Subnational patterns of population ageing

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Introduction

The UK population is growing in size. In 1981 the UK population was 56 million; by 2007 it was almost 61 million. This population growth has not been consistent across all ages. In 1981 the median age in the UK was 34.5 years; by 2007 it had increased by nearly five years to 39.2. In 2007, for the first time, the population over state pensionable age in the UK was higher than the population aged under 16¹. This was the result of below replacement fertility in the UK after 1974 and women born in the post Second World War baby boom beginning to reach retirement age in 2007. The ‘oldest old’ population, those aged 85 and over, have experienced the most rapid growth. In 1981, 1.1 per cent of the population were aged 85 and over. By 2007 this population had doubled in number, representing 2.1 per cent of the total population. This rapid growth can mainly be explained by falls in mortality rates leading to increased survival to older ages².

There are large variations in the age composition of the UK at the subnational level. In this report, population estimates and projections for Local Authorities (LAs) in England, Wales, Scotland and Northern Ireland are used to identify and investigate changes in population age structure at the subnational level, between 1997 and 2017 (see **Appendix 1** for a summary of the administrative geography of the UK). Different measures of population ageing are then described and used to give a full picture of the changes in age structure occurring at the subnational level. Three LAs have been further explored as case studies.

Definitions and measures of ageing

What do we mean by old age and population ageing? The term ‘ageing’ refers to both the increase in the average age of the population as well as the increasing number or proportion of older people in the population.

Over the last decade the number of people aged 65 and over in the UK has grown by 6 per cent, from 9.2 million in 1997 to 9.8 million in 2007. Over the next 10 years this older population is projected to grow by a further 23 per cent to 12.1 million by 2017. This is primarily a result of falls in fertility and mortality rates over the past 150 years and changing sizes of past birth cohorts. Population age structures differ by region and local area. In the UK, the majority of local areas are ageing but a small number are becoming less aged. Information on changes in the size and composition of the older population in local areas is of increasing importance to local government as this group is more likely to be in receipt of health and social services. This article explores changes in population age structure at the Local Authority (LA) level for the whole of the UK between 1997 and 2017, focusing on change in the older population.

Box one

Measures of population age structure and population ageing

Median Age

The median measures the average age of the population, the age at which 50 per cent of the population are younger and 50 per cent of the population are older. Growth of the median over time gives an indication of whether the population is becoming more aged over time.

Proportion of older people

The proportion of people aged 65 and over has been used to investigate the change in size of the older population as it broadly represents the age at which most people have just made or are just making their transition into retirement. The percentage of people aged over SPA has not been used as a direct measure of ageing because SPA is due to increase to 65 for women between 2010 and 2020 and to later rise for both sexes to 68 by 2046.

The proportion of people aged 85 and over, referred to as the "oldest old", is also used in this report. Understanding the population trends in this age group is important as they are most likely to be in receipt of health and social services.

Percentage change in the older population

Change in the older population, expressed as a percentage of the population at the beginning of the time period, is probably the simplest indicator of population ageing. Percentage change in the older population has been investigated for the past and future time periods: 1997 to 2007 and 2007 to 2017.

The *Classification Typology of Ageing*, adapted from Walford and Kurek³ classifies areas according to whether growth in the percentage aged 65 and over has been positive, negative, or a combination in the two time periods considered. The categories are as follows:

Category	Direction of change	
	1997–2007	2007–2017
Growth	+	+
Projected Growth	–	+
Projected Decline	+	–
Decline	–	–

Old Age Support Ratio

The old age support ratio (OASR) represents the number of people of working ageⁱ to the number of people of SPAⁱⁱ and over. The OASR is a demographic ratio and does not take into account possible future inactivity owing to early retirement, health problems, disabilities and caring responsibilities that prevent people from working. Similarly, some people of SPA will choose to extend their working lives into later life. Care is therefore needed in its use; it is not an indicator of the economic support ratio, which is the ratio of the number of people aged 16 and over in paid employment to the number of people aged over SPA in retirement plus those aged under 16⁴.

ⁱ The working age population is defined as those aged 16 up to State Pension Age.

ⁱⁱ The population of SPA is defined as women aged over 60 and men aged over 65 prior to 2010. From 2010 onwards the definition of SPA takes into account the phased increases due to be introduced by the UK government between 2010 and 2046.

There are many different measures of population ageing and 'old age' may be defined differently depending on the ageing measure used. The most commonly used definition of old age is the age at which a person becomes entitled to receive state pension benefits³. Currently in the UK, state pension age (SPA) is 60 for women and 65 for men. The ageing measures and their properties are discussed in **Box one**.

Data sources

Population Estimates

ONS produces annual mid-year population estimates of the resident population for England and Wales⁵; the General Register Office for Scotland (GROS) and Northern Ireland Statistics and Research Agency (NISRA) produce the corresponding estimates for Scotland and Northern Ireland⁶. ONS combines the estimates made by the three agencies to produce UK population estimates. For this report mid-year population estimates by single year of age and sex for LAs have been used from 1997 to 2007 in England, Wales, Scotland and Northern Ireland⁷.

