

Compendium

Results, 2012-based NPP Reference Volume



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1 . Introduction

This chapter presents the key findings from the 2012-based national population projections. Included are sections on:

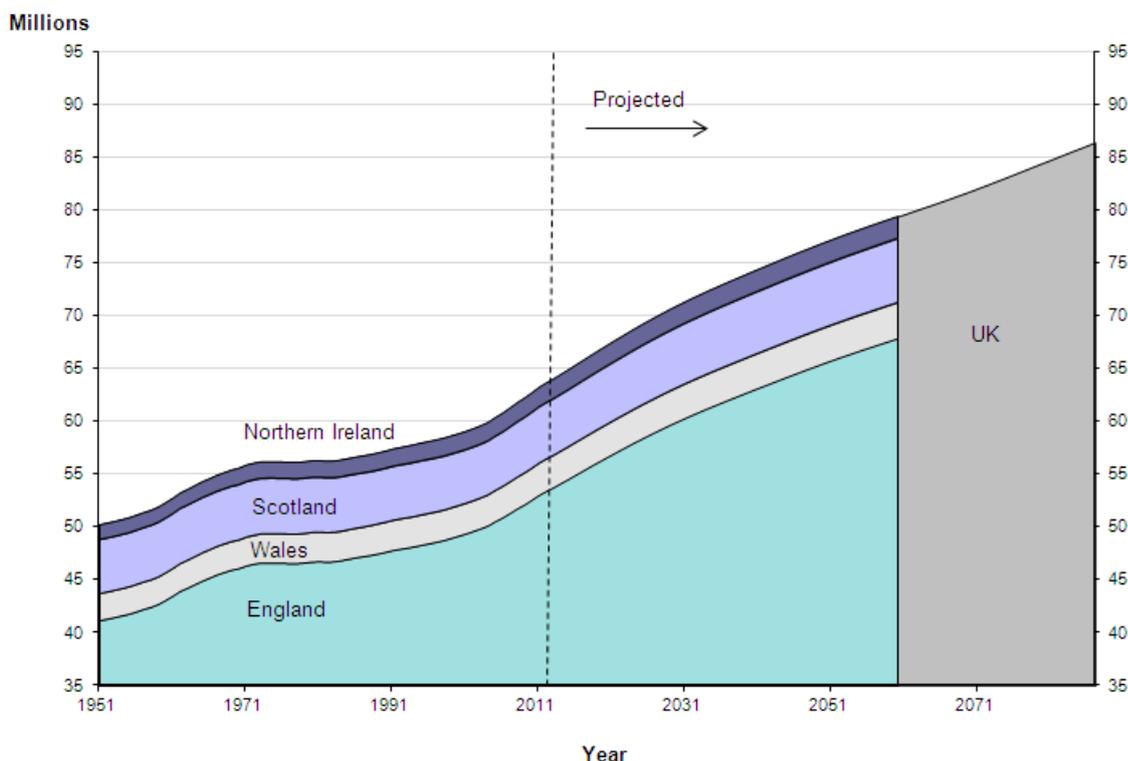
- future size of the population,
- age structure,
- comparison with the 2010-based population projections.

Discussion of the results of the variant projections can be found in [Chapter 6](#).

2 . Future size of the population

The United Kingdom population is projected to increase by 9.6 million (15%) to 73.3 million over the 25 year period to mid-2037. This increase is equivalent to an annual growth rate of 0.6% each year between mid-2012 and mid-2037. Longer term projections suggest that the population will continue rising beyond mid-2037 reaching 86.5 million by mid-2087. Figure 2-1 shows the actual and projected population of the UK and its constituent countries between mid-1951 and mid-2087.

Figure 2-1: Actual and projected population of the United Kingdom and constituent countries mid-1951 to mid-2087



The population of England is projected to increase by 16% by mid-2037. The population of the other UK countries are also projected to increase, but at a slower rate. Northern Ireland is projected to increase by 10%, Scotland by 9% and Wales by 8% over the 25 year period to mid-2037. Beyond mid-2037 the populations of England, Wales and Scotland are projected to continue to rise. However, Northern Ireland's population is projected to reach its peak in the mid 2050s.

3 . Births, deaths and migration

Of the 9.6 million projected increase in the population by mid-2037, 5.4 million (57%) is due to projected natural increase (more births than deaths) and 4.2 million (43%) is due to projected net migration. The projected number of births and deaths are themselves partly dependent on the assumed level of net migration. Because migration is concentrated at young adult ages, the assumed level of net migration affects the projected number of women of childbearing age and hence the projected number of births. Thus, about 60% of the projected increase in the population over the period mid-2012 to mid-2037 is either directly or indirectly attributable to future migration. Table 2-1 contains a breakdown of the components of population change of the UK population projections for the 5 year periods between mid-2012 and mid-2037.

Table 2-1: Projected components of change, United Kingdom, mid-2012 to mid-2037

	millions				
	2012- 2017	2017- 2022	2022- 2027	2027- 2032	2032- 2037
Population at start	63.7	65.8	68.0	70.0	71.7
Births	4.0	4.1	4.0	4.0	4.0
Deaths	2.8	2.8	2.9	3.1	3.3
Natural change	1.3	1.3	1.2	0.9	0.7
Net migration	0.8	0.8	0.8	0.8	0.8
Total change	2.1	2.1	2.0	1.8	1.6
Population at end	65.8	68.0	70.0	71.7	73.3

