-8, and 10,000 added in both the 2005-6 and 2006-7 years<sup>16</sup>.

In brief, the changing age structure of the Northern Ireland population has largely resulted from a decline in both fertility and mortality (natural change). Since 2004, net migration has also been a contributory factor.

This paper has presented a brief demographic portrait of Northern Ireland as a single entity. A reasonable question one might ask is how Northern Ireland compares with other jurisdictions; in particular, the other constituent countries of the United Kingdom, Ireland and the EU. The next section will attempt to answer this question.

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<sup>12</sup> Eight Central and Eastern European countries (referred to as the "A8" countries) joined the European Union in May 2004 – The A8 countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

<sup>13</sup> NISRA (2011). **Births in Northern Ireland, 2010 – Statistics Press Notice**. Available at: [http://www.nisra.gov.uk/archive/demography/publications/births\\_deaths/births\\_2010.pdf](http://www.nisra.gov.uk/archive/demography/publications/births_deaths/births_2010.pdf) [Accessed on March 21st, 2011].

<sup>14</sup> NISRA (2010). **Deaths comparison with other countries of the United Kingdom, 1981 – 2009**. Available at: [http://www.nisra.gov.uk/archive/demography/publications/annual\\_reports/2009/Table1.10d\\_2009.xls](http://www.nisra.gov.uk/archive/demography/publications/annual_reports/2009/Table1.10d_2009.xls) [Accessed on February 23rd, 2011].

<sup>15</sup> ONS (2009). **A demographic portrait of Northern Ireland**. Population Trends, 135, Spring 2009, pp. 91 – 97. Available at: [http://www.statistics.gov.uk/downloads/theme\\_population/Population\\_trends\\_135.pdf](http://www.statistics.gov.uk/downloads/theme_population/Population_trends_135.pdf) [Accessed on February 23rd, 2011].

<sup>16</sup> NISRA (2010). **Statistics Press Notice - Migration Statistics for Northern Ireland (2009)**. Available at: <http://www.nisra.gov.uk/archive/demography/population/migration/Statistics%20Press%20Notice%20-%20Migration%20NI%202009.pdf> [Accessed on February 21st, 2011].

## 6 Northern Ireland: Comparisons with other jurisdictions

### 6.1 UK, England, Scotland and Wales

Table 3 presents a number of key demographic comparisons between Northern Ireland and the other UK countries, 2001 – 2021. The table reveals that:

- During the period 2001 – 2011, Northern Ireland had the *fastest growing population* (7.5 per cent increase). In the coming decade, 2011 – 2021, England is the only UK country where population growth is expected to be faster than Northern Ireland (7.3 per cent –v- 6.2 per cent).
- Using the median (average) age as an indicator, Northern Ireland is projected to have the *youngest population* in the UK for the entire period (37.0 years in 2011 and 38.8 years in 2021).
- At a projected 2.03 births per woman in 2011, Northern Ireland has the *highest fertility rate* in the UK. By 2021, the rate is projected to fall to 1.95, which is still higher than any other UK country.
- In common with all UK countries, death rates have been falling in Northern Ireland in recent decades. In 2009, Northern Ireland had the *lowest death rate* (8.1 per thousand population) of any UK jurisdiction.<sup>17</sup>
- Net migration (the difference between the number of immigrants and emigrants) is projected to *contribute less* to population growth in Northern Ireland over the next decade than any other UK country. Natural increase (the difference between the number of births and deaths) will be the main contributor (93.6 per cent).

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<sup>17</sup> Death rates in Northern Ireland are projected to fall to a low of 7.5 per thousand population by 2014, remain at this figure until 2020, and rise thereafter to 8.4 by 2031.

*Table 3: Northern Ireland: comparisons with other UK Jurisdictions, 2001 - 2021*

