



Demographic Change in Scotland

DEMOGRAPHIC CHANGE IN SCOTLAND

Office of the Chief Researcher
Office of the Chief Economic Adviser

Scottish Government Social Research
2010

This report is available on the Scottish Government Social Research website only www.scotland.gov.uk/socialresearch.

The views expressed in this report are those of the researcher and do not necessarily represent those of the Scottish Government or Scottish Ministers.

© Crown Copyright 2010

Limited extracts from the text may be produced provided the source is acknowledged. For more extensive reproduction, please contact the Queens Printers of Scotland, Admail, ADM 4058, Edinburgh EH1 1NG. Email: licensing@oqps.gov.uk

CONTENTS

EXECUTIVE SUMMARY	1
1. INTRODUCTION AND BACKGROUND	5
Background	5
Scotland's Population Growth Purpose Target	5
Scotland's demography as an issue of ongoing interest	7
2. POPULATION GROWTH	9
Population growth	9
Progress towards the Population Growth Purpose Target	10
3. POPULATION AGEING	14
Age structure of Scotland's population	14
Geographical variation in population profile across Scotland	16
Implications of an ageing population for the dependency ratio	17
Implications of an ageing population for the economy	18
Implications for public spending	22
Policy considerations related to an ageing population	23
Determinants of the ageing population	24
4. MORTALITY, LIFE EXPECTANCY AND HEALTHY LIFE EXPECTANCY	25
Mortality trends in Scotland	25
Life expectancy and healthy life expectancy trends in Scotland	26
Health inequalities in Scotland	27
Implications of increasing life expectancy	28
Positive implications of increasing numbers of older people	31
Current issues for policy makers	32
Current policy activity in relation to older people	32
Current/future evidence needs relating to mortality, life expectancy and older people	34
5. FERTILITY	36
Fertility trends in Scotland	36
Implications of a low fertility rate	37
Scotland's fertility in comparison to other European countries	38
Groups contributing to the recent upturn in the birth rate in Scotland	39
Geographic variations in fertility across Scotland	40
Factors influencing fertility rates in Scotland	40
Current issues in relation to fertility	41
Current policy activity in relation to fertility	41
Current/future evidence requirements in relation to fertility	42
6. MIGRATION	43
Migration trends in Scotland	43
Geographical variations in migration	45
Characteristics of migrants to Scotland	46
Characteristics of migrants leaving Scotland	49
Student/graduate migration	49
The Scottish diaspora	50
Migration between Scotland and England	51
Internal migration within Scotland	51
Current policy issues in relation to migration	52
Current policy activity in relation to migration	52
Current/future evidence requirements relating to migration	53
7. CONCLUDING REMARKS	54

8.	ANNEX 1 – ESRC/SE SCOTTISH DEMOGRAPHY RESEARCH PROGRAMME: SUMMARY OF FINDINGS	57
9.	ANNEX 2 - RESEARCH CENTRE FOR POPULATION CHANGE	61
10.	REFERENCES	62

EXECUTIVE SUMMARY

Demographic change is a key issue for policy makers in Scotland and elsewhere. Changes in the size and age structure of the population will have important implications for economic growth performance, the demand for public services and overall levels of public spending in coming years. Recognising the importance of population growth, and the population profile, to economic growth, the Scottish Government Economic Strategy includes a Population Growth Purpose Target of “[matching] average European (EU15) population growth over the period 2007 to 2017, supported by increased healthy life expectancy...”

Demographic change (population growth and population profile) – and, in the case of Scotland, progress towards the population growth target - is determined by changes in mortality, fertility and migration. Each of these have individual implications for policy and service delivery, and collectively determine the overall demography of a country in terms of both population size and structure. It is therefore important to have good evidence in relation to each of these areas to understand the dynamics of demographic change and investigate the impact on, and implications for, policy and services.

Population growth

Scotland’s population stands at 5,194,000 (2009 mid year estimate), an increase of 25,500 on the previous year. After many years of decline, Scotland’s population has increased in each of the 7 years to 2009. Looking at recent years, the current overall picture is of one of growth, with increased net in-migration and fertility, as well as increased life expectancy, all contributing to overall growth.

The annual population growth rate of 0.49 per cent recorded in 2008-9 was an increase on previous years. Improved population growth has, however, also been a feature in other EU countries in recent years so, although Scotland has made some positive progress towards matching EU15 population growth, there is still a gap and further gains will need to be made to close the gap. Further, population projections indicate an increasing gap between projected population change and the growth required to meet the population target. It is, thus, important to be aware of, and understand, the dynamics of mortality, fertility and migration and the factors which might influence them if the target is to be met.

Population ageing

- Scotland’s population is continuing to age, with a 50% increase in over 60s projected by 2033.
- There is a strong urban/rural dimension to the ageing population; while 17% of the population are over 60, this age group makes up 21% of the population in several rural local authorities.
- Scotland’s dependency ratio is projected to increase from 60 per 100 to 68 per 100 by 2033.
- Age related public expenditure in the UK is projected to increase from 20.1% of GDP in 2007-8 to 26.6% in 2057.

Scotland's population is ageing, and ageing somewhat more rapidly than the other UK countries. This has implications for the dependency ratio (the ratio of those of working age to those above/below working age), the economy, demands on public services, and tax revenues for supporting such services. However, it is important that the debate also recognises the potential positive implications of an ageing society. For example, those who remain in the workforce will contribute to tax revenues, as well as potentially increasing overall levels of labour market participation, and, as a result, economic growth. Older workers and retirees are also important consumers of goods and services – and as a result of demographic change will account for an increasing proportion of total consumers - whilst an ageing population is also anticipated to give rise to new or increased markets (and employment opportunities) in order to meet the needs of changing demand patterns.

Mortality, life expectancy and healthy life expectancy

- The annual number of deaths in Scotland in 2009 (53,856) was the lowest ever recorded.
- Reduced mortality in relation to the “3 big killers” collectively (cancer, heart disease, stroke) has been notable.
- Life expectancy at birth in Scotland stands at 75 for men and 80 for women.
- Healthy life expectancy is increasing but not at the same rate as life expectancy.
- Health inequalities in Scotland result in significant variation in mortality, life expectancy and healthy life expectancy, with deprivation being a key determining factor.

Mortality, life expectancy and healthy life expectancy are all improving in Scotland, although the overall improvements mask significant geographic variations with deprivation being a key factor. Nevertheless, despite recorded improvements Scotland still lags behind other European countries.

The increasing numbers of older people in the community as a result of improving life expectancy have implications across a range of policy areas, particularly in relation to health and social care. However, older people also make a valuable contribution to society across a range of areas, for example, in relation to caring, and it is important that the positive implications of increasing numbers of older people in society are recognised. As such, policy in Scotland aims to increase life expectancy and HLE, as well as enabling older people to contribute fully to society.

Fertility

- The 60,000 births in 2008 was the highest since 1995.
- The birth rate in Scotland has increased over recent years (although the most recent figures (2009) show a slight drop), but continues to be the lowest of the UK countries.
- The birth rate is lower in cities and higher in surrounding commuter areas and rural areas.
- In relation to their English counterparts, Scots women delay longer between births and are more likely to “stop at two”, both of which contribute to (but do not fully explain) the different birth rates in the 2 countries.

- A range of social and environmental factors including educational qualifications, female employment, views on gender equality, friendship networks and family friendly neighbourhoods appear to be linked to fertility.

The number of births in 2008 (60,041) was the highest since 1995, with the figure for 2009 (59,046) showing just a slight fall. However, the total fertility rate (1.77 in 2009) remains below the level required to maintain the population. Fertility is important as it contributes to population growth (or decline), and the population profile. Natural population change (ie, the difference between births and deaths) provides a longer term and more sustainable solution to growing the population than migration; fertility also has a bigger impact on the age profile of the country (and the dependency ratio in the longer term) than life expectancy.

The increased birth rate in recent years has made an important contribution to population growth. However, it is not yet clear if this positive trend will be maintained in the longer term, and a better understanding of factors which influence fertility in Scotland would be helpful.

Migration

- Recent gains in net migration - peaking at 27,000 in 2007 - have had a significant impact on Scotland's population gains.
- About half of migrants to Scotland are from the rest of the UK, the vast majority of whom are from England.
- About half of overseas migrants to the UK are from the EU.
- Migrants from the EUA8 countries have contributed to the rise in net in-migration, with Poland being the most common country of origin.
- About a million people born in Scotland currently live elsewhere.
- Migrants (in and out of Scotland) tend to be young and single, with a fairly even split between males and females.
- The main factors in migration decisions are economic, employment and study related.

Scotland has, historically, been a country of net out-migration. In recent years this trend has reversed, as a result of both retention of the Scots-born population and increased in-migration. This trend is significant as migration provides the only option for significant short term population growth.

Net in-migration has been the most important factor in Scotland's recent population gains, and policy activity to date in support of the population growth has concentrated on maximising net in-migration. Although this appears to have been sustained through a period of economic downturn in Scotland, migration is the element of population change most open to fluctuation as a result of a range of external and internal factors (eg economic conditions in Scotland and the UK and elsewhere; migration policies in the UK and elsewhere), and the long term picture regarding migration to/from Scotland is not certain.

Concluding remarks

Demographic change is complex, with links between the different drivers of demographic change, and a range of social and economic factors which can impact on trends, leaving projections open to uncertainty. Scotland's population target implies a role for government in influencing demographic trends, as well as in responding to demographic change. This dual role highlights the importance of understanding the drivers and implications of population change, and ensuring that evidence is available to allow informed policy decisions in this area.

1. INTRODUCTION AND BACKGROUND

- 1.1 This paper sets out current evidence relating to demography in Scotland, exploring the implications of demographic change and related policy issues, with reference to Scotland's Population Growth Purpose Target, as appropriate. The paper looks at population growth and population ageing in Scotland (ie, the results of demographic change), as well as mortality and life expectancy, fertility and migration (inward and outwards) (ie, the drivers of population change). The paper focuses on evidence related to Scotland but, where relevant, reports on evidence covering the UK and other international jurisdictions.

Background

- 1.2 Demographic change continues to be a big issue in Scotland, and the UK more generally, with changes in population size and structure both having implications across a range of policy areas. In terms of population size, the Scottish population has grown in recent years, a reversal of the previous long terms trend of population decline which had given rise to concern for policy makers. In terms of population structure, the key issue is the increasing proportion of older people in the population in Scotland (ie, the ageing population).
- 1.3 While changing population size and structure are the *results* of demographic change, the *drivers* of demographic change are mortality and life expectancy, fertility and migration, all with their own implications across a range of policy areas. Thus to understand demographic change, and its impact it is important to also consider the dynamics of the different drivers of change.

Scotland's Population Growth Purpose Target

- 1.4 Despite the recent upturn in population size, policy makers are still keen to encourage continued population growth. This has been explicitly recognised with the inclusion of the Population Growth Purpose Target within the Scottish Government Economic Strategy:

To match average European [EU15] population growth over the period from 2007 to 2017, supported by increased healthy life expectancy in Scotland over this period.

- 1.5 The target recognises the role of population growth (and increased healthy life expectancy) in achieving the overarching Purpose of increasing sustainable growth in Scotland, and has given the issue of demographic change particular focus for the Scottish Government.
- 1.6 It is important to understand how population growth contributes to economic growth in order to understand why the Scottish Government has adopted this target. Population growth impacts on economic growth performance in a number of ways. Growth in the total population increases the demand for goods and services, which creates business and employment opportunities. In

addition, increases in the working age population raise the potential supply of labour in the economy, and should, over time, lead to an increase in the number of people in employment. A larger workforce will be able to produce greater amounts of goods and services, which will result in increased output (GDP). These effects should also have a positive impact on tax revenues and public spending – particularly in the short to medium term¹. Population growth (and growth of the working age population in particular) is one of 3 key supply-side drivers of GDP growth, over the medium to long term, along with labour market participation and productivity. Analysis of average annual growth performance against the drivers of GDP growth over the period 1998 to 2008 suggests that nearly half the GDP growth differential between Scotland and the UK as a whole is due to the higher levels of population growth in the UK (see Table 1 below).

Table 1: Factors contributing to economic growth (1998-2008, Scotland and UK)

<i>Average Annual Growth Rate (1998-2008)</i>	<i>Scotland</i>	<i>UK</i>	<i>Differential (Scotland minus UK)</i>
Productivity (GDP per hour worked)	1.7	1.9	-0.2
Participation (employment rate for 16+ population)	0.5	0.1	0.4
Population (aged 16+)	0.5	0.7	-0.2
Average hours worked	-0.7	-0.3	-0.4
GDP	2.1	2.6	-0.4

Source: Scottish Government, ONS

Notes:

- (1) Due to lack of seasonally adjusted average hours worked data for Scotland, this variable is estimated as the residual of the other drivers (for both Scotland and the UK).
- (2) Individual components and differentials may not sum to totals due to rounding.

1.7 The Scottish Council of Economic Advisers (CEA)² has also emphasised the importance of population growth (in-migration and retention in particular) to economic growth, and has also noted the importance of a sound analytical underpinning to any policy work in this area.