Population Projections

ONS produces national population projections for the UK and constituent countries every two years. The latest projections are based on the 2006 mid-year population estimates. Population projections are based on assumptions about births, deaths and migration, but do not take into account the effects of future local or central government policies. Subnational population projections (SNPPs) for countries within the UK are produced by each respective statistical office in England, Wales, Scotland and Northern Ireland⁸. For this report SNPPs by single year of age and sex for LAs have been used from 2007 to 2017 in England, Wales, Scotland and Northern Ireland⁹.

Results

Changes in population age structure at the National and Government Office Region (GOR) level

Tables 1 and **2** show that in 2007, Wales was the most aged country in the UK, with a median age of 40.8 years and 18 per cent of its population aged 65 and over. While Wales has had similar fertility and mortality

Table 1

Median age in years for the population of UK constituent countries and English regions

	1997	2007	2017 (projected)
United Kingdom	36.9	39.2	40.0
England	36.9	39.0	39.7
North East	37.5	40.4	41.4
North West	36.9	39.4	40.1
Yorkshire and the Humber	37.0	38.9	38.8
East Midlands	37.3	39.9	41.0
West Midlands	36.9	39.3	40.0
East of England	37.6	40.1	41.2
London	33.8	34.7	35.1
South East	37.7	40.0	41.2
South West	39.5	41.7	43.4
Wales	38.3	40.8	42.6
Scotland	37.2	40.5	42.7
Northern Ireland	33.0	36.3	38.0

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

Table 2

Percentage population aged 65 and over for the UK constituent countries and English regions

	1997	2007	2017 (projected)
United Kingdom	15.9	16.0	18.4
England	15.9	16.0	18.2
North East	16.1	16.9	19.6
North West	15.9	16.2	18.6
Yorkshire and the Humber	16.0	16.0	18.0
East Midlands	16.0	16.3	19.2
West Midlands	15.7	16.4	19.0
East of England	16.2	16.8	19.6
London	13.1	11.7	11.8
South East	16.4	16.6	19.3
South West	18.7	18.8	21.8
Wales	17.4	17.8	21.2
Scotland	15.5	16.4	19.5
Northern Ireland	13.0	13.8	16.5

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

patterns to England, these have been combined with the out-migration of younger people¹⁰. Wales is also largely rural, and larger proportions of older people tend to live in and retire to rural areas as opposed to urban areas¹¹. Northern Ireland currently has the least aged population with a median age of 36.3 years and 14 per cent of its population aged 65 and over. Over the past few decades, Northern Ireland has had markedly higher fertility rates in comparison the rest of the UK¹² and therefore has the largest proportion of children. **Figure 1** shows the age structure of each UK constituent country for the years 1997, 2007 and 2017.

Between 1997 and 2007, both Scotland and Northern Ireland experienced the largest increase in the median age of the population (3.3 years). Northern Ireland also experienced a 12 per cent increase in the number of people aged 65 and over, the largest increase of UK constituent countries. The population of England experienced the smallest increase in median age (2.1 years); Wales experienced only a 5 per cent increase in the number of people aged 65 and over between 1997 and 2007, the smallest of the UK constituent countries.

By 2017 Scotland is projected to have the highest median age in the UK, rising from 40.5 years in 2007 to 42.7 years in 2017. Wales is projected to maintain the highest proportion of the population aged 65 and over rising to 21 per cent in 2017. Northern Ireland is projected to experience the largest increase in its older population, with the number of people aged 65 and over projected to increase by 27 per cent between 2007 and 2017.

For each year the South West has the highest median age followed by the North East, the East and the South East. The population of London has slowly become older between 1997 and 2007 and is projected to continue to age up to 2017, but still has the lowest median age of all the Regions over the time period. Between 1997 and 2007 the East experienced the largest growth in number of people aged 65 and over, an increase of 11 per cent. The East Midlands is projected to have the greatest increase in the number of people aged 65 and over between 2007 and 2017, at 30 per cent. **Figure 2** shows that the LAs in the South East had the widest distribution of people aged 65 and over in 2007, whereas the LAs in the North East had the narrowest distribution (information on interpreting box plots can be found in **Box two**).

Changes in population age structure at the Local Authority (LA) Level

Median Age

In 2007 West Somerset had the highest median age in the UK at 52 years (**Table 3**). **Map 1** shows the median age of the LA populations for 2007. Maps 1 to 6 have been constructed using categories defined by the 5th, 25th, 75th and 95th percentiles of the distribution of the median age variable for 2007. The map shows that LAs with the highest median ages tend to be located on the south and east coasts of England. These include West Somerset, Christchurch, Rother, East Dorset, Tendring, North Norfolk, East Lindsey, Berwick-Upon-Tweed and Alnwick. Although older people have low migration rates, the South West has the highest in-migration of people aged 60 and over of all Regions¹¹. This trend reflects the tendency for older people to choose coastal and rural areas as retirement destinations.

In 2007 Oxford had the lowest median age in the UK at 29 years. The presence of higher education institutions in Oxford increases the population of young adults, reducing the average age. Other areas highly populated by students and many inner London boroughs also have low median ages.