	United Kingdom	England	Wales	Scotland	Northern Ireland
<b>POPULATION</b> (millions, rounded)					
<b>Estimates</b> <sup>1</sup>					
2001	59.1	49.4	2.9	5.1	1.7
<b>Projections</b> <sup>2</sup>					
2011	62.6	52.6	3.0	5.2	1.8
2021	67.0	56.4	3.2	5.4	1.9
% change 2001 – 2011	6.0	6.3	3.9	3.3	7.5
% change 2011 - 2021	6.9	7.3	5.4	3.4	6.2
<b>MEDIAN AGE</b> <sup>3</sup> (years)					
2011	39.8	39.6	41.7	41.4	37.0
2021	40.3	40.0	42.3	42.5	38.8
<b>FERTILITY RATES</b> <sup>4</sup> (children per woman)					
2011	1.89	1.90	1.89	1.73	2.03
2021	1.84	1.85	1.85	1.70	1.95
<b>DEATHS</b> <sup>5</sup> (rate per thousand population)					
1981	11.7	11.6	12.4	12.3	10.6
2009	9.1	8.9	10.3	10.4	8.1
<b>COMPONENTS OF CHANGE</b> <sup>6</sup> (percentage contribution, 2011 - 2021)					
Natural Increase	57.1	58.2	34.9	29.6	93.6
Net Migration	42.9	41.8	65.1	70.4	6.4

**Sources:**

<sup>1</sup> ONS (2010). United Kingdom Population Estimates, June 2009. Available from:

<http://www.statistics.gov.uk/pdffdir/pop0610.pdf>

<sup>2,3,4,5,6</sup> ONS (2009). Tables - Components of Change UK, Northern Ireland, England, Scotland and Wales (mid-year to mid-year), 2008 – 2083. Data available from :

[http://www.statistics.gov.uk/downloads/theme\\_population/NPP2008/NatPopProj2008.pdf](http://www.statistics.gov.uk/downloads/theme_population/NPP2008/NatPopProj2008.pdf)

**6.2 Ireland**

The population of Ireland, which remained quite stable at just under three million between 1926 and 1951, declined to reach a low point of 2.8 million in 1961. The 1960s, 1970s and the first half of the 1980s witnessed a decline in emigration and a relatively high level of natural increase, culminating in a population total in excess of 3.5 million in 1986. After a slight fall between 1986 and 1991, the upward trend resumed in the early 1990s. Both natural increase and significant net inward migration have contributed to record population growth, with the result that the 2006 population of 4.24 million was 50 per cent higher than the low point of 1961, and was the highest

recorded since the census of 1871<sup>18</sup>. The latest population estimate (April 2010) is 4.47 million<sup>19</sup>.

The central demographic projection is that the population of Ireland will grow from 4.24 million in 2006 to 5.1 million in 2021, assuming positive but decreasing migration, with growth rates highest in the first 5 years of the projection (2.3 per cent). If migration falls to zero early in the projection period, population growth may moderate to 4.71 million<sup>20</sup>.

In 2009, the estimated median age of Ireland's population was 33.8 years, compared with 36.7 years in Northern Ireland (projected), and the EU-27 average of 40.6 years<sup>21</sup>, making Ireland's population the youngest in Europe. The young age profile of the population is linked to factors such as the relatively young age of migrant workers, and those born during the baby boom of the late 1970s and early 1980s. In brief, while Ireland has the youngest population in the EU-27, Northern Ireland has the youngest population in the United Kingdom.

Somewhat paradoxically, while Ireland has a young population, Total Period Fertility Rate (TPFR) has fallen sharply in recent decades, from a peak of 4.03 births per woman in 1965 to 1.90 in 2006, which is below the replacement level of 2.1<sup>22</sup>. In broad terms, significant net migration (particularly from the EU A-8 countries), coupled with declining mortality rates, largely accounts for the observed increase in population witnessed over the past decade.

### 6.3 European Union (EU-27)

The total population of the EU-27 was provisionally estimated to be 501.1 million in 2010<sup>23</sup> and is projected to reach 513.8 million by 2020, an increase of 2.5 per cent<sup>24</sup>.

Northern Ireland has a younger age distribution than the EU as a whole. In 2009, young people (0 - 14 years old) made up 15.6 per cent of the EU-27 population, while

<sup>18</sup> Central Statistics Office Ireland (2010). **Population and Migration Estimates, 2011 – 2041**. Available at: <http://www.cso.ie/releasespublications/documents/population/current/popmig.pdf> [Accessed on February 10th, 2011].

<sup>19</sup> Central Statistics Office Ireland (2010). **Population and Migration Estimates, April 2010**. Available at: <http://www.cso.ie/releasespublications/documents/population/current/popmig.pdf> [Accessed on February 24th, 2011].