1.8 In relation to the population target, the CEA 2009 Annual Report included 2 recommendations. Firstly the CEA recommended that the target be revisited (and the focus of government immigration policy clarified) in the light of changed economic circumstances. Secondly the CEA recommended the commissioning of research to explore factors affecting migration decisions³.

¹ The longer-term impact on the public finances is not clear, particularly if population growth is predominately driven by net migration, as migrants, if they choose to settle, will also age and place demands on public services in the future.

² The Scottish Council of Economic Advisers (CEA) was established in 2007. It brings together experts from business and economics to advise the Scottish Government on how to achieve sustainable economic growth. The CEA Annual Reports can be found at: <http://www.scotland.gov.uk/Topics/Economy/Council-Economic-Advisers> .

³ The full text of the CEA recommendations is as follows:

- 1.9 The second recommendation explicitly recognises the need to have good evidence to allow the government to monitor and understand progress towards the population target, and consider the policy levers that might be available to help in meeting the target. While the recommendation is made with reference to migration, the principle of ensuring that policy is grounded in good evidence reads across to all areas that contribute to demographic change and progress towards the population target.

Scotland's demography as an issue of ongoing interest

- 1.10 While the Population Growth Purpose Target may have brought the issue into focus, Scotland's demography has been of interest – for academics and policy makers - for some time. In addition to economic growth, population change impacts on the funding of and demand for public services which are key issues for both national and local government.
- 1.11 A 2004 ESRC/Scottish Executive seminar brought together academics and policy makers to discuss Scotland's demography and related policy implications, with discussion informed by papers commissioned from key academics working in the area. Figures available at that point showed the key demographic trend for Scotland to be that of a shrinking and ageing population, driven by below replacement fertility rates, balanced in/out migration and increased life expectancy (although not necessarily *healthy* life expectancy). Projections indicated the continuation of this trend, giving rise to a range of key issues for policy makers. Although most industrialised countries were experiencing population ageing, Scotland was the only EU country at that time where the population was also declining in numbers (1995-2001)⁴, and responding to the ageing population was seen as a key concern.
- 1.12 Following the seminar, the ESRC launched the Scottish Demography Research Programme (funded in partnership with the Scottish Executive), resulting in 6 projects looking at aspects of fertility, migration, ageing, and the economic impacts of demographic change:

Recommendation 1: [the Scottish Government] revisits its short-term population growth target in the light of circumstances that are hugely changed since the target was set. In this context, the Government may wish to clarify further the focus of its immigration strategy, specifically: whether it is to widen the specific skills base; to increase human capital more generally; to improve population balance by having more people of working age; or, more generally, to increase Scotland's population;

Recommendation 2: [the Scottish Government] commissions research to explore the factors affecting the decisions of both immigrants and emigrants, so that policy design is properly grounded in good evidence.

The Scottish Government rejected the first recommendation, believing it right to retain the albeit ambitious target in order to support the overall Government Economic Strategy, and accepted the second recommendation, noting work already under way to map existing evidence.

⁴ See ESRC/Scottish Executive (2005) Demographic Trends in Scotland: A Shrinking and Ageing Population for further details of the seminar and summaries of the papers commissioned.

- Why is fertility in Scotland lower than in England? (Universities of St Andrews/Essex/Stirling)
 - Fertility variations in Scotland (Edinburgh/St Andrews)
 - Macroeconomic impacts of demographic change in Scotland (Strathclyde/Stirling)
 - Scotland's ageing population (Stirling)
 - Scottish graduate migration and retention (Edinburgh)
 - Scottish migration to, and return from, South East England (Dundee/Edinburgh/Strathclyde)
- 1.13 The 6 research projects examined aspects of the key issues identified at the time: Scotland's low fertility rate and its drivers; the implications of the ageing population; and the factors influencing migration and retention, with particular reference to England-Scotland migration and student/graduate migration. The main findings of these studies are summarised in Annex 1, and drawn on as relevant in the paper.
- 1.14 The ESRC has continued to support research in the demography area at a UK level, and funds a number of relevant initiatives within the Social Diversity and Population Dynamics theme. The Research Centre for Population Change, in particular, will provide a key source of evidence in this area over the coming years. This 5-year Centre was established in 2009 and involves Southampton University and a consortium of Scottish universities carrying out work in 4 thematic areas of fertility, life course and family formation, migration, and population modelling (see Annex 2 for further details), and aims to provide policy relevant information in a number of areas of interest to the Scottish Government and other public sector bodies in Scotland.
- 1.15 Against a background of existing interest and activity relating to demographic change in Scotland, this paper aims to provide an overview of current evidence. In relation to the population target in particular, the CEA report highlighted the need for sound evidence and analysis to ensure that policy decisions in this area were well informed and that the impact of policy initiatives could be properly monitored and evaluated. This paper aims to contribute to the evidence base by collating existing information and providing an overview in relation to key relevant issues. The remainder of this paper looks in more detail at population growth and the ageing population in Scotland (particularly with respect to economic implications), before turning to the 3 themes of mortality and life expectancy, fertility and migration, all of which contribute to demographic change.

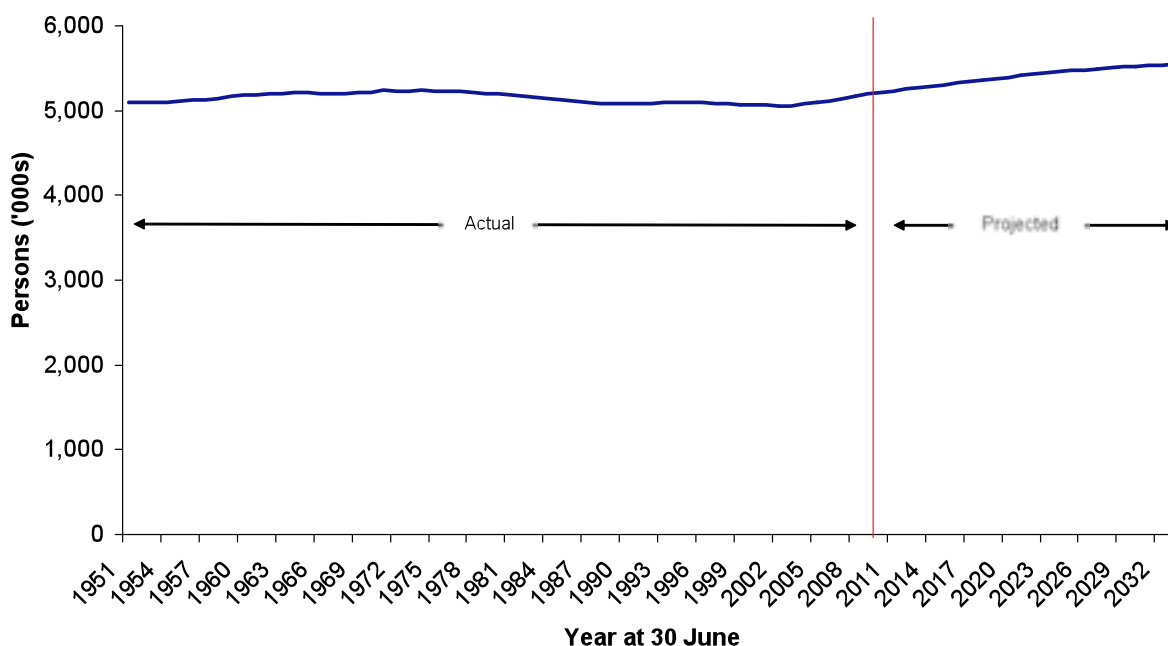
2. POPULATION GROWTH

- Scotland's population has grown in recent years, now standing at 5,194,000.
- Increases in net in-migration and fertility, as well as increased life expectancy, have all contributed to recent population growth.

Population growth

2.1 In contrast to the situation which gave rise to the Scottish Demography Research Programme, Scotland's population is now growing. After many years of decline, Scotland's population has increased in each of the last 7 years, with particularly strong growth over the period 2005-06 to 2008-09. The 2009 GROS mid year estimates put the population of Scotland at 5,194,000, a 25,500 increase on the previous year. In the 10 years to 2009 the population grew by 2.4%, increasing by 122,000 from 5.07 million. Current GROS projections (principal projection, 2008 based), which project changes based on the continuation of recent trends in the drivers of population growth, show the population rising to 5.54 million by 2033 (see Figure 1).

Figure 1: Estimated population of Scotland, actual and projected, 1951 – 2033



Source: GROS (2009)

2.2 Trends in both natural change and migration are now contributing to the overall picture of population increase. GROS figures for recent years have shown several years of net in-migration, an increase in Scotland's fertility rate, and continued improvements in mortality and life expectancy (although this has not been matched by the same level of increase in healthy life expectancy). In relation to migration, the numbers of those coming to Scotland have exceeded those leaving Scotland for each of the last 7 years;

in 2008-9, 22,000 more people arrived in Scotland than left. The initial years in the current period of population growth were driven by migration, but natural change has also been a factor in more recent years. Births have exceeded deaths each year since 2006-7 resulting in positive natural change, with the number of births exceeding the number of deaths by around 4,585 in 2008-9. This figure is driven by an upturn in the number of births, combined with a reduction in the number of deaths each year, with life expectancy increasing for both men and women. This positive rate of natural change is projected to continue until around 2027 (GROS 2008 based projections). Although positive natural change has contributed to population growth since 2006-7, migration is still the biggest contributing factor, accounting for over 80% of the population increase from 2007-8 to 2008-9.

- 2.3 In a country as diverse as Scotland, there is always interest in geographic variation, and in particular in urban/rural distinctions. While there has been a 2.4% increase in the population overall between 1999 and 2009, this has not been uniform across the country. GROS 2009 mid year estimates shows that 20 local authorities gained population over the period, while 12 authorities lost population, with figures ranging from net population loss of 6% in Inverclyde to a population gain of 10.5% in West Lothian. Both urban and rural authorities feature in the list of losers and gainers, with 9 of Scotland's 14 rural authorities increasing their populations, and 5 experiencing population decreases⁵.
- 2.4 The recent growth in Scotland's population appears to be a positive scenario, with increases in fertility, life expectancy and in-migration all playing their part. However, it is still important to understand the detail of current trends and the factors influencing them - and the geographical variation within them - in order to inform policy decisions that will support continued population growth and progress towards the population target and allow Scotland to respond effectively to the demands of the changes in its demographic structure (including in relation to its ageing population).

Progress towards the Population Growth Purpose Target

- 2.5 Scotland's population target was introduced in recognition of the part that population growth (and population profile) plays in economic growth. The target is relative, with the aim of matching population growth in the EU15 countries⁶ over a 10 year period. The annual growth rate recorded for Scotland in 2008-9 of 0.49% showed an increase on previous years and closed the gap with other EU countries, but was still below the overall 0.51% growth recorded for the EU15. The relative nature of the target is important in understanding Scotland's progress towards it. Table 2 shows that over the first 2 years of the target period the EU15 population has grown by a total of 1.12 per cent, whilst the Scottish population increased by 0.97 per cent over the same period. For Scotland to have matched EU15 growth over this period,

⁵ Using the Randall classification system, based on population density (with less than one person per hectare considered "rural").

⁶ The EU15 countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Sweden, United Kingdom.

the Scottish population would have had to increase by around 57,800 – an additional 8,000 people compared to the estimated growth over the period. This 8,000 can be seen as the current deficit on the target, which, as the target is cumulative over the 10 year period 2007 to 2017, will have to be addressed over the remaining 8 years. The majority of this gap is due to Scotland’s lower population growth rate in 2007-08.

Table 2: Performance against population growth target (source: GROS, and Eurostat)

	EU15 Growth Rate (%)	Scotland Growth Rate (%)	Change in Scottish Population	Change required to match EU15	Gap
2007-08	0.61	0.47	24,300	31,300	-7,000
2008-09	0.51	0.49	25,500	26,400	-900
Total	1.12	0.97	49,800	57,800	-8,000

Note: Figures may not sum to total due to rounding

2.6 Although Scotland has achieved population growth in the 7 years prior to 2008-9 and has narrowed the gap with the EU15 countries, population growth has been a feature in many EU15 countries (in particular, Spain, France, Ireland, and the United Kingdom), and this has kept the overall EU15 growth rate relatively high, with projections indicating that this trend will continue (Eurostat 2008-based population projections).

2.7 It is, however, not clear how sustainable the recent observed population growth within Scotland will be. With the improved growth based to a large extent on net in-migration - and to a lesser extent on increased fertility (see para 2.2) - there are a number of factors which may have an impact in future years. In relation to migration these include the following:

- The economic downturn, and uncertainty over the nature of the recovery (i.e. in particular regarding the number of new job opportunities that will be created), may make Scotland a less attractive option for migrants.
- In relation to the EUA8⁷ countries which joined the EU in 2004, Sweden, Ireland and the UK granted EUA8 citizens the right to live and work freely, while the other existing EU countries imposed initial restrictions, which must be lifted within 7 years of EU accession. Once these restrictions are lifted, Scotland will be competing with a wider range of countries in attracting EUA8 migrants. In addition, economic conditions are improving in many EUA8 countries making remaining at home more attractive for potential migrants.
- Changes to the UK Government’s Points Based System for Managed Migration (including the introduction of an annual limit on non-EU immigration to the UK) may impact on the numbers of migrants coming to Scotland.