Figure 1

Age structure of the four UK constituent countries in 1997, 2007 and 2017 (projected)

Source: ONS Mid year population estimates and 2006-based UK population projections

Figure 2

Percentage distribution of population aged 65 and over in LAs within English regions in 2007

Source: ONS Mid year population estimates

In 1997 LAs in Northern Ireland had low median age, Derry being the lowest at 29 years. This may have resulted from higher fertility rates in Northern Ireland compared to the rest of the UK, where fertility peaked in the early 1960s but has since been declining. In 1992 the total period fertility rate in Northern Ireland dropped below replacement level (2.1) for the first time¹². As a result the population in Northern Ireland has been ageing significantly since 1997.

Box two

Interpreting box plots¹³

Median

The line in the box represents the median value of the data. If a set of observations is ordered by size, the median is the middle observation.

Boxes

The box itself contains the 'middle' 50 per cent of the data. If a set of observations is ordered by size, with the median being the middle observation, 25 per cent of the observations either side of the median will constitute the middle 50 per cent. The lower edge (hinge) of the box indicates the 25th percentile (lower quartile), and the upper hinge indicates the 75th percentile (upper quartile). The box represents the range of the middle two quartiles and is known as the interquartile range. It illustrates how the middle half of the data are spread.

Whiskers

The ends of the lines extending from the box (whiskers) indicate the minimum and maximum data values. If outliers are present the whiskers extend to the nearest data observation which lies within 1.5 times the interquartile range.

Outliers

The points beyond the whiskers are outliers. Values which lie more than 1.5 times the interquartile range away from the edge of the box are 'mild' outliers and are marked by a circle. Values which lie more than 3 times the interquartile range away from the edge of the box are 'extreme' outliers and are marked by a star.

West Somerset is projected to continue to have the highest median age, rising by 4 years to 56 years in 2017. **Map 2** shows the median age of LAs for 2017. When comparing maps 1 and 2, it is evident that LAs in the UK are projected to age dramatically over the next ten years.

Population age structure at the local authority level

Percentage of people aged 65 and over

In 2007 there were 9.8 million people in the UK aged 65 and over (16 per cent of the total population), an increase of 0.6 million since 1997. By 2017 this figure is projected to have grown by 25 per cent reaching 12.1 million (18 per cent of the total population). **Maps 3, 4 and 5** show the proportions of people aged 65 and over in 1997, 2007 and projected for 2017 respectively. In 2007 Christchurch had the largest proportion of people aged 65 and over at 30 per cent of the population (**Table 4**). The LAs with the highest proportion of people aged 65 and over are consistent with the LAs with the highest median ages. These areas are located on the south and east coast of England, reflecting retirement migration to coastal areas¹⁵. In 2007 Tower Hamlets had the smallest proportion of people aged 65 and over with 8 per cent of the population. The ten least aged local authorities, each with less than 10 per cent of their total population aged 65 and over, are all London boroughs. London has the highest out-migration of people aged 45 and over of all England

Table 3

The five LAs in the UK with the highest and the lowest median age in years

1997		2007		2017 (projected)	
Lowest median age in years					
Derry City	28.9	Oxford	29.0	Oxford	28.4
Tower Hamlets	29.1	Newham	30.2	Cambridge	29.8
Limavady	29.7	Manchester	30.2	Newham	30.7
Newham	30.1	Cambridge	30.2	Manchester	30.9
Magherafelt	30.4	Tower Hamlets	30.6	Tower Hamlets	31.6
Highest median age in years					
East Dorset	46.2	East Dorset	49.2	Rother	53.0
East Devon	46.7	Rother	49.9	East Dorset	53.2
West Somerset	48.0	Christchurch	50.1	North Norfolk	53.4
Rother	48.1	North Norfolk	50.4	Berwick-upon-Tweed	54.2
Christchurch	48.6	West Somerset	51.6	West Somerset	55.6

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

Map 1 Median age for all UK local authority areas in 2007 / Map 2 Projected median age for all UK local authority areas in 2017

1 Because of very low population numbers in certain age categories, data for City of London have been combined with Westminster, and data for the Isles of Scilly with Penwith.
Source: Map 1 – Mid-year population estimates, Office for National Statistics; Map 2 – Subnational population projections, Office for National Statistics, Welsh Assembly Government, General Register Office for Scotland and Northern Ireland Statistics and Research Agency

Map 3 Percentage of population aged 65 and over by UK local authority, 1997 / Map 4 Percentage of population aged 65 and over by UK local authority, 2007 / Map 5 Projected percentage of population aged 65 and over by UK local authority, 2017

1 Because of very low population numbers in certain age categories, data for City of London have been combined with Westminster, and data for the Isles of Scilly with Penwith.

Source: Map 3 – Mid-year population estimates, Office for National Statistics; Map 4 – Mid-year population estimates, Office for National Statistics; Map 5 – Subnational population projections, Office for National Statistics, Welsh Assembly Government, General Register Office for Scotland and Northern Ireland Statistics and Research Agency

Table 4

The five LAs with the highest and the lowest percentage population aged 65 and over

1997		2007		2017 (projected)	
Lowest percentage aged 65 and over					
Derry City	9.2	Tower Hamlets	7.8	Tower Hamlets	5.9
Limavady	9.5	Newham	8.1	Newham	7.7
Newham	9.9	Lambeth	8.5	Lambeth	8.0
Milton Keynes	10.0	Hackney	8.7	Southwark	8.2
Antrim	10.2	Camden	8.9	Camden	8.2
Highest percentage aged 65 and over					
Tendring	26.6	East Devon	26.6	East Dorset	31.9
West Somerset	26.9	North Norfolk	26.9	Rother	32.0
East Devon	27.2	Rother	28.0	North Norfolk	32.5
Rother	28.9	West Somerset	28.2	Christchurch	33.1
Christchurch	30.4	Christchurch	29.6	West Somerset	34.2

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

GORs, but the highest in-migration of people aged 20 to 29¹⁴. Many other urban LAs with large populations of young professionals and students also tend to have low proportions of people aged 65 and over, such as Milton Keynes, Derry, Limavady, Oxford, Manchester and Slough.