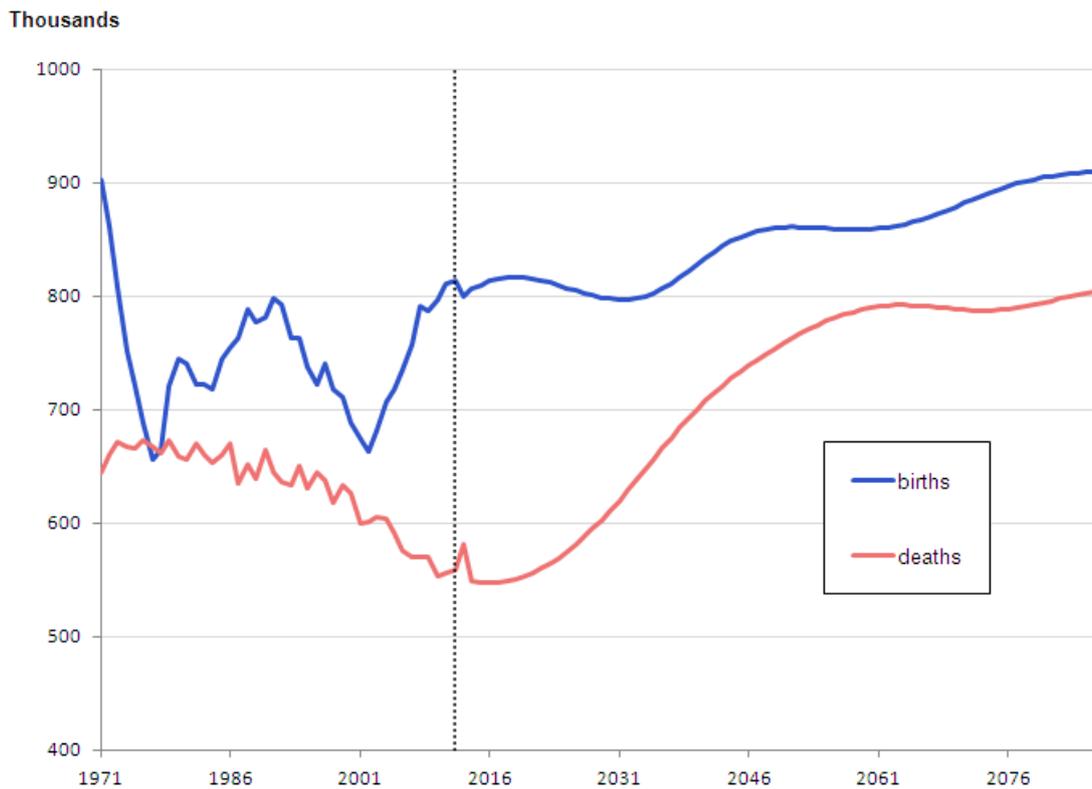
Source: Office for National Statistics

Note:

1. Figures may not sum due to rounding

With the single exception of 1976, the UK gained population through natural increase (more births than deaths) every year throughout the 20th century. Figure 2-2 shows the estimated and projected number of births and deaths in the UK since the year ending mid-1971.

Figure 2-2: Estimated and projected births and deaths, United Kingdom, year ending mid-1971 to year ending mid-2087



The equivalent charts for the constituent countries of the UK can be found in [appendices A-D of the Results report](#) published on 6 November 2013.

Between 2002 and 2008, total fertility rates¹ increased in all constituent countries of the UK, followed by a dip in 2009. All countries except Scotland then showed a recovery in 2010 with Wales showing another dip in 2011. For the 2012-based projections, the total fertility rate for the UK has been assumed to decrease slightly from 2012 to 2013 then stabilise at 1.89 from then on. Figure 2-2 shows that after the initial dip in 2012-2013, births are projected to rise until mid-2019, before declining slightly, then rising again from 2033.

The annual number of deaths has generally been declining in the last few years and, excluding the first year of the projections, is projected to continue to decline until mid-2016. For the remainder of the century, deaths are expected to rise, with the steep increase reflecting deaths to the large cohorts born after the Second World War and those born during the 1960s baby boom.

It is assumed that annual net inward migration into the UK will be 165,000 persons per year from the year ending mid-2019 onwards. In the short term, figures have been formulated to represent a smooth transition from the last year of actual data to the long-term assumptions. The year ending mid-2016 has the highest anticipated net migration with a projected net inward movement of 183,500. New methods have been used to model migration trends in setting the migration assumptions for the 2012-based projections. These are described in [Chapter 5](#).

4 . Age Structure

The age structure of the population is projected to change in future years as a result of past and projected changes in births, deaths and net migration. The main effects are summarised in Table 2-2 and Figure 2-3.

Table 2-2: Projected population by age, United Kingdom, mid-2012 to mid-2037

	millions					
Ages	2012	2017	2022	2027	2032	2037
0-14	11.2	11.7	12.2	12.3	12.2	12.2
15-29	12.6	12.4	12.1	12.3	12.9	13.3
30-44	12.8	12.7	13.3	13.6	13.5	13.2
45-59	12.6	13.3	13.0	12.6	12.4	13.0
60-74	9.4	10.1	10.7	11.6	12.3	12.1
75 and over	5.0	5.5	6.6	7.7	8.5	9.5
75-84	3.6	3.8	4.6	5.3	5.4	5.9
85 & over	1.4	1.7	2.0	2.4	3.1	3.6
All ages	63.7	65.8	68.0	70.0	71.7	73.3
Median age (years)	39.7	40.1	40.6	41.3	42.1	42.8
Under 16	12.0	12.4	13.0	13.1	13.0	13.0
Working age ¹	39.4	41.0	42.4	42.9	43.1	44.2
Pensionable age ¹	12.3	12.4	12.5	13.9	15.6	16.1
Dependents per 1,000 persons of working age						
Under 16	304	304	306	305	303	294
Pensionable age ¹	311	304	295	324	362	365
Total	615	607	602	630	665	659

