SCOTLAND'S POPULATION 2010

The Registrar General's Annual Review of Demographic Trends 156th Edition

A National Statistics publication for Scotland.

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(Laid before the Scottish Parliament pursuant to Section 1(4) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965)

SG/2011/110

Published 5 August 2011

ANNUAL REPORT

OF THE

REGISTRAR GENERAL

of BIRTHS, DEATHS AND MARRIAGES for SCOTLAND 2010

156th Edition

To Scottish Ministers

I am pleased to let you have my Annual Report for the year 2010, which will be laid before the Scottish Parliament pursuant to Section 1(4) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965.

Duncan MacnivenRegistrar General for Scotland
5 August 2011

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Introduction

I have served as Registrar General since 2003 and this is my last annual review before I retire. The past eight years have been a time of great change in Scotland's population.

When I was appointed, Scotland's population was estimated to be 5,054,800 and had been slowly reducing since 1974. Past trends suggested that the fall in numbers would continue, with the population in 2010 set to fall to 4,991,500. In fact, the estimated population in mid 2010 was 5,222,100 – an increase of over 3% in eight years, and only 18,700 short of the highest-ever population, which was in 1974.

There were two reasons for that remarkable turnaround. Migration was the main cause. From 2004, there was an unexpected and unusual increase in the number of people moving to Scotland - partly as a result of eight East European states joining the European Union and their citizens being given free access to the UK. For the previous 15 years, the number of people moving to Scotland and the number moving out of Scotland had been approximately the same. However, in each of the last few years the number of people coming to Scotland has been higher than the number leaving by an average of 22,800. In 2009-2010, about half of the people who moved to Scotland came from the rest of the UK. The other half came approximately equally from the European Union and from the rest of the world – and about a quarter of those were British citizens returning to live in the UK.

The second, and smaller, reason for the change was the difference between the number of births and deaths. The number of deaths has reduced from 58,472 in 2003 to 53,967 in 2010, while the number of births has risen in the same period from 52,432 to 58,791. So, instead of that 'natural change' reducing the population by 6,000, as in 2003, it is now increasing the population by 5,000.

The reduction in the death rate is unsurprising. In the 1980s, the number of deaths each year was between 61,000 and 65,000, in the 1990s (with one exception) it ranged from 59,000 to 62,000, and in the early years of this century it was between 57,000 and 59,000. But the number has fallen more rapidly since then, reaching 53,856 in 2009 (the lowest number since civil registration began in 1855) and 53,967 in 2010. That welcome change is mainly because of large falls in the number of deaths from coronary heart disease and strokes. Deaths from coronary heart disease have been falling for many years – for example, from 18,000 in 1986 to 11,000 in 2003. Since then, there has been a drop of nearly a third in only seven years (to 8,138 in 2010). Similarly, deaths from strokes fell from almost 8,600 in 1986 to fewer than 6,500 in 2003, and then to 4,764 in 2010 – a further drop of more than a quarter.

More surprising has been the change in the number of births. In 1993, 63,000 births were registered – but then the number fell in almost every year until a low of 51,270 in 2002 (the lowest number since the start of civil registration in 1855). While there was a rise to 52,432 in 2003, that was a small increase compared with the growth over five years to the most recent peak of 60,041 in 2008. Numbers dropped slightly in the next two years – but the total of 58,791 for 2010 is still 6,359 (12%) more than in 2003. Again, that was partly a result of the East European states joining the EU in 2004. In 2003, there were 1,025 births in Scotland registered to mothers who had been born in countries (not including the UK) which are part of the EU today. In 2010, mothers born in these same EU countries

registered 3,494 births – more than three times the number seven years before. Most of the increase was due to women who had been born in Poland – they gave birth in Scotland to 29 babies in 2003 and 1,727 in 2010. Mothers from countries which have joined the EU since 2003 gave birth to only 4% (one in 25) of babies born in Scotland. But that accounted for around one in three of the increase in births between 2003 and 2010.

There were 30,757 marriages in 2003. Since then, the numbers have tended to fall (although the figure for 2004 was the highest since 1993), reaching 27,524 in 2009 – the lowest level since Victorian times. While there was an increase to 28,480 in 2010, that is still the second lowest figure for well over 100 years and is 7% less than in 2003. There has also been a clear increase in the proportion of children born to unmarried parents. They accounted for around 5% to 10% of all births registered each year from the mid 1850s to the mid 1970s, but there has been a marked rise since then – for instance to 15% in 1983, 31% in 1993 and 46% in 2003. There have been further increases since 2003, and 2008 was the first year in which more than half of all babies registered in Scotland had unmarried parents. However, with hardly any change in the last three years (50.1% for 2008, 50.3% for 2009 and 50.2% for 2010), it may be that the upward trend has ended. And it is important to note that most births are registered by both parents. In 2010, only 5.3% of births were registered in just the mother's name – less than the 6.3% in 2003 and the lowest rate since 1981.

The first civil partnership in Scotland was registered on 20 December 2005. During 2006, the first full year, just over 1,000 civil partnerships were registered. Since then, the number has been lower, presumably because many long-standing relationships were registered as civil partnerships in the first year. The figure for 2010 was 465, slightly fewer than in 2009. The Civil Partnership Act 2004 allows civil partnerships to be dissolved in the same way as marriages can be ended by divorce. The first dissolution of a civil partnership in Scotland was in 2007 and, in 2010, 34 civil partnerships were dissolved.

Life expectancy in Scotland has steadily increased in recent years. For babies born around 2003 the life expectancy was 73.8 years for boys, and 79.1 years for girls. This was 9 or 10 years more than for children born 50 years before. That trend has continued, with the average life expectancy for babies born around 2009 being 75.8 years for boys, and 80.3 years for girls. That steady progress is cause for celebration – and the traditional gap between male and female life expectancy has narrowed from 5.3 years in 2003 to 4.5 years in 2009. But little or no progress has been made on two major counts. First, there are still big differences in life expectancy across Scotland, with men in the council area with the highest life expectancy expected to live for 7.2 years longer than those in the council area with the lowest life expectancy (the equivalent figure for women is 5.6 years). For people born around 2003, the difference between the highest and lowest council areas was 7.7 years for men and 4.4 years for women – so the gap has widened for women and narrowed only a little for men.

Second, Scottish men and women continue to have relatively low life expectancy at birth compared with much of the European Union. In 2003, life expectancy at birth for Scottish men was estimated to be one year lower than the EU (25 states) average and for women it was almost two years lower. There has been little change in these figures in the seven years since then.

The number of households in Scotland has steadily increased. The number in mid 2010 (2,357,424) was almost 6% higher than in mid 2003 – partly because of the increase in Scotland's population, but mostly because more people (especially elderly people) are living alone and the size of the average household is getting smaller. However, the rate of growth in the number of households has slowed in the past three years. Between 2001 and 2008, the number of households in Scotland rose by an average of 19,600 each year, while in 2009 and 2010 the increases were only 12,800 and 12,100 respectively.

So, interesting things have been happening to Scotland's population over the past few years. Trends are changing, for reasons which are not always clear. The role of the researcher in reviewing what has happened, and trying to identify the causes and future trends, has become more important. When I became Registrar General, there was little research on Scotland's population. Joint working with the Scottish Government, the Economic and Social Research Council and others has led to new research efforts. In 2009, the Centre for Population Change was created, involving the University of Southampton and a partnership of Scottish universities led by St Andrews. We are already seeing results from the new centre, and chapter 10 in this report summarises some of the centre's recent findings. The contribution of the academic community is particularly helpful as we look to future population changes in Scotland.

My main task over the past year has been to run Scotland's 2011 Census. Thanks to the efforts of a great many people – my staff, our contractors and the small army of enumerators who collected the information from every part of Scotland – the census was a great success, with a response rate which appears to have been higher than in the last census, 10 years ago. The statistics from the 2011 Census will be published next year and will cast new light on the characteristics of Scotland's changing population.

Important points

Population

The estimated population of Scotland on 30 June 2010 was 5,222,100.

The population of Scotland grew by around 28,100 in the 12 months between 1 July 2009 and 30 June 2010, an increase of 0.5%.

The increase in the population in the 12 months between 1 July 2009 and 30 June 2010 was mainly due to:

- 24,968 more people coming to Scotland than leaving; and
- 5,188 more births than deaths.

The age of the population of Scotland was as follows.

- 17% of people were aged under 16.
- 66% of people were aged 16 to 64.
- 17% of people were aged 65 and over.

Scotland's population has been fairly stable over the past 50 years. It peaked at 5.24 million in 1974 before falling to 5.05 million in 2002. It then increased each year to reach 5.22 million in 2010. That increase has mainly been the result of more people moving to Scotland than leaving.

Changes in the population vary across Scotland. In the 10 years from 2000 to 2010, the council areas which had the highest population increases and reductions were as follows.

- West Lothian up 10%
- Perth and Kinross up 9%
- Inverclyde down 6%

Current projections (estimates for future years largely based on past trends) suggest that the population of Scotland will rise to 5.54 million by 2033 and that the population will age significantly, with the number of people aged 60 and over increasing by 50%, from 1.17 million to 1.75 million.

Births

There were 58,791 births registered in Scotland in 2010.

There were 255 (0.4%) fewer births in 2010 than in 2009. This is the second year the number of births has fallen (following increases in each of the previous six years).

The average age of mothers has increased from 27.4 in 1991 to 29.6 in 2010. Similarly, the average age of fathers has increased from 30.0 in 1991 to 32.4 in 2010.

The percentage of babies born to unmarried couples rose steadily from the 1970s until 2008. In 2010 it was slightly more than 50% for Scotland as a whole, the same level as in

the previous two years. Most births are registered by both parents. In 2010, 5.3% of births were registered in just the mother's name – the lowest percentage since 1981.

86% of mothers who gave birth in Scotland in 2010 were born in the UK, including 76% who were born in Scotland. 6% of mothers had been born elsewhere in the European Union (EU), including 4% from the countries which joined the EU in 2004 (such as Poland).

For 14% of births in 2010 neither parent was born in Scotland (compared with 9% in 2003) and for 9% of births neither parent was born in the UK (compared with 3% in 2003).

Deaths

There were 53,967 deaths registered in Scotland in 2010.

This was 111 (0.2%) more than in 2009 and was the second lowest number of deaths since 1855 (when civil registration was introduced).

The main causes of deaths were:

- cancer, which caused 15,323 deaths (28% of all deaths);
- ischaemic (coronary) heart disease, which caused 8,138 deaths (15% of all deaths);
- respiratory system diseases (such as pneumonia), which caused 6,896 deaths (13% of all deaths); and
- cerebrovascular disease (stroke), which caused 4,764 deaths (9% of all deaths).

The percentage of deaths caused by coronary heart disease has fallen from 29% in 1980-1982 to 15% in 2010, but the percentage of deaths caused by cancer has risen from 22% to 28%.

Death rates from cancer, coronary heart disease and stroke in Scotland are well above the rates for the other countries in the UK.

There were 291 stillbirths and 218 infant deaths in 2010. Death rates for both have improved significantly. The rate of stillbirths has dropped from 13.1 for every 1,000 births (live births and stillbirths) in 1971 to 4.9 in 2010. The infant death rate fell from 19.9 for every 1,000 live births in 1971 to 3.7 in 2010.

Life expectancy

Life expectancy in Scotland has improved greatly over the last 25 years, increasing from 69.1 years for men and 75.3 years for women born around 1981 to 75.8 years for men and 80.3 years for women born around 2009.

Despite recent improvements, Scottish men and women have poor life expectancy compared with most of the EU – about four years lower for men and almost five years lower for women compared with the countries where life expectancy is highest.

Migration (people moving into and out of the country)

In the last half of the 20th century, more people tended to leave Scotland than move here. However, since 2002, this has changed.

In the year to 30 June 2010, the number of people moving to Scotland from other parts of the UK, and the number of people moving out of Scotland to other parts of the UK were as follows.

- 47,000 people came to Scotland from the rest of the UK.
- 43,500 people left Scotland for other parts of the UK.

This movement of people increased the population by around 3,500 people.

In the year to 30 June 2010, the number of people moving to Scotland from overseas and the number of people moving out of Scotland to go overseas were as follows.

- 46,100 people came to Scotland from overseas.
- 24,600 people left Scotland to go overseas.

This movement of people increased the population by around 21,500 people – the highest since current records began in 1991-92.

Most people moving to and from Scotland are young – between 16 and 34. As a result of people moving to and from the rest of the UK, Scotland's population was boosted for every broad age group. Moves to and from overseas countries meant that the numbers of people in every age group up to 35 increased.

Marriages and civil partnerships

There were 28,480 marriages in Scotland in 2010. This includes 6,799 marriages (24%) where neither the bride nor groom lived in Scotland, but does not include people living in Scotland who marry elsewhere.

The average age at which people marry for the first time has increased by around two years in the last 10 years, to 32.5 years for men and 30.7 years for women.

Just over half of all marriages (51%) were civil ceremonies, carried out by a registrar – compared with just under one-third (31%) in 1971. Just under half of these civil ceremonies took place in registration offices, with the rest taking place in approved places.

Most religious marriages were carried out by Church of Scotland ministers (6,005), with clergy from the Roman Catholic Church carrying out 1,776 marriages. Celebrants from the Humanist Society of Scotland, authorised to carry out marriages since 2005, officiated at 2,092 marriages.

In 2010 there were 465 civil partnerships – 197 male couples and 268 female couples.

In 2010, there were 10,034 divorces and 34 dissolutions of civil partnerships (when a civil partnership is ended) in Scotland.

Adoptions

In 2010, there were 466 adoptions recorded in Scotland, 11 more than in 2009. The number of adoptions each year is around a quarter of what it used to be in the early 1970s.

Households and housing

In the middle of 2010, there were 2.36 million households in Scotland – around 315,000 more than in 1991.

The number of households has been increasing steadily, but this growth has slowed over the last three years. Between 2009 and 2010, the increase in the number of households (12,100) was lower than in the last five years.

Projections suggest that by 2033 the number of households in Scotland will increase to 2.8 million, which is an average of 19,300 extra households each year.

Most of that expected increase in the number of households is the result of an ageing population and more people living alone or in smaller households. The increase in the population is a small factor.

Across Scotland in 2010, 2.8% of homes were empty and 1.4% were second homes, though there are wide differences across the country. There are more empty homes in more deprived areas, and more second homes in the remote rural areas.

Scotland's census as a research resource

Scotland's census is an important research resource which is being used by the new Centre for Population Change.

The ability to compare one census with another and link the information to other sources helps to understand changes to Scotland's population, economy and society.

Three of the centre's recent research projects have reached the following conclusions.

- When comparing Scotland with England and Wales, differences in the way that
 people rate their health in a census can be explained by differences in economic
 circumstances, whereas differences in death rates cannot entirely be explained in
 this way. The unexplained higher death rates in Scotland have been called the
 'Scottish effect'.
- People who leave Scotland and then return help to increase economic growth and
 the size of the population in Scotland since they tend to be younger, better qualified
 and more likely to be in work than the general Scottish population and are likely to
 be in better jobs. Leaving, even for a short period, and later returning to Scotland
 appears to be beneficial for those involved, as they are more likely to return to
 better jobs than those who stay in Scotland.
- Creating communities where there is a mix of owner-occupied and council or housing-association housing does not appear to affect the employment prospects of the people living there.

Chapter 1 - Population

The latest estimate of Scotland's population (on 30 June 2010) is 5,222,100 – the highest since 1977 and an increase of 28,100 people on the previous year. There are almost 170,000 more people in Scotland than in 2002, when the population hit its lowest level since just after the Second World War.

The recent increase in Scotland's population has been driven mostly by net in-migration although, recently, there have also been more births than deaths. In the twelve months to 30 June 2010, in-migration exceeded out-migration by just under 25,000. This included a net gain of around 3,300 from the rest of the UK and a net gain of around 21,500 from overseas (including asylum seekers). People joining and leaving the armed forces contributed a net gain of around 200. In the same period, there were 5,188 more births than deaths (58,937 births and 53,749 deaths), the largest natural increase since 1991-92.

The rise in Scotland's population in the last eight years, and projected changes over the next two decades described below, should be seen in the context of the relative stability of the population over the last 50 years, as shown in Figure 1.1. The population reached a peak of 5.24 million in 1974 before falling to 5.05 million in 2002 and then rising again in the last eight years.

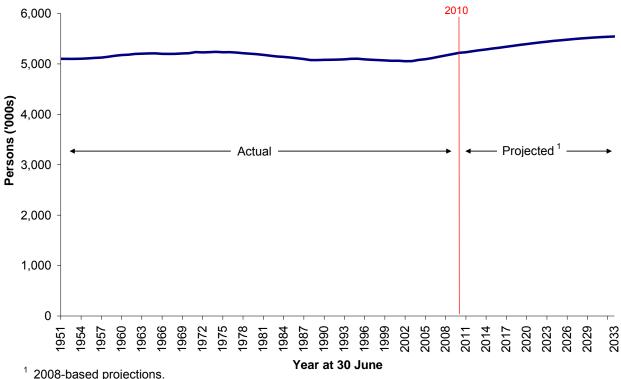


Figure 1.1 Estimated population of Scotland, actual and projected, 1951-2033

Figure 1.2 shows the trends in natural change (births minus deaths) and migration. Between the mid-1960s and mid-1970s, both natural change and net out-migration fell dramatically, although the natural increase generally remained greater than net out-migration. This resulted in a growth in population up to 1974. From that point on, through the late 1970s and the 1980s, net out-migration was higher than the natural increase, causing the population to decline. In recent years the trend in natural change has reversed

and Scotland has experienced record levels of net in-migration resulting in small increases in the population over each of the last eight years.

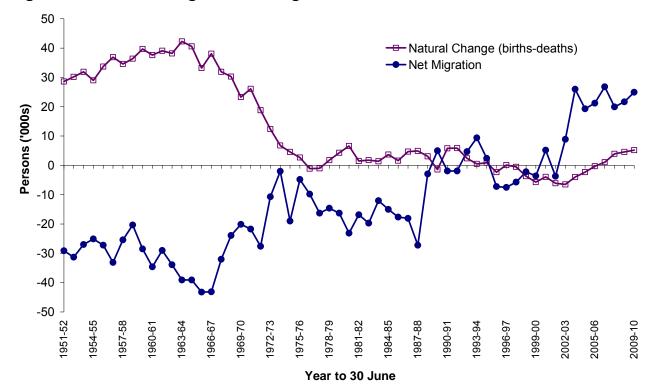


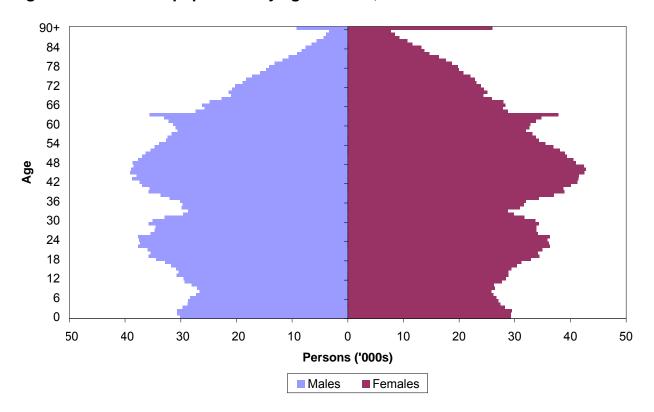
Figure 1.2 Natural change and net migration, 1951-2010

Age Structure

The age/sex composition is one of the most important aspects of the population, as changes in the number of men and women in different age groups will have different social and economic impacts. For example, increases in the elderly population are likely to place a greater demand on health and social services.

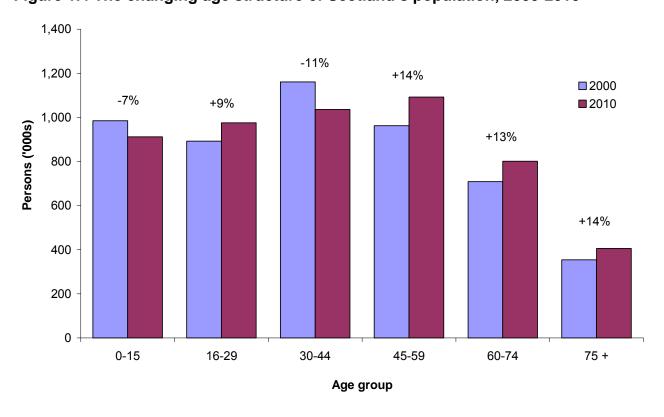
Figure 1.3 shows the age structure of the population in 2010. Seventeen per cent of the population was aged under 16, 66 per cent was aged 16 to 64 and 17 per cent was aged 65 and over. Amongst older people, particularly those aged over 75, the higher number of females reflects the longer expectation of life for women, partly as a result of male mortality rates during the Second World War. The sharp peak at age 63, and the bigger bulge between the ages of around 40 and 50, are the result of the two baby booms of 1947 and the 1960s. The small bulge between 20 and 30 are the children of the baby boomers which is known as the echo effect.

Figure 1.3 Estimated population by age and sex, 30 June 2010



The changing age structure of Scotland's population over the last ten years is illustrated in Figure 1.4. During this period the population has increased by just under 160,000 (3.1 per cent), from 5.06 million to 5.22 million. The ageing of the population is evident from the decrease in population aged under 16 (-7 per cent) and the increase of those aged 45-59 (+14 per cent), those aged 60-74 (+13 per cent) and those aged over 75 (+14 per cent).

Figure 1.4 The changing age structure of Scotland's population, 2000-2010

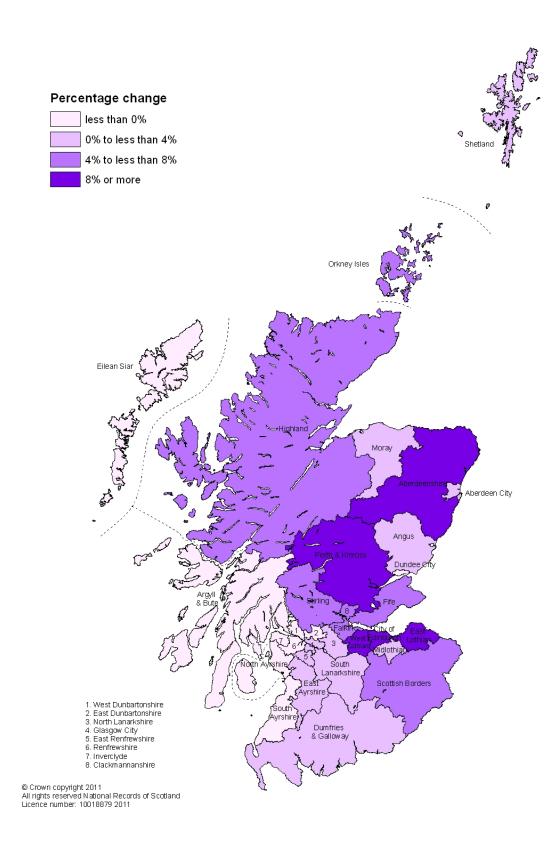


Changes within Scotland

The map at Figure 1.5 shows the percentage change in population between 2000 and 2010 for each Council area.

The Council area with the greatest fall in population was Inverclyde where the population declined by 4,890 (-5.8 per cent). West Lothian (+9.6 per cent) and Perth & Kinross (+9.5 per cent) saw the greatest percentage increases, while the largest increase in absolute numbers was in City of Edinburgh (+37,690).