<sup>20</sup> Economic and Social Research Institute (2009). **Projecting the impact of demographic change on the demand for and delivery of health care in Ireland**. Research Series No. 13, October 2009. Available at: <http://www.cardi.ie/publications/projectingtheimpactofdemographicchangeonthedemandforanddeliveryofhealthcareinireland> [Accessed on February 24th, 2011].

<sup>21</sup> Eurostat (2010). **Population structure and ageing**. Available at: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Population\\_structure\\_and\\_ageing](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Population_structure_and_ageing) [Accessed on February 24th, 2011].

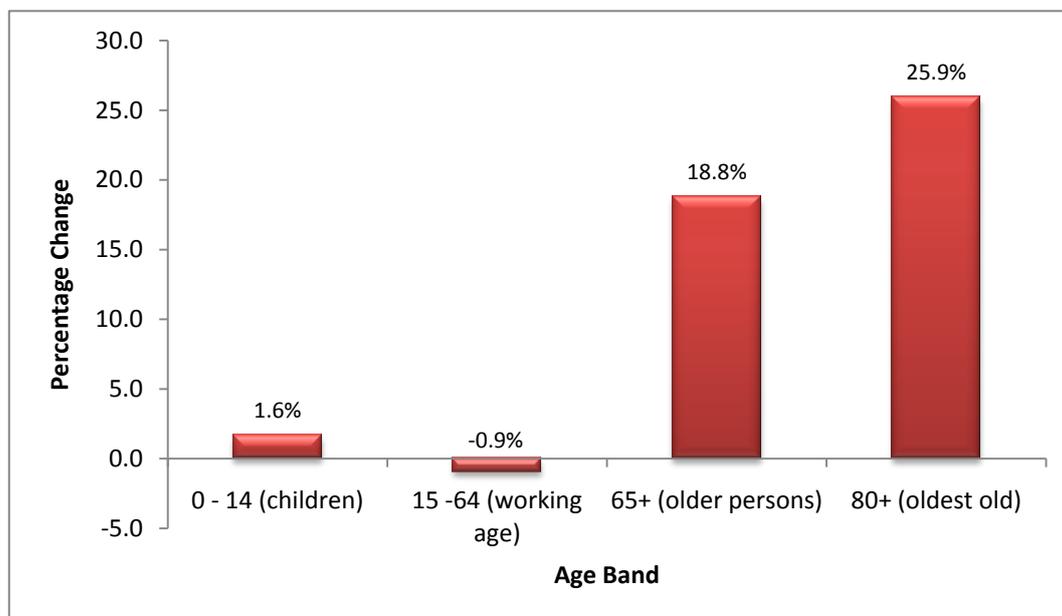
<sup>22</sup> Central Statistics Office Ireland (2010). **Population and Migration Estimates, 2011 – 2041**. Available at: <http://www.cso.ie/releasespublications/documents/population/current/popmig.pdf> [Accessed on February 10th, 2011].

<sup>23</sup> Eurostat (2011). **Total Population at 1st January, 1999 - 2010**. Available at: <http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tps00001> [Accessed on February 25th, 2011].

<sup>24</sup> Eurostat (2008). **Ageing characterises the demographic perspectives of the European societies**, Statistics in Focus, 72/2008. Available from: [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-SF-08-072/EN/KS-SF-08-072-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-08-072/EN/KS-SF-08-072-EN.PDF) [Accessed on February 14th, 2011].

persons of working age (15 - 64 years old) accounted for 67.1 per cent, and older persons (65 or more years old) had a 17.2 per cent share. The comparable population estimates for Northern Ireland<sup>25</sup> were 0 – 14 (20.0%), 15 – 64 (65.8%) and 65+ (14.2%).

Chart 7: Projected change in the age structure of selected groups, EU-27, 2010 - 2020



Across the EU-27, the highest estimated share of young people in 2010 was observed in Ireland (20.9 %), while the smallest share was recorded in Germany (13.6 %). The reverse situation was observed for the share of older persons, as Germany had the highest proportion (20.4 %), while Ireland had the lowest share (11.0 %).

The impact of demographic ageing within the EU-27 is likely to be of major significance in the coming decades. Chart 7 (above) shows the projected change in the age structure of the EU-27, 2010 – 2020. While little growth is expected to occur in the number of persons aged 0 – 64, the 65+ and oldest old (80+) are projected to grow by 18.8 per cent and 25.9 per cent respectively<sup>26</sup>.