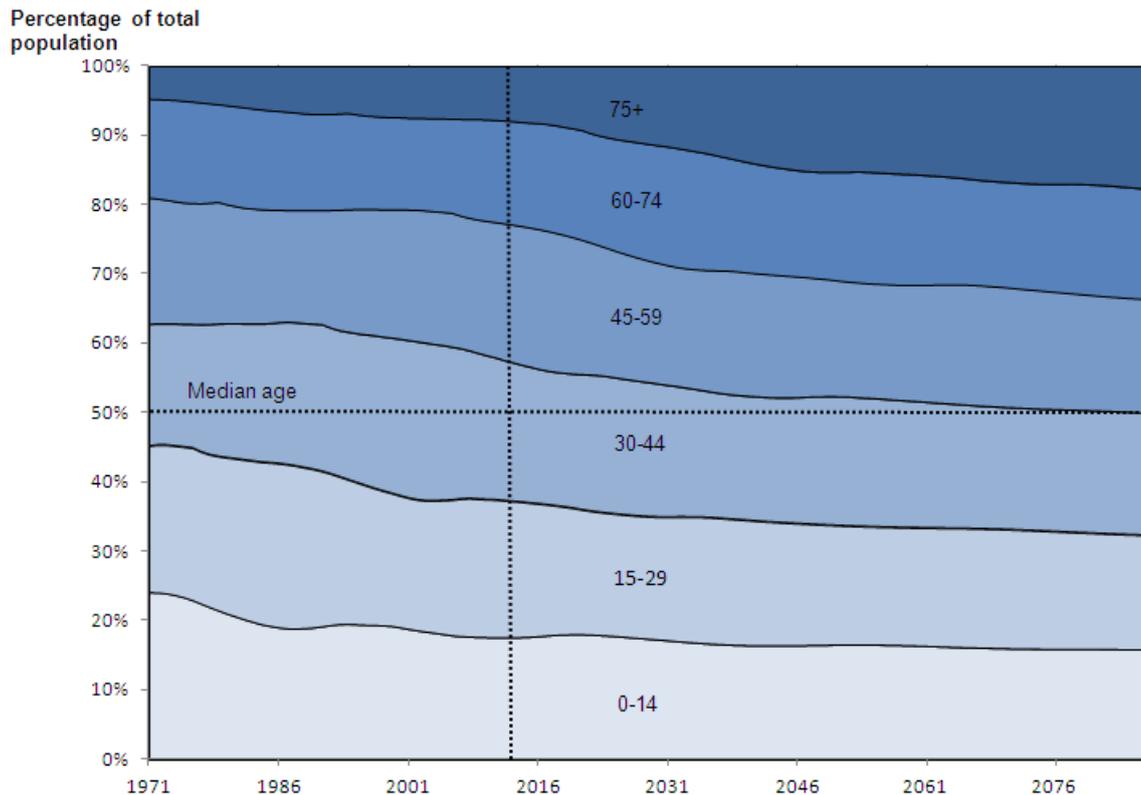
Source: Office for National Statistics

Notes:

1. Working age and pensionable age populations based on State Pension age for given year. Between 2012 and 2018, State Pension age will change from 65 years for men and 61 years for women, to 65 years for both sexes. Then between 2019 and 2020, State Pension age will change from 65 years to 66 years for both men and women. Between 2034 and 2046, State Pension age will increase in two stages from 66 years to 68 years for both sexes. This is based on State Pension age under the 2011 Pensions Act

2. Figures may not sum due to rounding

Figure 2-3: Percentage age distribution, United Kingdom, mid-1971 to mid-2087



Source: Office for National Statistics

The equivalent charts for the constituent countries of the UK can be found in [appendices A-D of the Results report](#) published on 6 November 2013.

The age structure is projected to become gradually older with the median age of the population increasing from 39.7 years in mid-2012 to 42.8 years in mid-2037. Longer term projections show continuing ageing with the median age reaching 45.1 years by mid-2087.

Particularly notable is the projected increase in the population at older ages. By mid-2037, 13% of the population of the UK is projected to be aged 75 and over, compared to 8% in mid-2012. By mid-2087, this figure is projected to increase to 18%. The number of people aged 80 or over is projected to more than double by mid-2037, the number of people aged 90 or over is projected to more than triple, and the number of centenarians is projected to rise from 13,000 in mid-2012 to 111,000 in mid-2037, a more than eightfold increase. The increase in the number of older people means that by mid-2037 one in 12 of the population is projected to be aged 80 or over.

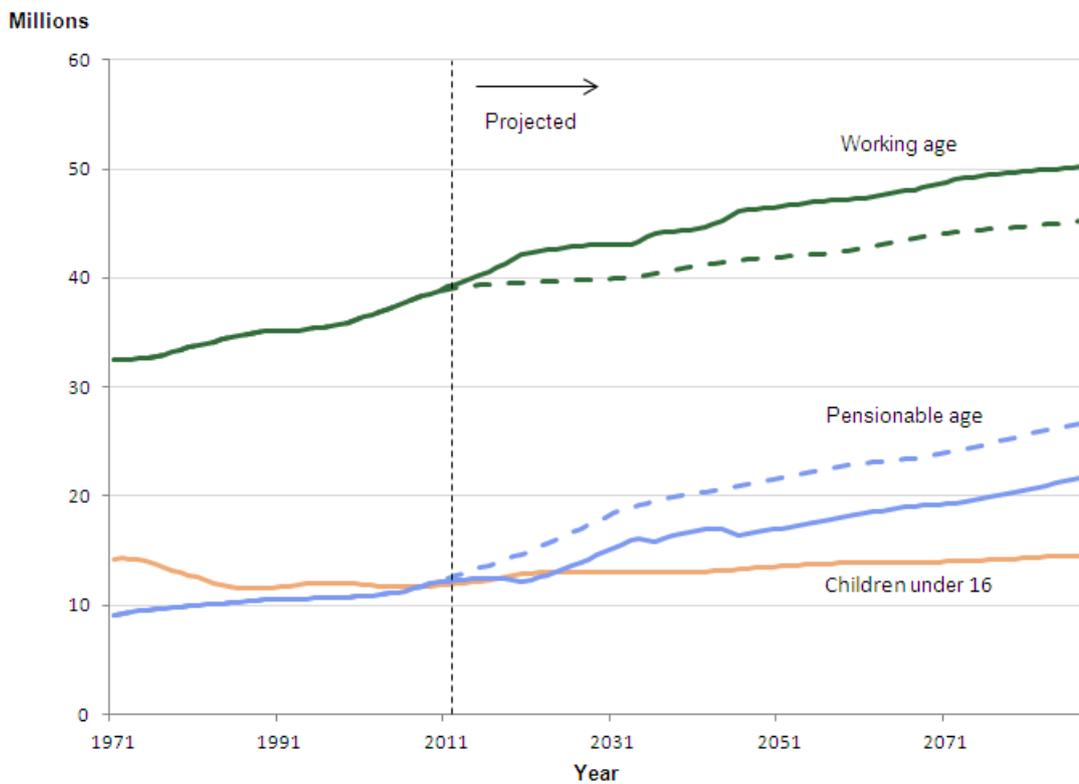
Children and the population of working and pensionable ages

Under legislation introduced by the Pensions Act 1995, women's State Pension age was due to be equalised with men's, rising from 60 years in 2010 to 65 years by 2020. Following this, both women's and men's State Pension age would have increased to 66 years by 2026 under the Pensions Act 2007 and would then rise to 67 years by 2036, and to 68 years by 2046.