⁷ The 2004 EUA8 accession countries are: Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, Slovenia.

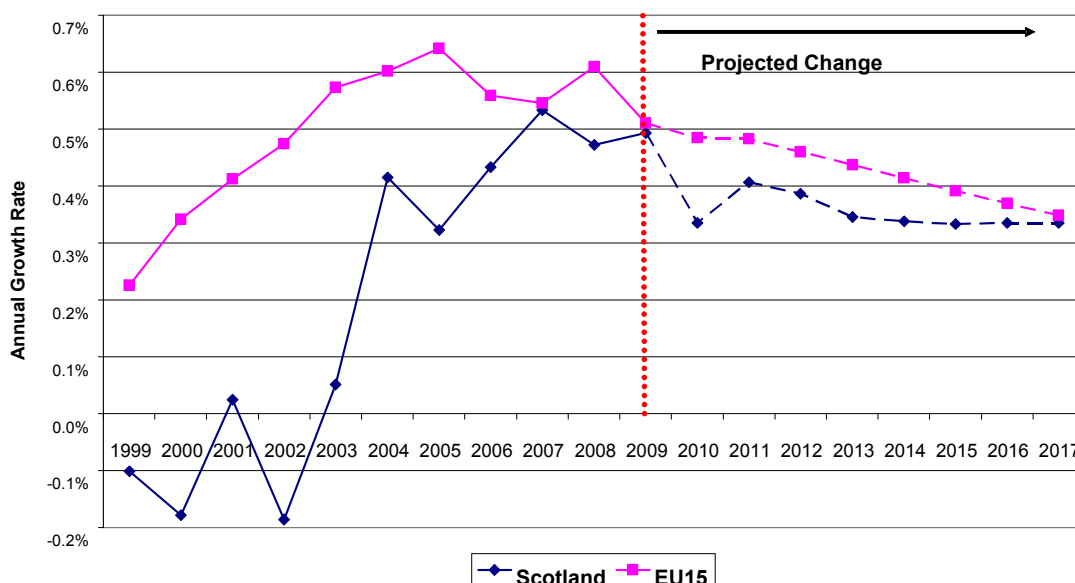
- 2.8 These factors may result in a downturn in the number of migrants coming to Scotland⁸ (which may then have a knock on effect on the birth rate, given the contribution that migrants make in this area – see para 5.8). In addition, the long term settlement intentions of the current migrant population are uncertain and there may be increasing numbers who choose to return to their country of origin or move on to another country. Interestingly, though, the most recent GROS figures (2009 mid year estimates) show the net migration gain from overseas (17,500) returning to the previous peak level of 2006-7 (16,800) following a dip in 2007-8.
- 2.9 In relation to fertility, the birth rate can fluctuate as a result of social and economic factors, and the impact of the recent economic downturn is not yet known. Historically it can, though, be seen that earlier upturns in the birth rate in Scotland (eg, during the late 1970s) have subsequently fallen back to previous levels.
- 2.10 Using the latest EU15 population projections, produced by Eurostat and based on the 2008 population⁹, it is possible to obtain a broad indication of the level of change required in Scotland's population in order to match EU15 growth over the period to 2017. This analysis estimates that average annual growth of around 23,000 to 24,000 in Scotland's population will be required to meet the population target. Figure 2 compares the latest estimates and projections of annual population growth in Scotland and the EU15. The projections are based on the central (principal) projection for Scotland and the EU15. The projections suggest that annual population growth in Scotland will continue to lag the EU15 over the period to 2017 – although there will be a convergence in annual rates by the end of the period. However, the projections are based on the population in 2008, and for the first year of the projection period (2009) underestimated the level of change in the population in both Scotland and the EU15¹⁰. The projections suggest that the Scottish population will increase by 2.9% between 2009 and 2017, compared to 3.4% in the EU15 – this would lead to a shortfall of around 30,000 in the required level of growth to meet the target over this period.

⁸Current work by Findlay and McCollum (University of Dundee) carried out as part of the Centre for Population Change research programme aims to add to understanding in this area. Their work explores the impact of the economic downturn on A8 migration to Scotland, highlighting interesting geographical and sectoral differences (Findlay, A and McCollum, D in Scottish Geographical Journal (forthcoming) "International Migration and Recession").

⁹ Eurostat population projections (EUROPOP2008), convergence scenario, <http://epp.eurostat.ec.europa.eu/portal/page/portal/population/data/database>

¹⁰ For Scotland, this reflects the higher levels of net migration experienced in 2008-09 than were previously forecast. Net migration flows are the most difficult element of the population projections to forecast and are subject to a significant degree of uncertainty.

Figure 2: Estimated and projected annual population growth rates for Scotland and EU15



Source: ONS, Eurostat

2.11 Although the main focus of the population target may be on population growth, the aim that this should be supported by increased healthy life expectancy is also important to note. Healthy life expectancy (HLE) is a measure of years spent in good health¹¹. As well as recognising the inherent benefits to the well-being of the individual, the inclusion of this aspect of the population target recognises the additional contribution that a population that stays healthy and active for longer can make to economic growth and civic life in Scotland. HLE at birth has been gradually increasing in Scotland since 1980 and currently stands at 68.1 for men and 70.8 for women (Scottish Government, 2010¹²), thus meeting the requirements of the population target. However, further analysis shows that the gap between life expectancy and healthy life expectancy has not closed, meaning that, while the number of years spent in good health has increased, the number of years spent in poor health in Scotland has not decreased (see para 4.6).

2.12 While this section has looked at population growth in Scotland, the following section looks at the age structure of the population, and Scotland’s ageing population in particular. The relationship between population growth and economic growth is complicated by the age profile of the population (as well as the health of the population) as this impacts on employment rates, as well as influencing, for example, demand for age related goods and services (public and private).

¹¹ Healthy Life Expectancy is the number of years that people can expect to be in good health. This is based on a combination of life expectancy and survey data on self-assessed health.

¹² These figures are taken from Health of Scotland’s Population – Life Expectancy (SG website, 2010) and are used in demonstrating progress towards the HLE element of the population target. ONS figures for 2010 give slightly lower HLE figures for Scotland at 67.3 for men and 69.9 for women.

3. POPULATION AGEING

- Scotland's population is continuing to age, with a 50% increase in over 60s projected by 2033.
- There is a strong urban/rural dimension to the ageing population; while 17% of the population are over 60, this age group makes up 21% of the population in several rural local authorities.
- Scotland's dependency ratio is projected to increase from 60 per 100 to 68 per 100 by 2033.
- Age related public expenditure in the UK is projected to increase from 20.1% of GDP in 2007-8 to 26.6% in 2057.

Age structure of Scotland's population

3.1 The age profile of the population is as important as the total population size in policy terms, and this has to be borne in mind in considering Scotland's progress towards its population target. In simple terms, an ageing population is one with an increasing average age, where the proportion of older people is increasing and the proportion of younger people is decreasing. Like the majority of industrialised nations, Scotland's population is ageing as a result of a relatively low birth rate (below replacement level – see Section 5, Fertility) and increasing life expectancy. Table 3 below shows the numbers in broad age categories in the population in Scotland (GROS 2009 mid year estimates).

Table 3: Scottish population by broad age bands (2008-9)

0-15	912,340	18%
16 – 59/64	3,248,815	63%
Over 60/65	1,032,845	20%

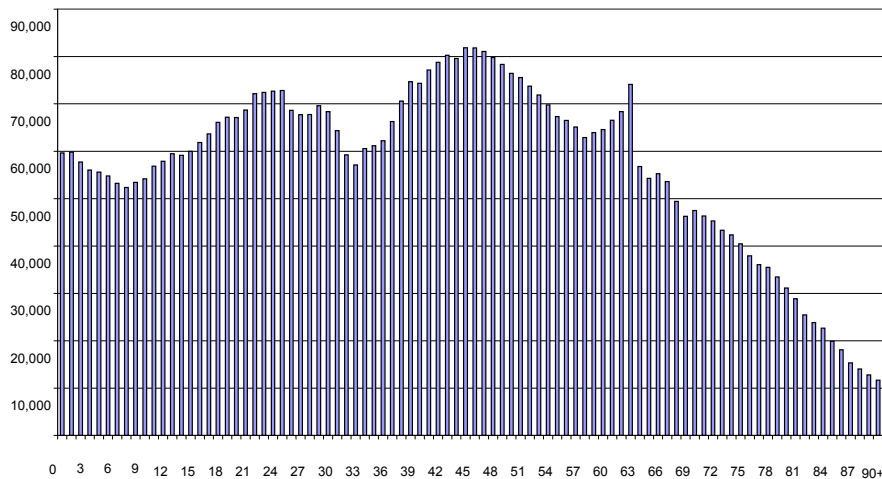
Source: GROS mid year estimates 2009

Note: due to rounding the percentage figures may not sum to 100%.

- 3.2 The GROS 2009 mid year estimates show 18% of the population to be 15 or under, and 20% of the Scottish population to be over pensionable age (60 for women/65 for men). Those in the 60/65+ age group already outnumber those in the under 16 age group; this has been the case since the figures reported in the 2003 mid year estimates and the balance between old and young people in the population is continuing to shift.
- 3.3 To illustrate the extent to which Scotland's population is ageing, in the years 1999 to 2009 there has been a 8% reduction in the number of under 16s and a 12% increase in those in the 60-74 age group; the increase in the over 75s is higher still at 14%. The proportion of under 16s in the population decreased from 20% in 1999 to 18% in 2009, while the proportion of people of pensionable age increased from 18% to 20% in the same period.
- 3.4 It is important to note that the key determinant of the future structure of the Scottish population is the current population structure. Figure 3 shows that Scotland currently has an uneven age profile with a disproportionately large

share of the population accounted for by those currently aged 36-55. This group will continue to influence Scotland's population structure in future years. The ageing of this 'cohort' is the key driver in the shift in Scotland's population profile over the period to 2033, described below.

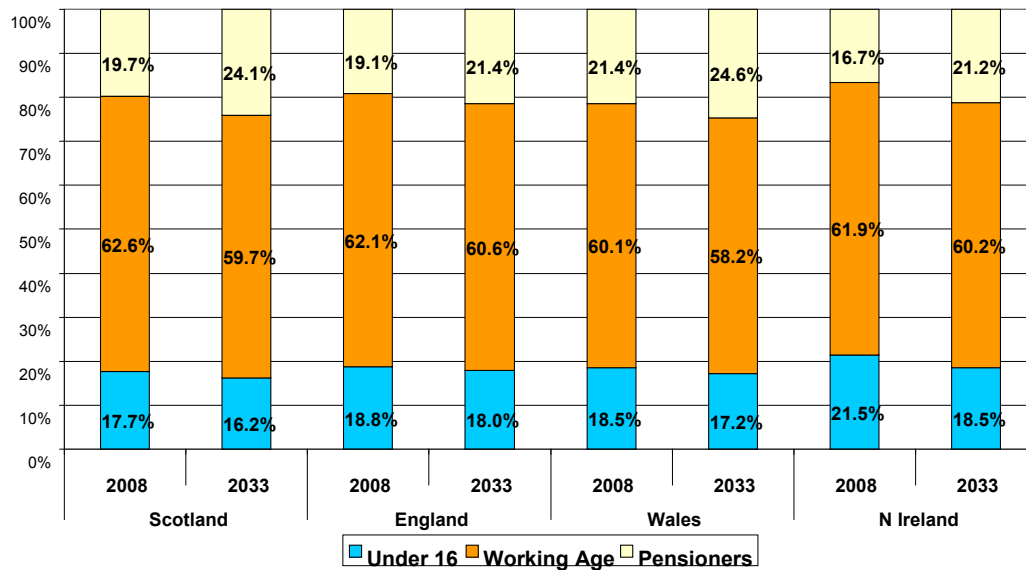
Figure 3: Age distribution of Scottish population, 2009



Source: GROS

- 3.5 Current projections suggest that there will be a 50% increase in the over 60s and a 4% decrease in the under 16s by 2033. Figures for the 75 and over age group show a projected increase of over 80%. These figures are driven by a relatively low birth rate, although increasing in more recent years (see Section 5, Fertility), and improvements in life expectancy in recent decades (see Section 4, Mortality, Life Expectancy and Healthy Life Expectancy).
- 3.6 Scotland's population is projected to age somewhat more rapidly than elsewhere in the UK. In Scotland and England the proportions of people of pensionable age (60 for men/65 for women) as at mid 2009 stand at 19.9% and 19.3 % respectively. Current statistics show the gap between the 2 figures to be widening; by 2033 the figures are projected to be 24.1% and 21.4% respectively (see Figure 4).

Figure 4: Estimated and projected population structure for countries in the UK (2008/2033)



Source: ONS

3.7 Indeed, an ageing population is an issue for all European countries and while the UK, and Scotland in particular, face demographic challenges in the coming years, other European countries are facing a more severe situation, with Eurostat figures for 2009 showing Germany and Italy having the biggest proportion of over 65s in their populations at just over 20% (the Eurostat figure for the UK (2008) is 16.1%).