Derry had the smallest proportion of people aged 65 and over in 1997 at 9 per cent of the population. In 1997, three of the five areas with the lowest proportion of people aged 65 and over are located in Northern Ireland. Declining fertility rates over the second half of the 20th century have contributed to the rapid ageing of the population in Northern Ireland. High levels of international migration during the 1990s saw a great influx of working age migrants into London. Since 1997 London boroughs have replaced Northern Ireland areas as the least aged areas in the UK.

By 2017 West Somerset is projected to be the LA with the largest proportion of people aged 65 and over. Many of the areas with the lowest proportions of people aged 65 and over in 2007 are projected to become even younger by 2017.

Percentage change of population

The percentage change in the older population is a useful measure to identify the areas which are ageing rapidly. Table 5 shows that between 1997 and 2007, Rutland had the largest percentage increase in the number of people aged 65 and over at 34 per cent. Map 6 shows that during this period LAs in middle and eastern England, Scotland and Northern Ireland had the largest percentage increases in numbers of people aged 65 and over. Maps showing percentage change over time have been constructed broadly using categories defined by the 5th, 25th, 75th and 95th percentiles of the distribution in question for the period 1997 to 2007. However, in order to use zero as a category boundary (as is conventional when showing both positive and negative values on a map), some boundaries have been adjusted and the counts do not therefore reflect the percentiles previously chosen.

Seventy-five per cent (24) of London boroughs experienced a decline in the number of people aged 65 and over. These and other urban centres are also the locations of higher education institutions and tend to attract younger single migrants and experience net outward migration of families and older people¹¹.

Between 1997 and 2007 a number of coastal areas experienced a decline in the number of people aged 65 and over, despite being particularly aged areas in 1997 (for example, Brighton and Hove and Bournemouth). There have been decreases in the number of people aged 50 and over migrating to coastal areas from other LAs in the UK. At the same time there have

Table 5

The five local authorities with the highest and lowest actual and projected percentage change in population aged 65 and over

1997–2007		2007–2017 (projected)	
Lowest percentage change			
Barking and Dagenham	–18.8	Tower Hamlets	–13.3
Lewisham	–15.8	Barking and Dagenham	–7.0
Tower Hamlets	–15.8	Newham	–4.9
Brighton and Hove	–15.5	Oxford	–3.8
Wandsworth	–14.9	Lambeth	–2.1
Highest percentage change			
Wokingham	27.4	Huntingdonshire	47.7
Hart	29.8	Daventry	48.5
South Staffordshire	29.9	Milton Keynes	49.6
Lichfield	30.2	South Northamptonshire	50.0
Rutland	33.8	East Northamptonshire	52.6

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

been large increases in the number of people aged 50 and over migrating from these areas to other LAs in the UK. These areas have become very expensive to live in and are increasing in popularity with students, which may partly explain the decline in their appeal to older people. In many areas, it could also be possible that the older cohorts are not being sufficiently replaced by both younger cohorts who age *in situ*, or by new migration into the area.

Between 2007 and 2017 East Northamptonshire is projected to have the largest increase in the number of people aged 65 and over, at 53 per cent. Some areas of very high ageing will reflect the periods during which the areas experienced rapid development and hence large inflows of families. The parents will tend to stay put as they age although their children will tend to leave the family household and probably migrate (perhaps temporarily) to the city areas mentioned earlier. Between 2007 and 2017, 97 per cent of LAs are projected to experience growth in the numbers of people aged 65 and over. Map 7 shows that these areas are mostly located in Northern Ireland, East Midlands, north east Scotland, the Midlands and East Anglia.

Only 11 LAs are projected to experience a decline in the number of people aged 65 and over, compared to 76 LAs, which experienced decline between 1997 and 2007. This illustrates that the vast majority of UK LAs are ageing and are projected to continue to age. Nine of the 11 areas which are projected to experience a decline in the number of people aged 65 and over are London boroughs. For example, between 2007 and 2017, Tower Hamlets is projected to have the largest decrease in the number of people aged 65 and over at –13 per cent.

Classification Typology of Ageing

The Classification Typology of Ageing⁴ is a method of classifying change in population age structure over two or more time periods. For this analysis each LA is classified according to whether the number of people aged 65 and over has increased or decreased between 1997 and 2007 and is projected to increase or decrease between 2007 and 2017 (see Box 1). Eighty-two per cent of UK LAs are in the ‘growth’ category. This indicates that the majority of LAs are ageing between 1997 and 2007, and are also projected to age between 2007 and 2017.