Under the provisions of the Pensions Act 2011², this timetable was amended. The State Pension age will change from 65 years for men and 60 years for women to 66 years for both sexes between 2018 and 2020. To enable the increase to 66 to be implemented from 2018, the Act also amended the timetable for equalising women's State Pension age with men's so that women's State Pension age rises more quickly from 2016 to reach 65 by 2018. There will then follow an increase in two stages to 68 years for both sexes between 2034 and 2046. The 2012-based projections presented in this report and on the ONS website incorporate these changed definitions to State Pension age as they occur during the projection period.

The government has recently proposed to introduce a flat rate (single-tier) State Pension from April 2016 and raise the State Pension age from 66 to 67 years gradually between 2026 and 2028. As these proposed changes are not yet law and still require the approval of Parliament, they have not been incorporated within the pension age projections assumptions. Further information relating to these proposals can be found on the gov.uk website³

Figure 2-4: Actual and projected number of children and populations of working and pensionable ages, United Kingdom, mid-1971 to mid-2087



Source: Office for National Statistics

Notes:

1. Working age and pensionable age populations based on State Pension age for given year. Between 2012 and 2018, State Pension age will change from 65 years for men and 61 years for women, to 65 years for both sexes. Between 2019 and 2020, State Pension age will change from 65 years to 66 years for both men and women. Between 2034 and 2046, State Pension age will increase in two stages from 66 years to 68 years for both sexes
2. The dotted lines show what the projected population at working age and pensionable age would have been if the Pension Acts of 2005, 2007 and 2011 had not been introduced i.e. a State Pension age of 65 years for men and 60 years for women has been applied throughout

The definition of the working age population used in this report is people aged between 16 and State Pension age. The size of the working age population is affected by a number of different factors. This includes the level of net migration (much of which is of young adults), the survivors of births 16 years earlier who enter the working age population and the size of the cohort about to leave the working age population and become State Pension age.

The working age population is projected to rise from 39.4 million in mid-2012 to 44.2 million by mid-2037 and then reach 50.2 million by mid-2087. If State Pension age had remained at 65 years for men and 60 years for women, the population of working age would have been projected to rise to 40.5 million in mid-2037 and 45.2 million by mid-2087.

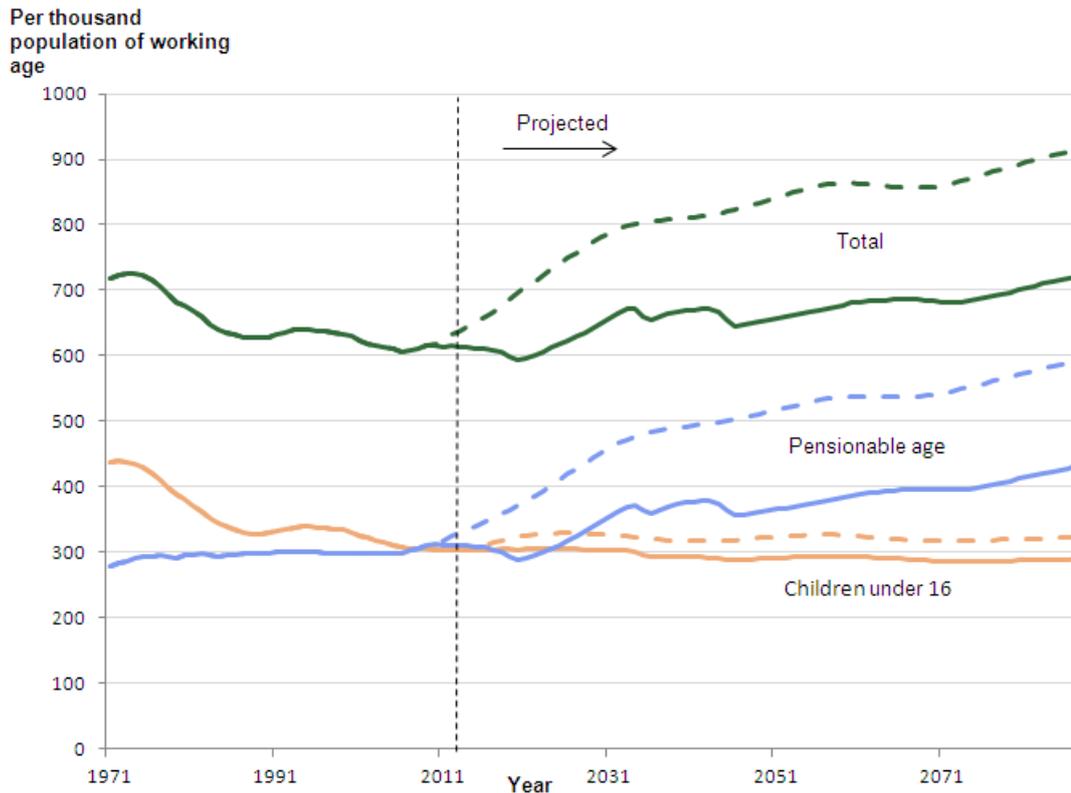
Despite increases to State Pension age, the population of pensionable age is projected to increase by 31% from 12.3 million in mid-2012 to 16.1 million by mid-2037. This increase is projected to continue into the long term reaching 21.7 million by mid-2087. Assuming State Pension age remained at 65 years for men and 60 years for women, the population of this age group would have been projected to rise to 19.7 million by mid-2037, and to 26.7 million by mid-2087 (3.6 and 5.0 million higher respectively than with the current changes).

The number of children under the age of 16 is projected to rise by around 8% from 12.0 million in mid-2012 to 13.0 million in mid-2037. This number is projected to continue to increase to 14.6 million by mid-2087.