Figure 1.5 Percentage population change by Council area, 2000-2010



The relative importance of migration and natural change differs between areas. In some areas of population increase, such as West Lothian, City of Edinburgh and Aberdeenshire, the gain is attributable both to migration and to natural increase. East Lothian, Fife and Stirling experienced a population increase because of in-migration combined with a very low natural change. In other areas, the population increase is due to in-migration, despite the number of deaths exceeding the number of births. These included Perth & Kinross, Scottish Borders and Orkney Islands.

Similarly, some areas of population decline, such as Inverclyde, West Dunbartonshire and Renfrewshire have experienced population decreases both from migration and natural change. In other areas such as Eilean Siar, Argyll & Bute and North Ayrshire the population decline was mainly attributable to more deaths than births. This analysis is shown in Table 1.1, which compares percentage change in population due to natural change and migration across the Council areas.

Table 1.1 Components of population change for Council areas: 2000-2010

	Natural change ¹	Net civilian migration and other changes ¹	Percentage population change	
SCOTLAND	-0.2	3.3	3.1	
Council areas ²				
Inverclyde	-2.5	-3.3	-5.8	
East Dunbartonshire	-0.4	-3.3	-3.7	
West Dunbartonshire	-1.1	-2.5	-3.6	
Eilean Siar	-4.8	2.6	-2.2	
Argyll & Bute	-3.8	1.7	-2.0	
Renfrewshire	-0.7	-1.3	-2.0	
Dundee City	-1.0	-0.6	-1.6	
North Ayrshire	-1.3	0.4	-0.9	
South Ayrshire	-3.6	2.8	-0.8	
Midlothian	1.0	-1.0	0.0	
East Ayrshire	-1.1	1.2	0.1	
Dumfries & Galloway	-2.8	3.2	0.4	
East Renfrewshire	0.4	0.1	0.6	
Shetland Islands	1.7	-0.7	1.0	
Moray	-0.4	1.6	1.2	
North Lanarkshire	1.5	0.1	1.5	
Angus	-1.7	3.3	1.6	
Aberdeen City	0.5	1.3	1.8	
Glasgow City	-0.5	3.2	2.7	
South Lanarkshire	0.1	3.1	3.2	
Orkney Islands	-1.6	5.9	4.3	
Stirling	0.0	4.3	4.3	
Fife	0.1	4.7	4.8	
Clackmannanshire	0.9	4.2	5.1	
Falkirk	0.9	5.1	6.0	
Highland	-0.6	6.6	6.0	
Scottish Borders	-2.0	8.3	6.2	
Aberdeenshire	1.7	6.6	8.3	
Edinburgh, City of	1.0	7.4	8.4	
East Lothian	0.0	8.4	8.4	
Perth & Kinross	-1.6	11.1	9.5	
West Lothian	4.4	5.2	9.6	

¹ Change per 100 population at mid-2000. The underlying data used to produce these figures can be found in Table 6 of the 'Mid-2010 Population Estimates Scotland' publication.

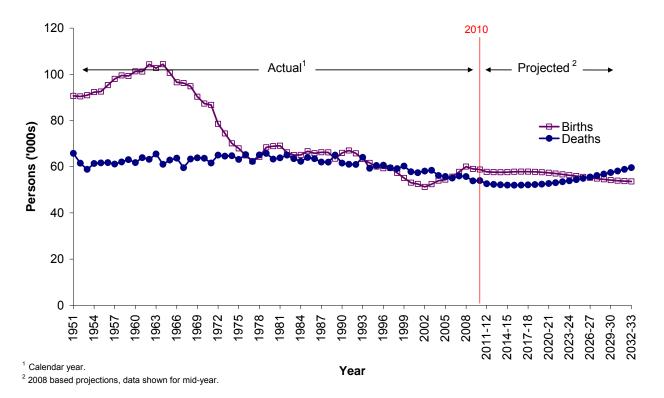
² Ordered by population change.

Projected population

The latest projections of Scotland's future population are based on the estimate of Scotland's population in June 2008. The projections, based on existing trends and making no allowance for the future impact of government policies and other factors, show the total population of Scotland rising from 5.17 million in 2008 to 5.54 million in 2033 (Figure 1.1). Longer term projections show the population peaking at 5.57 million in the mid 2040s.

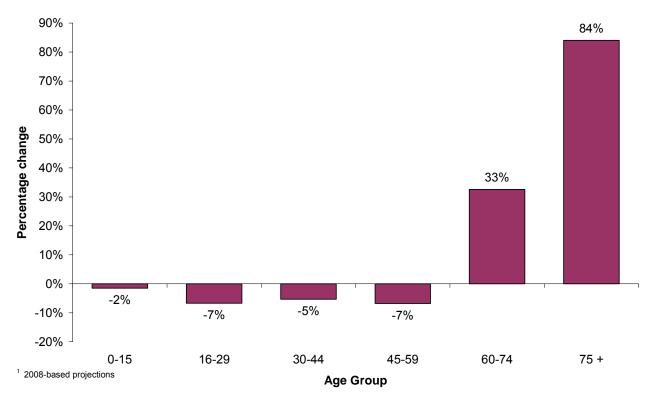
Until 2026, natural change and migration both act to increase the size of the population as the number of births exceeds the number of deaths and there is net in-migration. After that point, the number of deaths exceeds the number of births, a consequence of the ageing of the population, whilst the net migration into Scotland continues. Figure 1.6 shows the historical and projected future trends of births and deaths in Scotland.

Figure 1.6 Births and deaths, actual and projected, Scotland, 1951-2033



Between 2008 and 2033, Scotland's population is projected to age markedly. As shown in Figure 1.7, the number of children aged under 16 is projected to decrease by 2 per cent, from 0.91 million to 0.90 million. The number of people aged 60 and over is projected to rise by 50 per cent, from 1.17 million to 1.75 million.

Figure 1.7 The projected percentage change in age structure of Scotland's population, 2008-2033¹

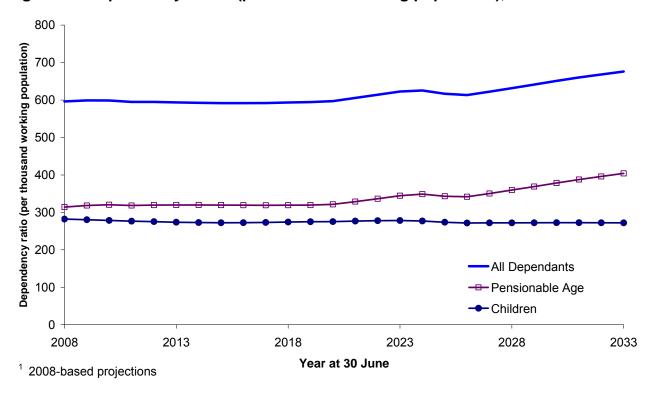


'Dependency ratios' are the number of dependants - children aged under 16 and people of pensionable age - per 1,000 working age population. Figure 1.8, which takes account of the increase in the pensionable age for both men and women*, shows little change in these ratios over the next 15-20 years, but a fairly rapid increase in the pension age population relative to the working age population in subsequent years.

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^{*} Pensionable age is 65 for men, 60 for women until 2010; between 2010 and 2020 pensionable age for women rises to 65. Between 2024 and 2026 the pensionable age for both men and women increases to 66 and changes again, in two further steps, to 68 by 2046.

Figure 1.8 Dependency ratios¹ (per thousand working population), 2008-2033



As demographic behaviour is uncertain, a number of variant projections of the future population have been calculated, based on alternative assumptions of future fertility, mortality and migration, in addition to the 'principal projection' on which the previous paragraphs are based. The variant projections give users an indication of this uncertainty. They illustrate plausible alternative scenarios, rather than representing upper or lower limits of future demographic behaviour. These variant projections, and the assumptions used, can be found on the Office for National Statistics website: www.statistics.gov.uk/StatBase/Product.asp?vlnk=8519.

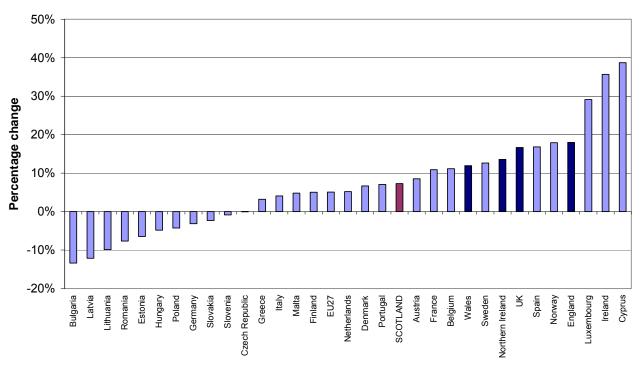
Scotland's position within Europe

The population of most of the countries in Europe is projected to increase over the next few years. Scotland's population is projected to rise by 7.3 per cent between 2008 and 2033. The population of Europe (EU-27*) is projected to increase by 5.1 per cent while, the rest of the UK, and certain countries such as Ireland, are projected to have much bigger increases. However Germany, and a number of Eastern European countries, are projecting a population decline as Figure 1.9 shows.

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^{* &}quot;Appendix 2 – Notes, definitions and quality of statistics" for definition of EU15 and EU27.

Figure 1.9 Projected percentage population change in selected European countries 2008-2033



Source: ONS (UK and constituent countries) and Eurostat 2008 based projections

Scotland is not alone in having an ageing population. The pattern of change over the last twenty years, and the projected change in the age distribution, is similar to that of other countries in the UK and Europe, although the rate of change varies.

More information about population statistics

More detailed information about Scotland's population, including estimates, projections at national and sub-Scotland level, as well as estimates of specific population groups, can be found at: www.gro-scotland.gov.uk/statistics/theme/population/

Chapter 2 - Births

Numbers

58,791 births were registered in Scotland in 2010, 255 (0.4 per cent) fewer than in 2009. This is the second fall after six consecutive annual increases in the number of births. The total in 2010 was 1,250 (2.1 per cent) lower than the 2008 peak but remained higher than in 2007. However, it was still well below the peak of over 100,000 per year in the early 1960s, and the level of around 65-70,000 per year between the mid-1970s and the early 1990s, as Figure 2.1 shows.

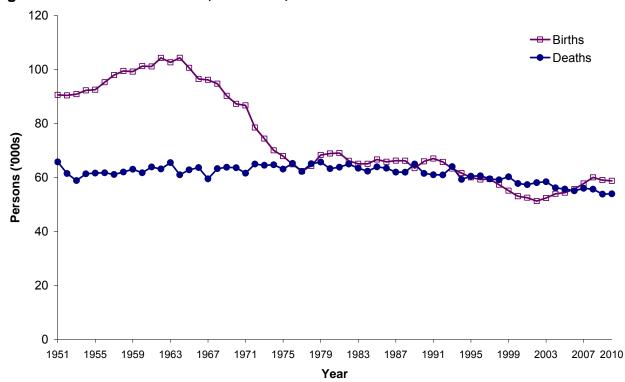


Figure 2.1 Births and deaths, Scotland, 1951-2010

The proportion of births to unmarried parents (including births registered solely in the mother's name) was 50.2 per cent in 2010 compared to 42.6 per cent ten years earlier and 27.1 per cent in 1990. However, the proportion of births registered solely in the mother's name - around 6-7 per cent in the 1980s and 1990s - fell over the past decade to 5.3 per cent in 2010, suggesting that the increase in births to unmarried parents has been in babies born to unmarried partners who are in a stable relationship.

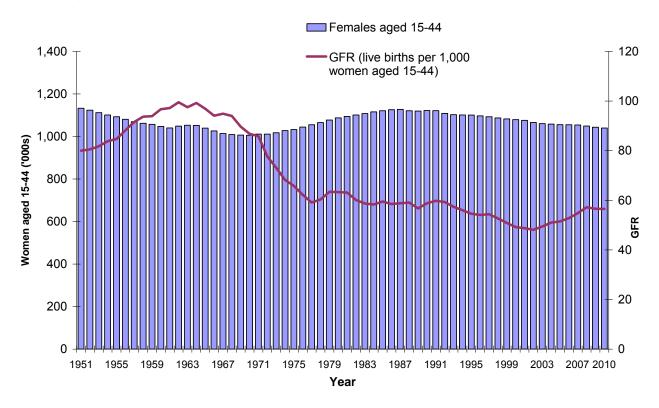
Fertility Rates

The simplest fertility rate is the crude birth rate, which is defined as the number of live births per 1,000 total population. Appendix 1 Table 1 on page 88 shows that in 2010 the crude birth rate for Scotland stood at 11.3 compared to roughly 18 around the end of the 1960s. Because it takes no account of the age/sex structure of the population, the crude birth rate has only limited value (e.g. for giving rough comparisons between areas with broadly similar age/sex structures). Appendix 1 Tables 2 and 3 show crude birth rates for administrative areas in Scotland and selected European countries. Appendix 1 Table 2

also gives standardised birth rates for the administrative areas of Scotland: these adjusted birth rates take account of the population structures in the different areas.

A better approach is to consider the General Fertility Rate (GFR) which is based on the numbers of women of childbearing age. Figure 2.2 shows the general fertility rate (births per 1,000 females aged 15-44), along with the number of women aged 15-44. During the 'baby boom' of the 1960s, the GFR reached 99.5 (in 1962). It then fell sharply to around 60 during the late 1970s and 1980s before declining more slowly during the 1990s, eventually dipping below 50 at the start of the 21st century. It then rose slightly to 57.2 in 2008 but fell to 56.5 in 2010. Interestingly, the female population aged 15-44 was relatively low during the baby boom of the 1960s. Moreover, the levelling off in the annual numbers of births during the 1980s was in part associated with the relatively large number of women born in the 1950s and 1960s, passing through what were the peak childbearing years, when those ages' fertility rates were falling.

Figure 2.2 Estimated female population aged 15-44 and general fertility rate (GFR), Scotland, 1951-2010

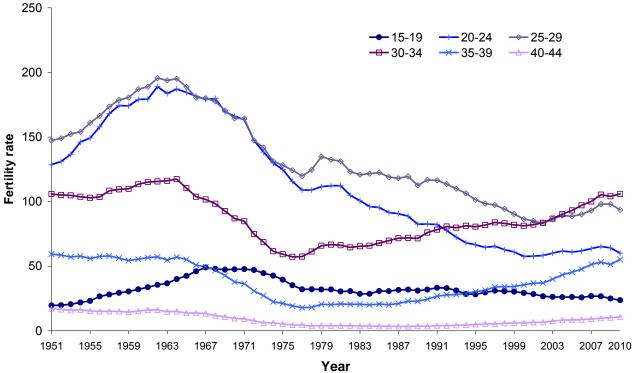


A more detailed picture is given by the Age Specific Fertility Rates (ASFRs) by mother's age, in five-year age groups, in Figure 2.3. This shows many significant age-related features of the pattern of childbearing over the last fifty years. The key point is that, as well as choosing to have fewer babies, women are also choosing to have them later in life. Other points of interest are:

- The 'baby boom' of the 1960s was mostly due to increased birth rates of women in their twenties.
- Since the early 1960s, women in their twenties have experienced a dramatic fall in fertility. For women aged 20-24 the fertility rate has fallen by around two-thirds, and for those aged 25-29 it fell by about half.

- The rate for 15-19 year olds fell by around one-third during the 1970s and remained around 30 births per 1,000 women for the following twenty years, before falling to under 24 births per 1,000 women over the past decade.
- Fertility rates for women aged 30 and above have gradually increased over the last thirty years. In particular, the rate for 30-34 year olds overtook that of 25-29 year olds in 2002 and now stands at 106 births per 1,000 women.
- Despite the recent increases, rates for women aged over 30 are still generally slightly lower than they were in the first half of the 1960s.
- The reductions in the numbers of births between 2008 and 2010 are mainly the result of women aged 24 and under having fewer babies.

Figure 2.3 Live births per 1,000 women, by age of mother, Scotland, 1951-2010 $$^{250}\ \rceil$



Since the mid-1970s, there has been a trend towards having children at older ages. The percentage of births to mothers aged under 20 fell from an average of about 11 per cent between 1976 and 1980, and around 8 per cent in 1991-95, to around 6 per cent in 2010. Mothers aged 20-24 accounted for roughly a third of all births in 1976-1980, about 22 per cent in 1991-95, and 18 per cent in 2010. The percentage of births to mothers aged 25-29 has also fallen, from around 35 per cent in 1976-80 and about 36 per cent in 1991-95, to 27 per cent in 2010. As a result, women aged over 30 accounted for nearly half of all births in 2010; 28 per cent were to mothers aged 30-34, 16 per cent were to 35-39 year olds and 4 per cent were to women aged 40 and over.

Figure 2.4 further illustrates the ageing pattern of fertility by showing detailed ASFRs for selected years: 1951, 1964 (peak number of births), 1977 (end of steep decline), 1991 recent peak) and 2010. Though the levels differed considerably, the age patterns of fertility for 1951, 1964 and 1977 were roughly the same. However, the age distribution for 1991 shows a distinctly older peak and that for 2010 reveals a further reduction in fertility of

women in their twenties, mirrored by an increase for women in their thirties, compared with 1977 and 1991.

The trend towards later childbearing is underlined by changes in the average age of all women giving birth. This was 29.6 in 2010, compared to 27.4 in 1991, 26.1 in 1977, and 27.4 in 1964. Similarly, the average age of fathers (excluding births registered in the mother's name only, where the father's details were not provided) has increased to 32.4 in 2010 compared to 30.0 in 1991 and 28.6 in 1977.

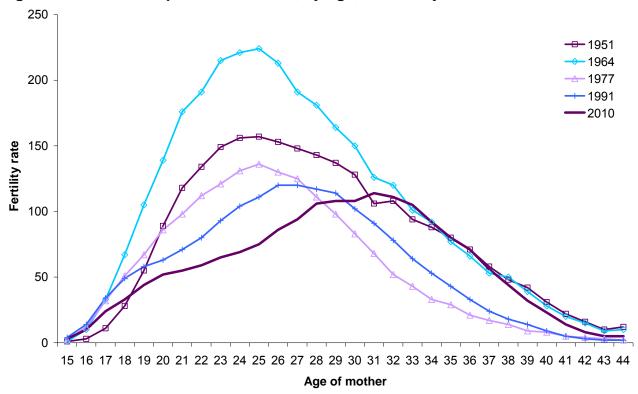
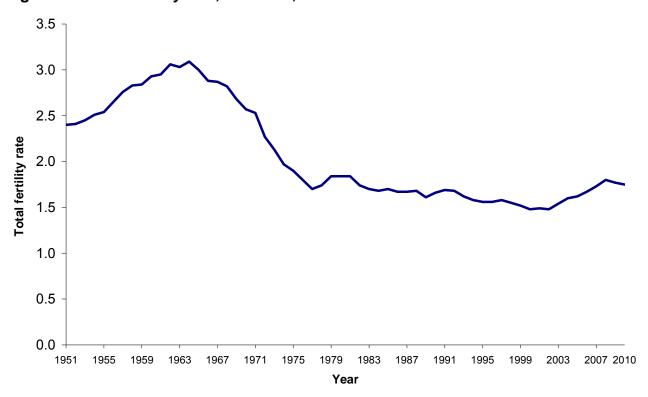


Figure 2.4 Live births per 1,000 women, by age, selected years

The Total Fertility Rate (TFR) is a commonly used summary measure of fertility levels calculated by summing the age specific rates for a single year. It gives the average number of children that a group of women would expect to have if they experienced the observed ASFRs in each of their childbearing years. For a population to replace itself, the TFR needs to be around 2.1.

The TFR for Scotland since 1951 is plotted in Figure 2.5. Not surprisingly, it follows the same general pattern as the GFR described above. It rose to 3.09 in 1964 before dropping sharply to 1.70 in 1977. Since then, with a few minor fluctuations, it fell more slowly to the 2002 rate of 1.48 before increasing to 1.62 in 2005 and 1.80 in 2008 – its highest level for 26 years. In 2010 the TFR was 1.75.

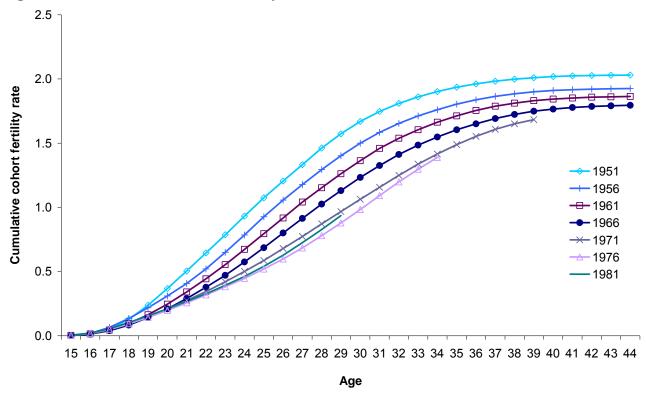
Figure 2.5 Total fertility rate, Scotland, 1951-2010



Though widely used, in part because it is relatively easy to calculate, the TFR has serious deficiencies as it is based on only one year's observations. For example, when women are delaying childbearing, as they have been in Scotland, the TFR is likely to underestimate the number of children women will eventually have.

A more satisfactory measure is average completed family size. Figure 2.6 shows the completed family size (or cumulative cohort fertility) by age for women born in selected years. Those born in 1951 had attained an average completed family size of 2.03 by the time they reached 45, whereas for those born in 1956 and 1961 the figures were 1.93 and 1.87 respectively. The figure also permits the comparison of family size at selected ages for the various cohorts as they pass through the childbearing ages. Of crucial importance is the extent to which the later cohorts are falling behind in family building. For example, by age 30 the cumulative childbearing of women born in 1976 was about 0.5 lower than that of the 1956 cohort. The 1981 cohort is the first in decades to show a higher fertility rate than the previous cohort. Whilst the increasing fertility rates of those aged over 30 may lead to further catching-up, it is highly unlikely that this will increase the average completed family size to the levels attained as recently as the cohorts of women born in the 1960s.

Figure 2.6 Cumulative cohort fertility rate for selected birth cohorts, Scotland



Since the early 1980s, Scotland's fertility has been lower than fertility in the other parts of the United Kingdom. Figure 2.7 compares the TFRs for England, Wales and Northern Ireland since 1971 with those for Scotland. Until the late 1970s, Scotland's TFR was slightly higher than that for England and Wales. However, since the early 1980s, Scotland's TFR has dropped steadily below the levels for England and Wales. In 1971, the TFR for Northern Ireland was markedly higher than for the other three countries but since then the differential has been significantly reduced. The recent rise in fertility levels in Scotland has been paralleled elsewhere in the UK as has the downturn in 2009, except in England where the TFR remained at the 2008 level. TFRs for other parts of the UK for 2010 were not available at the time of writing.