Fifteen per cent of LAs are in the ‘projected growth’ category. This category contains those areas where the number of people aged 65 and over has been declining between 1997 and 2007, but is projected to grow between 2007 and 2017. Many of these areas are located on the south coast of England, the Midlands, Wales and Greater London (see Map 8).

Map 6 Percentage change in population aged 65 and over by UK local authority, 1997 to 2007 / Map 7 Projected percentage change in population aged 65 and over by UK local authority, 2007 to 2017

1 Because of very low population numbers in certain age categories, data for City of London have been combined with Westminster, and data for the Isles of Scilly with Penwith.

Source: Map 6 – Mid-year population estimates, Office for National Statistics; Map 7 – Mid-year population estimates, Office for National Statistics; Subnational population projections, Office for National Statistics, Welsh Assembly Government, General Register Office for Scotland and Northern Ireland Statistics and Research Agency

Map 8 Classification typology of population ageing projected for all UK local authorities, 1997 to 2017

¹ Because of very low population numbers in certain age categories, data for City of London have been combined with Westminster, and data for the Isles of Scilly with Penwith.

Source: Mid-year population estimates, Office for National Statistics; Subnational population projections, Office for National Statistics, Welsh Assembly Government, General Register Office for Scotland and Northern Ireland Statistics and Research Agency

Map 9 Classification typology of population ageing projected for all London Boroughs, 1997 to 2017

1 Because of very low population numbers in certain age categories, data for City of London have been combined with Westminster.

Source: Mid-year population estimates, Office for National Statistics; Subnational population projections, Office for National Statistics

Map 10 Percentage change in population aged 85 and over in all UK local authorities, 1997 to 2007 / Map 11 Projected percentage change in population aged 85 and over in all UK local authorities, 2007 to 2017

Table 6**Five local authorities in the UK with the highest and the lowest percentage population aged 85 and over**

1997		2007		2017 (projected)	
Lowest percentage aged 85 and over					
Tamworth	0.82	Tower Hamlets	0.85	Tower Hamlets	0.87
Derry City	0.83	Derry City	0.94	Newham	1.04
Limavady	0.86	Islington	1.04	Camden	1.05
Cannock Chase	0.93	Lambeth	1.05	Islington	1.07
Milton Keynes	0.95	Haringey	1.05	Haringey	1.10
Highest percentage aged 85 and over					
East Devon	3.96	Worthing	4.32	North Norfolk	5.05
Christchurch	4.29	Arun	4.40	Rother	5.10
Eastbourne	4.30	West Somerset	4.47	West Dorset	5.44
Worthing	4.37	Christchurch	4.76	Christchurch	5.57
Rother	4.61	Rother	4.78	West Somerset	5.73

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

Table 7**Five local authorities in the UK with the highest and lowest actual and projected percentage change in population aged 85 and over**

1997–2007		2007–2017 (projected)	
Lowest percentage change			
Waltham Forest	–17.3	Newham	–1.4
Haringey	–16.7	Lewisham	–0.1
Camden	–14.5	Waltham Forest	0.2
Hounslow	–14.0	Barking and Dagenham	3.4
Islington	–13.2	Richmond upon Thames	3.4
Highest percentage change			
Thurrock	66.6	Cookstown	71.4
Barrow-in-Furness	71.0	Strabane	73.7
Tamworth	71.8	Limavady	74.8
Cannock Chase	76.1	Newry & Bourne	82.1
Crawley	100.4	Carrickfergus	85.3

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

Table 8**The five local authorities in the UK with the highest and lowest old age support ratio (OASR)**

1997		2007		2017 (projected)	
Lowest Old Age Support Ratio					
Christchurch	1.52	Christchurch	1.48	West Somerset	1.45
Rother	1.56	Rother	1.58	Christchurch	1.46
West Somerset	1.73	West Somerset	1.61	North Norfolk	1.56
East Devon	1.75	North Norfolk	1.70	Rother	1.56
Tendring	1.78	East Dorset	1.70	East Dorset	1.58
Highest Old Age Support Ratio					
Derry City	5.43	Islington	6.76	Southwark	8.50
Haringey	5.48	Camden	6.80	Camden	8.66
Milton Keynes	5.55	Newham	7.00	Islington	8.72
Limavady	5.56	Lambeth	7.17	Lambeth	8.74
Lambeth	5.60	Tower Hamlets	7.80	Tower Hamlets	11.57

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

lay within Northern Ireland. However as shown in **Map 11** between 2007 and 2017, the rate of growth of people aged 85 and over in Northern Ireland is projected to be the highest in the UK; 14 out of the top 20 areas with the highest projected percentage change in people aged 85 and over are LAs in Northern Ireland. **Table 7** shows that Carrickfergus is projected to have the largest percentage increase in people aged 85 and over.

The Old Age Support Ratio (OASR)

The areas with the lowest OASR are located on the south coast of England. In 2007, Christchurch had the lowest OASR with 1.48 working age people to every person of SPA. By 2017 West Somerset is projected to have the lowest OASR in the UK, with 1.45 working age people to every person of SPA (**Table 8**).