Geographical variation in population profile across Scotland

3.8 There is a clear urban/rural dimension to Scotland's ageing population. While 17% of the Scottish population are 65 and over (GROS 2009 mid year estimates), the councils with the largest proportions of over 65s are predominantly rural (eg, Argyll and Bute, Eilean Siar, Dumfries and Galloway, South Ayrshire all at 21%). Age related migration is a key factor here. GROS figures show significant net out-migration from rural (and especially remote rural) areas in the 16-24 age group (with young people leaving for employment and education reasons). Rural areas also show net migration gains in the older age groups as people move away from urban areas in later life (see Table 4).

Table 4: Age and migration in urban and rural Scotland (2007-8)(%)

Age group	Accessible rural areas	Remote rural areas	Rest of Scotland
0-15	2.4	1.5	*
16-24	-0.8	-5.3	1.8
25-34	4.9	2.6	0.3
35-44	2.9	2.1	-0.3
45 59/64	1.2	1.2	-0.1
Pension age	0.1	*	*
All	1.6	0.7	0.2

Source: GROS

* less than 0.05%

3.9 The extent of geographic variation in projected population ageing is also evident from GROS figures (2008 based projections). While the 65 and over age group is set to increase from 17% to 25% of the Scottish population by 2033, the projected proportions range from 19% in Glasgow to 33.5% in Dumfries and Galloway, with other authorities with projected 65 and over populations of over 30% also being largely rural (eg, Eilean Siar, Shetland, Argyll and Bute, East Dunbartonshire, Angus).

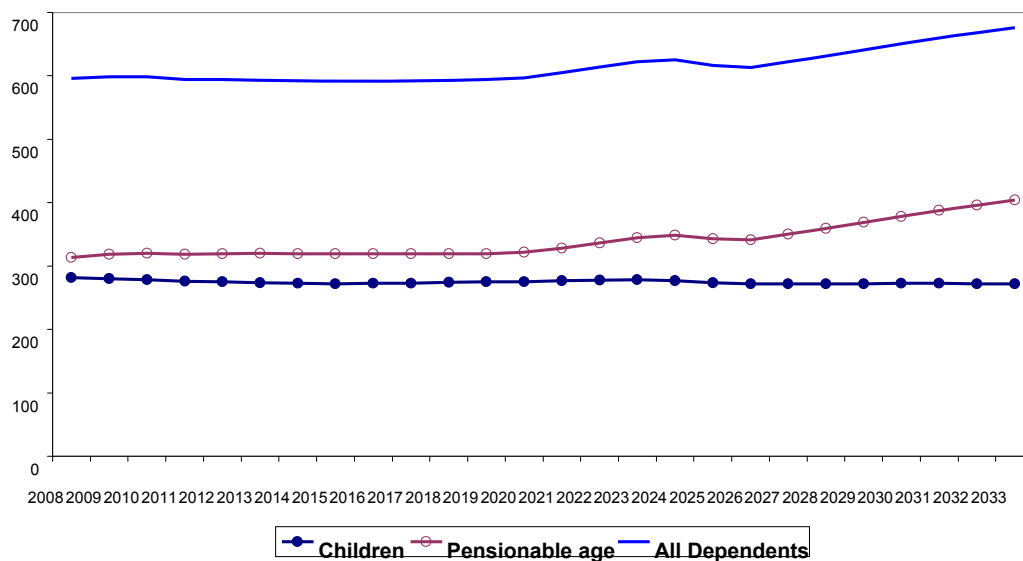
Implications of an ageing population for the dependency ratio

3.10 The dependency ratio compares the number of those of working age within the population to dependants (under 16s and over pensionable age combined). This is a fairly crude indicator as it is based purely on age, and takes no account of labour market or education participation rates¹³. In Scotland figures from the GROS 2009 mid year estimates show a dependency ratio of 60 (dependants per 100 population), with a fairly even balance between under 16s (28) and over 60/65s (32). Population projections show this ratio remaining fairly constant (overall and in relation to under 16s v over 60/65s) over the next 15 years, but an increase in the ratio thereafter driven by the projected rise in older people in the population¹⁴. By 2033, current GROS projections (based on the 2008 mid year estimates) indicate a dependency ratio of 68 per 100, and a balance of 27 per 100 and 40 per 100 for under 16s and over 65s (see Figure 5). Thus it can be seen that the worsening dependency ratio is driven by the increasing number of older people in the population.

¹³ GROS projections take account of the planned changes in retirement age: the raising of the retirement age for women to 65, and the subsequent raising to 68 for both sexes.

¹⁴ In addition it should be noted that the pattern of change in the dependency ratio is projected to be quite volatile in future years as the currently proposed changes to the state pension age are introduced (which will alter the size of the working age population).

Figure 5: Scotland's dependency ratio (2008-2033)



Source: GROS (2009)

3.11 The implications of an ageing population, and a worsening dependency ratio, are wide-ranging and complex. They include potential increased demands on public services (particularly from increased numbers of older people, although some of these pressures may be off-set by reduced demands for services from a smaller under 16 population, i.e. for education), and potential reduced tax revenues (unless older people work longer, a trend evident since 2002) to fund this increased demand as a result of fewer (or proportionately fewer) people aged 16 and over in employment. In this way, Scotland's demographics present clear challenges, but there are also opportunities and benefits to be explored, as touched on in relevant sections below.

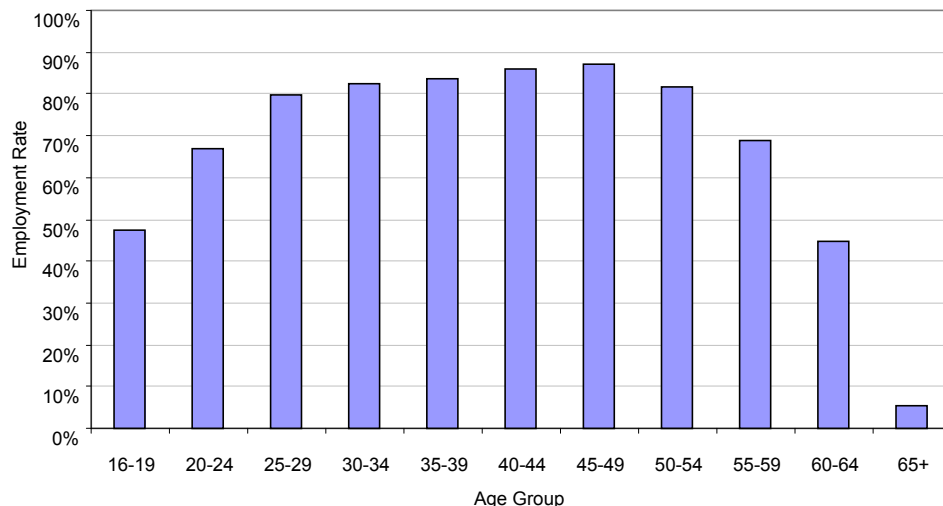
Implications of an ageing population for the economy

3.12 The economic impacts of an ageing population are of key interest. As the population ages, the working age population will gradually shrink as a proportion of the whole population. McGregor et al carried out modelling work as part of the Scottish Demography Research Programme looking at the potential impacts of a reduction in the working age population. This work was published in 2007 with an updated paper published in September 2008 drawing on revised population projections. Their work examined a range of scenarios, involving different fertility, migration and life expectancy rates, and highlighted the general principle that a reduction in the working age population would lead to a tightening of the labour market, increased wage levels (as firms have to pay higher wages to attract workers from a declining supply of labour), higher prices and a loss of competitiveness in the international market. As a result of these impacts the analysis estimates that GDP (output) would be lower under such a scenario compared to one where the population remains unchanged from its current size and structure. Further, within the

working age population itself the proportion of older workers to younger workers will increase. This can lead to increased competition for young workers who represent investment for the future and who may have different skill sets to older people already in the workforce.

- 3.13 The original work of McGregor et al was prompted by projections showing Scotland's population falling below 5 million and an anticipated significant decrease in the size of the working age population. The rise in Scotland's fertility rate and the increase in in-migration over recent years have resulted in more positive central population projections (see Figure 1), but it is far from clear as to whether these projections will be realised. In particular, the migration element of population change, which can adjust the working age population in the short term, is open to fluctuation and it is not clear whether the recent gains in net migration will be sustained in the longer term, and Scotland's ageing workforce and the less favourable projected dependency ratio continue to be key issues for Scottish public policy.
- 3.14 In an ageing population, one option for increasing the workforce is to encourage people to remain economically active for longer. The Labour Force Survey can be used to show labour market employment rates by age group. Figure 6, based on figures from 2008 (second quarter) in order to highlight the pre-recession situation, shows that the employment rate increases for each age group up to the 45-49 group (when it is around 87%), after which rates decrease steadily to around 45% for the 60-64 age group.

Figure 6: Scottish employment rates by age groups (2008)

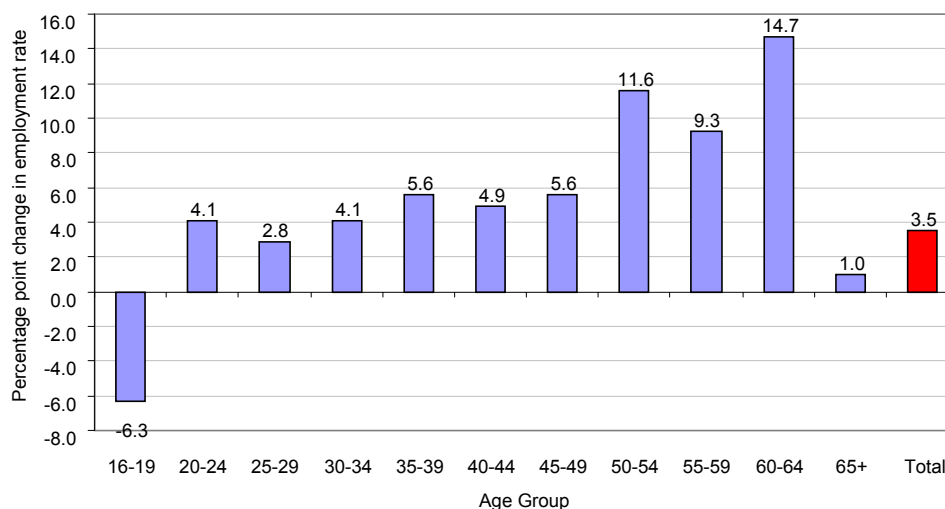


Source: Labour Force Survey, April-June (Q2) 2008

- 3.15 With an increasingly higher proportion of the workforce falling into the older age groups, lower employment rates in these age groups may impact on overall labour market participation. However, growth in employment rates has

also varied across age groups in recent years with the highest rates of increase experienced across the older age groups (see Figure 7).

Figure 7: Percentage point change in employment rates by age group, 1999 to 2008



Source: Labour Force Survey, April-June (Q2) in each year

3.16 This analysis precedes the impact of the recession on the labour market. Analysis covering the 2 year period to 2010 second quarter (April-June) shows that during the downturn there has been a relatively larger decline in employment rates for younger workers compared to older workers (see Table 5). For example, over this 2 year period the employment rate for the 50-64 age group in Scotland has declined by 2.5 percentage points, compared to a fall of 3.9 percentage points for the 18-24 age group over the same period. The latest figures also indicate that during the recession there has been an increase in employment for those above retirement age in both Scotland and the UK. It will be interesting to see how, and to what extent, these labour market trends are maintained.

Table 5: Employment rate by age group, data for period April to June 2010 (not seasonally adjusted)

Age Group	Scotland		
	Rate (%)	Change on year (%pt)	Change on 2 years (%pt)
18-24	61.3	↓ -1.4	↓ -3.9
25-34	77.6	↓ -1.8	↓ -3.5
35-49	80.5	↓ -1.6	↓ -5.1
50-64	63.3	↓ -1.7	↓ -2.5
All 16-64	70.2	↓ -1.9	↓ -4.1

Source: Labour Force Survey, ONS

- 3.17 The coming years will see changes to the pension age for women, and both men and women thereafter, with a recent announcement as part of the UK Spending Review (October 2010) of the raising of the UK pension age to 66 (for both men and women) by 2020; the timetable for further changes thereafter is still to be confirmed. In addition, there are plans to phase out the default retirement age (the age at which employers can legally force someone to retire). These changes (in line with policy considerations in many other countries) will impact on participation rates, encouraging women and men to stay in the labour market for longer (and increasing the overall supply of labour). Indeed, research indicates that many older workers would be happy to work beyond the current retirement age (eg, CROW, 2004) - albeit not necessarily on a full-time basis, and with a range of motivations - and the removal of the default retirement age will allow them to do so.
- 3.18 However, the potential interaction between labour market participation and the demands of caring for relatives and friends (eg, caring for partners and parents) and providing childcare for grandchildren should be noted. The need (or wish) to take on a caring role or provide childcare for younger relatives may impact on the potential for increased labour market participation amongst older age groups. Alternatively, increasing numbers of older people remaining within the workforce may impact on the availability of carers or “child-carers” within this age group. In relation to childcare, for example, the Growing Up in Scotland (GUS) survey¹⁵ found grandparents to be the main providers of childcare for almost half (47%) of children aged 0 to 3. Any reduction in this resource may impact on labour market participation of younger women with children or, alternatively, fertility among younger women, given that the availability of informal childcare/local family support may be a factor in fertility decisions¹⁶. If demographic change results in a lower, or potentially negative, contribution from growth in labour market participation to economic growth rates then this will have to be compensated by higher rates of growth in other areas. This could be achieved through a variety of factors, including: (1) encouraging more potential workers to move from inactivity into employment; (2) increasing the average hours worked (which would boost overall levels of labour input); and/or (3) seeking to improve overall productivity levels, so that higher levels of output can be produced with the same level of inputs (i.e. labour and capital).
- 3.19 It is, of course, important that the debate also recognises the potential positive implications of an ageing population for the Scottish labour market and economy (as well as society as a whole). Analysis by David Bell indicates how demand for formal paid care services will rise over the coming years bringing a potential increase in jobs in this sector¹⁷. This is primarily linked to the increasing numbers of older people in the population, but Bell argues that an increasing “deficit” in unpaid care will also be a factor. He suggests that

¹⁵ The Scottish Government Growing Up in Scotland Survey is a longitudinal study following a sample of children from infancy to their teens (see: <http://www.growingupinScotland.org.uk/>).