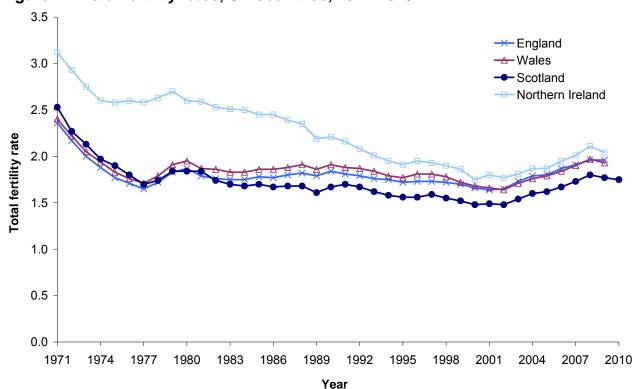


Figure 2.7 Total fertility rates, UK countries, 1971-2010

Country of birth of parents

86 per cent of births in 2010 were to mothers who had been born in the UK, including 76 per cent to women who were born in Scotland. A further 6 per cent of mothers had been born elsewhere in the European Union, including 4 per cent from the countries which joined the EU in 2004 (like Poland). Commonwealth countries were the birthplace of 4 per cent of mothers including 2 per cent from the Indian sub-continent. In the cases where the father's country of birth was known, 86 per cent had been born in the UK, including 75 per cent who were born in Scotland.

The decline in the number of births since 2008 is due to falls in births to mothers who were born in Scotland or England: there was a continuing increase in births to mothers who were born elsewhere in the EU.

Considering only births for which both the mother's and the father's countries of birth were known, in 14 per cent of births in 2010 neither parent was born in Scotland and in 9 per cent of births neither was born in the UK. These figures compare to 9 per cent and 3 per cent respectively in 2003. The numbers of births to parents from EU and non-EU countries have both increased over this period.

More information about birth statistics

More detailed information about Scotland's births can be found at: www.gro-scotland.gov.uk/statistics/theme/vital-events/births/

Or in the births section of the Vital Events Reference Tables 2010 at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general/ref-tables/2010/births.html

Chapter 3 – Deaths

Numbers

53,967 deaths were registered in Scotland in 2010. This was 111 (0.2 per cent) more than in 2009, and was the second lowest total recorded since the introduction of civil registration in 1855.

Figure 2.1 on page 25 shows that from 1951 up to the early 1990s the annual number of deaths remained relatively stable at about 60-65,000 a year. The total then declined slowly to just under 55,100 in 2006 which, until 2009, was the lowest annual total recorded.

Causes of death

In 2010 more than half of all deaths were due to the so-called 'three big killers'. There were 15,323 deaths from cancer (28 per cent of all deaths), 8,138 deaths from ischaemic (coronary) heart disease (15 per cent of all deaths) and 4,764 deaths from strokes (9 per cent of all deaths).

Since 1980, the total number of deaths from these causes has reduced, as shown in Table 3.1, falling from 65 per cent of all deaths during 1980-82 and 1990-92, to 58 per cent during 2000-02 and to 52 per cent in 2010. The proportion of deaths caused by coronary heart disease has fallen from 29 per cent in 1980-82 to 15 per cent in 2010, and by strokes from 14 per cent to 9 per cent. However, the number of deaths from cancer has increased, and as a proportion of all deaths has risen from 22 per cent to 28 per cent. Death rates, by sex, for some of the most common causes of death are shown in Tables 3.2a and 3.2b.

Cancer

Of the 15,323 deaths from cancer in 2010, cancer of the trachea, bronchus and lung was the most common type, with 4,055 deaths, accounting for over a quarter (26 per cent) of all cancer deaths.

The next most frequent type of cancer death was bowel for men (793 deaths) and breast for women (1,022 deaths). Cancers of the lymphoid, haematopoietic and related tissue caused 1,075 deaths and prostate cancer caused 849 deaths.

Over the last 25 years or so, male death rates from lung cancer have fallen by nearly a third (from 119 per 100,000 population in 1980-82 to 83 in 2010). By contrast, the rates for women, though still lower than those for men, have increased by 76 per cent (from 41 per 100,000 population in 1980-82 to 72 in 2010).

Although overall death rates from cancer have risen since the start of the 1980s, from 291 (per 100,000 population) in 1980-82 to 309 for males and from 247 (per 100,000) in 1980-82 to 279 for females, they have actually fallen for those aged under 75. For men the rate

fell from 214 (per 100,000 population) in 1980-82 to 172 in 2010, and for women it fell from 170 (per 100,000 population) in 1980-82 to 150 in 2010.

Heart disease and stroke

Table 3.2a shows that, in contrast to the rises for cancer, death rates for coronary heart disease (ischaemic heart disease) and stroke (cerebrovascular disease) have significantly declined. Between 1980-82 and 2010, rates for males fell by 55 per cent for coronary heart disease and 46 per cent for stroke, compared with reductions of 57 and 49 per cent respectively for females. Table 3.2b shows that the improvement was proportionately greater for people aged under 75, with the coronary heart disease and stroke death rates falling by about 70 per cent for males and roughly 75 per cent for females.

Table 3.1 Number of deaths from selected causes, by sex, 1980-2010

	Ca	ncer	(Ischaer	onary nic) heart ease	(Cerebr	roke ovascular ease)	Total deaths from these causes		These causes as a % of all deaths	All deaths	
Year	Males	Females	Males	Females	Males	Females	Males	Females	Persons	Persons	Persons
1980-82 ¹	7,269	6,634	10,173	8,150	3,470	5,638	20,912	20,422	41,334	65%	64,050
1990-92 ¹	7,664	7,324	8,964	7,846	2,913	5,029	19,541	20,199	39,740	65%	61,168
2000-02 ¹	7,674	7,394	6,342	5,664	2,465	4,250	16,481	17,308	33,789	58%	57,761
2010	7,807	7,516	4,599	3,539	1,889	2,875	14,295	13,930	28,225	52%	53,967

¹ Average over 3 year period.

Table 3.2a Death rates from selected causes, by sex, Scotland, 1980-2010

Males - rates per 100,000 population								
		Cancer						
Year	All types	Trachea, bronchus and lung	Prostate	Coronary (Ischaemic) heart disease	Stroke (Cerebrovascular disease)			
1980-82 ¹	291	119	19	408	139			
1990-92 ¹	314	111	27	367	119			
2000-02 ¹	315	93	32	261	101			
2010	309	83	34	182	75			

Females - rates per 100,000 population								
		Cancer						
Year	All types	Trachea, bronchus and lung	Breast	Coronary (Ischaemic) heart disease	Stroke (Cerebrovascular disease)			
1980-82 ¹	247	41	45	304	210			
1990-92 ¹	278	57	48	297	191			
2000-02 ¹	281	64	43	216	162			
2010	279	72	38	131	107			

¹ Average over 3 year period.

Table 3.2b Death rates from selected causes, aged under 75, by sex, Scotland, 1980-2010

Males aged under 75 - rates per 100,000 population

		Cancer		_	_
Year	All types	Trachea, bronchus and lung	Prostate	Coronary (Ischaemic) heart disease	Stroke (Cerebrovascular disease)
1980-82 ¹	214	92	9	290	72
1990-92 ¹	210	79	11	231	50
2000-02 ¹	195	61	12	142	36
2010	172	49	11	90	22

Females aged under 75 - rates per 100,000 population

		Cancer			
Year	All types	Trachea, bronchus and lung	Breast	Coronary (Ischaemic) heart disease	Stroke (Cerebrovascular disease)
1980-82 ¹	170	34	36	145	69
1990-92 ¹	175	42	34	115	46
2000-02 ¹	158	41	28	63	31
2010	150	44	23	34	17

¹ Average over 3 year period.

Some other major causes of deaths

Other major causes of deaths registered in 2010 included:

- respiratory system diseases (e.g. pneumonia) 6,896 deaths, or 13 per cent of all deaths;
- diseases of the circulatory system other than coronary heart disease and stroke (e.g. other forms of heart disease) 3,615 deaths, or 7 per cent;
- mental and behavioural disorders (e.g. due to alcohol or drugs) 3,459 deaths, or 6 per cent;
- diseases of the digestive system (e.g. chronic liver disease) 3,108 deaths, or 6 per cent;
- diseases of the nervous system (e.g. Alzheimer's disease) 1,759 deaths, or 3 per cent:
- diseases of the genitourinary system (e.g. renal failure) 1,337 deaths, or 2 per cent;
- accidents (e.g. falls, transport accidents) 1,295 deaths, or 2 per cent;
- endocrine, nutritional and metabolic diseases (e.g. diabetes) 1,004 deaths, or 2 per cent:
- certain infectious and parasitic diseases (e.g. septicaemia) 751 deaths, or 1 per cent.

NRS publishes a wide range of other statistics on causes of death. They are available from the relevant parts of our website (which include some background information on the basis of the statistics):

- drug-related deaths: www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/drug-related/
- alcohol-related deaths: <u>www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/alcohol-related/</u>
- deaths involving healthcare associated infections (Clostridium difficile and MRSA): <u>www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/cdiff/</u>
 www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/mrsa/
- suicides: www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/suicides/
- increased winter mortality: <u>www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/increased-winter-mortality/</u>

Mortality by age

The average age at death has increased steadily over the past thirty years. Figure 3.1 shows that the average ages at death for cancer, heart disease and stroke have generally increased in line with the average for all deaths.

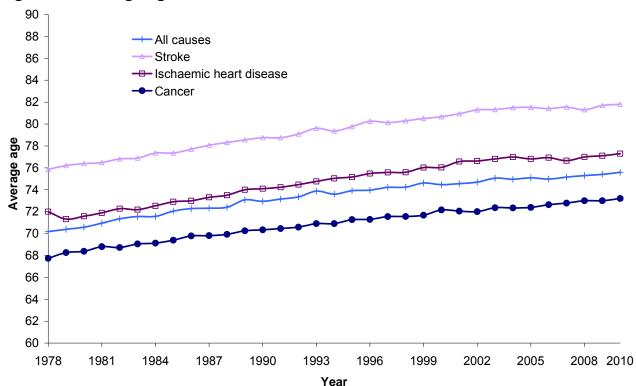


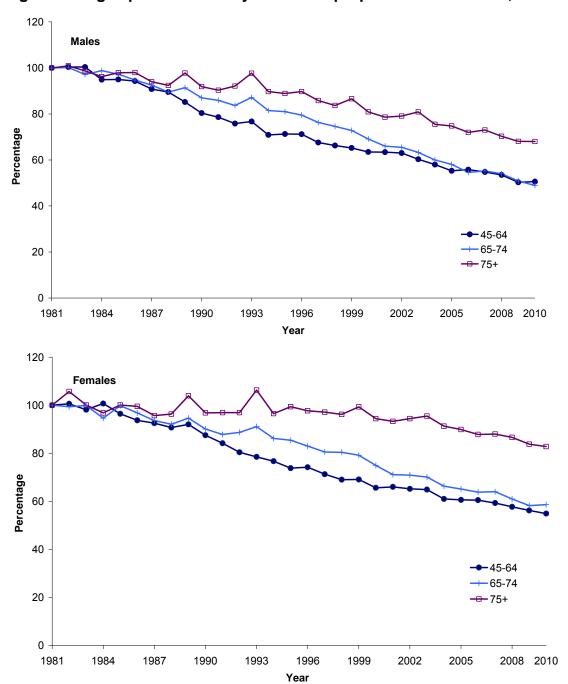
Figure 3.1 Average age at death, selected causes, Scotland, 1978-2010

About 60 per cent of deaths in 2010 were of people aged 75 and over, and a further 19 per cent were between the ages of 65 and 74.

The relative stability in the total number of deaths over recent years masks significant reductions in age-specific mortality. Figure 3.2 shows, for both men and women, selected age-specific mortality rates over the last quarter of a century relative to the 1981 rates. The three age groups shown (45-64, 65-74 and 75 and over) account for around 95 per cent of all deaths.

At all these ages, there have been greater improvements in male than in female mortality. In the 45-64 age group, the death rates for men and women dropped by 49 per cent and 45 per cent respectively. In the 65-74 age group, males showed an improvement of 51 per cent compared to 41 per cent for females. The greatest differential is in the 75 plus age group, where male mortality has fallen by 32 per cent compared to only 17 per cent for females. These changes have narrowed the difference between female and (traditionally higher) male mortality.

Figure 3.2 Age specific mortality rates as a proportion of 1981 rate, 1981-2010



Geographical variations in mortality

Using 2009 data, the latest available, Figure 3.3 compares the death rates for the constituent countries of the UK for selected causes after adjusting for differences in age structure, by applying the European Standard Population age structure. The Scottish rates for cancer, ischaemic heart disease, and cerebrovascular disease (stroke) are well above the rates for the other countries of the United Kingdom, for both men and women.

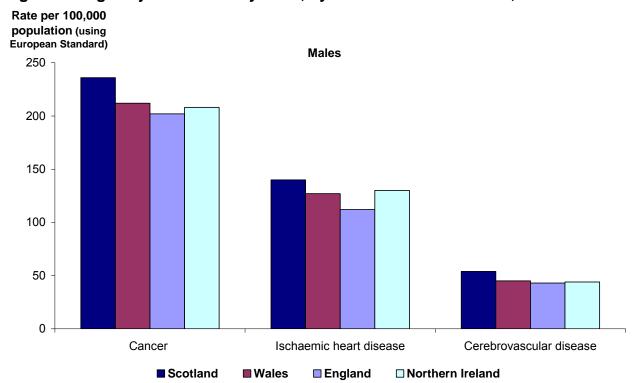
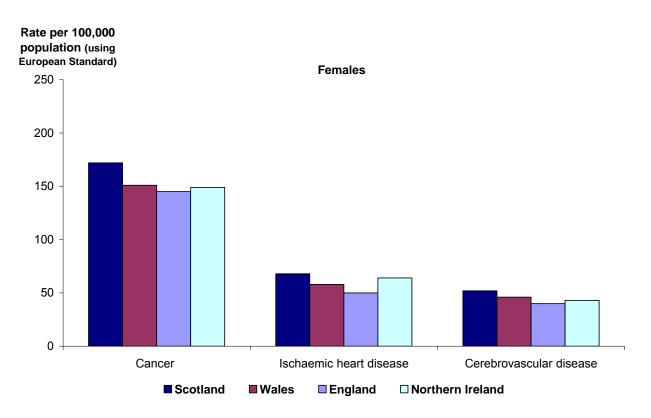


Figure 3.3 Age-adjusted mortality rates, by selected cause and sex, 2009



Appendix 1, Table 3 on page 90 shows the death rate for each of the European Union member states, and for some other countries in Europe. These are so-called "crude" death rates. They are calculated by expressing the number of deaths per thousand population. As a result, they do not take account of differences in the sex and age structures of the countries' populations. All else being equal, a country with an unusually high proportion of its population in the younger age groups could have an unusually low 'crude' death rate. So, though the figure for Scotland is higher than those for most of the countries that are shown, this could to some extent be due to the structure of the Scotlish population. A better way to compare Scotland's mortality with other countries' is to use the estimates of life expectancy for each country (Chapter 4).

Stillbirths, perinatal deaths and infant deaths

There were 291 stillbirths registered in Scotland in 2010. Stillbirths (where a child born after the 24th week of pregnancy does not breathe or show any other sign of life) are registered separately from live births and from deaths, and so are not included in either of those figures.

Perinatal deaths consist of stillbirths plus deaths in the first week of life (the latter are registered as live births and as deaths). There were 118 deaths of children who were aged under one week old, so there was a total of 409 perinatal deaths.

Infant deaths are deaths in the first year of life, all of which are registered as live births and as deaths. In total, 218 infant deaths were registered in Scotland in 2010 (including those who died in the first week of life).

Appendix 1, Table 1 on page 88 shows that the stillbirth rate (4.9 per 1,000 live and still births) and the infant death rate (3.7 per 1,000 live births) are at the lowest levels ever recorded, having fallen greatly since the Second World War. The stillbirth rate has not fallen much in the past thirty years but the infant death rate has continued to decline over the same period.

Appendix 1, Table 3 on page 90 shows that the stillbirth rate for Scotland was slightly higher in 2009 (5.3) than that for the UK as a whole (5.2) and higher than those of all but five of the EU countries for which figures are available. The infant death rate for Scotland in 2009 (4.0) was below the UK rate (4.7) but higher than those of 18 of the 27 EU countries.

More information about death statistics

More detailed information about Scotland's deaths can be found at: www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/increased-winter-mortality/

Or in the deaths sections of the Vital Events Reference Tables 2010 at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general/ref-tables/2010/stillbirths-infant-deaths.html

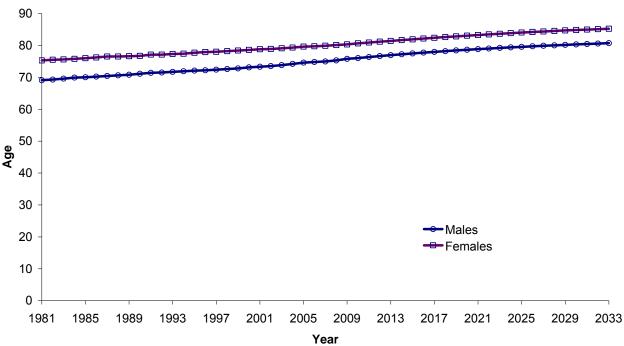
www.gro-scotland.gov.uk/statistics/theme/vital-events/general/ref-tables/2010/deaths-causes.html

Chapter 4 - Life Expectancy

Although mortality rates in Scotland have generally fallen more slowly than in the rest of the UK and elsewhere in Europe, the improvements are still considerable and the impact is reflected in the steadily rising expectation of life.

The expectation of life at birth is a commonly used measure of mortality which is particularly helpful in comparing the 'health' of a nation through time and for making comparisons with other countries as well as for areas within Scotland. Figure 4.1 shows that the expectation of life at birth in Scotland has improved greatly over the last 25 years or so, increasing from 69.1 years for men and 75.3 years for women born around 1981 to 75.8 years and 80.3 years respectively for those born around 2009. Figure 4.1 also illustrates that improvements in life expectancy at birth are projected to continue, rising to 80.7 years for men and 85.2 years for women by 2033.

Figure 4.1 Expectation of life at birth, Scotland, 1981-2033¹



^{1.} Figures to 2009 are based on 3 years of data. For example 2009 figure uses data for 2008-2010. Source: Figures to 2009 from Interim Life Tables, ONS. Figures after 2009 are projected single year life expectancies, ONS.

However, Figures 4.2a and 4.2b show that Scottish men and women have relatively low expectation of life at birth compared with much of the European Union. The countries with lower life expectancy than Scotland were most of the Eastern European states which joined the EU on 1 May 2004 as well as Romania and Bulgaria which joined in January 2007. For men, the expectation of life in Scotland is about 4 years lower than the countries with the highest expectation of life whilst for women it is almost 5 years lower.

Figure 4.2a Life expectancy at birth, 2008, selected countries, Males

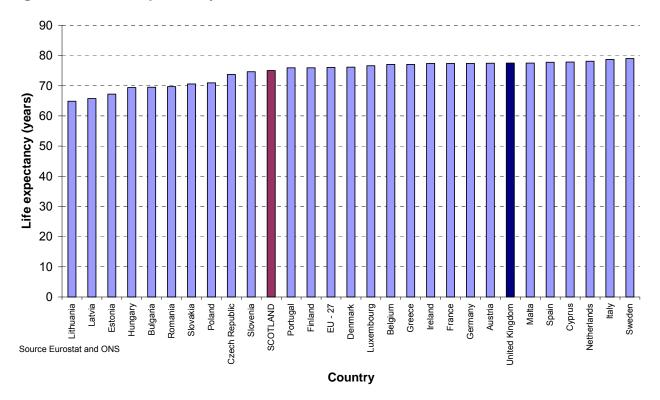
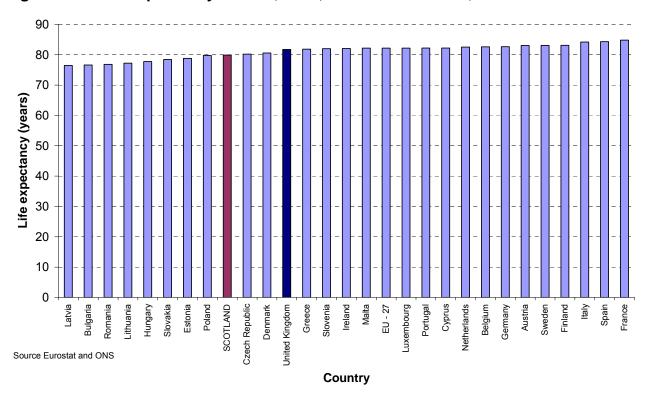


Figure 4.2b Life expectancy at birth, 2008, selected countries, Females



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Within Scotland, there are considerable differences in life expectancy at birth between different Council areas as illustrated in Figure 4.3. For men, the Council area with the lowest life expectancy was Glasgow City (71.1 years), and the Council area with the highest life expectancy was East Dunbartonshire (78.3 years), 7.2 years more than Glasgow City. For women, East Dunbartonshire also had the highest life expectancy (83.1 years), 5.6 years more than Glasgow City, the area with the lowest figure (77.5 years).

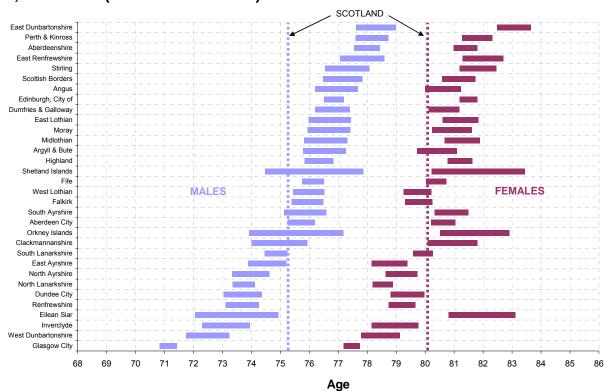


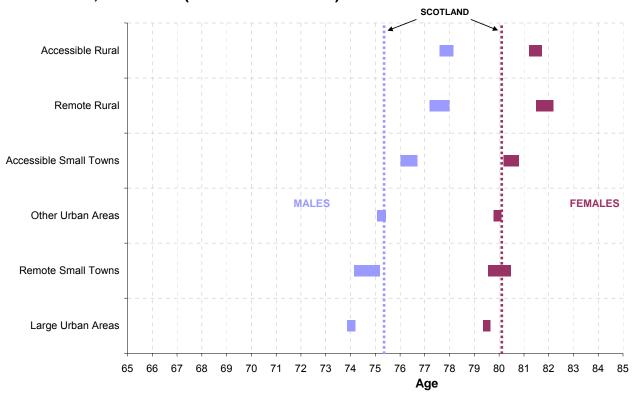
Figure 4.3 Life expectancy at birth, 95 per cent confidence intervals¹ for Council areas, 2007-2009 (Males and Females)

1. Life expectancy at birth is an estimate which is subject to a margin of error. The accuracy of results can be indicated by calculating a confidence interval which provides a range within which the true value of underlying life expectancy would lie (with 95 per cent probability).

Please note that the Scotland-level life expectancy estimate shown in this chart is for use only as a comparator for the corresponding sub-Scotland-level figures. The definitive Scotland-level life expectancy estimate (based on interim life tables) is published by the Office for National Statistics.

There are also differences between urban and rural areas as shown in Figure 4.4. Men in rural areas – remote and accessible – can expect to live just over 3.5 years longer (77.6 and 77.9 years respectively) than men in large urban areas (74.0 years). Women in rural areas – remote and accessible – can expect to live around 2 years longer (81.8 and 81.5 years respectively) than women in large urban areas (79.5 years).

Figure 4.4 Life expectancy at birth, 95 per cent confidence intervals¹ for Urban and Rural² areas, 2007-2009 (Males and Females)



^{1.} Life expectancy at birth is an estimate which is subject to a margin of error. The accuracy of results can be indicated by calculating a confidence interval which provides a range within which the true value of underlying life expectancy would lie (with 95 per cent probability).