In 2007 Tower Hamlets had the highest OASR with 7.80 working age people to every person of SPA. In 2007, all five of the areas with the highest OASR, were located in London, compared to only two London boroughs in 1997. In 1997, Derry and Limavady had a high proportion of working age people to every person of SPA, as did Milton Keynes, although these areas have since experienced a period of rapid ageing. Between 2007 and 2017 the OASRs in central London are projected to rise even higher. For example, it is projected that in 2017 there will be 11.57 people of working age to every person of SPA in Tower Hamlets. This reflects the increasing number and proportion of working age people living in London.

Figure 3 shows that only 14 LAs appear at least once in the bottom ten OASRs measured annually between 1997 and 2017. Some areas (North Norfolk, East Dorset, East Devon, West Somerset, Rother and Christchurch) consistently have low OASRs. **Figure 4** shows equivalently that 17 LAs have been in the highest ten OASR category at least once between 1997 and 2017. Three (Lambeth, Hackney and Newham) are consistently present.

Measures of ageing

Different measures were used in this report to give a full insight into how population age structure is changing at the subnational level. The measures used included median age, percentage aged 65 and over, and the OASR.

Figure 3**Local areas where the OASR occurs in bottom-ten most frequently between 1997 and 2017 (projected)**

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

Figure 4 Local areas where the OASR occurs in top ten most frequently between 1997 and 2017 (projected)

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

Figure 5 shows the population age structure of Westminster compared to Oxford. In 2007 both areas had the same percentage of people aged 65 and over (11 per cent) and the same OASR (5.6), but had differing median ages (34 and 29 respectively). Central London areas, such as Westminster tend to attract a lot of international and internal migrants aged between 25 and 64. However, areas with popular higher education institutions, such as Oxford tend to have a large percentage of young adults aged between 18 and 24. The relatively high percentage of young adults in Oxford has resulted in the lower median age of the population when compared with Westminster. This example illustrates that more than one measure of ageing is needed to get a full picture of the changes in age structure occurring in an area.

Local Authority Case Studies

The following section explores the changes in age structure in three LAs: Brighton and Hove, Tower Hamlets and Coleraine.

Figure 5 Age structure of populations in Westminster and Oxford local areas in 2007

Source: ONS Mid year population estimates

Figure 6 Difference in population by single year of age and gender (2007 less 1997), Brighton and Hove

Source: ONS Mid year population estimates

Brighton and Hove

Brighton and Hove is located on the south coast of England. Over recent years, the population age structure in Brighton and Hove has become less aged. Outside London, Brighton and Hove had the largest decrease in the number of people aged 65 and over of 16 per cent. In 1997, 18 per cent of people were aged 65 and over and this declined to 15 per cent in 2007. By 2017, it is projected that only 14 per cent of the population will be aged 65 and over. Brighton and Hove is one of the few LAs on the south coast of England to have such a low proportion of older people.

Since university designation in 1992 the University of Brighton has grown steadily in both size and numbers. Partly as a result, Brighton and Hove had the tenth highest net inflow of people aged 18 to 24 in England and Wales, at just over 1600 people in 2007. In 2007 Brighton and Hove was also ranked the fourth lowest in terms of net migration of people aged 65 and over to other LAs in England and Wales, with a net outflow of 530 people. **Figure 6** illustrates the increase in young adults in Brighton and Hove since 1997, especially for females. This has been coupled with a general decrease in people aged 65 and over since 1997. This increase in younger people into the area coupled with rising house prices and the vibrant social scene in Brighton may have made the area less attractive for older people to live, therefore causing a net migration outflow of older people. These net outflows have been larger for females than males at ages 85 and over, every year between 1999 and 2008. This explains why the differences for males and females diverge at ages 85 and over.

Brighton is in the 'projected growth' category for the Classification Typology of Ageing. This means that even though the number of people aged 65 and over has been declining between 1997 and 2007, it is projected that the number of those aged 65 and over will grow between 2007 and 2017, by 2 per cent.

Tower Hamlets

Tower Hamlets is located in East London. It is one of only 11 LAs in the UK which experienced a decline in the number of people aged 65 and over between 1997 and 2007, and is projected to experience further decline between 2007 and 2017. In the years 2007 and 2017 Tower Hamlets had and is expected to have the lowest proportion of people aged 65 and over, and 85 and over. Between 2000 and 2001 areas in and around London had the largest migration outflow of people aged 50 and over to other areas in the UK, which suggests that London is not a desirable destination for retirement¹⁵.

Figure 7**Age structure of population in Tower Hamlets in 1997, 2007 and projected for 2017**

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

In 1997, 11 per cent of the population were aged 65 and over. This decreased to 8 per cent in 2007. By 2017 Tower Hamlets is projected to have only 6 per cent of the population aged 65 and over. **Figure 7** shows a decrease in the proportion of people aged 65 and over, as well as a decrease in the proportion of people aged 0 to 15. Despite this, the median age of the population of Tower Hamlets has been increasing gradually. In 1997 the median age was 29 years and by 2007 the median age had increased to 31 years. By 2017 the median age is projected to increase to 32 years. This indicates that although the population of older people in Tower Hamlets is getting smaller, the age structure is changing in such a way that the working age population is getting older, resulting in an increasing average age of the population.