¹⁶ Research in Germany (Kreyenfeld and Hank (2002)) found a link between a woman’s family living locally and the likelihood of starting a family. In addition, Graham et al refer to the proximity of other family as a possible factor in fertility decision making (GROS, 2008)

¹⁷ Bell, D, Agreeing Priorities and Delivering Outcomes, presentation, January 2010

this deficit will come about as a result of increasing life expectancy and family migration patterns: people will live longer and have more years when they may have care needs, but may have fewer younger relatives nearby who may provide such care, and that such patterns would be particularly apparent in rural areas which have the highest proportions of over 65s, and the greatest levels of out-migration of younger people. However, the likely extent of any such “deficit” is not clear. As people live longer lives and have more years in good health, older people themselves are likely to provide more care in the future. In addition, younger relatives who no longer live nearby may still provide some care; for example, some people may be cared for by paid carers during the week, and by relatives at the weekend.

- 3.20 In addition to paid carers, Graham et al (2007) note the increase in demand for other goods and services linked to an ageing population. Most obviously, this might include relevant medical and healthcare professionals, and manufacturers and suppliers of equipment and adaptation supporting independent living. However, those older workers who remain in the workforce for longer (and indeed the affluent retired) will pay taxes and continue to be important consumers of goods and services across a range of sectors. Further work by David Bell has also looked at this issue, citing economic analysis that indicates no significant link between changes in the proportion of older people in the population and economic performance. Bell also looks at age-related patterns of consumer spending and concludes that an ageing population will present important opportunities as well as challenges¹⁸. Thus, employment opportunities and economic growth may increase as a result of the ageing population.

Implications for public spending

- 3.21 Analysis by HM Treasury in March 2008 estimated that around a half of all current public sector spending at the UK level is age related¹⁹ (see Figure 8). HM Treasury figures²⁰ show this balance is set to change over the coming years, with age related expenditure increasing from 20.1% of GDP in 2007-8 to 26.6% of GDP in 2057; over the same period, other spending is projected to go from 20.4% of GDP to 18% of GDP. While some age related expenditure is linked to children (and increases are projected in education spending), the biggest increases are projected to come in relation to state pensions and health care, both of which are projected to increase by more than 2 percentage points. Long term care expenditure is projected to increase by around 0.8 percentage points.

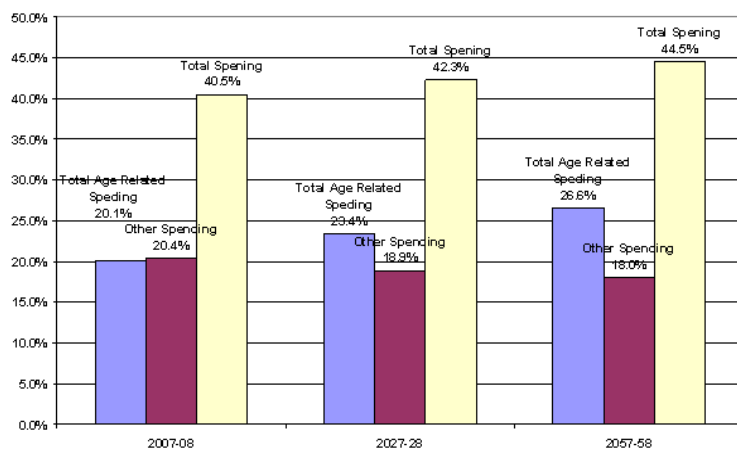
¹⁸ Bell, D, The Ageing Population: Global and Local Issues, presentation to Scottish Enterprise, April 2010

¹⁹ It should be noted that this analysis was published alongside Budget 2008 and precedes the impact of the downturn on the UK public finances, and the outcome of the UK Spending Review (October 2010) which will impact on some of the results of this previous analysis.

²⁰ Long-term Public Finance Report: An Analysis of Fiscal Sustainability (HM Treasury, March 2008).

Figure 8:

UK Age Related, Non Age Related and Total Spending Projections (per cent of GDP) for the period 2007-08 to 2057-58.



Source: HM Treasury

3.22 For services currently devolved to Scotland, the relative impact of the projected increases in expenditure will be influenced by the size of the change in population structure in Scotland relative to the rest of the UK. Figure 3 (at para 3.5 above) which uses the central (principal) projection for each country in the UK, shows that Scotland is projected to experience a relatively sharper increase in the proportion of the population that is of pension age between 2008 and 2033. In relation to Free Personal and Nursing Care, a policy currently unique to Scotland, expenditure has risen since its introduction in 2002 in line with the increase in numbers benefiting from the policy. For those in care homes, expenditure has risen from £83.3m in 2003-4 to £101.5m in 2007-8. For those at home, expenditure across Scotland has risen from £128.6m to £256.7m over the same period²¹. It is anticipated that these figures will continue to rise with the increased number of people living longer into old age.

Policy considerations related to an ageing population

3.23 Responding to Scotland's ageing population gives rise to a number of policy considerations focusing on the changing balance of older and younger people in the population. Key amongst them are:

- Consideration of how the labour market participation rate can be increased for older age groups
- Consideration of how public services, and age related public services in particular, can be funded as the proportion of the population of working age continues to fall.

²¹ Many home care clients would have received personal care services free of charge prior to the introduction of the universal policy as a result of means testing, so not all expenditure recorded under the FPC for home care clients heading is "new" expenditure.

Determinants of the ageing population

3.24 This section has looked broadly at the characteristics and implications – both positive and negative - of an ageing population in Scotland. Population ageing is, though, determined by trends in mortality and fertility, both of which are examined in greater detail in the following sections. Section 4 (Mortality, Life Expectancy and Healthy Life Expectancy), in particular, covers a number of issues related to increased numbers of older people in the population and which are commonly associated with an “ageing population”. Migration (or at least net in-migration) (covered in Section 6) will tend to have a moderating effect on population ageing, as migrants generally increase the working age population. The material presented includes discussion of trends, policy implications and policy activity which are relevant in their own right, but combine to determine the extent of the ageing population.

4. MORTALITY, LIFE EXPECTANCY AND HEALTHY LIFE EXPECTANCY

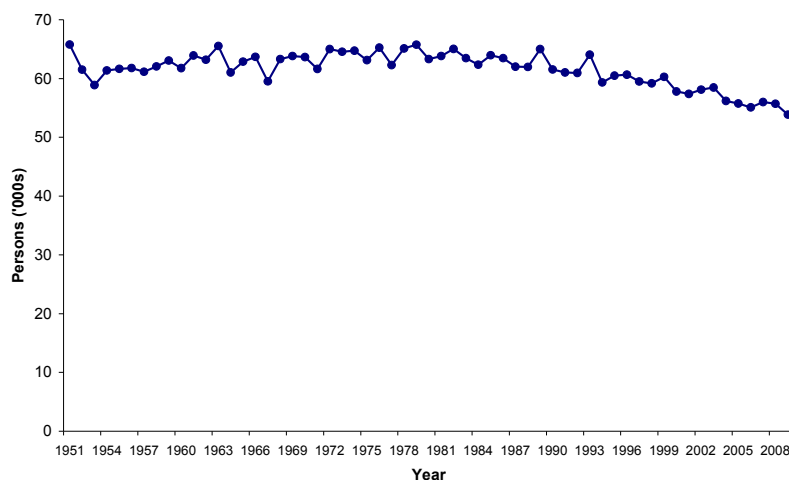
- The annual number of deaths in Scotland in 2009 (53,856) was the lowest ever recorded.
- Reduced mortality in relation to the “3 big killers” collectively has been notable.
- Life expectancy at birth in Scotland stands at 75 for men and 80 for women.
- Healthy life expectancy is increasing but not at the same rate as life expectancy.
- Health inequalities in Scotland result in significant variation in mortality, life expectancy and healthy life expectancy, with deprivation being a key determining factor.

4.1 Reduced mortality has been an important factor in Scotland’s population growth in recent years. This section looks at the related issues of mortality, life expectancy and healthy life expectancy in Scotland, and the implications of a population with increasing numbers of people living longer lives. There are, of course, clear links to the previous section which looked at ageing and the changing age balance in the population, as the implications of an ageing population are often articulated in terms of the implications of increasing numbers of older people.

Mortality trends in Scotland

4.2 Mortality, a key determinant of population change as one factor in natural change, has been decreasing in Scotland in recent years (see Figure 9). The number of deaths recorded in 2009 (53,856) was the lowest recorded since civil registration began in 1855, and represented a drop of 3.3 per cent on the previous year. There has been a downward trend in annual deaths since the 1990s, following a period of relative stability since the 1950s. Linked to the overall reduction in mortality, the average age at death has been increasing in Scotland, meaning that people have been living longer.

Figure 9: Deaths in Scotland (1951 – 2009) (thousands)



Source: GROS

- 4.3 More than half of all deaths in Scotland in 2009 were as a result of the “3 big killers” of cancer, heart disease and stroke. There has, though, been a notable reduction in mortality in relation to the 3 big killers collectively (reducing from 41,000 in 1980-82 (average over 3 years) to 28,000 in 2009), with such deaths now accounting for 53% of all deaths, down from 65% in 1980. However, this overall reduction masks the fact that the mortality rate for cancer has in fact increased over the period, while the rates for heart disease and stroke have fallen.
- 4.4 Despite these improvements, Scotland fares poorly against the rest of the UK in relation to mortality. Calculations of standardised mortality ratios²² for Scotland and the UK, show Scotland to have a figure significantly higher than that of England (about one sixth higher). In relation to Europe, Scotland’s crude death rate (deaths per 1000 population) is higher than all other EU15 countries (GROS, 2010).

Life expectancy and healthy life expectancy trends in Scotland

- 4.5 Life expectancy has been increasing in Scotland over recent decades. Figures for 1980 give life expectancy of 69 and 75 years for men and women respectively; for 2008 the figures now stand at 75.3 and 80.0 years respectively (Scottish Government, 2010). As with mortality, there is a persisting gap between life expectancy in Scotland and other countries in Europe; men in Scotland can expect to live 4 years fewer than men in the best performing EU countries, with women living almost 5 years fewer (GROS, 2009). Scotland also lags behind England which has life expectancy of 77.5 years for men and 81.7 years for women; comparative figures for Scotland stand at 74.8 years and 79.7 years (ONS, 2010). There is no sign of the gap narrowing between Scotland and UK or Scotland and EU15 life expectancies.
- 4.6 Healthy life expectancy in Scotland has also been increasing, but not at the same rate as life expectancy and the gap between life expectancy and healthy life expectancy has, for men, actually been widening. The latest data indicates healthy life expectancy in Scotland to be 68.1 years for men and 70.8 years for women (Scottish Government, 2010). When looked at in conjunction with life expectancy, men and women can currently expect to spend around 7 years and 9 years respectively in poor health (Scottish Government, 2010). While HLE has increased in Scotland, the gap between life expectancy and HLE has not closed; comparisons with 1980 data shows the gap between life expectancy and HLE has remained unchanged for women and has in fact increased for men (from 6 years to 7 years) (Scottish Government, 2010)²³. So, although people in Scotland are spending more years in good health (in line with the population target), the number of years spent in poor health has not decreased.