Consistently low birth rates and higher life expectancy are expected to transform the population structure. In line with global trends, there will be a marked transition towards a much older population<sup>27</sup>. As a result, the proportion of people of working

<sup>25</sup> NISRA (2010). **Northern Ireland home population by sex and 5-year age bands**. Available at: [http://www.nisra.gov.uk/archive/demography/population/midyear/NI\\_Home\\_Pop\\_5yrbds\(1961-2009\).xls](http://www.nisra.gov.uk/archive/demography/population/midyear/NI_Home_Pop_5yrbds(1961-2009).xls) [Accessed on February 25<sup>th</sup>, 2011].

<sup>26</sup> Eurostat (2008). **Ageing characterises the demographic perspectives of the European societies**, Statistics in Focus, 72/2008. Available from: [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-SF-08-072/EN/KS-SF-08-072-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-08-072/EN/KS-SF-08-072-EN.PDF) [Accessed on February 14<sup>th</sup>, 2011].

<sup>27</sup> The median age of the EU-27 population provides an illustration of population ageing. The EU median age increased from 35.2 years in 1990 to 40.6 years by 2009, and is projected to reach 47.9 years in 2060.

age in the EU-27 is shrinking, while the relative number of those retired is expanding. The share of older persons in the total population will increase significantly in the coming decades, as a greater proportion of the post-war baby boom generation reaches retirement. This will, in turn, lead to an increased burden on those of working age to provide for the social expenditure required by the ageing population <sup>28</sup>.

Another aspect of population ageing is the progressive ageing of the older population itself. The share of those aged 80 years or above in the EU-27 population is projected to almost triple by 2060 <sup>29</sup>.

## 7 Implications of an Ageing Population (Health and Pensions)

Previous sections of this paper have shown that the population of Northern Ireland, and indeed Europe as a whole, is progressively ageing. The baby boomer generations born between the late 1940s and the early 1960s are approaching retirement, and this will have important consequences for society at large.

### 7.1 Public Policy Implications

As there is little published work which directly examines the fiscal impact of demographic ageing on public policy or expenditure in Northern Ireland<sup>3</sup>, the scope of this section will be limited to some general observations, particularly in the areas of health care and pensions. These are likely to be two of the areas most affected by an ageing population.

In broad terms, as the number of people aged 65 + increases, the demand for public health and social care services and pensions is likely to grow. Simultaneously, the section of the population expected to pay for this increase, namely persons of working age in employment, becomes progressively smaller in relative terms. It is unlikely that such a situation of increasing imbalance is sustainable over the longer term.

#### 7.1.1 Health and Social Care

The relationship between ageing and public expenditure is not straightforward. The widely-held view that the ageing of the population will inevitably result in greater health care expenditure, for example, may be too simplistic <sup>30</sup>.

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<sup>28</sup> Whereas in 2008 in the EU27 there were 4 persons of working age (15-64 years old) for every person aged 65 years or over; in 2020 the ratio is expected to be just over 3 to 1 ( see <sup>38</sup> for full reference).

<sup>29</sup> Eurostat (2010). **Population structure and ageing**. Available at: [http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Population\\_structure\\_and\\_ageing](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Population_structure_and_ageing) [Accessed on February 24th, 2011].

<sup>30</sup> Economic Research Institute of Northern Ireland (2009). **Public Expenditure on Older People in Northern Ireland: A report for Changing Age Partnership**. J.I. Iparraguirre, September 2009. Available at [http://www.erini.ac.uk/dsp\\_publications.cfm/PublicationCAT\\_key/0/publication\\_key/2214/](http://www.erini.ac.uk/dsp_publications.cfm/PublicationCAT_key/0/publication_key/2214/) [Accessed on February 15th, 2011].

Whilst it is true that older people consume more health services per head than any other group, health care expenditure increases rapidly *only in the latter days of life*. It has been suggested that expenditure is driven more by the proximity of an individual to death than by their age per se. Normand (2011), in oral evidence to the Northern Ireland Assembly Committee for Health, Social Services and Public Safety <sup>31</sup>, noted that:

“... an evolving body of evidence suggests that ageing per se is of little importance, particularly in acute hospital services, and of only modest importance in continuing care. A number of care needs are clustered near the end of life. The most recent work, although it is still not fully published, suggests that age has almost no effect on acute hospital care per se, but that approaching death has a significant effect.”