Dependency ratios

Changes to the age structure will over time impact on the proportion of dependents in the population. The dependency ratio is the number of children aged under 16 or the number of people of pensionable age (or the sum of the two) per 1,000 people of working age. These figures provide an indication only of dependency as in reality full-time education ends and retirement starts at a range of ages. Research has shown that labour market changes have in the past been a more important factor than demographic trends in influencing real (economic) dependency⁴. Table 2-2 and Figure 2-5 show the actual and projected dependency ratios for the UK.

Figure 2-5: Actual and projected dependency ratios, total, children and pensionable ages, United Kingdom, mid-1971 to mid-2087



Source: Office for National Statistics

Notes:

1. Working age and pensionable age populations based on State Pension age for given year. Between 2012 and 2018, State Pension age will change from 65 years for men and 61 years for women, to 65 years for both sexes. Between 2019 and 2020, State Pension age will change from 65 years to 66 years for both men and women. Between 2034 and 2046, State Pension age will increase in two stages from 66 years to 68 years for both sexes
2. The dotted lines show what the projected population at working age and pensionable age would have been if the Pension Acts of 2005, 2007 and 2011 had not been introduced i.e. a State Pension age of 65 years for men and 60 years for women has been applied throughout

The total dependency ratio (the number of dependants aged under 16 or of pensionable age per 1,000 of the working age population) for the UK was 615 in mid-2012. Over the period until mid-2020 when the State Pension age for both men and women is set to rise to 66 years, the total dependency ratio is projected to decline. There then follows an increase in the ratio until mid-2034, after which there is some fluctuation as further changes in State Pension age come into effect between 2034 and 2046.

The longer-term projections suggest a total dependency ratio of 722 dependants per 1,000 persons of working age by mid-2087, which is similar to the ratios observed in the early 1970s. In the 1970s the majority of dependants were children, whereas longer term projections comprise more dependants of pensionable age than those aged under 16. Research suggests that the cost of supporting a person aged 65 and over is, on average, greater than that to support a child⁵.

Without the changes to State Pension age, the total dependency ratio would be projected to increase to a much higher level, with 714 dependants per 1,000 people of working age by mid-2022, 807 by mid-2037 and 914 by mid-2087.

The child dependency ratio (the number of children aged under 16 per 1,000 people of working age) declined markedly in the 1970s and 1980s. After some increases observed in the 1990s, it continued to decline to a ratio of 304 children per 1,000 people of working age in mid-2012. The child dependency ratio is projected to fluctuate over the next 75 years but remain within a relatively narrow range. The highest expected ratio during the projection period (307 children per 1,000 people of working age) is expected in mid-2023 whilst the lowest ratio (286 children) is expected around mid-2074. The changes to the State Pension age results in an increase to the working age population. Without these changes, the child dependency ratio would be slightly higher.

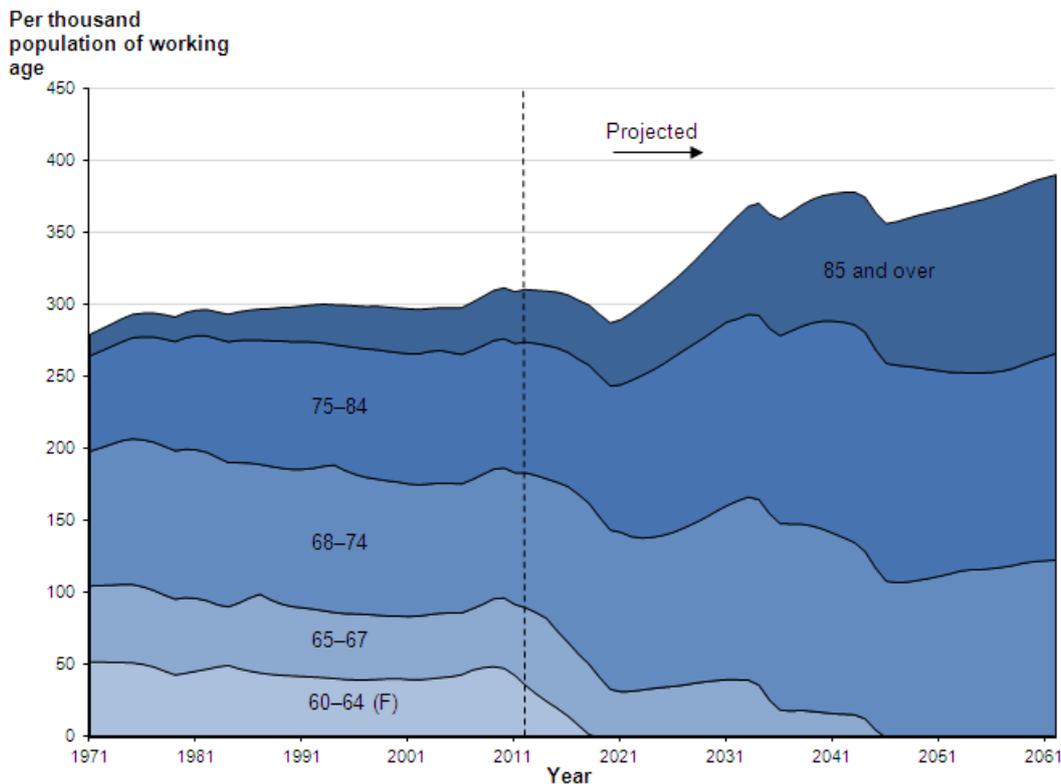
The pensionable age dependency ratio (the number of people of State Pension age per 1,000 people of working age) is affected more by the changes to the State Pension age and shows a very similar pattern to that of the total dependency ratio. The pensionable age dependency ratio is projected to fall from 311 per 1,000 persons of working age in mid-2012 to 288 by mid-2020. It then increases to 371 pensioners per 1,000 people of working age in mid-2034 before showing some fluctuation but eventually reaching a ratio of 432 by mid-2087.

Without the changes in State Pension age, the pensionable age dependency ratio would have steadily risen over the projection period, reaching 386 pensioners per 1,000 people of working age in mid-2022, 487 in mid-2037 and 591 in mid-2087 compared to figures of 295, 365 and 432 respectively based on the projections including the State Pension age changes.