2. Scottish Government's 6-fold Urban Rural Classification version 2009-2010. See Appendix 2 for more details.

Please note that the Scotland-level life expectancy estimate shown in this chart is for use only as a comparator for the corresponding sub-Scotland-level figures. The definitive Scotland-level life expectancy estimate (based on interim life tables) is published by the Office for National Statistics.

A more detailed picture of the large geographical variations in life expectancy can be seen in the 40 Scottish Community Health Partnership (CHP) areas*. The principal aim of the CHPs, which link NHS and Council services, is to improve the long-term health and wellbeing of communities and enhance the quality of health and social care services. Life expectancy at birth in the 40 CHP areas is shown in Figure 4.5. Men in East Dunbartonshire CHP area can expect to live over 8 years longer than men in North and East Glasgow CHP areas (78.3 years compared with 69.8 and 70.1 years respectively). Women in East Dunbartonshire CHP area can expect to live around 6 years longer than women in North and East Glasgow CHP areas (83.1 years compared with 76.2 and 77.3 years respectively).

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^{*} Glasgow CHPs are based on five Community Health and Care Partnerships prior to the new single CHP after 22 March 2011.

Figure 4.5 Life expectancy at birth, 95 per cent confidence intervals¹ for Community Health Partnership (CHP) areas, 2007-2009 (Males and Females)



^{*}Known as a Community Health and Care Partnership

1. Life expectancy at birth is an estimate which is subject to a margin of error. The accuracy of results can be indicated by calculating a confidence interval which provides a range within which the true value of underlying life expectancy would lie (with 95 per cent probability).

Please note that the Scotland-level life expectancy estimate shown in this chart is for use only as a comparator for the corresponding sub-Scotland-level figures. The definitive Scotland-level life expectancy estimate (based on interim life tables) is published by the Office for National Statistics.

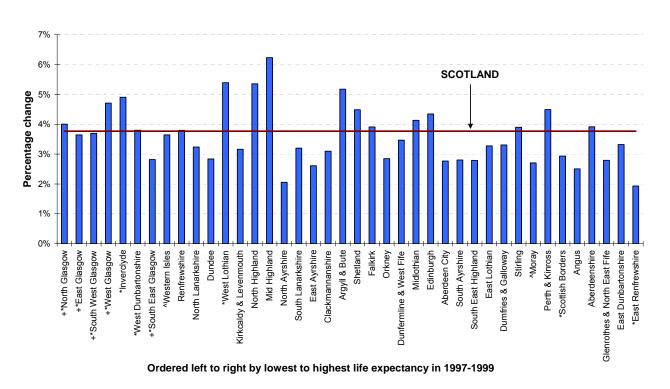
The percentage change in life expectancy at birth in CHP areas over the 10 year period 1997-1999 to 2007-2009 is illustrated in Figures 4.6a and 4.6b (ordered from left to right by lowest to highest life expectancy in 1997-1999). The improvement at the national level over the 10 year period was 3.8 per cent for men (or 2.7 years) and 2.5 per cent for females (or 2.0 years) and is shown by the heavy horizontal lines across the charts.

In the 10 years since 1997-1999, life expectancy at birth has increased in every CHP area, although in 7 cases by a margin so small that it may be a consequence of the volatile nature of life expectancy estimates in small areas. For men, the largest increase in life expectancy at birth was in Mid Highland with 6.2 per cent (an improvement of 4.5 years) and for women in East Dunbartonshire with 4.5 per cent (an improvement of 3.6 years). The gap of 9.3 years between the area with the highest male life expectancy at birth and the area with the lowest has decreased by 0.8 years over the 10 year period; for females it has increased by 0.6 years (from 6.3 years in 1997-1999 to 6.9 years in 2007-2009). The gap between male and female life expectancy narrowed in all but 7 of the CHP areas. The gap decreased most in North Highland (3.5 years in 2007-2009 compared with 6.0 years in 1997-1999).

[^]Known as a Community Health and Social Care Partnership

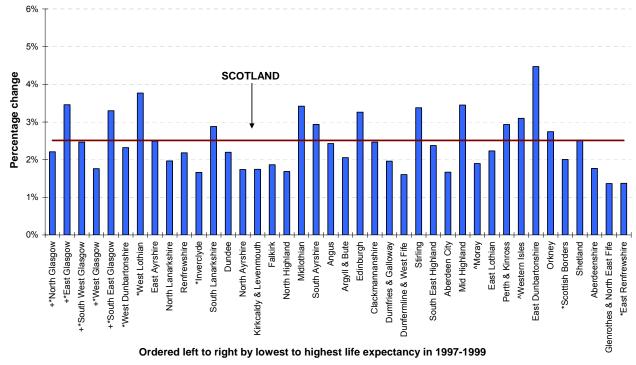
⁺Glasgow CHPs are based on five Community Health and Care Partnerships which existed before the new single CHP was set up on 22 March 2011

Figure 4.6a Percentage change in life expectancy, 1997-1999 to 2007-2009, in Scotland and for each individual Community Health Partnership (CHP) area, Males



^{*}Known as a Community Health and Care Partnership

Figure 4.6b Percentage change in life expectancy, 1997-1999 to 2007-2009, in Scotland and for each individual Community Health Partnership (CHP) area, Females



^{*}Known as a Community Health and Care Partnership

[^]Known as a Community Health and Social Care Partnership

⁺Glasgow CHPs are based on five Community Health and Care Partnerships which existed before the new single CHP was set up on 22 March 2011

[^]Known as a Community Health and Social Care Partnership

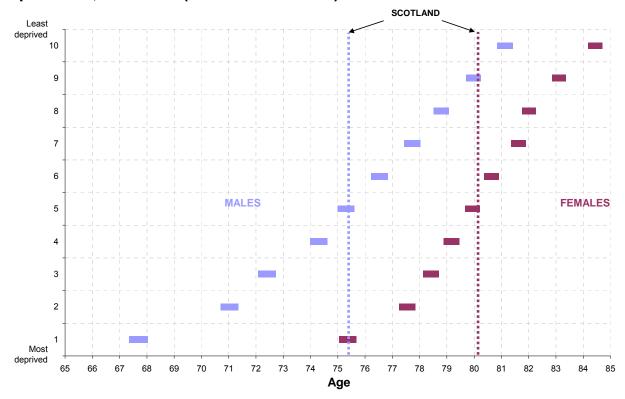
⁺Glasgow CHPs are based on five Community Health and Care Partnerships which existed before the new single CHP was set up on 22 March 2011

In West Glasgow and Inverciyde CHPs (areas which had among the lowest life expectancy at birth in 1997-1999), male life expectancy improved by 4.7 and 4.9 per cent respectively (or 3.2 and 3.4 years) over the last 10 years which is around 1 percentage point more than the average improvement experienced by Scotland. In contrast, life expectancy at birth for men in North Glasgow, East Glasgow and South West Glasgow CHPs (the areas ranked lowest to third lowest respectively in 1997-1999) improved but at around the average rate of improvement for Scotland. In South East Glasgow CHP, life expectancy started out low 10 years ago and only improved marginally over the period.

The largest improvement in female life expectancy between 1997-1999 and 2007-2009 was in East Dunbartonshire CHP area (4.5 per cent or 3.6 years), which was also among the best performing in terms of life expectancy in 1997-1999. Female life expectancy in Mid Highland and Stirling CHP areas behave in a similar way to East Dunbartonshire in that these CHP areas had a higher life expectancy than the national average in 1997-1999, and have improved at a much greater rate than the Scottish average. There are areas where female life expectations improved at a better rate than average for Scotland and had a very low life expectancy in 1997-1999 – for example East Glasgow, South East Glasgow and West Lothian CHP areas. These areas have improved by 3.3 per cent to 3.8 per cent, but there does not seem to be a pattern whereby all of the best performing areas in 1997-1999 have pulled further ahead.

Life expectancy decreases as deprivation increases, as illustrated by Figure 4.7. Men in the 10 per cent least deprived areas of Scotland can expect to live around 13.4 years longer than those in the 10 per cent most deprived areas (81.1 years compared with 67.7 years). Women in the 10 per cent least deprived areas of Scotland can expect to live around 9 years longer than those in the 10 per cent most deprived areas (84.4 years compared with 75.4 years).

Figure 4.7 Life expectancy at birth, 95 per cent confidence intervals¹ by level of deprivation², 2007-2009 (Males and Females)



- 1. Life expectancy at birth is an estimate which is subject to a margin of error. The accuracy of results can be indicated by calculating a confidence interval which provides a range within which the true value of underlying life expectancy would lie (with 95 per cent probability).
- 2. Scottish Index of Multiple Deprivation (SIMD) 2009. For more information see Appendix 2.

Please note that the Scotland-level life expectancy estimate shown in this chart is for use only as a comparator for the corresponding sub-Scotland-level figures. The definitive Scotland-level life expectancy estimate (based on interim life tables) is published by the Office for National Statistics.

A useful extension of life expectancy estimates is information on Healthy Life Expectancy (HLE) which is published by the Information and Statistics Division of the NHS. HLE is defined as the number of years people can expect to live in good health. The difference between HLE and life expectancy indicates the length of time people can expect to spend in poor health. More information on HLE in Scotland is available on the website of the Scottish Public Health Observatory (ScotPHO): www.scotpho.org.uk/

More information about life expectancy statistics

More detailed information about Scotland's life expectancy can be found at: www.groscotland.gov.uk/statistics/theme/life-expectancy/

Chapter 5 - Migration

Unlike some countries, the UK does not have a comprehensive system of recording migrants, particularly those leaving the country, nor any legal requirement to notify change of address. So migration is the most difficult component of population change to measure and predict. Migration and the reasons for migrating are also much more susceptible to short-term changes in social and economic circumstances than births and deaths. More detailed information on the methodology for estimating migration is available on our website at: www.gro-scotland.gov.uk/statistics/theme/migration/methodology.html

Trends in migration since 1951

Historically, Scotland has been a country of net out-migration, with more people leaving to live elsewhere than moving to live in Scotland. However, since the 1960s, net out-migration has greatly reduced and, in some years during the late 1980s and early 1990s, Scotland experienced net migration gains. As Figure 5.1 shows, Scotland has now entered a period of net in-migration. Over the last seven years, there have been net gains of at least 19,000 per year. In 2009-10 the net migration gain was 24,900, the third highest since these estimates started in 1951.

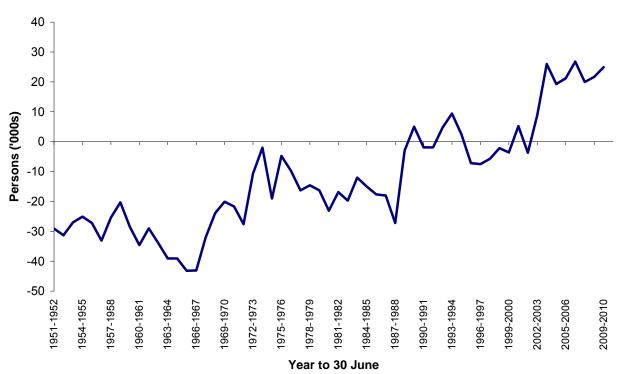


Figure 5.1 Estimated net migration, Scotland, 1951-2010

Net migration is the difference between much larger flows of migrants into and out of Scotland. The level of net migration can be significantly affected by relatively small changes in these gross flows from year to year, particularly if one flow rises while the other falls. In the last five years, migration to Scotland has typically been about 90,000 per year whilst migration from Scotland has been around 70,000.

In the year to 30 June 2010, around 47,000 people came to Scotland from England, Wales and Northern Ireland and around 43,500 people left Scotland for the rest of the UK. The net gain of around 3,500 is lower than the net gains of 12,000 in 2008 and 4,200 in 2009, mainly because of a drop in the number of people coming to Scotland from the rest of the UK.

During the same period, about 46,100 people came to Scotland from overseas and around 24,600 left Scotland to go overseas, giving a net migration gain from overseas of around 21,500. This is the highest net migration gain from overseas in any year, beating the previous high of 17,500 in the year to June 2009. Estimating international migration is particularly difficult as the estimate is based primarily on the International Passenger Survey (IPS). This is a sample survey conducted at main airports and ports across the UK, and the sample size for Scotland is very small (around 243 migrant contacts in 2009-10). Internationally, migrants are defined as people who change their country of usual residence for 12 months or more. So short-term seasonal migrant workers, including many from the Eastern European states which joined the EU in 2004, will not be counted in the migration estimates, and hence will not be included in the mid-year population estimates.

Origins and destinations of migrants

Figure 5.2 illustrates the trend in flows of people to and from the rest of the UK since 1981. There was a small drop in in-migration in 2009-10 following a large drop on the previous year. The downward trend in out-migration, which began in 2000, is showing signs of slowing down.

Figure 5.2 Movements to/from the rest of the UK, 1981-2010

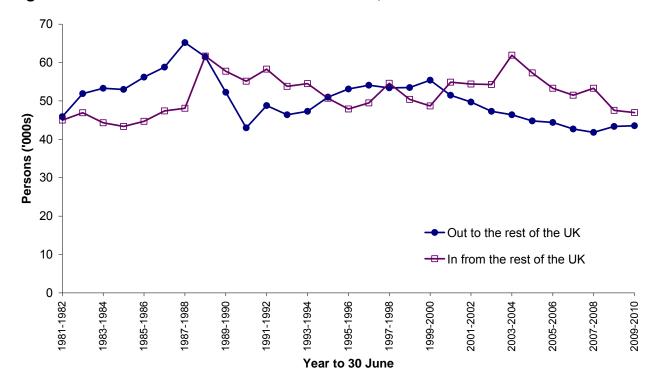


Figure 5.3 shows the trends in flows of people to and from overseas since 1991. In-migration from overseas has been increasing since 2003 and is currently at its highest level since the series began in 1991. Out-migration to overseas has dropped two years in a row following a large rise in 2007-2008. The figures shown here are from the Long-Term International Migration (LTIM) series produced by the Office of National Statistics (ONS).

Figure 5.3 Movements to/from overseas, 1991-2010

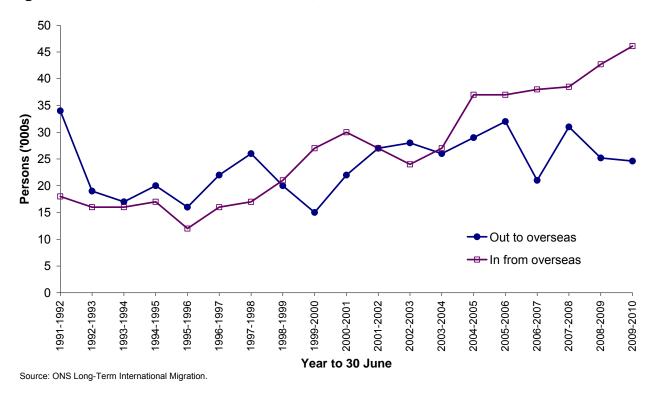


Table 5.1 summarises the migration flows between Scotland and the rest of UK and Scotland and overseas between mid-2009 and mid-2010. The in-flows of migrants from the rest of UK and overseas are similar. However, the out-flows to overseas are much lower than the outflows to the rest of the UK. As a result, the largest component of the total net migration is net in-migration from overseas.

Table 5.1 Migration between Scotland and Rest of UK/Overseas: 2009-2010

	In	Out	Net
Rest of UK ¹	47,000	43,500	3,500
Overseas	46,100	24,600	21,500
Total ²	93,100	68,100	24,900

¹ The estimates of migration between Scotland and the rest of UK include movements to and from the armed forces.

² Movements between Scotland and the rest of UK and overseas will not sum to the total net migration due to rounding adjustments.

Age and sex of migrants

Figure 5.4 illustrates the ages of people moving between Scotland and the rest of the UK between mid-2009 and mid-2010. The peak age for migration into Scotland is 19, at which age there is a marked migration gain. The peak ages for migrating out of Scotland are 23 and 24 and this results in a migration loss at these ages. These large in and out flows result from an influx of students from outside Scotland starting higher education, followed by a move out of Scotland after graduation.

Figure 5.4 Movements between Scotland and the rest of the UK, by age, mid-2009 to mid-2010

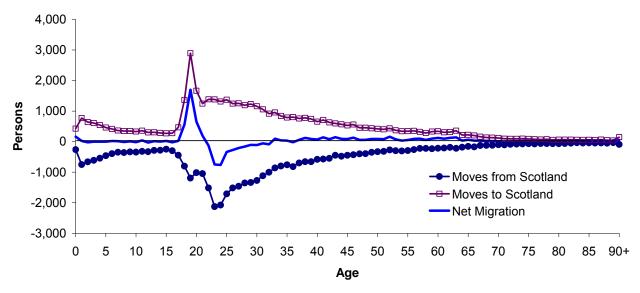
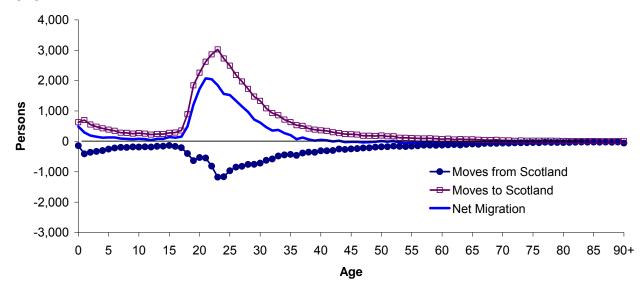


Figure 5.5 shows the age distribution of people moving between Scotland and overseas between mid-2009 and mid-2010. In contrast to moves to Scotland from the rest of the UK, the peak age for migration into Scotland is 23 and there are high numbers of migrants from age 19 to 31. This results in a net migration gain of young adults through to age 35.

Figure 5.5 Movements between Scotland and overseas, by age, mid-2009 to mid-2010



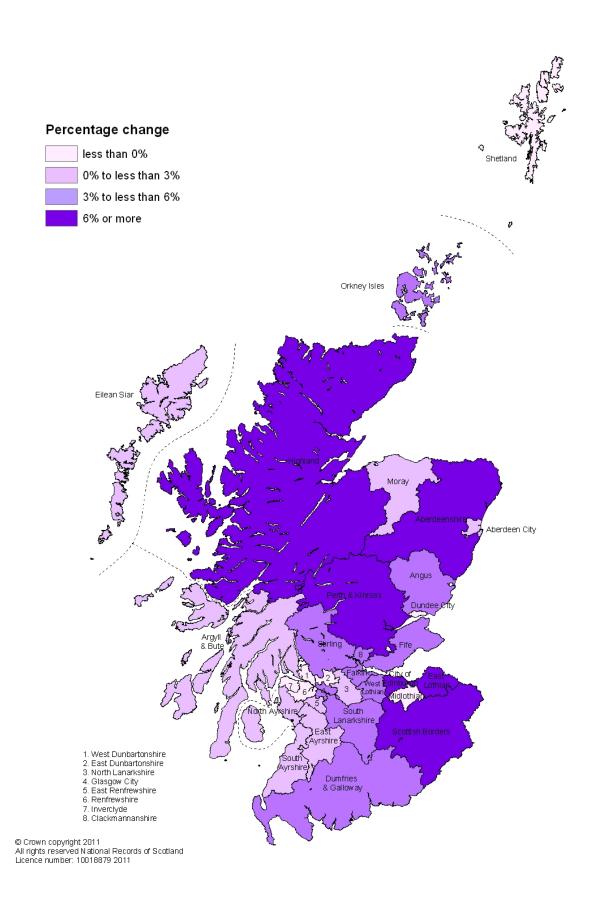
Migrants to and from the UK and overseas alike tend to be much younger than the general population: 49 per cent of in-migrants from the rest of the UK and 71 per cent of those from overseas are aged 16-34, compared with 25 per cent of the resident population. There also tend to be smaller peaks for moves of the very young, under the age of 5, as their parents move home before their children have started school. Later in life, there is no significant "retirement migration" in either direction. The pattern of migration is very similar for men and women.

Migration and the distribution of people in Scotland

In many parts of Scotland, migration is the most important component of population change. Net migration rates (here, the amount of net migration between 2000 and 2010 as a proportion of the 2000 population) are a useful indicator when comparing migration between areas of different sizes. Information on net rates for Council areas, which includes migration between Council areas, the rest of the UK and overseas, is shown in Figure 5.6.

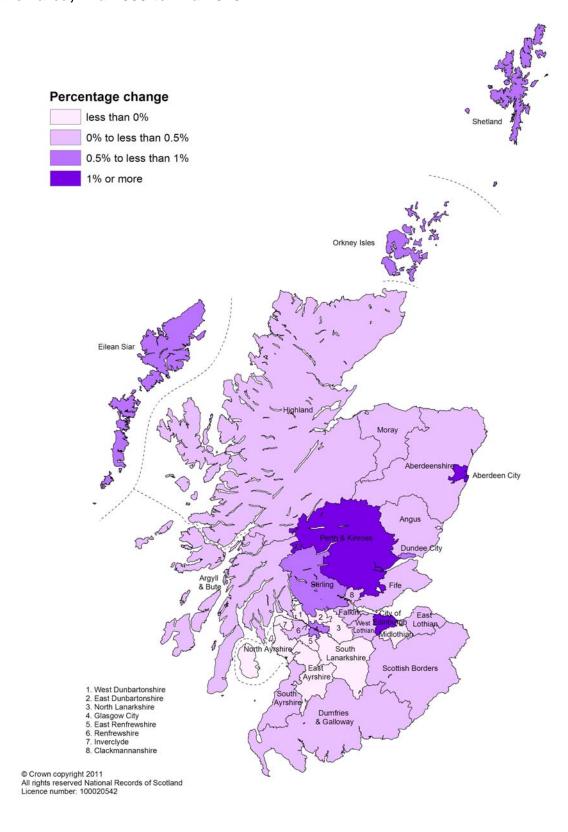
The patterns of migration over the period 2000 to 2010 indicate that the highest net out-migration rates were in East Dunbartonshire, West Dunbartonshire and Inverclyde. The highest net in-migration rates were in Perth & Kinross, East Lothian and Scottish Borders.

Figure 5.6 Net migration as percentage of population by Council area, 2000-2010



Migration between Scotland and the rest of UK and overseas shows a slightly different pattern. Migration in the period mid-2009 to mid-2010 to and from areas outside Scotland, as a proportion of the resident population, is shown in Figure 5.7. The highest net inmigration rates were in the city areas of Aberdeen, Edinburgh and in Perth & Kinross. The highest net out-migration rates were in East Dunbartonshire and Inverciyde.

Figure 5.7 Net migration with areas outside Scotland as percentage of population by Council area, mid-2009 to mid-2010



Improvements in migration statistics

Since the early 2000s, and especially since Eastern European countries joined the EU in May 2004, migration has played a larger part in Scotland's demographic change than in the previous decade. So it has become more important to have high quality statistics on migration and the population, for policy development and for planning and providing public services. NRS is part of an inter-departmental effort, led by the Office for National Statistics (ONS), to improve the estimates of migration and migrant populations in the United Kingdom, both nationally and at a local level. Current work and progress from the Improvements to Migration and Population Statistics (IMPS) cross-government programme can be found through the ONS website: www.ons.gov.uk/about-statistics/methodology-and-quality/imps/

More information about migration statistics

More detailed information about Scotland's migration can be found at: www.gro-scotland.gov.uk/statistics/theme/migration/methodology.html

Chapter 6 – Marriages and Civil Partnerships

Marriages

There were 28,480 marriages in Scotland in 2010, 956 (3.5 per cent) more than in 2009. Figure 6.1 shows that, following a decline from over 40,000 marriages a year in the early 1970s, the annual total levelled out at around 30,000 in the mid-1990s, but fell each year from 2005 to 2009. The highest total recorded since 1993 was 32,154 in 2004 whilst the 2009 total was the lowest since Victorian times.