With regard to approaching death, the crude number of deaths in Northern Ireland is projected to fall to a low of circa 14,000 in 2013, before rising to 14,600 in 2021 and 16,800 by 2031. Initially, death rates are also projected to fall, from 7.7 per thousand in 2011 to a low of 7.5 in 2020. This is because deaths are occurring against a backdrop of a rising population. Thereafter, in line with the projected increase in crude deaths, death rates will begin to rise again, and are projected to reach 8.4 per thousand by 2031 <sup>32</sup>.

In brief, health care costs associated with approaching death are likely to rise modestly in the coming decade. However, in the *following decade* (2021 – 2031), such costs may rise more steeply in line with the growing number of deaths.

### 7.1.2 Pensions

It has been observed that, since the Second World War the idea of leaving the workforce at 60 or 65 became, for much of the industrialized world, one of the great certainties of life. “However, the right to retirement and leisure is a post-war idea, and one that given the shifting demography may not last.” (p.20) <sup>33</sup>.

Population projections (2008-based) indicate a marked increase in the size of the Northern Ireland population at older ages. The number of people of current pensionable age (2009 definition) is projected to increase by around 10 per cent during the period 2011 – 2021 (30,000), and by 33 per cent by 2031 (101,000) <sup>34</sup>. The

<sup>31</sup> Northern Ireland Assembly (2011). **Committee for Health, Social Services and Public Safety, Official Report (Hansard). Draft Budget 2011 – 15, Briefing from Professor Charles Normand, 18 January 2011.** Available from [http://www.niassembly.gov.uk/record/committees2010/HSSPS/110118\\_ProfNormand.pdf](http://www.niassembly.gov.uk/record/committees2010/HSSPS/110118_ProfNormand.pdf) [Accessed on February 17<sup>th</sup>, 2011].

<sup>32</sup> NISRA (2009). **Components of change, 2008 – 2058.** Available at: <http://www.nisra.gov.uk/archive/demography/population/projections/wni08cc.xls> [Accessed on March 10<sup>th</sup>, 2011].

<sup>33</sup> Scottish Parliament (2006). Population Ageing. Burnside, R. SPICe Briefing 06/93. Available at: <http://www.scottish.parliament.uk/business/research/briefings-06/SB06-93.pdf>

<sup>34</sup> ONS (2009). **Components of Change Northern Ireland (mid-year to mid-year) ... 2008 – 2083.** Available at: [http://www.statistics.gov.uk/downloads/theme\\_population/NPP2008/wNI08cc.xls](http://www.statistics.gov.uk/downloads/theme_population/NPP2008/wNI08cc.xls) [Accessed on February 24<sup>th</sup> 2011].

European Commission (2010)<sup>35</sup> sounded a pessimistic note when considering the European pension system:

“On present trends the situation is untenable. Unless people, as they live longer, also stay longer in employment, either pension adequacy is likely to suffer or an unsustainable rise in pension expenditure may occur.” p.4.

Although the shift towards an ageing population in Northern Ireland will undoubtedly lead to greater pressure on the state-funded pension system, there are a number of legislative changes and other trends which will ameliorate or reduce the impact of shifting demography.

Firstly, the Employment Equality (Age) Regulations (Northern Ireland) 2006 (“the Age Regulations”), prohibit discrimination on the grounds of age, introduced a new right for employees to request working beyond retirement age, and imposed a duty on employers to consider that request<sup>36</sup>. The Age Regulations provide important additional protection for older workers.

Secondly, the abolition of the Default Retirement Age (DRA) in October 2011<sup>37</sup> will greatly facilitate those who, for whatever reason, wish to remain in employment beyond current retirement age.

The trend towards working beyond current retirement age is already evident. The Observer newspaper (2011) noted that total employment in Britain during 2010 increased by 218,000, almost half of which (104,000 jobs) went to the over-65s<sup>38</sup>. Further, a recent survey (December 2010) of 10,143 adults in the UK, found that nearly two-thirds (62 per cent) of those who had planned to retire in 2011 would consider postponing their pension and continuing to work in order to boost their retirement income. Of those considering putting off their retirement, nearly half (46 per cent) say they will definitely have to continue to work in order to supplement their pension or build up their savings further<sup>39</sup>.