Figure 2-6 splits the pensionable age dependency ratio into five age bands (60-64 (females only), 65-67, 68-74, 75-84 and 85 and over). The first two bands represent the age groups which become part of the working age population by 2046. In mid-2012, persons aged 75 and over represented 41% of the population of pensionable age. This is projected to increase to 59% by mid-2037 and 71% by mid-2087.

Population ageing will be experienced to a greater or lesser extent in all Western countries. The latest Eurostat projections⁶ based on the population in 2010 show that the UK will have proportionately fewer older people than most other EU countries over the coming decades.

Figure 2-6: Actual and projected pensionable age dependency ratio, by age of dependent, United Kingdom, mid-1971 to mid-2062



Source: Office for National Statistics

Notes:

1. Working age and pensionable age populations based on State Pension age for given year. Between 2012 and 2018, State Pension age will change from 65 years for men and 61 years for women, to 65 years for both sexes. Between 2019 and 2020, State Pension age will change from 65 years to 66 years for both men and women. Between 2034 and 2046, State Pension age will increase in two stages from 66 years to 68 years for both sexes

5 . Long-term projections to mid-2087

The main focus of the projections is on the period to mid-2037. Longer-term projections have been discussed where appropriate. However, projections become increasingly uncertain the further they are carried forward into the future as demographic trends can change from those being assumed.

The annual number of births is projected to still be increasing in the long-term, reaching around 910,000 by mid-2087. The annual number of deaths is projected to reach about 806,000 by mid-2087. The excess of births over deaths is projected to reach a peak of 268,000 by mid-2018 before reducing to a difference of around 69,000 in mid-2061. After this point, the excess of births over deaths is projected to increase on an annual basis to 111,000 in mid-2071, before starting to slowly decline. These patterns are mainly the result of the current age structure of the UK. The excess of births over deaths, combined with the assumed level of net inward migration, means that the UK population is projected to continue rising strongly throughout the projection period reaching 86.5 million by mid-2087.

Population increases are greatest at the oldest ages. The number of people aged 60 and over is projected to rise throughout the projection period, with more than twice the number aged 60 and over by mid-2087 compared with mid-2012 (29.1 million compared with 14.5 million). However, the number of persons aged over 75 is projected to rise even faster, doubling by mid-2040 and more than trebling by mid-2087.

Although these very long-term figures are subject to great uncertainty, they show the consequences that would follow if the long-term assumptions of fertility, mortality and migration were to be realised in practice.

Longer term projections to mid-2112 are available on the ONS website for users who require them but these should be treated with extreme caution. They are not considered appropriate for a wide range of users but have been made available in line with making datasets publicly available under the government's transparency agenda.

6 . Comparisons with 2010-based projections

The 2012-based population projections are different to the 2010-based projections as the 2012-based figures use the latest available population estimates (mid-2012) as the base year. Further to the 2010-based projections, the underlying assumptions about future fertility, mortality and migration have been reviewed. Revised assumptions have been adopted for the 2012-based projections.

Changes in assumptions

Table 2-3 shows the long term fertility, mortality and migration assumptions used in the 2012-based population projections compared with those used for the 2010-based projections.

Table 2-3: Long-term principal assumptions for the 2012-based national population projections compared with assumptions for the 2010-based projections

	United Kingdom	England	Wales	Scotland	Northern Ireland
Fertility – Long-term average number of children per woman					
2012-based	1.89	1.90	1.90	1.75	2.00
2010-based	1.84	1.85	1.85	1.70	1.95
Mortality - Expectation of life at birth in 2037 ¹					
Males 2012-based	84.0	84.3	83.6	81.9	83.3
Males 2010-based	83.6	83.9	83.1	81.1	82.6
Females 2012-based	87.3	87.5	86.9	85.4	86.8
Females 2010-based	87.2	87.4	86.8	85.4	86.8
Net migration ² – Annual long-term assumption					
2012-based	+165,000	+143,500	+6,000	+15,500	0
2010-based	+200,000	+172,500	+10,000	+17,500	0

Source: Office for National Statistics

Notes:

1. Expectations of life for 25 years ahead given as example year. Note these are period expectations of life based on the mid-year mortality rates assumed for the year 2037 and do not take account of the continuing improvement in mortality projected beyond 2037.
2. Net migration includes international migration and cross-border migration between the countries of the UK.

Fertility

The long-term assumptions of completed family size for the UK and constituent countries are higher than the 2010-based projections. This increase is based on the observation that the falling completed family size for women has slowed in recent years, and younger cohorts partway through their childbearing years look set to have similar levels of completed fertility to those who have recently completed childbearing.

Mortality

The 2012-based projections assume that rates of improvement will converge to 1.2% for most ages in mid-2037, and remain at 1.2% each year thereafter. Those born between 1925 and 1938 are assumed to experience higher rates of improvement than 1.2% in mid-2037, while those born before 1922 are assumed to experience annual mortality improvements below 1.2%. These are the same assumptions for the rates of mortality improvement in the target year as those used in the 2010-based projections (where the target year was mid-2035). The projected period life expectancies at birth for mid-2037 are around 0.1 years higher than in previous projections for females and 0.4 to 0.8 years higher for males.

Migration

The long-term assumption for net migration to the United Kingdom is +165,000 each year, compared with +200,000 a year in the 2010-based projections. The assumed level of annual net migration to England is +143,500, which is 29,000 lower than for the 2010-based projections. For Wales it is 4,000 lower at +6,000 at year, and for Scotland it is 2,000 lower at +15,500 a year. The assumption for Northern Ireland is the same as that used for the 2010-based projections. These changes reflect the most recent trends in both international migration and cross-border migration between the four constituent countries of the UK.

Base population

Since the 2010-based projections were published the results of the 2011 Census have been released and used to rebase the population estimates series. There were around 500,000 more people estimated by the 2011 United Kingdom Census than had been previously estimated.

Table 2-4 shows the actual population change between mid-2010 and mid-2012 compared to the projected change from the 2010-based projections. At mid-2012 the estimated population of the UK was 461,000 higher than the projections for mid-2012 in the 2010-based projections. The vast majority of this difference can be attributed to the intercensal discrepancy which had accumulated in the population estimates between the 2001 and 2011 Censuses. However, the impact of the underestimate in the base population for the 2010-based projections was reduced in part by an over projection of births and net migration and an under projection of deaths.