The information in this section covers all marriages registered in Scotland, regardless of where the bride and groom lived. In 2010, there were 6,799 'tourism' marriages (24 per cent of all marriages) where neither the bride nor groom was resident in Scotland. This represents little change from 6,664 (24 per cent) in 2009. Gretna continues to be a popular venue for marriages, and the 3,680 registered in 2010 (13% of all marriages) were 4 per cent up on 2009 but over a third down on the record total of 5,555 in 2004 (17% of all marriages in Scotland in 2004). In 2010, 83 per cent (3,067) of the marriages at Gretna did not involve a Scots resident.

Of course, many couples who live in Scotland go abroad to be married. These marriages are not included, and only some come to the attention of the Registrar General through notification to British consular authorities.

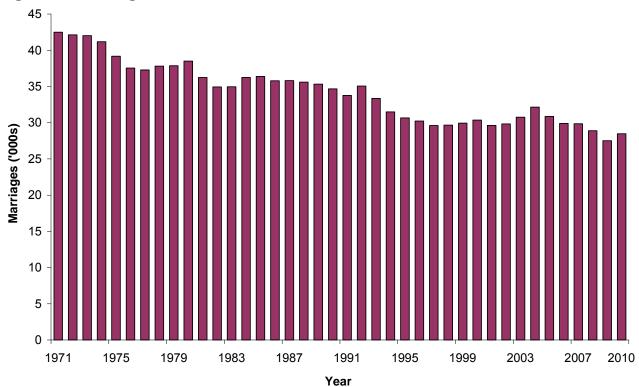


Figure 6.1 Marriages, Scotland, 1971-2010

Marital status at marriage

Figure 6.2 shows the percentage of marriages by marital status at the time of marriage between 1971 and 2010. The percentage of people marrying who had been divorced rose from just under 6 per cent in 1971, to over a quarter in 2001 (28 per cent for grooms and 26 per cent for brides). The majority of this shift reflects a reduction in the proportion of marriages where one of the partners had never been married. The percentage was around 25 per cent in 2010 (25 per cent for grooms and 24 per cent for brides). The proportion of those marrying who were widowed (2 per cent in 2010) has hardly changed since 2001.

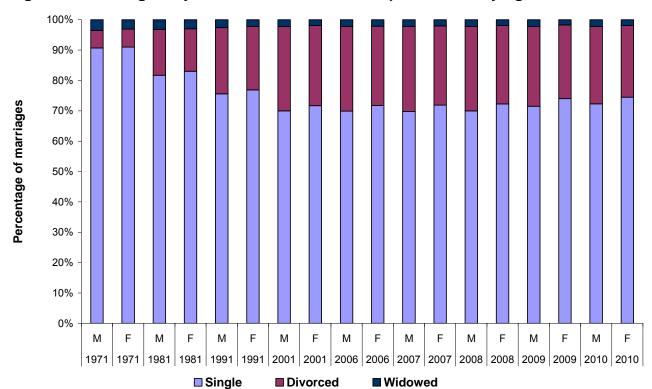


Figure 6.2 Marriages, by marital status and sex of persons marrying, 1971-2010

Age at marriage

The average age at marriage has risen for both males and females. For first marriages, the average age of grooms who were bachelors has risen from 30.5 in 2000 to 32.5 in 2010; the comparable figures for brides who were spinsters are 28.6 in 2000 and 30.7 in 2010.

Marriages by type of ceremony

Civil marriages are conducted by registrars, and they have wide discretion over the form of the ceremony, to meet couples' wishes, as long as there are no religious references. There were 14,449 civil marriages in 2010, when they accounted for just over half (51 per cent) of all marriages compared to just under one-third (31 per cent) in 1971 (Figure 6.3).

The trend in civil marriages mainly reflects a decline in the number of religious ceremonies during the past thirty to forty years. The small increase in religious marriages during the period 1997-2002 was largely associated with the increase of 'tourism' marriages, of which a significant proportion were carried out at Gretna. Since then, there has been a decrease

in the number of religious and other belief marriages, from 16,890 in 2003 to 13,285 in 2009 followed by an increase to 14,030 in 2010.

Religious marriages are conducted by a wide range of celebrants. The largest number of religious marriages were carried out by ministers of the Church of Scotland, who conducted 6,005 marriages in 2010. The other religious bodies conducting more than 500 marriages in 2010 were the Roman Catholic Church (1,776), Assemblies of God (879), Scottish Episcopal Church and other churches of the Anglican Communion (695), and the Methodist Church in Scotland (522). Humanist celebrants have been authorised to conduct marriages in Scotland since 2005. In 2010 they officiated at 2,092 marriages, compared with 1,544 in 2009, 1,026 in 2008, 710 in 2007 and 434 in 2006.

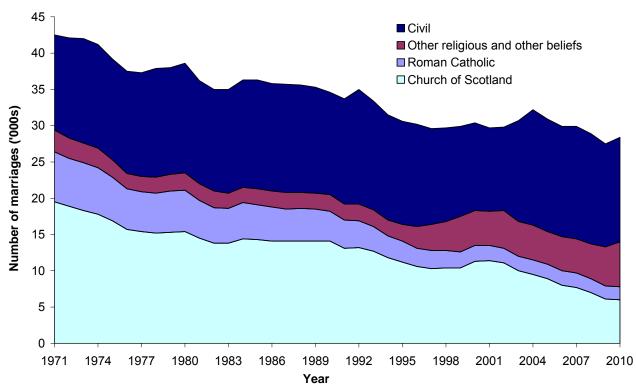


Figure 6.3 Marriages, by type of ceremony, 1971-2010

Until 2002, civil marriages could only be held in registration offices. The Marriage (Scotland) Act 2002 allowed registrars to conduct ceremonies in other approved places, from June 2002. In May 2011, there were almost 900 approved venues in Scotland, including castles, hotels, clubs and a small number of outdoor venues in gardens or the countryside. During 2010, 7,409 civil ceremonies (26 per cent of all marriages and 51 per cent of civil marriages) were conducted at these 'approved places'. Although similar to the number of ceremonies in 2009, this represented an increase of 114 per cent on 2003, the first full year of the new arrangements.

In 2010, 51 per cent of the religious marriages were celebrated in places of worship while just under half (49 per cent) of civil marriages took place in registration offices.

Civil Partnerships

The Civil Partnership Act 2004, which applies throughout the UK and came into force on 5 December 2005, allows same-sex couples to register their partnership.

During 2006, the first full year of operation, 1,047 partnerships were registered in Scotland. In 2007, 688 partnerships were registered. This decrease was expected, because many long-standing relationships would have been registered as civil partnerships in the first full year of registration. In 2008 and 2009, there were further decreases to 525 and 498 registered partnerships respectively and in 2010 there were 465 registrations – 197 male couples and 268 female couples (Figure 6.4).

1,200 ■ Female partnerships ■ Male partnerships 1,000 Number of partnerships 800 600 400 200 0 2006 2007 2008 2009 2010 Year

Figure 6.4 Civil partnerships, 2006-2010

(2005 not shown as the Act only came into force on 5 December

More information about marriage and civil partnership statistics

More detailed information about Scotland's marriages and civil partnerships can be found at: www.gro-scotland.gov.uk/statistics/theme/vital-events/marriages-and-civil-partnerships/

Or in the marriages and civil partnership section of the Vital Events Reference Tables 2010 at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general/ref-tables/2010/marriages-and-civil-partnerships.html

Chapter 7 - Divorces and Dissolutions

Number of divorces

The number of divorces in 2010 was 10,034, 3 per cent (337) fewer than the 10,371 in 2009.

Figure 7.1 shows the number of divorces between 1971 and 2010. There was a marked increase in the number of divorces up to a peak of 13,365 in 1985. The early 2000s saw a slight fall from the levels recorded in the late 1980s and 1990s - perhaps because more couples are cohabiting without getting married, since divorce proceedings are not necessary to sever such relationships.

Changes to divorce legislation were introduced by the Family Law (Scotland) Act 2006. The changes, which came into effect on 4 May 2006, reduced separation periods for divorce with consent to one year (previously two years) and without consent to two years (previously five years). The recent peak in 2006 (13,076 divorces, the highest figure since 1993), and the subsequent decreases in annual figures, were expected as a result of the change in legislation, because some divorces which were finalised under the new arrangements in 2006 would, under the old arrangements, have taken place in later years.

In 2010 the median duration of marriage ending in divorce was 15 years, compared with 12 years in 1999 and 11 years in 1985. Again, this change is probably due to more couples cohabiting rather than getting married, since the end of such relationships are not subject to divorce proceedings.

The information in this report covers divorces granted in Scotland, regardless of where the marriage took place.

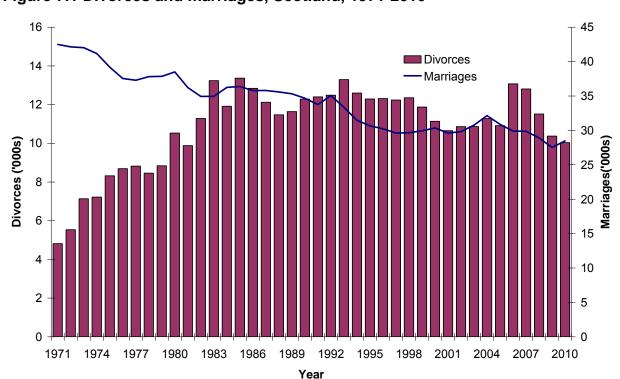


Figure 7.1 Divorces and marriages, Scotland, 1971-2010

Dissolutions of civil partnerships

The Civil Partnership Act 2004, which came into force on 5 December 2005, allows samesex partnerships to be dissolved in the same way that marriages can be ended by divorce.

The first dissolution in Scotland was finalised in 2007. In 2010, 34 partnerships (15 male couples and 19 female couples) were dissolved – an increase from the 24 dissolutions finalised in 2009.

More detailed statistics on divorces and dissolutions

Statistics on divorces and dissolutions in Scotland from April 2009 are now published by the Scottish Government. More detailed statistics are available from the Civil Justice section of the Scottish Government Crime and Justice Statistics website at: www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice

There are also some statistics available in the divorces and dissolutions section of the Vital Events Reference Tables 2010 at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general/ref-tables/2010/divorces-and-dissolutions.html

Chapter 8 – Adoptions

The Registrar General for Scotland registers adoptions under the Adoption and Children (Scotland) Act 2007. The Adoption of Children (Scotland) Act 1930 first provided for the registration of adopted children.

Adoptions include (for example) cases of step-parents adopting their spouse/partner's children as well as couples adopting children who are not related in any way to them. The figures include small numbers of foreign adoptions registered in Scotland, and parental orders granted following a birth by a surrogate mother.

Following a steady rise to a post-war peak of 2,298 in 1946, the total number of adoptions fell back to 1,236 in 1959 before peaking again at 2,268 in 1969. Since then, the annual number of adoptions declined fairly steadily to around 400 in 2000 and has fluctuated around the level of 400 to 450 thereafter.

The Registrar General recorded 466 adoptions during 2010. This is 11 more than in 2009, but half the number recorded per year in the late 1980s, and around a quarter of the number recorded per year in the early 1970s.

Of the children adopted in 2010, 27 per cent were adopted by a step-parent and 70 per cent were adopted by non-relatives of the child. Figure 8.1 shows the children's ages. Only 16 per cent of children adopted in 2010 were aged under 2, 12 per cent were aged 2, 23 per cent were 3-4, 34 per cent were 5-9, 11 per cent were 10-14 and 4 per cent were aged 15 or over. Of the children aged under 2, 82 per cent were adopted by non-relatives. In contrast, only 11 per cent of the 66 children aged 10 or over were adopted by non-relatives.

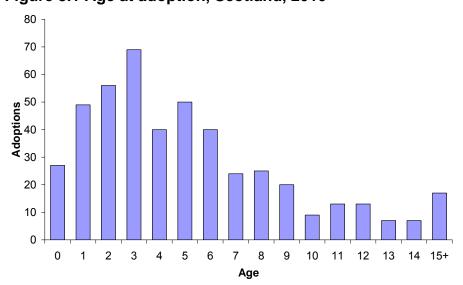


Figure 8.1 Age at adoption, Scotland, 2010

More information about adoptions

More detailed information about Scotland's adoptions can be found at: www.gro-scotland.gov.uk/statistics/theme/vital-events/adoptions.html

Or in the adoptions and re-registrations section of the Vital Events Reference Tables 2010 at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general/ref-tables/2010/adoptions-re-registrations.html

Chapter 9 - Households and Housing

In mid-2010, there were 2.36 million households in Scotland, which is around 315,000 more than in 1991. The number of households in Scotland has been increasing by an average of around 16,600 a year since 1991. The rate of growth has slowed since 2007 and the increase of 12,100 households from 2009 to 2010 was the lowest in the last five years.

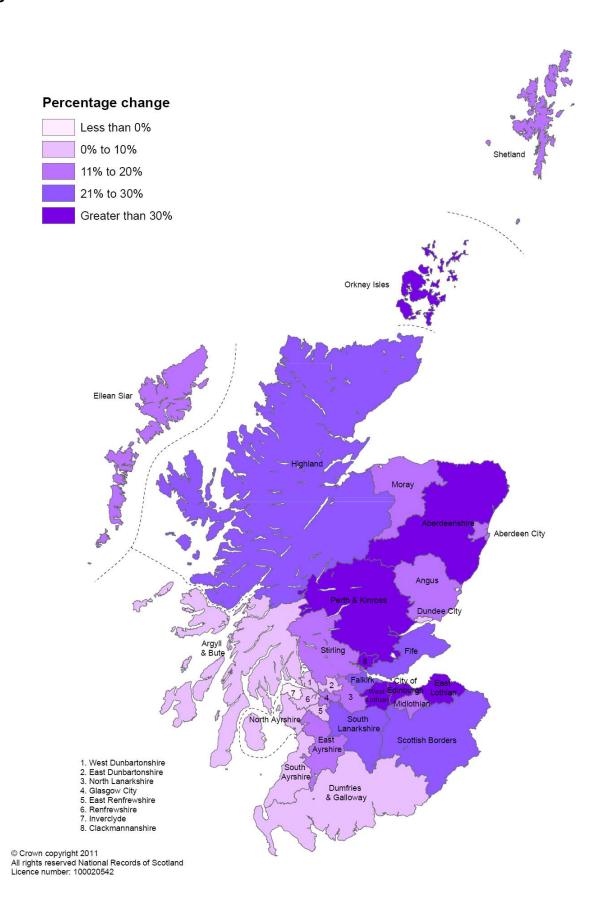
By 2033, the number of households in Scotland is projected to increase to 2.8 million, which is an average of 19,300 additional households per year. Most of the increase is the result of an ageing population and more people living alone or in smaller households, rather than an increase in the population. Looking to the future, there is a projected increase in the number of people in older age groups, with a fall in the number of younger people. This has an impact on household structure, as elderly people are more likely to live alone or with just one other person and children tend to live in larger households.

Variations within Scotland

Over the last five years, the number of households has increased in every Council area in Scotland except Inverclyde (where it fell slightly). These trends are likely to continue, with the number of households in almost every Council area projected to increase over the next 25 years. Figure 9.1 on the following page shows the projected percentage change in the number of households in each Council area between 2008 and 2033.

In some areas, the number of households is projected to rise markedly, with 13 of the 32 Council areas projected to increase by at least 20 per cent. The largest projected increases are in Clackmannanshire (41 per cent), East Lothian (40 per cent) and Perth and Kinross (38 per cent). Aberdeenshire, City of Edinburgh, West Lothian and Orkney Islands also have projected increases over 30 per cent. In contrast, Inverciyde has a projected decrease of 5 per cent over the same period.

Figure 9.1 Projected percentage change in households by Council area, 2008 to 2033



Household type

Figure 9.2 shows the number of households of each type in 1981 and 2008 and the projected number in 2033. There is a substantial increase in households containing just one adult (a projected increase of nearly a half over the next twenty five years). There are also increases in households with two adults (a projected increase of almost a quarter), and households with one adult with children.

In contrast, the number of larger households is falling, with households containing two or more adults with children, or three or more adults, projected to decrease by more than a quarter over the next twenty five years.

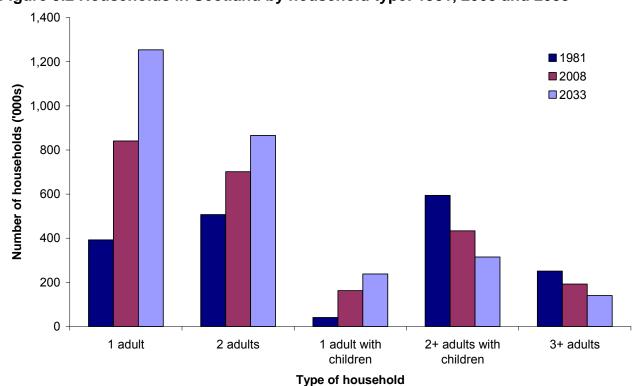


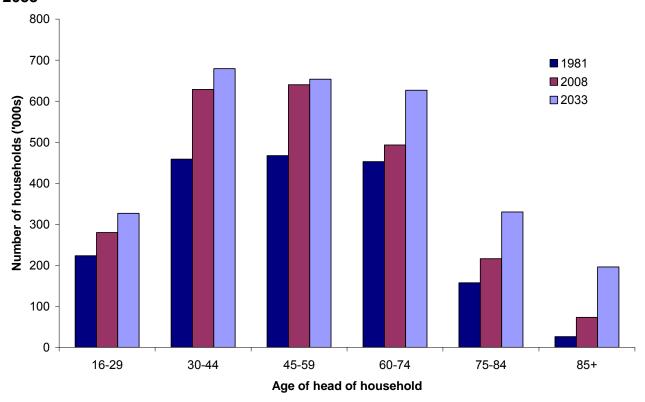
Figure 9.2 Households in Scotland by household type: 1981, 2008 and 2033

Age group

Figure 9.3 shows the number of households in 1981 and 2008, and the projected number in 2033, by the age of the head of household. The 'head of household' is normally the first person included on the census form.

Scotland's population is ageing, with a projected increase in the number of people in the older age groups. This trend is reflected in the projected number of households, with the largest increases in households headed by people aged 60 or over (an increase of almost 50 per cent, from 783,000 to 1,150,000, between 2008 and 2033). In contrast, households headed by someone aged under 60 are projected to increase by just 7 per cent, to around 1,660,000. The number of households headed by someone aged 85 or over is projected to more than double over the same period, from 73,000 to 196,000.

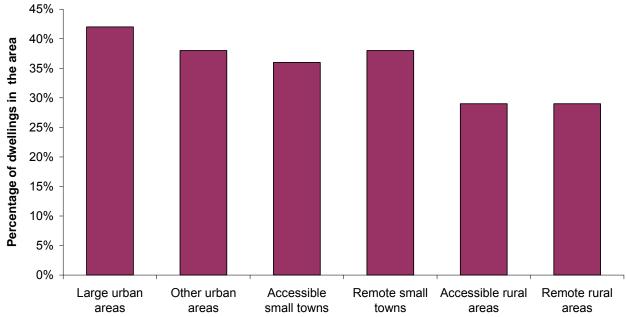
Figure 9.3 Households in Scotland by age of head of household: 1981, 2008 and 2033



Single-adult households

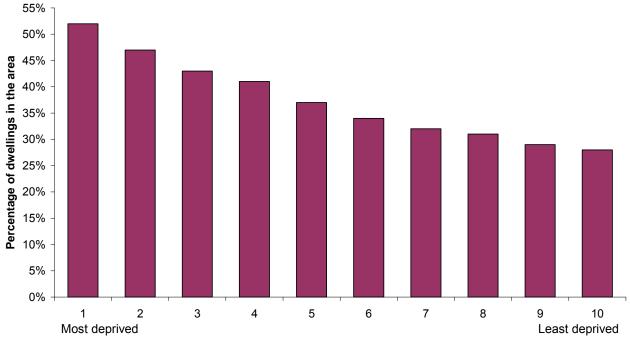
Thirty eight per cent of dwellings in Scotland are entitled to a Council Tax discount because there is only one adult living there (alone, with children, or with those 'disregarded' for Council Tax purposes). The proportion of dwellings entitled to a single-adult discount is higher in urban areas (42 per cent in large urban areas, compared to 29 per cent in rural areas) and in deprived areas (52 per cent in the most deprived areas, compared to 28 per cent in the least deprived areas), as illustrated in Figures 9.4 and 9.5.

Figure 9.4 Single-adult households¹, by urban-rural classification, 2010



^{1.} Dwellings entitled to a Council Tax discount, as there is only one adult living there (either alone, with children, or with those 'disregarded' for Council Tax purposes).

Figure 9.5 Single-adult households¹, by level of deprivation², 2010



^{1.} Dwellings entitled to a Council Tax discount, as there is only one adult living there (either alone, with children, or with those 'disregarded' for Council Tax purposes).

purposes).
2 .Scottish Index of Multiple Deprivation (SIMD) 2009. For more information go to Appendix 2.

Type of housing

There are higher proportions of flats in urban areas, and in more deprived areas, as shown in Figures 9.6 and 9.7. In contrast, there are higher proportions of detached houses in rural areas, and in less deprived areas.