Thirdly, the upcoming changes in retirement age will directly impact on the cost of state-funded pension provision by reducing the projected number of pensioners in Northern Ireland. Between 2010 and 2018, state pension age will change from 65

<sup>35</sup> European Commission (2010). **Green Paper: towards adequate, sustainable and safe European pension systems.** COM(2010) 365/3, Brussels. Available at: [http://www.linklaters.com/pdfs/publications/Pensions\\_EUPart1\\_v7.pdf](http://www.linklaters.com/pdfs/publications/Pensions_EUPart1_v7.pdf) [Accessed on February 17th, 2011].

<sup>36</sup> OFMDFMNI (2006). **Employment Equality (Age) Regulations (Northern Ireland) 2006.** Available at: [http://www.ofmdfmi.gov.uk/index/equality/age/employment\\_equality\\_regulations\\_2006.htm](http://www.ofmdfmi.gov.uk/index/equality/age/employment_equality_regulations_2006.htm) [Accessed on February 28th, 2011].

<sup>37</sup> The default retirement age (DRA), currently 65 years, will be abolished on 1 October 2011. After this date, employers will not be able to compulsorily retire employees on the grounds of age unless the decision can be objectively justified.

<sup>38</sup> The Observer (2011). **Long-life Britain and the price we will all have to pay**, Will Hutton, Observer Newspaper, March 6th, 2011. Available at: <http://www.guardian.co.uk/society/2011/mar/06/britain-living-longer-hutton-report-pensions?intcmp=239> [Accessed on March 8<sup>th</sup>, 2011].

<sup>39</sup> Prudential Assurance Company Ltd (2011). **Two-thirds of New Pensioners Could Work Beyond Retirement In 2011**, Press Release, February 15<sup>th</sup>, 2011. Available at: [http://www.pru.co.uk/pdf/presscenter/two\\_thirds\\_of\\_pensions.pdf](http://www.pru.co.uk/pdf/presscenter/two_thirds_of_pensions.pdf) [Accessed on February 17th, 2011].

years for men and 60 years for women, to 66 years for both sexes. Further, between 2024 and 2046, state pension age will increase in three stages from 65 years to 68 years for both sexes. It has been estimated that if all these changes go ahead as planned, by 2058 there will be 128,600 fewer pensioners<sup>40</sup> than there would be if current pensionable age continued<sup>41</sup>.

A fourth factor which is likely to influence government policy on pensions over the medium to longer-term is the review by the Independent Public Service Pensions Commission (“the Hutton Report”)<sup>42</sup> published in March 2011. Among the recommendations are:

1. an end to Final Salary Schemes, and their replacement with career average earnings; and
2. The Normal Pension Age (NPA) to be linked to the state pension age. In effect, most public service workers would retire at 65 years or more, rather than 60 as at present.

If implemented, the net effect of the Hutton Report would be a reduction in both the projected number of pensioners and their associated costs. According to the Commission, pensions would become more “affordable”.

In brief, although the impact on pension provision of the sharp increase in the projected number of pensioners in Northern Ireland may be considerable, there are a number of trends which will modify the effect. Taken together, anti-discrimination legislation, the end of the DRA, the upcoming rise in pension age, and the Hutton Report on public pensions, will reduce the projected number of pensioners and their associated costs, as well as promote the growing trend of working beyond retirement age.

Cairncross (2004) painted a more optimistic scenario when considering the current pension crisis:

“Indeed, the workplace revolution that lies ahead may be very like the one that, in the course of the 1970s and 1980s, brought millions of mothers into the job market. Since then, the workplace has been feminized; in future it will be grizzled. A quarter of a century from now, retirement will look different from the way it does now: a mix of work and gardening, rather than gardening alone. For older people, work may then offer some of the charms that have

<sup>40</sup> McCrory, G. O'Neill, N. Ijpelaar, J. and Marshal, D. (2010). *Chapter 2 - Northern Ireland: An Ageing Population*, in **Registrar General Northern Ireland Annual Report 2009**, pp. 37 – 64. Available from: [http://www.nisra.gov.uk/archive/demography/publications/annual\\_reports/2009/RG2009.pdf](http://www.nisra.gov.uk/archive/demography/publications/annual_reports/2009/RG2009.pdf) [Accessed on February 15th, 2011]

<sup>41</sup> The figure of 128,600 fewer pensioners by 2058 is likely to be an under-estimate, as it was made before the Chancellor's announcement on 20 October 2010 of further, accelerated changes to pension age..