Table 2-4: Population change mid-2010 to mid-2012: actual change compared with 2010-based projected change, United Kingdom

	Mid-year estimates ¹ (000s)	2010-based projections (000s)	Difference (000s)	Percentage difference
Population at mid-2010	62,759.5	62,262.0	497.5	0.8
Components of change (2010-2012)				
Births	1,624.3	1,639.6	-15.3	-0.9
Deaths	1,114.8	1,119.8	-5.0	-0.4
Natural change	509.6	519.9	-10.3	-
Net migration and other changes ²	436.0	462.0	-26.0	-
Total change	945.6	981.9	-36.3	-
Population at mid-2012	63,705.0	63,243.8	461.2	0.7
England	53,493.7	53,106.5	387.2	0.7
Wales	3,074.1	3,032.2	41.8	1.4
Scotland	5,313.6	5,281.7	31.9	0.6
Northern Ireland	1,823.6	1,823.4	0.3	0.0

Source: Office for National Statistics

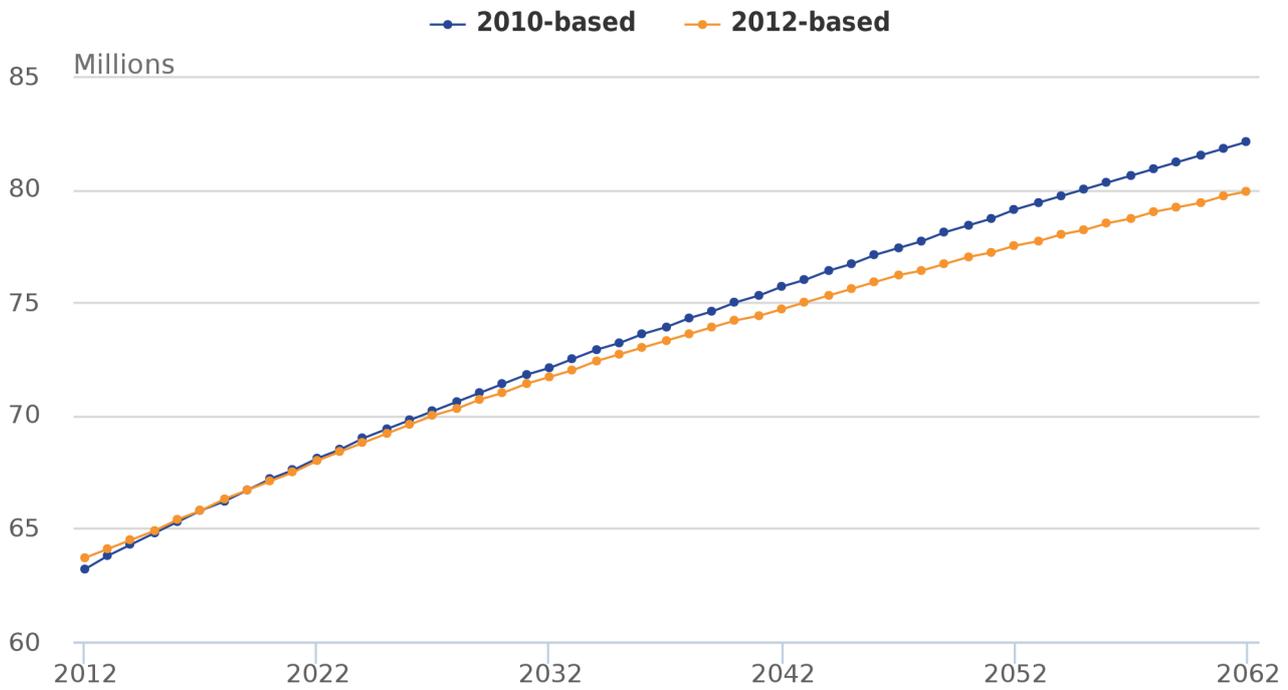
Notes:

1. Mid-year estimates have been rebased to take account of the results of the 2011 Census
2. Including net movements of Armed Forces and other small changes

Total UK population

Although the 2012-based projections start from a higher base than the 2010-based projections, the population is projected to grow at a slower rate (Figure 2-7). The slower projected growth is due to the change in the assumptions made for the 2012-based projections, with the assumptions for migration being lower and for fertility being lower in the short term (but higher in the long term) than the 2010-based projections.

Figure 2-7: 2010-based and 2012-based population projections, United Kingdom, mid-2012 to mid-2062



Source: Office for National Statistics

The 2012-based projected total population of each country is compared with the 2010-based projections in Table 2-5. Figures are compared one year, ten years and twenty five years into the projection period. The difference between the two sets of projections is broken down into changes due to the base population and changes due to the projected numbers of births, deaths and migrants.

Table 2-5: Change in projected population compared with 2010-based projections

	2012-based projection	2010-based projection	Total change	base population	Change due to difference in:		
					projected births	projected deaths	projected migrants
Population at mid-2013							
England	53,844	53,563	281	387	-35	-18	-53
Wales	3,083	3,048	35	42	-2	-2	-3
Scotland	5,328	5,312	16	32	-3	-2	-10
Northern Ireland	1,832	1,836	-3	0	-1	-1	-2
United Kingdom	64,087	63,758	329	461	-41	-23	-68
Population at mid-2022							
England	57,338	57,428	-91	387	-202	40	-315
Wales	3,193	3,204	-10	42	-17	3	-38
Scotland	5,520	5,532	-12	32	-10	6	-41
Northern Ireland	1,918	1,928	-9	0	-5	1	-6
United Kingdom	67,969	68,092	-123	461	-234	49	-399
Population at mid-2037							
England	62,166	62,730	-564	387	-259	57	-750
Wales	3,321	3,389	-67	42	-24	12	-98
Scotland	5,780	5,780	1	32	17	22	-71
Northern Ireland	2,005	2,013	-8	0	-6	3	-6
United Kingdom	73,272	73,911	-639	461	-271	95	-924

Source: Office for National Statistics

Notes:

1. Figures may not sum due to rounding

Table 2-5 shows that in England and Wales the projected populations in mid-2013 are higher than in the 2010-based projections but are lower in mid-2022 and mid-2037. For Scotland, the projected population is higher in mid-2013, lower in mid-2022 but then marginally higher in mid-2037. Whereas the Northern Ireland 2012-based projection is lower than the 2010-based projection in all three years. The largest difference at mid-2037 is for Wales, where the 2012-based population projection is 2.0% lower than the 2010-based projection.