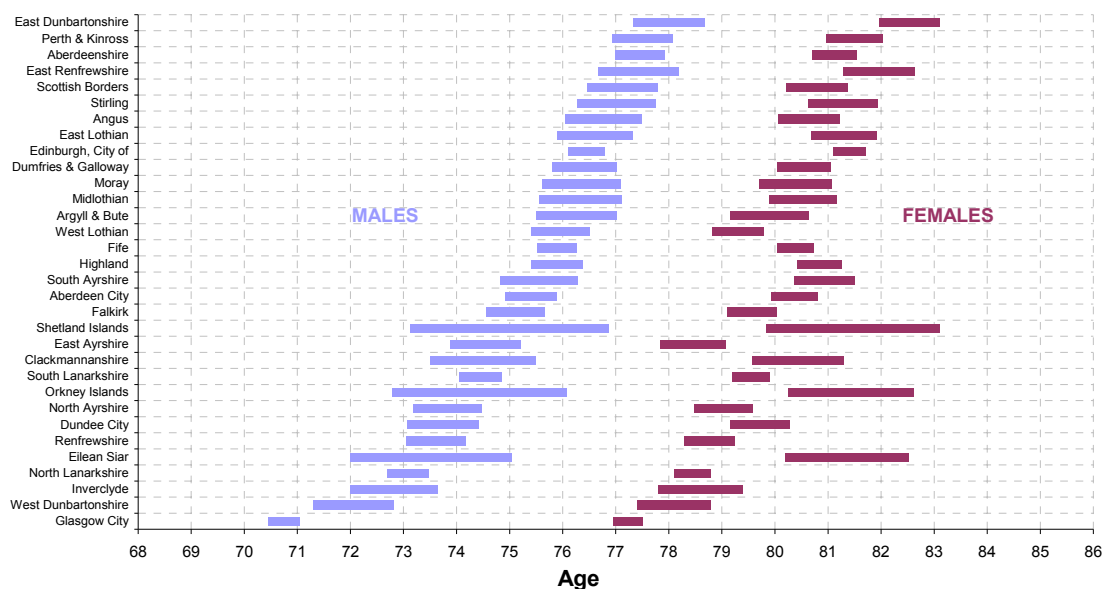
²² A measure which compares local death rates with national death rates, taking account of the population structure in the area.

²³ Latest ONS figures for HLE in Scotland stand at 67.3 and 69.9 years respectively for men and women (ONS, 2010).

Health inequalities in Scotland

4.7 Despite the improvements in mortality, life expectancy and healthy life expectancy, it should be noted that the all Scotland figures mask significant intra-country variation. On a geographic basis, men and women in rural Scotland (remote and accessible) can expect to live longer than those in large urban areas (around 3.5 years and 2 years more for men and women respectively) (GROS, 2010). Gender differences have already been noted; in addition socio-economic status, ethnicity and disability are all identified factors, and are reflected in the geographic variation apparent across Scotland. For example, the standardised mortality ratio in Scotland ranges from 27 per cent higher than the Scottish average (in Glasgow City, with some of the highest levels of deprivation in Scotland) to 23 per cent lower than the Scottish average (in East Dunbartonshire) (GROS, 2010). In relation to life expectancy, Glasgow City has the lowest male life expectancy at 71.1 years (GROS, 2010i); at the other end of the scale, East Dunbartonshire has male life expectancy of 78.3 years²⁴. This geographic variation is illustrated in Figure 10 which shows the life expectancy at birth for males and females in local authority areas in Scotland. A similar pattern is evident for women, although the gap between highest and lowest life expectancy is not quite as great.

Figure 10: Life expectancy in Scotland (2006-8) (males and females)



Note: The figure above shows life expectancy based on 95% confidence intervals. 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 the true value underlying the expectancy would lie (with 95% probability).

²⁴ Using the Scottish Index of Multiple Deprivation (see: <http://www.scotland.gov.uk/Topics/Statistics/SIMD>) Glasgow City is the local authority with the highest proportion of data zones (43%) which fall within the category: "15 per cent most deprived in Scotland".

- 4.8 Differentials in healthy life expectancy are even more marked. Analysis based on deprivation quintiles shows that HLE for males in the least deprived quintile is 15.8 years more than in the most deprived quintile. A similar pattern was evident for women with a 15.2 year differential. In relation to years spent in poor health, the differential was greatest for women. Men in the least deprived quintile spent 6.2 years in poor health, compared to 10.1 years for those in the most deprived quintile; the comparative figures for women were 6.2 and 14.2 years (GROS, 2010ii).

Implications of increasing life expectancy

- 4.9 While there are implications – both positive and negative - across all policy areas (including, eg, housing and transport) related to increased numbers of older people in the population as a result of increased life expectancy (see Section 3, Population Ageing), this section concentrates on the areas of health and social care, and caring. These are particularly key, given the persisting gap between life expectancy and HLE.

Implications of increased numbers of older people for health and social care in Scotland

- 4.10 The increasing numbers of older people have implications across a range of policy areas, but a key area (particularly given the increasing number of years that people spend in poor health) is that of health and social care. Figures from the Scottish Health Survey (SHeS) for 2008 show that self-assessed health declines with age. For example, 61% of men aged 65-74 and 55% of men aged 75 and over rate their health as good or very good compared to 76% of all men. Similarly, 12% of 65-74 year old men and 17% of those 75 and over rate their general health as bad or very bad compared to 7% of all men. A similar pattern is evident for women. The same survey shows the percentage of people (men and women) with a long term condition (limiting or non-limiting) to increase steadily with age. One particular condition with a clear age dimension is dementia. Figures included in Scotland's National Dementia Strategy (Scottish Government, 2010) indicate that while 1.5% of the 65-69 age group are affected, this increases to around one in 3 for those over 90, and the number of people with dementia in Scotland is expected to double over the next 25 years.
- 4.11 In line with the findings on self reported health, research shows that use of health care services, and health care costs, increases with age, and that, thus, greater numbers of older people in the population will place increasing demands on health services. However, evidence suggests that “proximity to death” rather than age per se is an important determinant of health care use and costs, with health care costs increasing significantly in the final year prior to death²⁵. Taking this into account will tend to moderate the projected increase in health care expenditure due to the ageing of the population. Achieving improvements in HLE (ie, reducing the numbers of years spent in

²⁵ Gray, A, Population Ageing and Health Care Expenditure, in Ageing Horizons, Oxford, 2005, issue no 2

poor health) will, though, be an important factor in age related health expenditure in the future if the point at which people start making increased demands on health services is delayed. Indeed, in relation to geographic variation, the greater proportion of older people in rural areas suggests higher demand for age-related health and social care services; however, this may be off-set to some extent by more favourable HLE in rural areas. Borders, Orkney, Grampian, Shetland and Highland Health Board areas all score particularly well in relation to HLE²⁶.

4.12 In relation to care services, Scotland is currently unique in the UK in having a policy of free personal and nursing care (FPNC) for the elderly. The number benefiting from this policy has increased steadily since its introduction in 2002. Over 50,000 older people across Scotland currently benefit from the policy. The latest figures (2008-09) show that around 44,600 people receive personal care services at home without charge. In addition, around 9,500 self funders in care homes receive flat rate payments towards the cost of delivering personal care. Of these people, around 6,200 also receive flat rate payments towards the cost of nursing care. The number of self funders receiving FPC payments in a care home increased by 15% between 2003-4 and 2008-9, while those receiving FPC in the community increased by 35% over the same period. The numbers receiving FNC payments increased by 17%.

4.13 In Scotland, the current economic situation and the resulting pressure on public finances has raised concern about the affordability of policies such as free personal and nursing care for the elderly. The previous UK Administration produced a green paper on the provision of care services, *Shaping the Future of Care*, highlighting the costs associated with increased demand for care services from an ageing population and the need for a fundamental review of how such services are provided and funded. The coalition government are taking forward three strands of work on social care; (1) the work of the Law Commission²⁷ on creating a modern statute for social care; (2) work within the Department of Health to articulate their vision of a more personalised and preventative service; and, (3) the independent Commission into the Funding of Care and Support²⁸. There is strong recognition by all UK political parties that projected costs of social care cannot be met under the current financial arrangements and the independent Commission have been asked to explore all possible options for the future funding of care. The current review of long term care in Scotland, *Reshaping Care*, is examining issues in relation to the planning and provision of services in Scotland. In general, improvements in data in this area would allow improved Scottish projections relating to the likely needs of the ageing population in Scotland, and consideration of the options of how such services might be provided and funded in the future. However, the UK Government's reserved authority over welfare benefits and taxation restrict the policy levers

²⁶ David Bell, Rural Ageing and Social Care, presentation to GROS Healthy Ageing Conference, Nov 2009.

²⁷ http://www.lawcom.gov.uk/adult_social_care.htm

²⁸ <http://carecommission.dh.gov.uk/>

available to Scottish Ministers to look at options for reforms to the way that social care is funded or paid for.

Implications of increased numbers of older people for caring

- 4.14 Caring is a key issue in relation to older people in Scotland, with clear links to the broader area of health and social care. Not only do older people represent a significant proportion of those in receipt of care, but they are also important providers of unpaid care. Findings from the Scottish Household Survey (SHS) (Harkins & Duddlestone, 2008) show that a significant proportion of those providing care are older people: a third of those caring for someone within the household are retired, and retired people make up 40% of those acting as sole carers for someone within their household. Census data (2001) shows a similar pattern with the incidence of caring increasing with age; in addition census data also shows the number of hours spent caring also increasing with age. As expected, a high proportion of those in receipt of care are also aged over 65. Numbers in both of these categories (carers and the cared for) are likely to increase as the numbers in the older age groups increase.
- 4.15 Many elderly people receiving care receive a combination of paid and unpaid care, but the contribution of unpaid carers is crucial to their families, to society and to the economy. Scotland's carers strategy, *Caring Together* (Scottish Government, 2010), sets out the available evidence base pointing to current and future savings across health and social care arising from effective carer support²⁹.
- 4.16 In relation to the introduction of free personal and nursing care for the elderly in Scotland there was concern that the policy would lead to a reduction in provision of unpaid care. However, early research by Bell and Bowes based on analysis of British Household Panel Survey data indicates that this has not been the case. An evaluation of the policy commissioned by the Scottish Government explored this issue further and found that people were continuing to provide care but they were doing so in different ways, providing "non-personal" as opposed to "personal" care. Bell and Bowes found that attitudes to caring for elderly relatives were linked to education and income, with those better educated and on higher incomes indicating less willingness to provide care (possibly because of the greater opportunity costs involved), although a greater likelihood to provide financial help. "Baby boomers" as a group were found to be less likely to believe people should care for elderly parents; this may have implications for publicly funded care if the behaviour of this group proves to be in line with their currently expressed beliefs. The Scottish Government carers strategy is, though, clear that assumptions should not be made about whether people want to or choose to be carers, or about the time that people may be able to give to caring

²⁹ Analysis by Leeds University for Carers UK estimates the replacement cost of care currently provided by carers in Scotland to be £7.68 billion (Carers UK, 2007)

- 4.17 Across caring, older people make a valuable contribution to society, and increased life expectancy (combined with the persisting gap with HLE) is a major factor that suggests that the demand for carers will increase in the coming years³⁰. Currently older people/retired people are important providers of unpaid care, but raising the retirement age and encouraging labour market participation amongst older people may have implications for the availability of such people to carry out caring activities (and, conversely, the wish to provide care for others may result in people leaving the workforce³¹).

Positive implications of increasing numbers of older people

- 4.18 As previously noted the increasing numbers of older people in the population present opportunities as well as challenges, and it is important to recognise the positive contribution that older people make to society in a wide range of areas. The positive economic impacts of changing demographics in Scotland have already been noted, as have the contribution that older people make through caring. In addition to caring for older relatives and others with social care needs, it is also worth restating that grandparents (many of whom will fall into older age groups and/or be retired) are also important providers of childcare (see para 3.17). Thus, this may be seen as one version of the “sandwich generation” where people are caring for relatives in generations above and below them at the same time, with older people potentially caring for elderly relatives and providing childcare for younger relatives at the same time. Volunteering is another area where the positive contribution of older people to society and to the economy in Scotland can be seen. The Scottish Household Survey shows that over a quarter (27%) of those in the permanently retired group are involved in volunteering. Further, just under a third of 60 to 74 year olds (28% of men and 33% of women) volunteer in some capacity. Thus retired older people provide a rich source of volunteers across a range of sectors, with this potential pool of volunteers increasing as the numbers in these age groups increase in coming years, although, again, the raising of the pension age may impact on this available pool.
- 4.19 The Scottish Government has adopted a positive approach to the increasing numbers of older people in the population, and the 2007 action plan, All Our Futures: Planning for a Scotland with an Ageing Population, set a broad vision for responding to Scotland’s changing demography, with activity across the range of policy areas, eg, health, housing, learning etc. The Action Plan highlighted the positive contribution made by older people and how the potential of this group could be maximised, stressing the importance of building on the contribution that older people make to the workforce, to volunteering and caring, and of facilitating links between generations and supporting the participation of older people in all aspects of civic life.

³⁰ Carers UK estimate that, at a UK level, the numbers of carer will increase from 5.7million to 9.1 million by 2037

³¹ Research by Carers UK found evidence of people leaving the workforce in order to care for relatives.

Current issues for policy makers

- 4.20 The increased number of older people in Scotland's population is a key issue for policy makers. Significant current and future issues include:
- The provision, cost and funding of care services, generally and in the light of Scotland's rural geography.
 - The need to achieve accurate projections relating to demand for care services and the likely costs of such services, and to better understand the interaction between different health and social care services, to allow for effective planning.
 - Consideration of the opportunities that may be available to influence demand for health and care services by focusing on different types of service provision, where a greater focus on "upstream" interventions and anticipatory care, for example, may reduce the need for more intensive support and interventions later on.

Current policy activity in relation to older people

- 4.21 Current policy activity in this area falls within 2 broad (interlinked) strands: activity responding to the increasing number of older people in Scotland's population, and activity that aims to promote increased HLE (and thus supporting progress towards the population growth target). Of course, some policy work can be seen to be responding to the increasing numbers of older people in the population *and* aiming to increase HLE. One example here would be the NHSScotland Quality Strategy which makes specific reference to responding to the challenges of demographic change and supporting people to live longer, healthier lives.