Figure 9.6 Dwelling type, by urban-rural classification, 2010

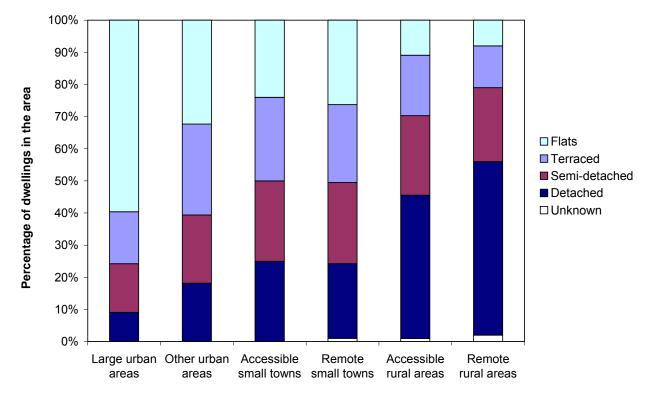
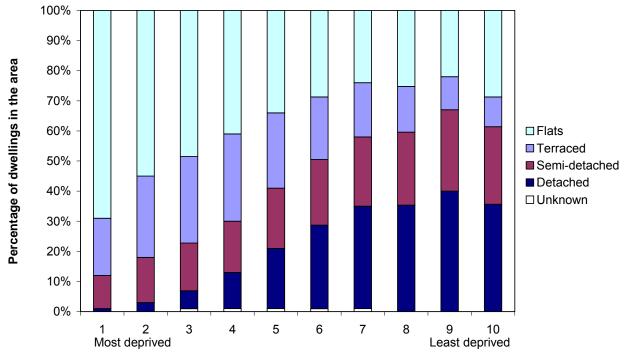


Figure 9.7 Dwelling type, by level of deprivation¹, 2010



1. Scottish Index of Multipe Deprivation (SIMD) 2009. For more information go to Appendix 2.

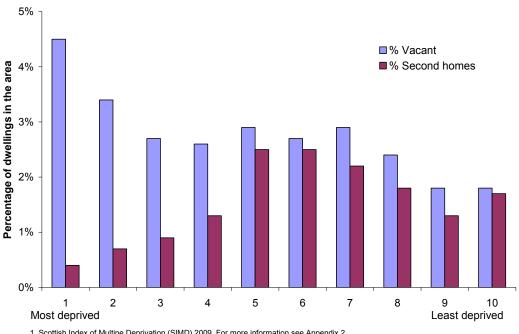
Vacant dwellings and second homes

In Scotland 2.8 per cent of dwellings are vacant and 1.4 per cent are second homes, though there is wide variation across the country. Remote rural areas have the lowest percentage of dwellings which are occupied (88 per cent), with higher percentages of vacant dwellings (4.6 per cent of all dwellings in these areas) and second homes (7.4 per cent), as shown in Figure 9.8. The most deprived areas have the highest percentage of dwellings which are vacant (4.5 per cent), as shown in Figure 9.9. The Council area with the highest percentage of dwellings which are vacant is Eilean Siar

8% 7% ■ % Vacant ■ % Second homes Percentage of dwellings in the area 2% 1% 0% Large urban Other urban Accessible Remote small Accessible rural Remote rural areas small towns towns areas

Figure 9.8 Vacant dwellings and second homes, by urban-rural classification, 2010

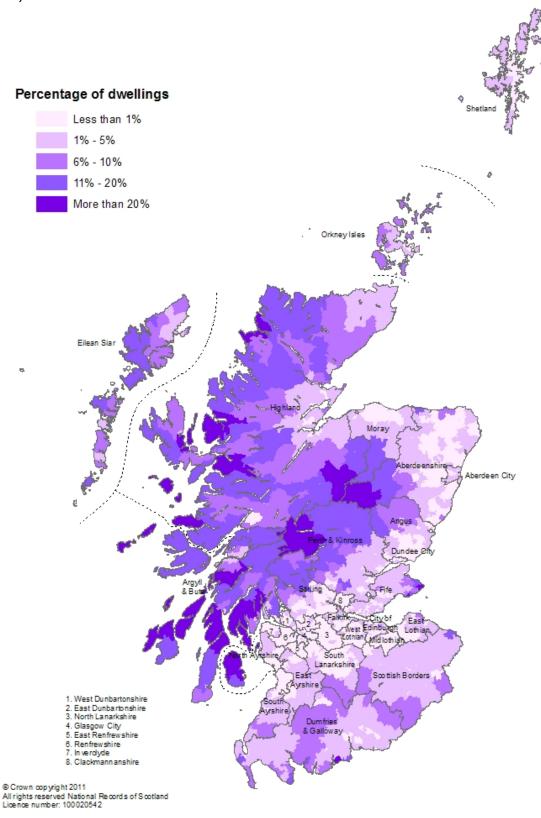




^{1.} Scottish Index of Multipe Deprivation (SIMD) 2009. For more information see Appendix 2.

Figure 9.10 shows the percentage of dwellings which are second homes in each 'data zone' in Scotland. A data zone is a standard geography which was designed to contain an average of around 750 people at the time of creation in 2004. Certain remote rural areas have the highest proportions of second homes, particularly parts of the west coast and some of the islands, Highland Perthshire, and the area around the Cairngorms National Park. This also illustrates the variation within Council areas.

Figure 9.10 Percentage of dwellings which are second homes, in each data zone in Scotland, 2010



More information about households and housing statistics

More detailed information about Scotland's households and housing, including estimates and projections can be found at: $\underline{www.gro-}$

scotland.gov.uk/statistics/theme/households/index.html

Chapter 10 - Scotland's Census as a Research Resource

An invited chapter from Elspeth Graham, Allan Findlay, David Manley, David McCollum, Frank Popham and Maarten van Ham Economic and Social Research Council (ESRC) Centre for Population Change, and Universities of St Andrews and Dundee)

Introduction

Scotland's census is amongst the most important research resources available to those wishing to investigate the nature and significance of population change in Scotland. Each decennial census provides a fascinating snapshot of Scotland's inhabitants on a particular date. Not only the size and composition of the population and its variations across Scotland, but all sorts of information about marriage and partnership, housing and household size, economic activity, religion and ethnicity, and migration and mobility can be gleaned from the census. Such basic information is important to good governance. However, it is the ability to compare one census with another, and in recent years to link census data to other statistical sources (for example, health records), that has unlocked the greater potential of the census as a means of understanding the complex facets of demographic, economic and social change in Scotland. This chapter illustrates how data from recent censuses have been used to analyse and interpret population change. It thus highlights the significance of Scotland's census, not only to those in government but also to researchers interested in investigating the causes and meanings underpinning key changes in the characteristics of Scotland's population (Graham and Boyle, 2004).

The census has a long history of providing information on the population of Scotland and its regions. This history stretches back to the first modern census in 1801. Since then insights into the nature of the Scottish population have become richer and more detailed as more census questions have been added on an ever-widening spectrum of topics (White, 2010). While this has provided government with the opportunity to govern more effectively and more equitably, for the researcher the increased detail offered by the census (combined with its authority as a means of representing the vast majority of Scotland's people in a way that a sample survey can never hope to achieve) has allowed the use of more complex analytical tools. The result has been a deeper understanding of the social and economic forces underpinning the demographic picture at each census and, more importantly, of the drivers accounting for changes in the country's socio-demographic profile.

As well as examining population change over time, researchers have turned their attention to geographical variations within Scotland. The 'mapping' of Scotland's population has often simply been included along with UK-wide representations such as those offered by the 1980 publication *People in Britain* (Census Research Unit, 1980). This collaborative project between the Census Offices and a group of academics showed the socioeconomic and demographic characteristics of Scotland's population in unprecedented detail using a matrix of one kilometre grid squares. The atlas demonstrated, in a way never before appreciated, just how unique the census is as a means of researching small-area variations in a systematic fashion. Later snapshot cartographies included Dorling's (1995) landmark *Social Atlas of Britain*, which used population-weighted cartograms and a

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¹ An early exception would be JB Caird's map of Scotland's population based on the 1961 Scottish census.

diversity of new census variables. To take only one example, the maps revealed just how different Scotland was from the rest of the UK in terms of ethnicity (a question first asked in the 1991 census). This was true not only in terms of the lower proportion of visible ethnic minorities compared with most other parts of the UK, but also in terms of little recognised facts such as that 'the largest group of immigrants in Britain are the English in Scotland and Wales' (Dorling, 1995, 46). Similar projects followed after the 2001 census when Dorling (2005; 2010) and others (Shaw et al, 2008) argued that the chief purpose of undertaking comparative cross-sectional analyses of census and other national statistics is not simply to satisfy academic curiosity about unexpected patterns, but more importantly to raise questions of social justice. The mapping of census data provide a vivid picture of the gross socio-spatial inequalities, including those in health and life expectancy, across the UK and graphically illustrate that geography matters!

If cross-sectional analysis of statistical data is academically valuable, even more exciting has been scholarly use of the census to explore the drivers of population change. For the first time following the 2001 Census, a coordinated Scottish programme of research (ESRC/Scottish Government, 2008) was launched that drew together academics from several different disciplines (from geography to economics and sociology) with the dual goals of understanding the changes in Scotland's mortality, fertility and mobility and the implications for Scotland's politicians, business people, and general public². Projects explored the macroeconomic impacts of demographic change, fertility in Scotland compared to England, fertility variations within Scotland, the ageing of Scotland's population, and different aspects of migration to and from Scotland. The Scottish Government has recognised the great value of these studies, not only in advancing the understanding of individual demographic processes but also as 'a key body of work' helping the Scottish Government to achieve its goals, including its population growth target of matching average European (EU15) population growth over the period 2007 to 2017.

Population research in Scotland has been strengthened further by the setting up of the ESRC Centre for Population Change, a collaborative project between a consortium of Scottish universities, the University of Southampton, the Office of National Statistics and the National Records of Scotland. New and on-going research is steadily increasing knowledge of Scotland's population and enhancing the evidence base needed for policy development. In the rest of the chapter, three case studies are presented to illustrate the value of Scotland's census as a research resource. These deal with topics of current social and economic significance relating to health, return migration to Scotland, and employment. The first is a comparative study of health in Scotland and England. The other two case studies focus on issues relating to population change over time. All demonstrate the value of new census-based data sets (especially the Samples of Anonymised Records and the Scottish Longitudinal Study) which are now making it possible to answer more complex questions.

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² There had been a history of the Economic and Social Research Council funding valuable census research programmes, but these were not specific to Scotland.

Case study 1: The health of Scotland's population

The health of a country's population is related to many things including the provision of universal free health services (like the NHS), the level of unhealthy behaviours (smoking for example) and also the economic circumstances of the population (for example the levels of poverty and unemployment). Although the life expectancy of the Scottish population keeps improving year on year, Scotland has a lower life expectancy than many other Western European countries. Scotland has not always lagged behind the rest of Western Europe as its life expectancy was comparatively good in the first half of the twentieth century, but its position has deteriorated more recently. Death rates amongst those of working age, in particular, are comparatively high in Scotland. In looking at reasons for Scotland's poor health performance, researchers have often contrasted it with England and Wales which has higher life expectancy.

One reason that has been explored is that Scotland as a whole has had high levels of poverty and unemployment relative to national levels in England and Wales. Research conducted utilising data from around the 1981 Census found that a large part of Scotland's excess mortality rate could be explained by the higher levels of deprivation (a combined measure of poverty and unemployment) in Scotland. However, when this research was repeated utilising data from around the 1991 and 2001 Censuses, it was found that a smaller proportion (although still a sizeable minority) of Scotland's excess mortality rate compared to England and Wales could be explained by its higher rates of deprivation (Hanlon et al., 2005). The remaining unexplained excess mortality in Scotland was named the 'Scottish effect' and it remains unexplained today although research is on-going to find an explanation.

There have been numerous reasons suggested for this unexplained excess. One possibility is that it is not enough just to take current economic circumstances into account as research has shown that differences in economic circumstances across a person's life can impact on the risk of death in older age. For example, those growing up in poverty may have, on average, a slightly higher risk of death independent of their economic circumstances in later life. So in Scotland's case, as levels of deprivation have declined in more recent years (although remaining higher than in England and Wales), measures of deprivation may no longer capture adequately the poorer average economic circumstances of the Scottish population in the past. Indirect evidence to support this comes from research that shows that people born in Scotland but who moved elsewhere in the UK (i.e. to England and Wales and Northern Ireland) have higher mortality rates than those born and living in England and Wales and Northern Ireland (Popham et al., 2010). In turn, migrants to Scotland tend to have lower death rates than those born in Scotland, recent research confirming that these differences cannot be explained by differences in current deprivation levels.

Most of the research to date has focused on differences in death rates. Although we all die eventually, only a small percentage of the population dies each year. Therefore, across the population, deaths are relatively rare events. As we all live longer, it becomes informative to measure levels of poor health, because it is more common. Using information collected in Scotland's Census of 2001, this study sought to answer a key question: 'Is there a Scottish effect for self-rated health?' (Popham, 2006). It extended 'Scottish effect' research by looking at whether rates of excess poor health in Scotland could be explained by

current socio-economic circumstances and whether country of birth was important. The 2001 Census was used to research this question because it contained the relevant information on health, country of birth and economic circumstances. People were asked two health questions. The first was on limiting illness: "Do you have any long-term illness, health problem or disability which limits your daily activities or the work you can do?". The second was on general health: "Over the last twelve months would you say your health has on the whole been: good, fairly good or not good?". Measuring levels of poor health is relatively complex because the definition of poor health can vary from person to person. Additionally, complete data on all people experiencing all types of disease are not available. However, it has been shown that asking people simply to rate their own health can provide a good picture of population health as these questions do capture health well. For example, research has shown that people rating their health as poor, on average, have a higher subsequent risk of death even after accounting for other risk factors.

Census results in an anonymised form (to preserve confidentiality) are made available to the general public, policy makers and researchers in various forms. The Samples of Anonymised Records (SARs) were used in this study. They give researchers access to a limited number of census variables for an anonymised sample of the UK population (a 3 per cent sample in this case). The SARs started with the 1991 Census and, in addition to the 2001 SARs, SARs are planned for the 2011 Census³. Although England and Wales, Scotland and Northern Ireland conduct separate censuses there is much co-ordination, meaning that the same or very similar questions were asked in all the Censuses in 2001. This allowed a comparison to be made between the levels of poor health reported in Scotland compared to those reported in England, by country of birth (limited to those born in England and Scotland) for those of working age (aged 25 to 64). Importantly, the census covers all sections of the population and so it provides the most representative information on the population.

Overall 768,885 people were included in the analysis. The majority were born and living in England (87.3 per cent), 2.1 per cent were born in Scotland but living in England, 1.1 per cent were born in England but living in Scotland and 9.5 per cent were born and living in Scotland. Just over 9 per cent of people reported having poor (not good) general health. After accounting statistically for any age and sex differences between the groups, those born and living in Scotland were found to be most likely to report poor health. This is illustrated in Figure 10.1 where the odds ratio of poor general health is given for each country of birth and residence combination, comparing the other groups to those born and living in England who have the reference value of one. An odds ratio of above one means a higher rate of poor general health and below one a lower rate. Those born in Scotland and living in England had very slightly worse health compared to the reference group but the difference was small, while those born in England and living in Scotland had slightly better health. To investigate further the apparent health disadvantage of the Scots-born. the economic differences between the groups were then examined. Of the four groups, individuals born and living in Scotland were most likely to live in socially rented housing, not to have access to a car, to live in deprived housing conditions and to be unemployed or economically inactive. Housing tenure, car access, housing conditions and employment status are all markers of economic status that have been shown to be associated with how people rate their health. Thus the poorer average economic conditions of those born and

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³ More details on the SARs are available at www.ccsr.ac.uk/sars/.

living in Scotland could be the reason for their higher rate of poor general health. This was tested by statistically accounting for the differences in these economic markers and the results are also shown in Figure 10.1.

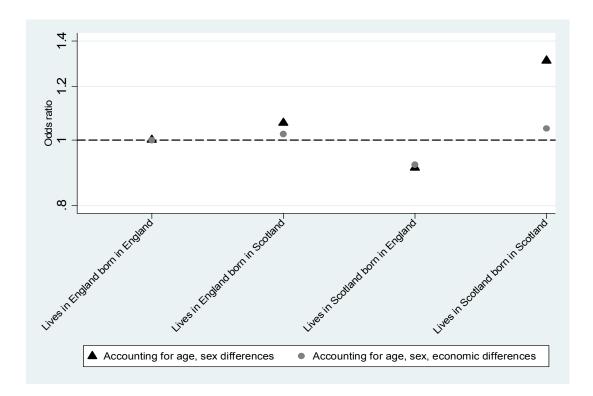


Figure 10.1 Odds ratio for poor general health by country of residence and birth

The odds ratio for those born in and living in Scotland was lowered and was reduced to just above one, suggesting that the rate of general health is very similar to that of those born and living in England once economic factors have been taken into consideration. Thus there appears to be no evidence of a 'Scottish effect' as the excess poor general health can be explained by differences in economic circumstances. The odds ratios were little changed for the other two groups as they were similar in economic profile to those born and living in England. When the statistical analysis was conducted with limiting illness, rather than general health, as the outcome of interest, results were very similar.⁴

Why is a 'Scottish effect' found for mortality but not self-ratings of health? One of several possible reasons is that self-ratings of health, although associated with later mortality risk, capture present or more recent health rather than health risk accumulated across one's life. Thus current economic circumstances rather than circumstances in the past may be most important for how people rate their health. This study raises the important possibility that decreasing poverty and non-employment in Scotland may be beneficial for the health of its population although it should be recognised that there is an on-going debate about the relative importance of tackling poverty to improve health or improving health to tackle poverty.

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⁴ The full results are available at http://www.biomedcentral.com/content/pdf/1471-2458-6-191.pdf

Case study 2: Scots return migrants to Scotland

Scotland's prosperity, yet understanding of migration flows to and from Scotland is limited. In-migration flows include Scots returning home after a period living outside Scotland. These Scots-born returnees from the rest of the UK and overseas made up 29 per cent of all migrants into Scotland in the twelve months prior to the 2001 Census. This study aimed to fill some of the existing evidence gaps in relation to migration to and from Scotland by investigating the characteristics of Scots return migrants using data from the census and the Scotlish Longitudinal Study. The analysis explored the demographic and socio-economic profile of Scots-born individuals who left and returned to Scotland in the ten year period between the 1991 and 2001 Censuses. The occupational mobility of these migrants was compared to that of other groups, and the factors that determined levels of occupational mobility were investigated.⁵

The Scottish Longitudinal Study (SLS) is a 5.3 per cent nationally representative sample of the Scottish population comprising anonymised data mainly from the 1991 and 2001 Censuses and vital events (births, marriages and deaths) registration. It has a large sample size (274,055 sample members in 1991), which allows for the examination of relatively small subgroups. The National Health Service Central Register (NHSCR), which records movements of patients between health boards (based on registrations with General Practitioners), was used to identify the entry or exit of SLS members into and out of Scotland. It was, therefore, possible to identify a particular sub-set of Scots return migrants and to draw out their demographic and socio-economic characteristics. Returnees were defined as Scots-born SLS members who were recorded as leaving and later returning to Scotland. Most had returned after a period living somewhere in the rest of the UK but the sample also included returnees from overseas. Members of this study cohort were present in Scotland at both the 1991 and the 2001 Censuses, and left and returned to Scotland in the period between the censuses. This analysis thus covered a particular sub-set of Scots return migrants.

While the SLS dataset is an extremely valuable resource for those studying Scotland's population, it may not identify all migrants. The SLS relies on the NHSCR to flag the relocation of sample members, so that those who do not register with a GP when they move (especially young men and short-term migrants) may be missed. In addition, people migrating overseas are less likely to be identified as migrants than those migrating to other parts of the UK. This is because, even if people in the latter group do not inform their GP that they are leaving Scotland, they will be picked up by the NHSCR as having left Scotland when they register with a new GP in another part of the UK.

The SLS contains 1,524 Scots-born individuals who left and returned to Scotland between the 1991 and 2001 Censuses. Return migrants were more likely to be female than male (59 per cent versus 41 per cent) and had a relatively young age profile, with average ages at last exit from Scotland of 26, at last entry to Scotland of 28, and of 30 at the time of the 2001 Census. Compared with the general Scotlish population in 2001, these return migrants had a favourable educational profile (Figure 10.2) and were more likely to be in managerial or professional jobs (Figure 10.3).

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⁵ For a full description of these findings see McCollum (2011) available at http://www.scotland.gov.uk/Resource/Doc/341539/0113589.pdf

Figure 10.2 Level of highest qualification, Scots return migrants and general Scottish population, 2001

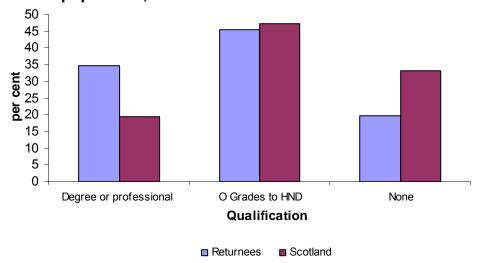
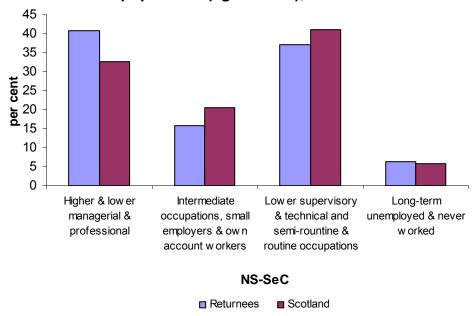


Figure 10.3 National Statistics Socio-economic Class of Scots return migrants and general Scottish population (aged 16-74), 2001



Return migrants generally experienced greater levels of upward occupational mobility relative to other groups. The occupational mobility between 1991 and 2001 of return migrants was compared with three other groups: 1) Scots who remained in Scotland; 2) inmigrants born in the rest of the UK who had lived in Scotland since 1991; and 3) inmigrants born overseas who had lived in Scotland since 1991. In the analysis, group members had to be present in Scotland and employed in both 1991 and 2001. Individuals without a job in either 1991 or 2001 were omitted from the study, as were those who were younger than 15 or older than 55 in 1991. Economically active students were also excluded as this could distort the analysis of occupational mobility trends if, for example, a student was recorded as working in a supermarket part-time whilst studying but became an accountant after graduation.

High occupational status refers to National Statistics Socio-economic Classification (NS-SeC) 1 and 2 (higher managerial occupations, higher professional occupations, lower professional and higher technical occupations). Low occupational status refers to NS-SeC groups 3, 5, 6 and 7 (intermediate occupations, lower supervisory and technical occupations and semi-routine and routine occupations). Scots-born people who migrated from Scotland after 1991 and returned before 2001 had much lower occupational status in 1991 than the two in-migrant groups: 70 per cent were in low status occupations compared to 58 per cent of in-migrants born overseas and 56 per cent of in-migrants born in England and Wales. By 2001, Scots-born return migrants had closed the gap with the two inmigrant groups in terms of their occupational status: 43 per cent of Scots-born returnees were in high status occupations compared to 49 per cent of in-migrants born overseas and 51 per cent of in-migrants born in England and Wales. The greatest contrast was between the returnees and those who had never left Scotland; while 43 per cent of Scots-born return migrants were in higher status occupations by 2001, only 34 per cent of those who had remained in Scotland were in this occupational group. Thus, for Scots, leaving and returning to Scotland may be associated with greater upward occupational mobility compared to those remaining in the country.

A closer examination of occupational change over the decade revealed the relative advantage for Scots-born returnees in terms of occupational status: 20 per cent moved from low to high status occupations between 1991 and 2001 compared to 15 per cent of in-migrants born overseas and 15 per cent of in-migrants born in England and Wales. However around 40 per cent of in-migrants from England and Wales were already in high occupational status jobs by 1991, so could not be recorded as experiencing further upward mobility between the two censuses. Most of those who stayed in Scotland (60 per cent) remained in low occupational status jobs between 1991 and 2001.

The factors associated with mobility from a low to high occupational status versus remaining in low occupational status between 1991 and 2001 were investigated using binary logistic regression models. The findings indicated that having post-school qualifications (especially a university degree, but also vocational qualifications) was by far the most powerful predictor of upward occupational mobility. Other significant determinants of upward occupational mobility included being white (as opposed to a member of an ethnic minority group), in good health, a migrant (as opposed to a 'stayer'), female and young. Scots return migrants were also shown to have a higher likelihood of upward occupational mobility than Scots who had not engaged in migration (i.e. remained in Scotland between the 1991 and 2001 Censuses).

Some explanations of these findings have been offered in a range of academic papers that stress that migration is a positively selective process engaging the better educated and better qualified elements of the population (Findlay *et al*, 2008 and Findlay *et al*, 2009), with similar positive selectivity amongst in-migrants to Scotland. Contrary to some perceptions, Scots return migrants between 1991 and 2001 were not predominantly retirement migrants, or people whose careers were nearing conclusion (Findlay *et al*, 2009).