The OASR increased from 5.0 in 1997 to 7.8 in 2007 and is projected to increase to 11.6 in 2017. This shows that the increase in the working age population and the decrease in the population aged 65 and over has a major effect on the age structure of the population. **Figure 8** shows the decrease in older people, coupled with the increase in people of working age, since 1997.

Figure 8**Difference in population by single year of age and gender (2007 less 1997) in Tower Hamlets**

Source: ONS Mid year population estimates

Figure 9**Age structure of population in Coleraine in 1997, 2007 and projected for 2017**

Source: ONS Mid year population estimates and 2006-based UK subnational population projections

Recent trends in London show a net outflow of people migrating to other areas in England and Wales¹⁴. The 2001 census recorded a net loss of people aged 0 to 15 in London, as well as net losses of all age categories above the age of 30, with the exception of those 75 and over in the year prior to the census¹⁶. London, however, has a high net inflow of people aged 20 to 24¹⁴, probably reflecting the attraction of London to university graduates. This helps explain the decrease in the proportion of people aged 0 to 15 in Tower Hamlets, as well as the gains in the working age population.

Coleraine

Coleraine is located on the north coast of Northern Ireland. It is part of the causeway coast and officially an Area of Outstanding Natural Beauty. The population of Coleraine is ageing rapidly. **Figure 9** shows the changing age structure in Coleraine for the years 1997, 2007 and 2017. In 2007, 9200 people (16 per cent of the population) were aged 65 and over, a 22 per cent increase since 1997. By 2017, 21 per cent of the population are projected to be 65 and over, a further increase in number of 2300 (26 per cent) since 2007. This is the LA with the second highest percentage of people aged 65 and over in Northern Ireland.

Coleraine has become more and more attractive to older people in recent years as a retirement destination, much like the aged areas on the south coast of England. Despite the main campus of the University of Ulster being situated in Coleraine, the number of young adults aged 18 to 24 have been declining and are projected to continue to decline. **Figure 10** shows there are fewer young people (aged 18 to 35) in 2007 and a greater number of people aged 40 and over in comparison to 1997. It is likely this is a result of a net outflow of young people over the decade and a net inflow of people aged 40 and over¹⁷.

Conclusions

This article has explored differences in population age structure at the subnational level. It has described the changes that have occurred and are projected to occur in the number and relative size of the older population in LAs in the UK. Different measures of ageing have been used to describe changes in the average age of the whole population and the relative size of the older population.

The most aged areas in the UK are located on the south coast of England, whereas the least aged areas tend to be located in urban areas,

Figure 10

Difference in population by single year of age and gender (2007 less 1997) in Coleraine

Source: ONS Mid year population estimates

such as London, and in areas highly populated by students, such as Oxford. Between 1997 and 2007, LAs in middle and eastern England, Scotland and Northern Ireland have experienced the largest increases in the number of people aged 65 and over. Similarly, between 2007 and 2017, LAs in Northern Ireland, East Midlands, north east Scotland, the Midlands and Eastern England are all projected to have large increases in the number of people aged 65 and over.

Key findings

- The most aged LAs tend to be located on the south coast of England. In 2007 West Somerset had the highest median age in the UK at 52 years and Christchurch had the highest percentage of people aged 65 and over at 30 per cent.
- In 2017 West Somerset is projected to have the highest median age at 56 and the highest proportion of people aged 65 and over at 34 per cent.
- Almost 97 per cent of LAs are projected to experience growth in the number of people aged 65 and over between 2007 and 2017. East Northamptonshire is projected to have the largest increase in the number of people aged 65 and over at 53 per cent.
- Between 2007 and 2017 only 11 LAs are projected to experience a decline in the number of people aged 65 and over. Nine of these areas are London Boroughs and include Tower Hamlets, Barking and Dagenham, Newham and Islington.
- In 2007 Rother had the highest percentage of people aged 85 and over at 4.8 per cent. The ten LAs with the highest percentages of people aged 85 and over are all located on the coast, mostly in the South and East of England.
- All LAs with the exception of Newham and Lewisham are projected to experience increases in the number of people aged 85 and over between 2007 and 2017. Carrickfergus in Northern Ireland is projected to experience the largest increase at 85 per cent.
- Bournemouth and Brighton and Hove experienced a decline in the number of people aged 65 and over between 1997 and 2007, despite being within the top 25 per cent most aged areas in 1997. Over the last decade these areas have experienced declining net internal migration of people aged 50 and over.
- The areas with the lowest Old Age Support Ratios are located on the south coast, such as Christchurch, Rother and West Somerset.

A project is currently underway to create an interactive data visualisation tool for users to explore the population data collected and measures calculated for the analysis in this report. This tool will be released in Winter 2009.

Appendix

Geography of the UK at the Subnational Level

Within the UK constituent countries there are different groups of territorial units such as administrative, postal and health geographies, each with a different geographic hierarchy. The estimates in this report are based upon administrative geography. Within each country, the structure of administrative geography differs according to how local government is structured.