Responding to the increasing number of older people in Scotland

- 4.22 Work has continued since publication of the action plan, All Our Futures, and important initiatives have been seen across a range of areas. Current policies and initiatives relevant to older people include:
- Free Personal and Nursing Care: This policy introduced free care services to people over 65 who are assessed as having appropriate needs.
 - Development of Telecare: The National Telecare Development Programme makes funds available to Health and Social Care Partnerships to provide technology based equipment to allow older people to live independently in their own home.
 - Long Term Conditions Collaborative: This programme is working to deliver improvements in patient centred services and changes in the way care is provided for people with long term conditions.
 - Scotland's National Dementia Strategy: This 2010 strategy aims to ensure that people with dementia and their families and carers can access services that provide support, care and treatment in a way that meets their personal needs.

- Care Information Scotland: This is a telephone and web service (launched in 2010) providing information about care services for older people living in Scotland.
- Concessionary Travel Scheme: Over 60s in Scotland qualify for free travel on local (and some long distance) bus services.
- Caring Together: This 2010 strategy recognises carers as equal partners in providing care and sets out a series of actions for ensuring that carers are properly supported to manage their caring responsibilities with confidence and good health and to have a life of their own outside caring.
- Older People's Consultative Forum: This forum of older people's organisations was established to increase participation in the policy process in relation to issues relevant to older people.

4.23 Although All Our Futures emphasised the importance of cross-policy action in relation to older people, it is perhaps not surprising that many of the key policies and initiatives noted above have concentrated on the health and social care areas.

4.24 In relation to current policy considerations, Reshaping Care for Older People is a major programme of work designed to engage all interests in reshaping care and support services to ensure that policy objectives are met in ways that are sustainable, given current demographic and financial pressures. The programme initially involved 8 primary work streams looking at different aspects of care for older people, reporting to a Ministerial Strategic Group. It has now entered a period of public engagement with a view to encouraging wide national debate on how care is delivered for older people in Scotland. The publication, towards the end of the year, of plans for the future delivery of care will be informed by views from across Scotland. These plans will also support better integration of data routinely collected by separate agencies in health, housing and social care, to allow improved Scottish projections relating to the likely needs of the ageing population in Scotland, and consideration of the options of how such services might be provided and funded in the future.

4.25 It should be noted that other key policies relevant to older people – retirement age and pensions, age discrimination etc - are reserved matters dealt with by the UK government where significant changes have been proposed (or announced) since May 2010.

Improving healthy life expectancy

4.26 A range of policies – some more health specific and others cutting across a range of policy areas – are designed to improve the health of Scotland's population and further increase life expectancy and HLE, and can be seen to be tackling some of the social, environmental and behavioural determinants of health which contribute to health inequalities in Scotland:

- Early Years Framework (2008): Research points to early years intervention potentially having the greatest impact on outcomes in later life, as recognised in this policy framework. The framework is based on

partnership working, and aims to give children the best start in life with an emphasis on early intervention and prevention across the full range of policy areas including education, health and social care.

- *Achieving Our Potential* (2008): This policy framework aims to tackle poverty and inequality, with their links to health and well-being.
- *Equally Well* (2008): This report of the Ministerial Task Force on Health Inequalities responds to the variation in health and HLE across Scotland and set out a series of recommendations to tackle health inequalities.
- *Towards a Mentally Flourishing Scotland* (2009): This action plan aimed to promote good mental health in Scotland, a major component of health and well-being.
- *Healthy Eating, Active Living* (2008): This Action Plan included a range of initiatives (targeting all age groups) intended to improve diet and physical activity levels and reduce obesity and health inequalities.
- *Preventing Overweight and Obesity in Scotland: A Route Map towards Healthy Weight* (2010): This is a long term strategy for obesity prevention setting out actions in 4 categories: energy consumption, energy expenditure, early years and working lives.
- *Smoking, Alcohol and Drugs Strategies: Scotland's Future is Smoke Free: Smoking Prevention Action Plan* (2008), *Changing Scotland's Relationship with Alcohol: A Framework for Action* (2009), and *The Road to Recovery: A New Approach to Tackling Scotland's Drug Problem* (2008) all aim to tackle behaviours which contribute significantly to ill-health in Scotland

Current/future evidence needs relating to mortality, life expectancy and older people

4.27 As people live longer and the numbers of older people in the population increase, the importance of increased life expectancy (and healthy life expectancy) for public services is widely recognised and this is reflected in the analytical attention being paid to this issue. The main source of statistical data in this area is GROS which produces census data and related mid year estimates and projections. These data provide information on population numbers for different age bands. In addition, the Scottish Government regularly publish statistics on Community Care Services³² including Free Personal Care, NHS Scotland (ISD) publish health information relating to older people, the large national surveys in Scotland (SHS, SHeS) provide valuable information on older people in Scotland (including good quality health-related information in particular)³³, and a range of one-off projects add to knowledge on health behaviours and older people. The current Scottish Government Reshaping Care programme also includes important analytical work which will inform policy thinking in relation to the changing demands for and costs of care in the future. Scottish Government led work is also continuing in relation to establishing a “client-based” dataset in relation to care home and home care statistics, with the possibility of future linking with ISD

³² Scottish Government statistics releases on Care Homes, Home Care, Free Personal Care, Self-directed Support, Respite Care -

<http://www.scotland.gov.uk/Topics/Statistics/Browse/Health/Publications>

³³ Scottish Health Survey analysis looking at older people's health will be published in 2011.

health data. The Scottish Longitudinal Study³⁴ provides a further possible source of information on the characteristics of older people in Scotland.

- 4.28 There are, though, limitations to the data available on older people in Scotland. For example, information on the views and experiences of older people is less readily available, as this group may be excluded from surveys which have upper age limits or which exclude those living in residential accommodation. Where older people are included in surveys, the numbers involved (particularly at Scotland level in a UK survey) may be too small for detailed analysis, or the topics covered may not properly capture the experience of older people. In addition, where information is available it may be spread across a number sources (in the same way as would be the case for other age-groups within the population).
- 4.29 In relation to addressing perceived information gaps in relation to older people in Scotland, work was carried out in 2008 looking at the possibility of establishing a longitudinal study of ageing in Scotland³⁵, similar to the studies already running in a number of other countries, including England. Such a study would allow for the collection of data on a range of issues (health, housing, family and household formation, family finances etc) which would assist with the forecasting of need and the planning of services for the increasing numbers of older people. The scoping work highlighted particular information gaps (eg in relation to labour market participation, transitions into retirement, views and experiences of older people in receipt of care (paid and unpaid) which such a study might address but also highlighted the value of providing the possibility of exploring links across particular issues (eg, health and employment). Following the scoping study, the preferred option amongst policy makers was to further explore how data needs might be met through making better use of existing data sources, including further investigation of the applicability of English data from the English Longitudinal Study of Ageing in a Scottish context. It is clearly important, though, that any data solution adopted ensures the availability of good quality information in this crucial policy area to feed into projections and support sophisticated and reliable modelling work, and ensure the development of appropriate and informed policies.

³⁴ The Scottish Longitudinal Study brings together census data and vital events information for a 5% sample of the Scottish population, drawn from the 1991 census, with the option to link to ISD health data. More information is available at: www.lscs.ac.uk/sls.

³⁵ Anderson et al, A Scottish Longitudinal Study of Ageing: Scoping Study , Scottish Government 2008

5. FERTILITY

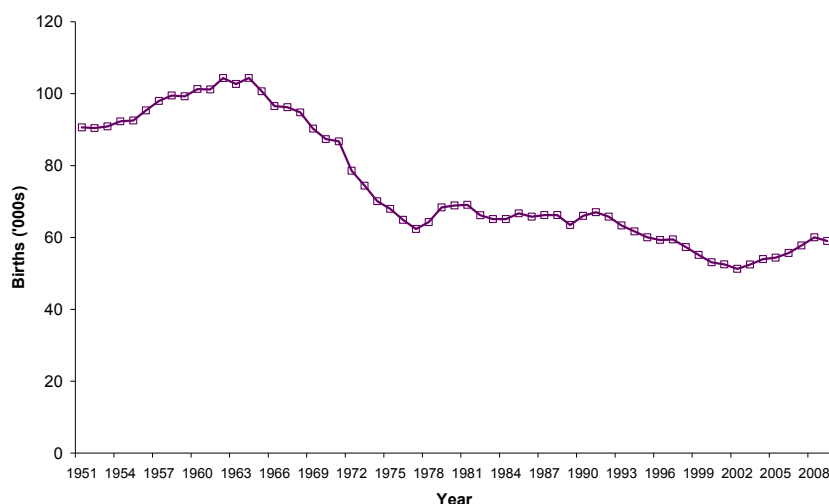
- The 60,000 births in Scotland in 2008 was the highest since 1995.
- The birth rate in Scotland has increased over recent years (although the most recent annual figures (2009) show a slight drop), but is the lowest of the UK countries, a reversal of the situation up until the 1980s.
- The birth rate is lower in the cities and higher in urban hinterlands and rural areas.
- In relation to their English counterparts, Scots women delay longer between births and are more likely to “stop at two”, both of which contribute to (but do not fully explain) the different birth rates in the 2 countries.
- A range of social and environmental factors including educational qualifications, female employment, views on gender equality, friendship networks and family friendly neighbourhoods appear to be linked to fertility in Scotland.

5.1 This section looks at fertility in Scotland. Births and deaths together determine natural population change, thus playing a part in progress towards the population target. The data presented covers trends, national comparisons, and factors associated with fertility.

Fertility trends in Scotland

5.2 While migration has been the main driver of population growth over recent years, natural change has also been an important factor, with increases in the number of births recorded in each year from 2002 to 2008. The most recent GROS figures (GROS, 2010) show there were 59,046 births in Scotland in 2009, a slight drop from the 60,041 recorded in 2008, although the figure remained above that recorded in 2007. The 2008 figure was the highest recorded number of births since 1995. Importantly for population growth, births have also exceeded deaths in Scotland each year since 2006, resulting in positive natural change. Births exceeded deaths by 5190 in 2009, the largest population gain through natural change since 1991. Figure 11 below shows the trends in births from 1951 to 2009.

Figure 11: Births in Scotland (1951-2009) (thousands)



Source: GROS

- 5.3 Despite the recent rise, fertility in Scotland still stands below the level required for population replacement. GROS figures show the 2009 Total Fertility Rate (TFR)³⁶ to be 1.77 (very slightly down from the 1.8 recorded in 2008); the 2008 figure was the highest for 26 years but still below the 2.1 required for population replacement. Scotland's fertility rate is currently classed as being in the "safety zone", ie, above 1.5 at a level where migration can realistically be expected to compensate for the deficit in maintaining the population. While the upturn in the birth rate in recent years is notable it is also clear that there have been previous short term rises in the birth rate which have then fallen away (eg, around the early 90s) and that, even if the fertility rate remains unchanged, smaller cohorts of women from periods of low fertility will result in fewer babies being born in total.

Implications of a low fertility rate

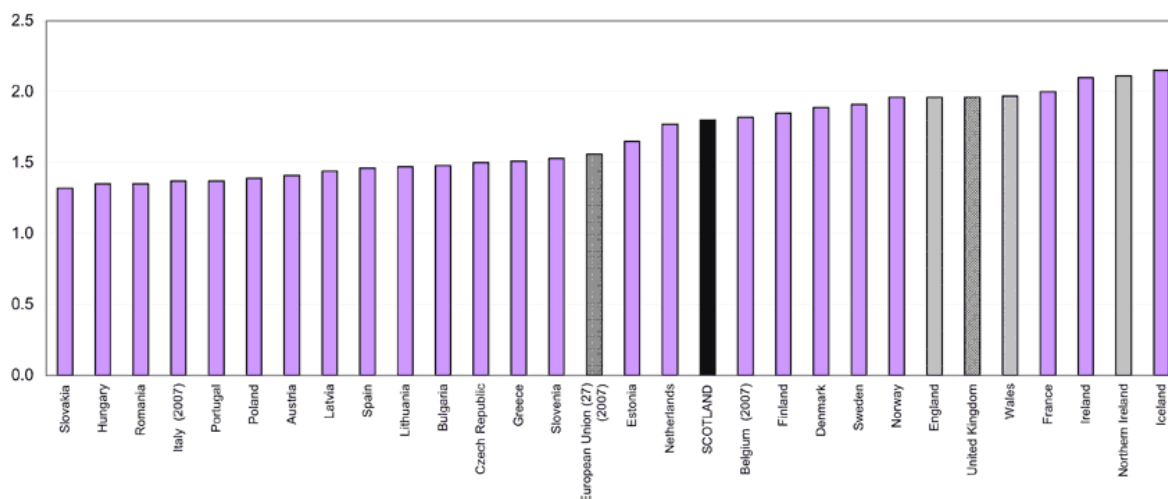
- 5.4 The fertility rate matters as it is a key driver - along with migration (in and out) and life expectancy - of demographic change, particularly in the medium to long term. It impacts on the size of the population and the population profile, and the dependency ratio. Increasing life expectancy will inevitably lead to an ageing population (a greater proportion of the population falling into older age groups). However, this is exacerbated when a low fertility rate reduces the numbers of people in the younger age groups, and over time reduces the numbers of people of working age. The dependency ratio is set to increase more rapidly in Scotland than elsewhere in the UK. Although in-migration can compensate for a low fertility rate (as is the case at present), this is not necessarily a long term solution as the behaviour of migrants in relation to long term settlement is far from certain.