In mid-2022 and mid-2037 in addition to the increase due to the rebasing of the population to take into account results of the 2011 Census, there has been a decrease in projected deaths and net migration in all countries. There has generally been a decrease in births projected in all countries with the exception of Scotland where projected births over the 25 years to mid-2037 are higher than the 2010-based projections. These differences generally reflect the changes to the long term assumptions (Table 2-3).

Distribution by age and sex

The change in the projected size of the UK population for selected age groups is shown in Table 2-6. Compared with the 2010-based projection, the projected UK population at mid-2037 is lower for those in the age groups between 16-59 but higher for children and the older population.

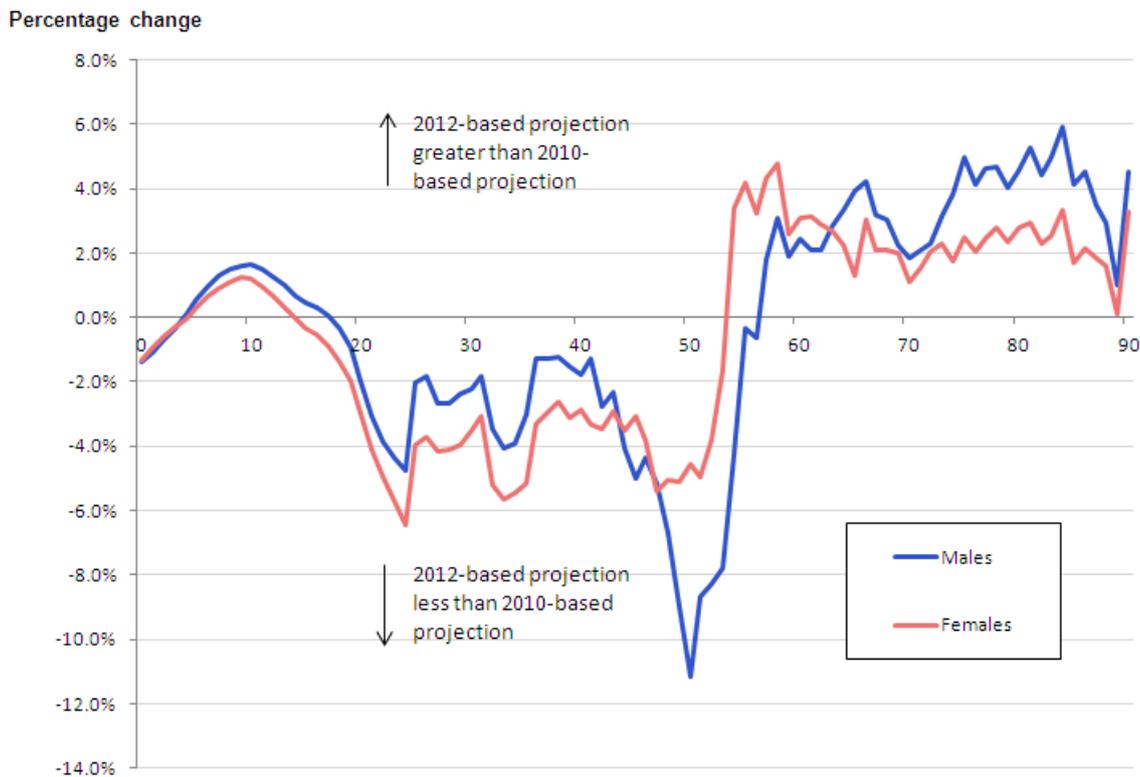
Table 2-6: Change in projected population by age group, United Kingdom, 2012-based projections compared with 2010-based projections

	mid-2012		mid-2022		mid-2032		mid-2037	
	000s	%	000s	%	000s	%	000s	%
Under 16	188	1.6	-151	-1.2	9	0.1	51	0.4
16-29	-88	-0.7	49	0.4	-288	-2.3	-372	-2.9
30-44	291	2.3	-345	-2.5	-453	-3.3	-414	-3.1
45-59	77	0.6	121	0.9	-79	-0.6	-401	-3.0
60-74	55	0.6	204	1.9	255	2.1	295	2.5
75 and over	-62	-1.2	-0	0.0	136	1.6	201	2.2
All ages	461	0.7	-123	-0.2	-420	-0.6	-639	-0.9

Source: Office for National Statistics

Figure 2-8 shows the changes by individual age and sex. Overall, the male and female projected UK populations are both 0.9% lower than the 2010-based projections.

Figure 2-8: Change in projected population at mid-2037 by age and sex compared with the 2010-based projections, United Kingdom



Source: Office for National Statistics

7. References

1. The total fertility rate is a summary measure of fertility and is defined as the average number of children that would be born per woman if all women lived to the end of their child bearing years and experienced the exact current age-specific fertility rates throughout their lifetime
2. Pensions Act 2011: <http://www.legislation.gov.uk/ukpga/2011/19/contents/enacted>
3. For more information on future pension changes see: <https://www.gov.uk/changes-state-pension>
4. Johnson P and Falkingham J. Ageing and economic welfare. Sage publications (1992)
5. Replacement migration: is it a solution to declining and ageing populations? United Nations (2000)
6. Eurostat Statistical Focus: 'The greying of the baby boomers – A century long view of ageing in European populations', May 2011, available at: http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-SF-11-023/EN/KS-SF-11-023-EN.PDF

8. Background notes

1. The 2012-based Population Projections for the United Kingdom and constituent countries were published on [6 November 2013](#) (main release) and [10 December 2013](#) (extra variants).

2. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

These National Statistics are produced to high professional standards and released according to the arrangements approved by the UK Statistics Authority.