England can be broken down into 9 Government Office Regions (GORs), which are further subdivided into 33 London boroughs, 239 non-metropolitan districts, 36 metropolitan districts, and 46 unitary authoritiesⁱ. Wales is currently subdivided into 22 unitary authorities, Scotland is currently subdivided into 32 council areas and Northern Ireland is currently subdivided into 26 local government districts. More information on UK geography can be found on the ONS website. Each of these local areas are considered equivalent to each other and are referred to as Local Authorities (LAs) when used collectively. There are 434 LAs across the UK in total. The analysis in the report, Isle of Scilly and City of London data have been combined with Penwith and Westminster respectively, due to the very small population sizes in certain categories.

In addition, the geographical structures of each country have been subject to a number of changes over time. When comparing data over time and across nations, adjustments are needed. The population estimates and projections we are using are all based upon 2001 Local Area boundaries to ensure that the population figures we are comparing over time are valid.

References

- 1 Office for National Statistics (2008) *More pensioners than under-16's for first time ever*. Available at: www.statistics.gov.uk/cci/nugget.asp?ID=949
- 2 Dini E and Goldring S (2008) 'Estimating the changing population of the 'oldest old''. *Population Trends* 132, pp 8–16.
- 3 Walford N S and Kurek S (2008) 'A comparative analysis of population ageing in urban and rural areas of England and Wales, and Poland over the last three census intervals'. *Population, Space and Place* 14(5), pp 365–386.
- 4 Dunnell K (2008) 'Ageing and mortality in the UK: National statistician's annual article on the population'. *Population trends* 134, pp 6–23.
- 5 Office for National Statistics (2005) *Making a population estimate in England and Wales. National Statistics Methodology Series No. 34*. Available at: www.statistics.gov.uk/downloads/theme_population/Making_PopulationEstimate.pdf
- 6 Northern Ireland Statistics and Research Agency (2006) *How are population estimates created? The methodology*. Available at: www.nisra.gov.uk/archive/demography/publications/mye_methodology.pdf
- 7 Office for National Statistics. *Populations estimates data for England, Wales, Scotland and Northern Ireland*. Available at: www.statistics.gov.uk/StatBase/Product.asp?vlnk=601
- 8 Office for National Statistics (2008) *2006-based subnational population projections for England: Briefing note on methodology, assumptions and future work programme*. Available at: www.statistics.gov.uk/downloads/theme_population/SNPP-2006/SNPP_Issues_and_Guidance.pdf

ⁱ New Unitary geography that came into being on 1/4/09 is not considered here.

- a Welsh Assembly Government (2008) *Local authority population projections for Wales (2006-based)*. Available at: <http://wales.gov.uk/docrepos/40382/40382313/statistics/population/popproj-leaflet.pdf?lang=en>
 - b General Register Office for Scotland (2008) *Population projections Scotland (2006-based): Population projections by sex, age and administrative area*. Available at: www.gro-scotland.gov.uk/files1/stats/population-projections-scotland-2006-based-population-projections-by-sex-age-and-administrative-area/population-projections-scotland-2006-based-population-projections-by-sex-age-and-administrative-area.pdf
 - c Northern Ireland Statistics and Research Agency (2008) *Northern Ireland local area population projections*. Available at: www.nisra.gov.uk/archive/demography/population/projections/Method_Sub_NI_Projs06.pdf
- 9 Office for National Statistics. 2006-based subnational population projections for England. Available at: www.statistics.gov.uk/statbase/product.asp?vlnk=997
- a General Register Office for Scotland. 2006-based population projections for Scottish areas. Available at: www.gro-scotland.gov.uk/statistics/publications-and-data/popproj/06pop-proj-scottishareas/index.html
 - b Welsh Assembly Government. 2006-based local authority population projections for Wales. Available at: www.statswales.wales.gov.uk/TableViewer/tableView.aspx?ReportId=5905
 - c Northern Ireland Statistics and Research Agency. Sub-Northern Ireland population projections, 2006. Available at: www.nisra.gov.uk/demography/default.asp47.htm
- 10 Welsh Assembly Government (2008) *Wales's population – A demographic overview*. Available at: <http://wales.gov.uk/docrepos/40382/40382313/statistics/population/pop2008/2088373/walespop08e5.pdf?lang=en>
- 11 Champion T (2004) *Ageing and migration trends*. Available at: http://eprints.ncl.ac.uk/file_store/nclep_691141724099.pdf
- 12 Northern Ireland Statistics and Research Agency (2008) *Annual report of the registrar general, 2007*. Available at: www.nisra.gov.uk/archive/demography/publications/annual_reports/2007/RG2007.pdf
- 13 Tromans N, Natamba E and Norman P (2008) 'Have national trends in fertility between 1986 and 2006 occurred evenly across England and Wales?' *Population Trends* 133, pp 7–19.
- 14 Office for National Statistics (2008) 'Internal migration estimates for local and unitary authorities in England and Wales, year to mid-2007'. *Population Trends* 133, pp 81–89.
- 15 Uren Z and Goldring S (2007) 'Migration trends at older ages in England and Wales'. *Population Trends* 130, pp 31–40.
- 16 Office for National Statistics (2005) *Focus on People and Migration*. Available at: www.statistics.gov.uk/statbase/Product.asp?vlnk=12899
- 17 Northern Ireland Statistics and Research Agency (2002) *Northern Ireland Census 2001 population report and mid-year estimates*. Available at: www.nisranew.nisra.gov.uk/census/pdf/NISRAPressRelease30Sept02.pdf