<sup>42</sup> HM Treasury (2011). **Independent Public Service Pensions Commission: Final Report**, 10 March 2011. Available at: [http://cdn.hm-treasury.gov.uk/hutton\\_final\\_100311.pdf](http://cdn.hm-treasury.gov.uk/hutton_final_100311.pdf) [Accessed on March 10th, 2011].

lured so many women into the job market: stimulus, companionship and the freedom from worry that a bit of extra money can bring”<sup>43</sup>.

## 8 Summary

### 8.1 Demographic Portrait of Northern Ireland, 2001 - 2021

This paper has presented a brief demographic portrait of Northern Ireland for the periods 2001 – 2011 and 2011 – 2021. Some implications for public policy, notably in the areas of health and pension provision, have also been outlined.

During the period 2001 – 2011, Northern Ireland had the fastest growing population of any UK region, with an estimated increase of 7.5 per cent. Population growth, however, has not been evenly spread. The largest percentage increases have occurred in the pension age population (60+/65+), in particular those aged 85+.

Similar trends are evident in the projections for 2011 – 2021. The growth in the ‘oldest old’ population will continue unabated through the coming decades. By 2031, the 85 + population is projected to reach 75,800, or 3.8 per cent of the total population. The number of primary school children is also projected to rise by 10.2 per cent.

The changing age structure of the Northern Ireland population has largely resulted from a decline in both fertility and mortality (natural change). Since 2004, net migration, particularly from the EU –A8 countries, has also been a contributory factor to population growth.

### 8.2 Comparisons with other UK countries, Ireland and EU

Compared with other UK jurisdictions, Northern Ireland:

- had the fastest-growing and youngest population during 2001 – 2011;
- is projected to have the youngest population during 2011 – 2021;
- is projected to have the highest fertility rate during 2011 – 2021; and
- net migration will make the smallest contribution to population growth of any UK region during 2011 – 2021.

Ireland has the youngest population in Europe, with an estimated median age of 33.8 years, compared with the EU-27 average figure of 40.6 years. The young age profile of the population is linked to factors such as the relatively young age of migrant workers, and those born during the baby boom of the late 1970s and early 1980s.

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<sup>43</sup> The Economist (2004). **Forever Young: a survey of retirement**. Frances Cairncross, Print edition, March 25th 2004. Available from: <http://www.economist.com/node/2516900> [Accessed on February 17th, 2011].

The total population of the EU-27 was provisionally estimated to be 501.1 million in 2010 and is projected to reach 513.8 million by 2020, an increase of 2.5 per cent. Northern Ireland has a slightly younger age distribution than the EU as a whole.

In common with global trends, there will be a marked transition in the EU-27 towards a much older population. Consistently low birth rates and higher life expectancy are expected to transform the population structure. This will, in turn, lead to an increased burden on those of working age to provide for the social expenditure required by the ageing population.

In summary, the population of Northern Ireland, and indeed Europe as a whole, is progressively ageing. The baby boomer generations born between the late 1940s and early 1960s are approaching retirement, and this will have important consequences for society at large.

### 8.3 Implications for Social Policy in Healthcare and Pensions

In broad terms, as the number of older people increases, the demand for public health and social care services and pensions is likely to grow. Simultaneously, the section of the population expected to pay for this increase, namely persons of working age in employment, becomes progressively smaller in both absolute and relative terms. It is unlikely that such a situation of increasing imbalance is sustainable over the longer term.

The relationship between ageing and public expenditure, however, is not straightforward. Whilst it is true that older people consume more health services per head than any other group, health care expenditure increases rapidly *only in the latter days of life*. In particular, it is proximity-to-death that increases costs, rather than age per se.

With regard to approaching death, the crude number of deaths in Northern Ireland is projected to fall until 2013, before gradually rising by 2021. Thereafter, the upward gradient will become steeper.

In brief, health care costs associated with approaching death are likely to rise modestly in the coming decade. However, in the *following decade* (2021 – 2031), such costs may rise more steeply in line with the growing number of deaths.

The impact on pension provision of the sharp increase in the projected number of older people in Northern Ireland may be considerable. Again, however, there are some factors which will modify the effect. For example, anti-discrimination legislation, the abolition of the Default Retirement Age (DRA), the rise in pension age, and the recommendations of the Hutton report on public service pensions, will all serve to reduce the projected number of pensioners and their associated costs.