Scotland's census, and in particular the Scottish Longitudinal Study, allow researchers to shed new light on the nature of Scots return migrants. The findings indicate that return migration can be viewed as a valuable source of population and economic growth in

Scotland since the sub-set of returnees analysed were typically younger, better qualified and more likely to be in work and in high occupational status jobs than the general Scottish population in 2001. Leaving, even for a short space of time, and later returning to Scotland also appears to have been beneficial for those involved, since they enjoyed increased levels of upward occupational mobility relative to those who remained in Scotland. Future research using the SLS could re-run this analysis when data from the 2011 Census becomes available. This would generate interesting findings relating to return migration during the recent years of recession (Findlay *et al*, 2010). It would be valuable to discover whether those who return during recession are significantly different in their economic and occupational characteristics from those returning in more prosperous years.

Case Study 3: Neighbourhoods and employment

The neighbourhood in which someone lives may influence their life chances. It is possible, for example, that living in an area with a high proportion of social housing has a negative impact on residents' health and well-being, including their employment prospects. Such thinking lies behind policies designed to create 'mixed communities', which have been enthusiastically adopted throughout the United Kingdom as well as in the Netherlands, Germany, France and Sweden. Large amounts of money have been spent to create neighbourhoods with a mix of housing tenures, and therefore with a mix of socio-economic groups. In addition to urban renewal, the right-to-buy legislation in the UK has also contributed to the development of mixed tenure neighbourhoods. Creating mixed communities is thought to be an important instrument for reducing the perceived negative effects on the individual of living in concentrations of poverty: so-called neighbourhood effects (van Ham & Manley, 2010). The neighbourhood effects hypothesis states that the neighbourhood in which an individual lives can have an independent and causal impact on the life chances of the individuals living there. But what is the evidence for such an effect in Scotland? This study used census data to explore this question.

Much of the early literature on neighbourhood effects focused on the idea that individuals living in concentrations of poverty would adopt deviant cultural values, giving rise to the notion of a culture of poverty (Wilson, 1987). To combat the development of a culture of poverty, it was suggested that communities experiencing severe poverty would benefit from the introduction of positive role models (such as homeowners) who would enrich local networks of residents and help people to get access to employment opportunities. However, recent research on neighbourhood effects has offered a more critical commentary, highlighting the fact that there is a lack of robust quantitative evidence of causal neighbourhood effects, and therefore questioning the effectiveness of mixed tenure policies (van Ham et al, 2011). The investigation of causal effects requires data for more than one time period, so data from the Scottish Longitudinal Study (SLS) were used to examine whether the neighbourhood in which one lives has a long lasting effect on employment outcomes in Scotland. The research addressed the following question: to what extent does 1991 neighbourhood tenure mix influence the probability that those who are unemployed in 1991 have a job in 2001? For the purpose of this study the SLS was enriched with aggregate-level census data on neighbourhoods⁶.

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⁶ For the full study, see Van Ham and Manley (2010), available at http://dx.doi.org/10.1093/jeg/lbp017

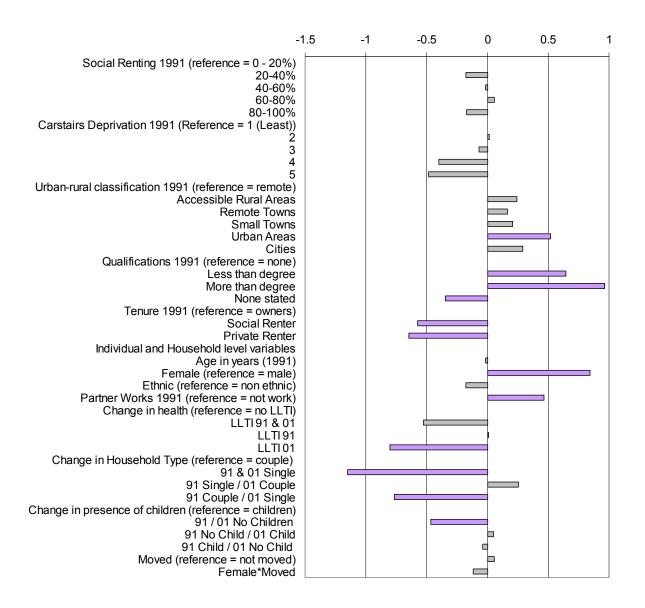
There is surprisingly little convincing evidence in the academic literature that the characteristics of neighbourhoods have an independent causal effect on employment outcomes for individuals or, if there are neighbourhood effects, on how important they are compared to the effects of other characteristics such as education. The problem with most previous studies is that they used cross-sectional data, which do not allow the order of events to be determined. Cross-sectional data cannot reveal whether living in a certain type of neighbourhood contributes to the probability of being unemployed, or whether people were already unemployed before moving to these neighbourhoods (Cheshire, 2007). The core of this problem is that people themselves decide whether to move into, or out of, particular neighbourhoods. Their decisions are not random but depend on personal preferences and characteristics. Studies using cross-sectional data can only demonstrate correlations between neighbourhood characteristics and individual outcomes, not causal relationships. The use of longitudinal data helps to overcome some of the problems associated with modelling neighbourhood effects.

To investigate the effect of neighbourhood tenure mix on employment outcomes, neighbourhood-level information derived from Scotland's census was linked with individual level data from the SLS. The SLS includes geographic identifiers which allowed small areas to be attached to other information while protecting the anonymity of the sample population. To derive a measure of neighbourhood tenure mix, the percentages of social renting in each neighbourhood were classified by quintiles. Those neighbourhoods in quintiles 2, 3 and 4 were considered mixed communities. Carstairs deprivation scores for each neighbourhood were also divided into quintiles. Using these broad categories (quintiles) safeguards the anonymity of SLS members and enables the investigation of threshold effects – the idea that high concentrations of deprivation or social housing above a certain threshold can be more detrimental than lower concentrations. This study examined neighbourhoods which contained on average 500 people. From the full SLS dataset, all unemployed individuals (excluding students) aged between 16 and 55 in 1991 were selected as the research population. The longitudinal character of the SLS allowed the 1991 neighbourhood characteristics to be linked to employment outcomes for the same people 10 years later. Three logistic regression models were fitted, predicting the probability that people unemployed in 1991 were employed in 2001.

The first model looked at whether the percentage of social renting in the neighbourhood of residence affected the probability that an individual who was unemployed in 1991 had a job in 2001. The results clearly showed that the higher the level of social renting in the neighbourhood in 1991, the less likely an individual was to be in employment in 2001. In particular, those living in neighbourhoods where 80 per cent or more of houses were social renting were found to be less than half as likely to be in employment 10 years later compared with those living in neighbourhoods with 20 per cent or less of social renting. However, this model took no account of other characteristics of the neighbourhood such as its level of deprivation. So the second model included measures of neighbourhood deprivation and showed that the more deprived the neighbourhood of residence in 1991, the less likely people were to be in employment in 2001. Indeed, it showed that housing tenure mix had little influence; it was deprivation which was the important factor. The final model included a range of neighbourhood, household and individual variables also known to influence labour market outcomes, providing a more robust test of the neighbourhood effect. The results are summarised in Figure 10.4, which shows that neither neighbourhood housing tenure mix (the top 4 bars) nor the neighbourhood's level of

deprivation (the next 4 bars) in 1991 had an effect on the probability of being employed in 2001. Rather, individual and household characteristics, such as educational qualifications and household composition (purple bars), were the important factors. These results suggest that, for Scotland, there is no independent causal effect of neighbourhood tenure mix on employment outcomes. However, they do not provide a definitive answer to the research question because there is reason to believe that neighbourhood effects do not influence all individuals in the neighbourhood in the same way.

Figure 10.4 Model showing no significant effects of neighbourhood characteristics on the probability of having a job in 2001 (purple bars represent statistically significant coefficients)



In order to explore potentially diverse effects of neighbourhood tenure mix, the models were rerun for subsets of the population by age groups, gender, social class and individuals' housing tenure. Significant differences in the association between neighbourhood characteristics in 1991 and employment outcomes for individuals in 2001 were only observed for housing tenure groups. Table 10.1 shows that correlations between neighbourhood deprivation and tenure mix were only significant for home owners,

and not for social renters. This seems surprising as it is highly unlikely that neighbourhood effects affect only the owners and not social renters in the same neighbourhoods. The most likely explanation is that the apparent neighbourhood effects are, in fact, proxy measures for the neighbourhood sorting process. Social renters had limited choice in selecting neighbourhoods, as their dwelling was allocated by housing officers, so they were more or less randomly allocated to neighbourhoods. Low income homeowners, on the other hand, selected themselves into the most deprived neighbourhoods because houses in other neighbourhoods were too expensive. while high income home owners selected themselves into more affluent neighbourhoods. So the correlation between neighbourhood characteristics and employment outcomes for homeowners cannot be interpreted as a causal neighbourhood effect.

Table 10.1 Neighbourhood level coefficients for home owners and social renters

	Owners Occ	upiers		Social Renters					
	Coefficient		Significance	Coefficient		s.e.	Significance		
		s.e.							
Neighbourho	ood Level Var	iables							
Social Renti	ng 1991 (refe	rence 0-20 pe	r cent)						
20 – 40	-0.074	0.262		0.142	0.410				
per cent									
40 – 60	-0.045	0.326	*	0.131	0.442				
per cent									
60 – 80	0.460	0.371	***	0.094	0.446				
per cent									
80 – 100	0.104	0.522	***	-0.120	0.451				
per cent									
Carstairs De	privation 199	1 (reference =	: 1, least depriv	ved)					
2	-0.404	0.339		0.487	0.425				
3	-0.610	0.378		0.501	0.454				
4	-0.896	0.388	**	0.341	0.458				
5	-1.242	0.435	***	0.291	0.472				

Note: the coefficients for the individual variables are excluded for brevity

s.e. is the standard error; significance is *p<0.10, ** p<0.05, ***p<0.01

This study set out to investigate whether neighbourhood tenure mix had an independent effect on individual employment outcomes for a sample of the Scottish population. The research was only possible because detailed individual-level data provided by the SLS could be combined with aggregate neighbourhood information derived from Scotland's census. The longitudinal research design offered a substantial improvement over many of the previous investigations of neighbourhood effects in the UK. In this study, no evidence for causal neighbourhood effects was found. These results have important policy implications because they indicate that creating mixed communities through mixed tenure policies is unlikely to have the desired effects. Given the importance of individual characteristics in understanding employment outcomes in the statistical models, anti-poverty policy targeting individuals with the aim of improving their educational and employment experiences and opportunities may well have greater impact.

Looking forward

The three case studies provide a brief insight into some of the ways that Scotland's census data are being used to advance knowledge of Scotland's population. They are part of a long tradition of research into population change that seeks both to answer academic questions and to provide a sound evidence base for policy development. There is much more that has been and can be done. Census data play a central role in this research because they provide the most complete record that we have of those living in Scotland on one particular date. Over the decades, the census questionnaire has grown in size and complexity, responding to the most important issues of the time. Almost a century ago, the Statistical Superintendent of the Office of the Registrar General for Scotland presented a paper on the 'Fertility of Marriage in Scotland' based on the responses to new questions inserted into the 1911 Census schedule (Dunlop, 1914). Scotland's fertility was known to be in decline but there was need for greater insight into the nature of the decline. The new data provided, for the first time, a detailed picture of fertility change in relation to a wife's age at marriage, the duration of marriage and the occupation of the husband. Studies such as this laid the foundation for a much enhanced understanding of fertility trends in Scotland.

In the early 21st century, fertility trends have again become an important issue for Scottish policy makers. Low and declining fertility is a major driver of population ageing, with implications not only for the provision of services such as schools and health care but also for Scotland's future prosperity (Graham and Boyle, 2004). The population of Scotland has been ageing more rapidly than that in the rest of the United Kingdom, and the causes and consequences have become another focus for contemporary research. For the first time in 2001, UK censuses asked the entire population how much (unpaid) time they spent helping or supporting others. The answers revealed a more extensive network of informal care than previously thought. Particularly striking was the number of older people (30,822 people aged 65 and over in Scotland) who were providing at least 50 hours of unpaid care a week to other family members, friends or neighbours. These data raise many questions because, without the extensive provision of informal care supporting those with chronic illness, the demand on health and social services would be much greater and possibly unsustainable.

2011 is once again census year. In March, all households in the UK received a census schedule for completion. Returns are currently being checked and collated. As in previous censuses, new questions have been developed in response to demand for information on new topics while other questions have been dropped. Detailed data on long-term health conditions, national identity, ability in spoken English, language used in the home, and dates of arrival in the UK will soon be available for the first time and promise new avenues for research. Other questions mirror those asked in previous censuses and will allow researchers to investigate many important dimensions of population change over the past decade. Scotland's census is an unparalleled resource and researchers are looking forward to the release of the 2011 Census results and the opportunities they will provide for the advancement of knowledge and the strengthening of the evidence base for public policies relating to population change in Scotland.

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Appendix 1 – Summary tables

Table 1 Population and vital events, Scotland, 1855 to 2010

	Estimated Live births ¹		Stillbirths ² Infant of			eaths Deaths			Marriages	Divorces	Civil Partnerships ³		
Year		Nicosaleaa	5 , 4	NI	D . 5	Nimakan	D . 6	Number D.1.4					
	('000s)	Number	Rate ⁴	Number	Rate ⁵	Number	Rate ⁶	Number	Rate ⁴			iviale	Female
1855-60	3,018.4	102,462	34.1			12,250	119.6	62,644	20.8	20,645	19		
1861-65	3,018.4	102,462	35.1	•••		13,166	119.0	69,265	22.1	22,013	19	•••	
1866-70	3,127.1	114,394	34.9			13,100	122.1	71,974	22.1	22,832	9		
1871-75	3,441.4	120,376	35.0			15,314	127.2	77,988	22.7	25,754	24		
1876-80	3,628.7	126,086	34.8			14,921	118.3	74,801	20.6	24,956	54		
1881-85	3,799.2	126,409	33.3	•••		14,864	117.6	74,396	19.6	26,176	74		
1886-90	3,799.2	120,409	31.4			14,943	120.5	74,390	18.8	25,702	94	•••	
1891-95	4,122.5	125,877	30.5	•••		15,895	126.4	78,350	19.0	27,962	115		
1896-1900	4,122.5	130,209	30.0	•••		16,857	120.4	78,021	17.9	31,771	146	•••	
1901-05		•		•••		,	119.9				181		
1901-05	4,535.7 4,679.9	132,399	29.2 27.6			15,881 14,501	112.4	77,313	17.1 16.1	31,838	195	•••	
		128,987						75,534		31,811		•••	
1911-15	4,748.3	120,654	25.4	•••	•••	13,604	112.8	74,466	15.7	33,857	264	•••	
1916-20	4,823.8	109,750	22.8			10,869	99.0	72,365	15.0	37,437	531	•••	
1921-25 1926-30	4,879.6	112,245	23.0	•••	•••	10,299	91.8	67,652	13.9	34,720	427		•••
	4,845.1	96,674	20.0	•••	•••	8,260	85.4	66,017	13.6	32,605	478	•••	
1931-35	4,905.1	89,306	18.2	•••	•••	7,212	80.8	64,839	13.2	34,986	507	•••	
1936-40	4,956.8	87,734	17.6			6,650	75.8	67,166	13.5	42,941	750	•••	
1941-45	4,711.9	91,593	19.4	3,393	35.7	6,202	67.7	66,302	13.8	43,772	1,413	•••	
1946-50	5,054.3	101,222	20.0	3,047	29.2	4,789	47.3	63,854	12.6	43,206	2,435	•••	
1951-55	5,103.6	91,366	17.9	2,390	25.5	3,009	32.9	61,838	12.1	41,718	2,274		
1956-60	5,145.2	98,663	19.2	2,307	22.9	2,755	27.9	61,965	12.0	41,671	1,792	•••	
1961-65	5,201.0	102,642	19.7	2,000	19.1	2,568	25.0	63,309	12.2	40,235	2,253	•••	
1966-70	5,204.3	93,033	17.9	1,415	15.0	1,970	21.2	62,797	12.1	42,832	4,056	•••	
1971-75	5,234.7	75,541	14.4	939	12.3	1,421	18.8	63,808	12.2	41,404	6,604		
1976-80	5,213.9	65,758	12.6	529	8.0	900	13.7	64,343	12.3	37,801	9,068	•••	
1981-85	5,151.9	66,422	12.9	389	5.8	695	10.5	63,723	12.4	35,756	11,939		
1986-90	5,089.5	65,544	12.9	350	5.3	550	8.4	62,796	12.3	35,440	12,070	•••	
1991-95	5,093.5	63,571	12.5	382	6.0	418	6.6	61,171	12.0	32,866	12,614		
1996-2000	5,077.5	56,856	11.2	327	5.7	316	5.6	59,478	11.7	29,965	11,984		
2001-2005	5,069.9	52,914	10.4	297	5.6	275	5.2	57,178	11.3	30,648	10,913		
2006-2010	5,169.1	58,270	11.3	311	5.3	245	4.2	54,920	10.6	28,934	11,561	316	329
1991	5,083.3	67,024	13.1	369	5.5	473	7.1	61,041	12.0	33,762	12,400		
1992	5,085.6	65,789	12.9	356	5.4	449	6.8	60,937	11.9	35,057	12,487		
1993	5,092.5	63,337	12.4	409	6.4	412	6.5	64,049	12.5	33,366	13,292		
1994	5,102.2	61,656	12.0	381	6.1	382	6.2	59,328	11.6	31,480	12,601		
1995	5,103.7	60,051	11.7	397	6.6	375	6.2	60,500	11.8	30,663	12,292		
1996	5,092.2	59,296	11.6	381	6.4	365	6.2	60,654	11.8	30,242	12,313		
1997	5,083.3	59,440	11.6	319	5.3	316	5.3	59,494	11.6	29,611	12,241		
1998	5,077.1	57,319	11.2	351	6.1	320	5.6	59,164	11.6	29,668	12,354	•••	
1999	5,072.0	55,147	10.8	286	5.2	276	5.0	60,281	11.8	29,940	11,872		
2000	5,062.9	53,076	10.4	298	5.6	305	5.7	57,799	11.3	30,367	11,139		
2001	5,064.2	52,527	10.4	301	5.7	290	5.5	57,382	11.3	29,621	10,651		
2002	5,054.8	51,270	10.1	278	5.4	270	5.3	58,103	11.5	29,826	10,860		
2003	5,057.4	52,432	10.4	296	5.6	265	5.1	58,472	11.6	30,757	10,864		
2004	5,078.4	53,957	10.6	317	5.8	266	4.9	56,187	11.1	32,154	11,275		
2005	5,094.8	54,386	10.7	292	5.3	284	5.2	55,747	10.9	30,881	10,913	53	31
2006	5,116.9	55,690	10.9	296	5.3	248	4.5	55,093	10.8	29,898	13,076	580	467
2007	5,144.2	57,781	11.2	327	5.6	272	4.7	55,986	10.9	29,866	12,813	339	349
2008	5,168.5	60,041	11.6	325	5.4	253	4.2	55,700	10.8	28,903	11,513	245	280
2009	5,194.0	59,046	11.4	317	5.3	235	4.0	53,856	10.4	27,524	10,371	219	279
2010	5,222.1	58,791	11.3	291	4.9	218	3.7	53,967	10.3	28,480	10,034	197	268

¹ Live births only, prior to 1939.

 $^{^{2}\,\,}$ See Notes, definitions and quality of statistics.

³ The Civil Partnership Act 2004 came into effect in December 2005.

⁴ Rate per 1,000 population.

⁵ Rate per 1,000 live and still births.

⁶ Rate per 1,000 live births.

Table 2 Estimated population, births, stillbirths, deaths, marriages and civil partnerships, numbers and rates, by Council area, Scotland, 2010

		Estimated		Live birth	s	Stillb	oirths	Infant	deaths		Deaths		_	Civil
F	Area	Population at 30 Jun	Number	Rate ¹	Standard- ised Rate	Number	Rate²	Number	Rate³	Number	Rate ¹	Standard- ised Rate	Marriages	Partner- ships

			ш.	0) . <u>22</u>		<u> </u>		ш_		ш	0) .92		
SCOTLAND	5,222,100	58,791	11.3	11.3	291	4.9	218	3.7	53,967	10.3	10.3	28,480	465
Council areas		ŕ							•			,	
Aberdeen City	217,120	2,599	12.0	9.6	5	1.9	8	3.1	2,021	9.3	10.1	828	18
Aberdeenshire	245,780	2,727	11.1	13.0	18	6.6	9	3.3	2,252	9.2	9.2	1,221	9
Angus	110,570	1,096	9.9	12.5	2	1.8	8	7.3	1,289	11.7	9.9	445	6
Argyll & Bute	89,200	763	8.6	11.3	2	2.6	2	2.6	1,096	12.3	9.9	931	14
Clackmannanshire	50,630	620	12.2	13.4	1	1.6	-	-	461	9.1	10.0	169	6
Dumfries & Galloway	148,190	1,445	9.8	13.1	8	5.5	9	6.2	1,857	12.5	10.0	4,881	61
Dundee City	144,290	1,745	12.1	10.9	6	3.4	10	5.7	1,695	11.7	10.8	548	16
East Ayrshire	120,240	1,334	11.1	12.3	6	4.5	4	3.0	1,270	10.6	10.4	400	2
East Dunbartonshire	104,580	924	8.8	11.1	7	7.5	5	5.4	964	9.2	8.4	258	4
East Lothian	97,500	1,123	11.5	14.2	5	4.4	2	1.8	984	10.1	9.5	482	5
East Renfrewshire	89,540	872	9.7	12.3	1	1.1	2	2.3	847	9.5	8.8	348	2
Edinburgh, City of	486,120	5,552	11.4	8.4	23	4.1	18	3.2	4,190	8.6	9.3	2,677	107
Eilean Siar	26,190	235	9.0	11.8	-	-	-	-	359	13.7	10.6	102	-
Falkirk	153,280	1,874	12.2	12.7	9	4.8	8	4.3	1,506	9.8	10.3	846	7
Fife	365,020	4,172	11.4	12.2	35	8.3	18	4.3	3,673	10.1	9.6	1,627	20
Glasgow City	592,820	7,565	12.8	9.7	38	5.0	35	4.6	6,325	10.7	12.7	2,501	69
Highland	221,630	2,467	11.1	13.3	10	4.0	10	4.1	2,423	10.9	9.9	1,591	20
Inverclyde	79,770	791	9.9	11.0	5	6.3	5	6.3	1,050	13.2	12.5	222	1
Midlothian	81,140	994	12.3	14.0	10	10.0	2	2.0	805	9.9	10.2	396	8
Moray	87,720	928	10.6	12.5	2	2.2	3	3.2	932	10.6	9.7	379	6
North Ayrshire	135,180	1,450	10.7	12.5	9	6.2	6	4.1	1,484	11.0	10.4	692	7
North Lanarkshire	326,360	3,929	12.0	12.1	29	7.3	21	5.3	3,442	10.5	12.2	895	11
Orkney Islands	20,110	197	9.8	12.2	-	-	2	10.2	213	10.6	9.4	94	-
Perth & Kinross	147,780	1,466	9.9	11.1	5	3.4	4	2.7	1,442	9.8	8.3	986	15
Renfrewshire	170,250	1,995	11.7	12.3	12	6.0	8	4.0	1,910	11.2	11.6	532	5
Scottish Borders	112,870	1,161	10.3	13.7	7	6.0	5	4.3	1,271	11.3	9.7	705	7
Shetland Islands	22,400	266	11.9	13.2	-	-	1	3.8	241	10.8	10.6	93	1
South Ayrshire	111,440	1,035	9.3	11.4	5	4.8	2	1.9	1,439	12.9	10.3	764	13
South Lanarkshire	311,880	3,418	11.0	11.7	11	3.2	3	0.9	3,207	10.3	10.5	1,007	5
Stirling	89,850	836	9.3	10.3	6	7.1	3	3.6	846	9.4	9.4	667	9
West Dunbartonshire	90,570	1,044	11.5	11.9	4	3.8	3	2.9	1,046	11.5	12.0	414	3
West Lothian	172,080	2,168	12.6	12.8	10	4.6	2	0.9	1,427	8.3	10.6	779	8

¹ Rate per 1,000 population.

² Rate per 1,000 live and still births.

³ Rate per 1,000 live births.

Table 3 International populations and vital statistics rates, selected countries, latest available figures

Country	Estimated population 2010	Live births 2009	Stillbirths ¹		infant deaths 2009	Dea	ths	Marriages		
	('000s)	Rate ²	Year	Rate ³	Rate ⁴	Year	Rate ²	Year	Rate ²	
Scotland	5,222	11.4	2009	5.3	4.0	2009	10.4	2009	5.3	
European Union										
Austria	8,375	9.1	2009	3.7	3.8	2009	9.2	2009	4.2	
Belgium	10,840	11.8	2007	4.4	3.4	2005	9.8	2009	4.0	
Bulgaria	7,564	10.7	2009	7.5	9.0	2008	14.5	2009	3.4	
Cyprus	803	12.0	•••		3.3	2008	6.5	2009	7.9	
Czech Republic	10,507	11.3	2009	2.7	2.9	2009	10.2	2009	4.6	
Denmark	5,535	11.4	2009	4.3	3.1	2006	10.2	2009	6.0	
Estonia	1,340	11.8	2009	5.0	3.6	2008	12.4	2009	4.0	
Finland	5,351	11.3	2009	3.5	2.6	2009	9.3	2009	5.6	
France	64,716	12.8	2001	4.8	3.9	2008	8.6	2009	3.9	
Germany	81,802	8.1	2009	3.5	3.5	2006	10.0	2009	4.6	
Greece	11,305	10.5	2009	4.3	3.1	2009	9.6	2009	5.2	
Hungary	10,014	9.6	2009	5.3	5.1	2009	13.0	2009	3.7	
Irish Republic	4,468	16.7	2007	4.5	3.2	2009	6.5	2007	5.2	
Italy	60,340	9.5	2007	2.6	3.7	2007	9.6	2009	4.0	
Latvia	2,248	9.6	2009	5.9	7.8	2008	13.7	2009	4.4	
Lithuania	3,329	11.0	2009	4.1	4.9	2009	12.6	2009	6.1	
Luxembourg	502	11.3	2008	3.9	2.5	2008	7.2	2009	3.5	
Malta	413	10.0	2009	6.7	5.3	2008	7.9	2009	5.7	
Netherlands	16,575	11.2	2008	4.2	3.8	2009	8.2	2009	4.4	
Poland	38,167	10.9	2009	4.2	5.6	2008	9.9	2009	6.6	
Portugal	10,638	9.4	2008	3.2	3.6	2009	9.9	2009	3.8	
Romania	21,462	10.4	2009	4.3	10.1	2009	12.0	2009	6.2	
Slovakia	5,425	11.3	2009	3.7	5.7	2008	9.0	2009	4.9	
Slovenia	2,047	10.7	2009	5.5	2.4	2008	9.9	2009	3.2	
Spain	45,989	10.8	2008	3.1	3.3	2008	8.5	2009	3.8	
Sweden	9,341	12.0	2008	3.6	2.5	2008	9.9	2009	5.1	
United Kingdom ⁵	62,008	12.8	2009	5.2	4.7	2009	9.0	2009	4.3	
Other Europe	- ,									
Croatia	4,426	10.1	2009	3.9	5.3	2009	11.8	2009	5.0	
Macedonia	2,053	11.5	2009	9.4	11.7	2003	8.9	2009	7.3	
Norway	4,858	12.8	2009	3.3	3.1	2009	8.6	2009	5.0	
Switzerland	7,786	10.1	2007	4.0	4.3	2007	8.1	2009	5.4	
Turkey	7,760	17.6	2009	7.3	15.3	2008	5.9	2009	8.2	

Sources: Eurostat, WHO/Europe

¹ The definition of a stillbirth varies from country to country and over time. The position in the UK is described in Appendix 2 - Notes, definitions and quality of statistcs.

² Rate per 1,000 population.

³ Rate per 1,000 live and still births.

⁴ Rate per 1,000 live births.

⁵ Excludes Isle of Man and Channel Islands.

Appendix 2 – Notes, definitions and quality of statistics

This appendix gives general notes on some of the information and conventions used in this report, and defines some of the terms.

General

Conventions for tables

Where a range of years is listed in a table (for example, '1980-82'), the information we have given will be an average for that length of time.

In all tables 'year' means 'calendar year' unless we tell you otherwise. Many of the ranges of years start in a census year (for example, 1991).

The date events happen and the date of registration

The statistics about births and deaths in the Population chapter are for mid-year periods (from 1 July of one year to 30 June of the next) and relate to the date the event happened and not to the date the event was registered. For example, a birth on 30 June 2010 which was registered on 4 July 2010 would be included in the mid-2010 figures, which relate to the period from 1 July 2009 to 30 June 2010.

All the other statistics about births and deaths, as well as the statistics about stillbirths, marriages and civil partnerships, are for calendar years and relate to the date the event was registered, not the date the event actually happened. For example, a birth on 31 December 2008 which was registered on 4 January 2009 would be included in the 2009 figures. By law, births and stillbirths should be registered within 21 days, marriages and civil partnerships should be registered within three days, and deaths should be registered within eight days. Almost all births, stillbirths, marriages, civil partnerships and deaths are registered on time.

The place the relevant person usually lives and the place the event happens

Births, stillbirths, and deaths are generally allocated to the area in Scotland where the relevant person (the mother for births and stillbirths, and the person who has died for deaths) usually lives. If the relevant person does not usually live in Scotland, the event is allocated to the area in which it happened. However, a death may be allocated to the area where the person used to live if the area is in Scotland and the person had lived away from Scotland for less than 12 months.

Marriage and civil partnership figures relate to the area the event took place.

Age

Ages relate to the person's age on their last birthday.

When working out average ages (such as the average age at death and the average age of mothers at childbirth) we have added half a year to people's age at their last birthday. For example, to work out the overall average age at death, we

have assumed that the average age of 77-year-olds who died was 77 years and 6 months.

Age standardisation

A straight comparison of rates between areas may give a misleading picture because of differences in sex and age between the different populations. For example, it would be unreasonable to expect a high birth rate in an area with a high proportion of elderly people. Because of this, we have standardised information in certain tables and charts. Standardisation allows areas with different age and sex structures to be easily compared, comparing the actual number of events that happen in an area with the total number of events that would be expected in the standard population. In this report, the standard population refers to the overall Scottish population for the year or years in question.

Lists of groups of countries

EU-15 refers to the countries that were member states of the European Union before 1 May 2004, which were Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom.

EU-25 refers to the EU-15, plus the countries that became member states of the European Union between 1 May 2004 and 31 December 2006, which were Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovenia and Slovakia.

EU-27 refers to the EU-25, plus the countries that became member states of the European Union after 1 January 2007, which were Bulgaria and Romania.

Urban and rural classifications

'Large urban areas' are settlements of over 125,000 people.

'Other urban areas' are settlements of 10,000 to 125,000 people.

'Accessible small towns' are settlements of between 3,000 and 10,000 people that are within a 30-minute drive of a settlement of 10,000 people or more.

'Remote small towns' are settlements of between 3,000 and 10,000 people that are not within a 30-minute drive of a settlement of 10,000 people or more.

'Accessible rural settlements' are settlements of fewer than 3,000 people that are within a 30-minute drive of a settlement of 10,000 people or more.

'Remote rural settlements' are settlements of fewer than 3,000 people that are not within a 30-minute drive of a settlement of 10,000 people or more.

You can get more information about the Scottish Government Urban Rural Classification at:

www.scotland.gov.uk/Topics/Statistics/About/Methodology/UrbanRuralClassification

Deprivation

The Scottish Government produces the Scottish Index of Multiple Deprivation to define small-area concentrations of deprivation across all of Scotland. The index is based on 38 indicators in eight fields – income, employment, health, education, skills and training, housing, geographic access and crime.

You can get more information about the Scottish Index of Multiple Deprivation at: www.scotland.gov.uk/Topics/Statistics/SIMD

Chapter 1 - Population

All population figures refer to estimates at 30 June of the relevant year.

Population covered

The estimated population of an area includes all those who usually live there, whatever their nationality. Students are treated as living at their term-time address. Members of UK and non-UK armed forces stationed in Scotland are included, but UK forces stationed outside Scotland are not. Short-term international migrants (people who move to Scotland for less than 12 months) are also not included.

Population projections

Population projections are estimates for future years largely based on past trends. The Registrar General asks the Office for National Statistics (ONS) to prepare population projections with input from his own experts. The latest national projections were published in October 2009, and were based on 2008 population estimates.

Sources and quality of statistics – population

Population estimates are based on the 2001 Census and are updated each year by adding one year to the age of everyone in the population and including information on births, deaths and migration (people moving to or away from an area). Births and deaths are estimated using information from the civil registration system, which is virtually complete. Migration is more difficult to estimate because there is no complete migration registration system in the UK.

You can get more information about the quality of population statistics at: www.gro-scotland.gov.uk/files2/stats/population-estimates/mid-year-pop-est-methodology.pdf and

www.gro-scotland.gov.uk/files2/stats/population-estimates/mid-2009/mid-09-pop-est-about.pdf

Sources and quality of statistics – population projections

You can get information about the quality of population projections at: https://www.ons.gov.uk/about-statistics/methodology-and-quality/quality/qual-info-economic-social-and-bus-stats/quality-reports-for-social-statistics/summary-quality-report-for-national-population-projections.pdf

Chapter 2 - Births

Cohort

A cohort is a well-defined group of people who have had a common experience and are observed through time. For example, 'the birth cohort of 1976' refers to the people born in that year.

General fertility rate (GFR)

The number of births per 1,000 women of childbearing age (15 to 44).

Total fertility rate (TFR)

The average number of children who would be born, per woman, to a cohort of women who experienced, throughout their childbearing years, the fertility rates for the calendar year in question.

Age specific fertility rate (ASFR)

The number of births per woman for a specific age during a set time.

Marital status of parents

'Married parents' means parents who are married to each other. 'Unmarried parents' refers to parents who are not married, or who are married but not to each other.

Sources and quality of statistics – births

Statistics about births in Scotland are produced from information collected when the births are registered. The information should be very accurate as it is almost always provided by one or both of the baby's parents, and the parent (or parents) and the registrar should check the details that will appear on the child's birth certificate before the certificate is produced. Also, each record of a birth is checked by one of NRS's district examiners.

The statistics will cover almost 100% of all births in Scotland – because of the importance of a person's birth certificate, there will be very few births that are not registered, and they are likely to be the result of extremely unusual circumstances (for example, if a pregnancy was hidden, the baby killed and the body disposed of).

You can get more information about statistics on births at: www.gro-scotland.gov.uk/statistics/theme/vital-events/births/bckgr-info.html

You can also get some general information on all vital events statistics at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general-bckgr-info/

Chapter 3 - Deaths

Cause-of-death coding

Since 1 January 2000, deaths in Scotland have been coded in line with the International Statistical Classification of Diseases and Related Health Problems (Tenth Revision), also known as ICD10. We put the underlying causes of death into classes based on information collected from the medical certificate of cause of death, together with any extra information the certifying doctor provides later. We also take account of changes that procurators fiscal tell us about.

You can get more detailed information about death certificates, coding the causes of death, and how we produce statistics of deaths from certain causes at: https://www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/bckgr-info/certificates-and-coding-causes/

Stillbirth

Section 56(1) of the Registration of Births, Deaths and Marriages (Scotland) Act 1965 (as amended by the Still-Birth (Definition) Act 1992) defines a stillbirth as a child born after the 24th week of pregnancy which does not breathe or show any other sign of life.

Perinatal deaths

This refers to stillbirths and deaths in the first week of life.

Infant deaths

This refers to all deaths in the first year of life.

Sources and quality of statistics – deaths

Statistics about deaths in Scotland are produced from information which is collected when the deaths are registered. Details of the causes of death come from the Medical Certificate of the Cause of Death (MCCD), and so represent the results of a doctor's clinical judgment, which may not be correct (and, sometimes, an investigator may feel that the doctor did not fill in the MCCD properly - for example, perhaps the doctor mentioned on the MCCD a medical condition that was not related in any way to the death). In some cases, the doctor, a procurator fiscal or a pathologist provides extra information about the cause of death later, for example following further investigations.

Other information about the person who has died will be provided by the person who registers the death (who is usually a son or daughter, sometimes a husband, wife or partner, another relative or a friend, or occasionally, someone like a police officer or a care-home manager) or the registrar can get the information from existing registration records (if the person who has died was born or married in Scotland). In a small percentage of cases, some of the information about the person who has died may not be complete or accurate (for example, if the person registering the death did not know the person very well, and the registrar could not get details from previous registration records). The person registering the death and the registrar should check the details before the certificate is produced. Also, each record of a death is checked by one of NRS's district examiners.

The statistics will cover almost 100% of all deaths in Scotland, as a cemetery or a crematorium will not accept a body unless the death has been registered. However, occasionally a death may not be recorded (for example, because the authorities do not know that someone who is missing has died).

You can get more information about statistics on deaths at: www.gro-scotland.gov.uk/statistics/theme/vital-events/deaths/bckgr-info/certificates-and-coding-causes/

You can also get some general information on all vital events statistics at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general-bckgr-info/

Chapter 4 - Life expectancy

The average number of extra years a person can expect to live if current trends regarding the number of deaths (mortality trends) continue for the rest of that person's life. Life expectancy is most commonly referred to in relation to life expectancy at birth.

Sources and quality of statistics – life expectancy

The life expectancy estimates are based on the likely trends in the number of deaths indicated by the death records for the three years before the year the records are published. For example, the estimates based on the figures for 2007-2009 for administrative areas were published in September 2010.

You can get more information about the quality of statistics on life expectancy at: https://doi.org/nc/nc/15/2/stats/life-expectancy-admin-areas/le-methodology-paper.pdf

and

www.gro-scotland.gov.uk/statistics/theme/life-expectancy/scotland/methodology.html

Chapter 5 - Migration

Net migration figures (the number of people moving to Scotland minus the number of people moving out of Scotland) include people joining and leaving the Armed Forces but do not include other changes, such as changes in the numbers of Armed Forces stationed in Scotland.

UK regions

For the purposes of this document, the regions of the UK are Scotland, Wales, Northern Ireland and the Government Office Regions of England. You can find a map at www.statistics.gov.uk/geography/gor.asp

Sources and quality of statistics – migration

Estimates of internal migration (that is people moving between Scotland and the rest of the UK) are based on GP registrations and are considered reasonably accurate for most groups. They may be less accurate for young men, as they tend not to register with a GP immediately after moving.

International migration estimates (that is, people moving between Scotland and countries outside the UK) are based largely on the International Passenger Survey (IPS). However, these estimates may not be very accurate.

Net migration figures (the number of people moving to Scotland minus the number of people moving out of Scotland) include people joining and leaving the Armed Forces but do not include other changes, such as changes in the numbers of Armed Forces stationed in Scotland.

You can get more information about the quality of statistics on migration at: www.gro-scotland.gov.uk/statistics/theme/migration/methodology.html and

www.gro-scotland.gov.uk/files2/stats/migration/migration-stats-about.pdf

Chapter 6 - Marriages and civil partnerships

Civil marriages were introduced by the Marriage (Scotland) Act 1939, which came into force on 1 July 1940.

The Civil Partnership Act 2004, which applies throughout the UK, came into force on 5 December 2005. The act allows same-sex couples aged 16 and over to get legal recognition of their relationship. In Scotland, the first civil partnership was registered on 20 December 2005.

Sources and quality of statistics – marriages and civil partnerships

Statistics about marriages and civil partnerships in Scotland are produced from information which is collected when the marriages and civil partnerships are registered. The information should be very accurate as it will be provided by the bride and groom, or the civil partners, and the couple and the registrar will check

the details that will appear on the certificate before the certificate is produced. Also, each record of a marriage or a civil partnership is checked by one of NRS's district examiners.

The statistics cover 100% of all marriages and civil partnerships in Scotland as a marriage or civil partnership is not legally formed unless a district registrar has carried out all the legal requirements.

You can get more information about statistics on marriages and civil partnerships at:

<u>www.gro-scotland.gov.uk/statistics/theme/vital-events/marriages-and-civil-partnerships/bckgr-info/</u>

You can also get some general information on all vital events statistics at: www.gro-scotland.gov.uk/statistics/theme/vital-events/general-bckgr-info/

Chapter 7 - Divorces and dissolutions

The information on divorces relates to the date on which the decrees were granted. The information on dissolutions of civil partnerships relates to the date on which the decree was granted.

Sources and quality of statistics – divorces and dissolutions

You can get some background information about some of these statistics at: www.gro-scotland.gov.uk/statistics/theme/vital-events/divorces-and-dissolutions/bckgr-info/

However, the Scottish Government (SG) is the main publisher of statistics on divorces and dissolutions in Scotland which have been granted since April 2009. More information about the quality of these statistics is included in SG's statistical publications on divorces and dissolutions, which are available from the Scottish Government's website at:

www.scotland.gov.uk/Topics/Statistics/Browse/Crime-Justice/DivDiss/

Chapter 8 - Adoptions

The Registrar General for Scotland registers adoptions under the Adoption of Children (Scotland) Act 1930.

Sources and quality of statistics – adoptions

You can get some more information about these statistics at: www.gro-scotland.gov.uk/statistics/theme/vital-events/adoptions.html

Chapter 9 - Households and housing

Household projections

We produce household projections (estimates for future years largely based on past trends) every two years. These are mainly used for informing decisions about future housing need and providing services. The latest household projections, covering the length of time from 2008 to 2033, take account of the results of the latest population projections. They use information from the last two censuses to help project trends in how households are structured by type of household and by the age of the head of household. The head of household is defined in the census as the first person on the census form who is aged 16 or over and usually lives at the address in question. The projections give an indication of what would happen if past trends continue. They do not take account of policy initiatives, or other factors that may affect future populations. Projections for small groups are likely to be less reliable than those for larger groups.

Household estimates

Household estimates are produced every year from information on occupied and empty homes taken from council tax billing systems. An occupied home is roughly equivalent to a household. The estimates are used for a range of purposes including informing local authority decisions about housing need and providing services (including housing, planning waste collection and community care). Information on types of housing is taken from the Scottish Assessors' Portal (www.saa.gov.uk).

Sources and quality of statistics – households and housing

Information on occupied and empty homes and on housing type comes from local authority council tax billing systems and from the Scottish Assessors Association, and then goes through a thorough process of quality assurance. It is possible that not all of the information held on the billing systems is up to date. There can also be small differences in the definitions used for various categories in the billing systems. The details can change over time as a result of reviews of council tax discounts and exemptions and year-on-year differences in the way second homes and empty homes are classed by some local authorities. This can have a small effect on the percentages of homes which are classed as empty or second homes.

You can get more information in the 'Uses and Limitations of the Data' and 'Sources, Methods and Definitions' sections of 'Estimates of Households and Dwellings in Scotland, 2010' at:

www.gro-scotland.gov.uk/statistics/theme/households/estimates/

Notes on statistical publications

National Statistics

This is a National Statistics publication. It has been produced to the high professional standards set out in the UK Statistics Authority Code of Practice for Official Statistics (www.statisticsauthority.gov.uk/assessment/code-of-practice). These statistics go through regular quality-assurance reviews to make sure that they meet customers' needs. They are produced in a way that is free from any political interference.

National Records of Scotland

From 1 April 2011, the General Register Office for Scotland merged with the National Archives of Scotland to become the National Records of Scotland (NRS). The GROS website will remain active until it is replaced by a new website for NRS.

We, the National Records of Scotland, are a non-ministerial department of the devolved Scotlish Administration. Our aim is to provide relevant and reliable information, analysis and advice that meets the needs of government, business and the people of Scotland. We do this as follows.

- Preserving the past We look after Scotland's national archives so that they are available for current and future generations, and we make available important information for family history.
- Recording the present At our network of local offices, we register births, marriages, civil partnerships, deaths, divorces and adoptions in Scotland.
- Informing the future We are responsible for the Census of Population in Scotland which we use, with other sources of information, to produce statistics on the population and households.

You can get other detailed statistics that we have produced from the Statistics section on our website (www.gro-scotland.gov.uk/statistics). Statistics from the 2001 Census are on Scotland's Census Results On-Line website (www.scrol.gov.uk) and on the Census section of the GROS website (www.gro-scotland.gov.uk/census).

We provide information about future publications on our website (www.gro-scotland.gov.uk/futurepb.html). If you would like us to tell you about future statistical publications, you can register your interest on the Scottish Government ScotStat website at www.scotland.gov.uk/scotstat.

Enquiries and suggestions

Please visit our enquiries page if you need any further information. If you have comments or suggestions that would help us improve our standards of service, please contact:

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Phone: 0131 314 4242

Email: <u>kirsty.maclachlan@gro-scotalnd.gsi.gov.uk</u>

Related organisations

Organisation	Contact
The Scottish Government (SG) forms the bulk of the devolved Scottish Administration. The aim of the statistical service in the SG is to provide relevant and reliable statistical information, analysis and advice that meets the needs of government, business and the people of Scotland.	Office of the Chief Statistician Scottish Government 1.N04, St Andrew's House Edinburgh, EH1 3DG Phone: 0131 244 0442 Email: statistics.enquiries@scotland.gsi.gov.uk Website: www.scotland.gov.uk/Topics/Statistics
The Office for National Statistics (ONS) is responsible for producing a wide range of economic and social statistics. It also carries out the Census of Population for England and Wales.	Customer Contact Centre Room 1.015 Office for National Statistics Cardiff Road Newport, NP10 8XG Phone: 0845 601 3034 Minicom: 01633 812399
	Email: info@statistics.gsi.gov.uk Website: www.ons.gov.uk
The Northern Ireland Statistics and Research Agency (NISRA) is Northern Ireland's official statistics organisation. The agency is also responsible, for registering births, marriages, adoptions and deaths in Northern Ireland, and the Census of Population.	Northern Ireland Statistics and Research Agency McAuley House 2-14 Castle Street Belfast, BT1 1SA Phone: 028 9034 8100 Website: www.nisra.gov.uk



Plain English Campaign's Crystal Mark only applies to pages 7 to 14 and 91 to 102 of this document.

The paper copies of this report are printed on paper which contains 75% recycled content.

First published 2011

Price £7

ISSN 0080-786 9

ISBN 978-1-874451-81-5

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