³⁶ The Total Fertility Rate is a summary measure of fertility, representing the number of children that a group of women would have if they experienced the observed ASFR (Age Specific Fertility Rate) in each of their child bearing years.

Scotland's fertility in comparison to other European countries

5.5 At an international level, Scotland's overall fertility trends are similar to those in other developed countries, with recent decades having seen a sustained reduction in the birth rate in most European countries. While Scotland's fertility rate has been below that required for population replacement, this is the same for a range of European countries (see Figure 12). Figures for 2008 show Iceland to have the highest TFR, with Republic of Ireland, Northern Ireland and France having the highest TFR amongst EU15 countries. Several countries recorded TFRs of below 1.5. Scotland is in the mid range of European fertility, with a TFR of 1.8, above the EU27 average.

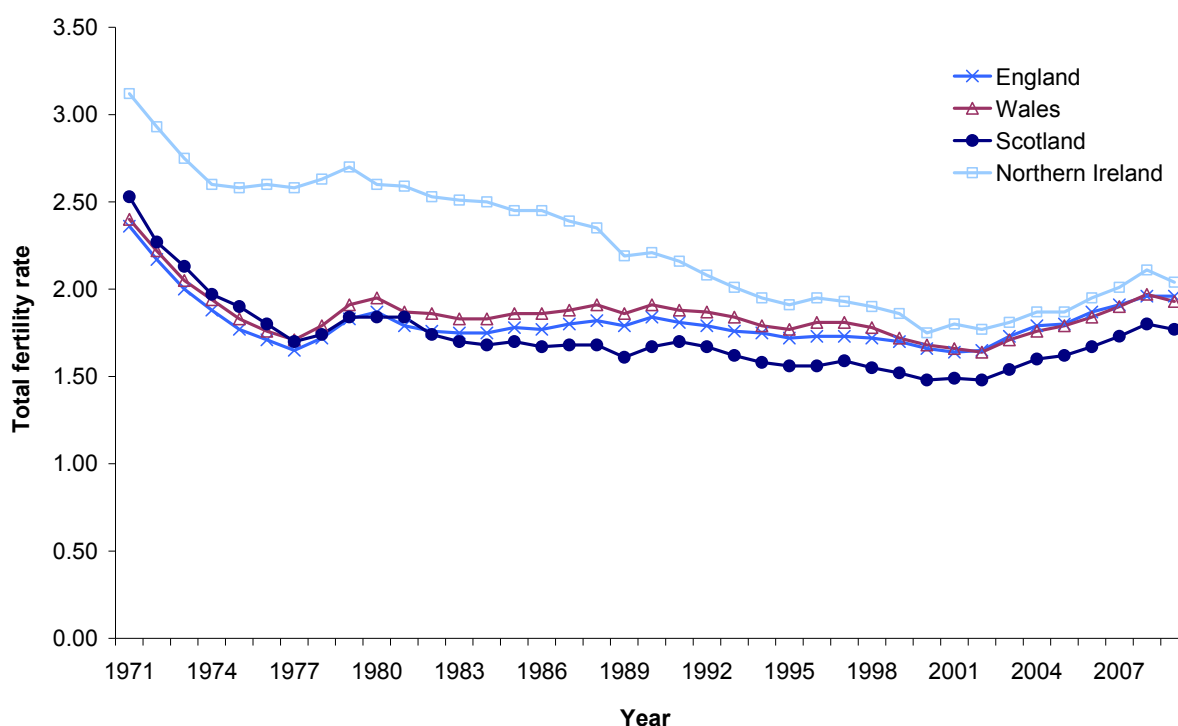
Figure 12: Total Fertility Rate (Scotland and selected European countries) 2008



Source: GROS (GROS High Level Summary of Statistics, 2010) and Eurostat

5.6 Figure 13 shows Scotland currently has the lowest fertility rate of the 4 UK countries. Scotland's fertility rate fell below that of England and Wales in the early 1980s and has remained in that position since. Northern Ireland has maintained its position as the UK country with the highest TFR (although its fertility rate is now much closer to the rates found in the other UK countries). All 4 UK countries have, though, witnessed similar overall trends with falling birth rates since the 1960s, and an upturn in more recent years. All 4 countries have experienced a slight dip in fertility from 2008 to 2009. The greater fall in Scotland's fertility rate over recent decades, relative to the other UK countries, suggests that particular factors in Scotland have impacted on the birth rate which could be further investigated.

Figure 13: Total fertility rate, UK countries, 1971-2009



Source: GROS

Groups contributing to the recent upturn in the birth rate in Scotland

- 5.7 GROS figures (vital events tables) show the increased birth rate over recent years to be apparent within all age groups in Scotland except the under 20s. However the increase has been most marked for women in the older age groups (aged 30 and over) who now account for almost half of all births in Scotland. The birth rate dropped or remained static for all age groups from 2008 to 2009, with the exception of the over 40s, where there is a continuation of the previous upward trend.
- 5.8 The proportion of births to non-Scots born mothers has also increased from 13% in 1977 to 24% in 2009 (GROS (2010)). Looking at the increase in births in recent years (from 2004 to 2007) Scots-born mothers accounted for 40% of the increase in births, other UK-born mothers a further 5% of the increase, while mothers born elsewhere accounted for 55% of the increase; 30% of the increase was accounted for by mothers born in the A8 countries (GROS, 2008). However, research suggests that the fertility behaviour of migrants tends to converge with that of the resident population over time³⁷.

³⁷ Sleebos (2003) Low Fertility Rates in OECD Countries: Facts and Policy Responses, in OECD Labour Market and Social Policy Occasional Papers

Geographic variations in fertility across Scotland

- 5.9 GROS figures (vital events figures) show the extent of geographic variation in fertility across Scotland's local authority areas. Across Scotland the General Fertility Rate (number of births per 1000 women of childbearing age) rose from 48.1 to 57.2 in the period 2002 to 2008, falling back slightly to 56.6 in 2009. There has, though, been significant variation at local authority level. Although all authorities have recorded an increase, this ranged from increases of 3.5% and 5% in Stirling and East Renfrewshire to increases of 40% and 32% in Shetland Islands and Clackmananshire (2002 to 2008).
- 5.10 In general, birth rates tend to be lower in city areas (particularly Edinburgh with a 2009 GFR of 46.9 compared to the Scotland-wide figure of 56.6), and higher in the surrounding commuter areas and in rural areas. Local authorities with the highest GFR levels include Shetland, Aberdeenshire and Moray. Possible explanations for this variation include housing availability and costs in urban areas, and lower rates of female economic activity in rural areas. Graham et al (2008) explore this further suggesting this pattern is driven by selective migration of people wishing to start or increase their families from cities to suburban areas as a result of housing market and quality of life issues.

Factors influencing fertility rates in Scotland

- 5.11 The 2 fertility projects commissioned as part of the Scottish Demography Research Programme sought to explore the reasons for Scotland's low fertility rate at that time, looking specifically at why fertility in Scotland is lower than that in England, and why fertility varies across Scotland.
- 5.12 In comparing Scotland and England³⁸ Graham et al reported similar fertility intentions and similar levels of childlessness; thus neither of these factors appeared to contribute to the fertility differentials between the 2 countries. However, a number of factors were found to contribute to the difference. Significantly, Scottish women were reported to wait longer between births and to be less likely to have a third or fourth child. In addition, black and ethnic minority women, who make up a bigger proportion of the population in England, were more likely to have 3 or more children, and better educated women in Scotland were less likely than their English counterparts to have a third child.
- 5.13 Beckett-Milburn et al³⁹ used survey work to explore views and experiences which might contribute to fertility variation within Scotland, looking at a range of factors which might influence fertility decisions. In relation to education, they found higher levels of education to be associated with lower levels of fertility, and a bigger gap between actual and expected fertility. In relation to employment, women in part-time work were more likely to start their families

³⁸ The research was based on analysis of British Household Panel data for women born on or after 1955.

³⁹ The research was based on a specially commissioned module of questions in the 2005 Scottish Social Attitudes Survey.

earlier and have more children. Those in full-time work were more likely to think that their work progress would be affected if they had another child, and those who thought their employers provided a poor “fit” between work and family life were particularly likely to express concern about work progress if they had another child. Attitudes and behaviours in relation to a number of social and environmental factors were also found to be associated with fertility (although the presence of any “cause and effect” is not clear): those with a lot of friends with children and those living in areas that were perceived as a good place to bring up children were more likely to have more children; those who practised gender equality in the home were less likely to have large families.

- 5.14 Thus, the 2 projects highlighted factors contributing to the different fertility patterns in Scotland and England and explored factors associated with variations in fertility within Scotland. Although the fertility rate in Scotland has increased since this work was carried out, the rate is still below replacement level and the findings may still provide pointers in terms of policy options that may support increased fertility, and families bringing up children more generally.

Current issues in relation to fertility

- 5.15 It is generally recognised that increased fertility needs to be part of the medium and longer term solution to population growth, and meeting Scotland’s population target in particular (see, for example, the CEA Annual Report 2009⁴⁰). Although, fertility has increased in Scotland in recent years, it is still below replacement levels, and consideration might, therefore, be given to how government activity might influence fertility.

Current policy activity in relation to fertility

- 5.16 Scotland does not have a “fertility policy” as such. Nevertheless, research suggests that there are a number of policy areas which can have an impact on fertility decisions at the individual level (falling broadly into the categories of: financial support, childcare provision, maternity/paternity/parental leave, employment conditions), and where government activity may be relevant to current fertility trends in Scotland:

- Provision of childcare: the Scottish Government has a role in provision of childcare, although policy activity is largely confined to the provision of (part-time) pre-school education for children of 3 years and over. In relation to its own staff, the Scottish Government provides a workplace nursery in Edinburgh.

- 5.17 In relation to employment conditions and fiscal benefits, however, which could form part of any overall “pro-family” package which may encourage childbearing, policy is reserved to Westminster. UK level policies include:

⁴⁰ CEA (2009) Second Annual Report

- Fiscal benefits: maternity allowance, child benefit, tax credits, childcare vouchers
- Leave arrangements/employment conditions: Maternity leave and maternity pay arrangements, paternity leave, adoption leave, parental leave (unpaid), the right to request flexible working hours.

Current/future evidence requirements in relation to fertility

5.18 GROS publish annual data on the number of births and fertility trends in Scotland. A number of large surveys currently collect information on fertility (eg, General Household Survey and British Household Panel Survey) and this has been used to investigate trends and influencing factors. However, specific work focusing on the drivers of fertility (eg, the drivers behind the recent upturn in fertility rates in Scotland) would be helpful in understanding the current picture. Further work on the impact of policy interventions (in the UK and elsewhere) would also be useful in consideration of how increased fertility might be supported. In relation to Scotland in particular, work that helps explain the lower fertility rate in Scotland in contrast to the UK as a whole would be helpful. Here, issues relating to birth parity (or birth order) would benefit from further investigation, given the differences in Scotland and England, although the lack of relevant information at a national level may be a limiting factor. Other research might include further exploration of some of the social and environmental factors (eg, housing costs and availability, family friendly neighbourhoods) linked to variations in fertility, building on the work previously carried out as part of the Scottish Demography Research Programme. And, reflecting the current economic climate, investigation of the impact of the economic downturn on fertility decisions may prove to have longer term value.⁴¹

⁴¹ Several UK-wide projects within the Fertility Theme of the Centre for Population Change work programme aim to add to knowledge and understanding in this area.

6. MIGRATION

- Recent gains in net migration - peaking at 27,000 in 2007 - have had a significant impact on Scotland's population gains.
- About half of migrants to Scotland are from England (54%).
- About half of overseas migrants to the UK are from the EU.
- Migrants from the EU A8 countries have contributed to the rise in net in-migration, with Poland being the most significant country of origin.
- About a million people born in Scotland currently live elsewhere.
- Migrants (in and out of Scotland) tend to be young and single, with a fairly even split between males and females.
- The main reasons for migration are economic, employment and study related.
- Many overseas migrants (from A8 countries in particular) work in low skill, low pay work below their qualification level.

6.1 This section presents information about migration to and from Scotland. Population growth is a key contributing factor to economic growth, and in-migration is the only option for significantly increasing the population – and the working age population in particular - in the short term. Increased migration has been a key element in progress towards the GES Population Growth Purpose Target. In-migration generally provides a source of working age people who may choose to settle in Scotland long term and have their families here. Thus, as well as supporting population growth, sustained levels of net migration can also influence, to an extent, the age structure of the population.

Migration trends in Scotland

- 6.2 Traditionally, Scotland has recorded high levels of out-migration; retention of the Scots-born population and long term settlement of migrants coming to Scotland are both therefore important factors in the level of achieved net in-migration. The increase in Scotland's population over recent years, however, has been largely driven by migration; GROS 2009 mid year estimates show 21,700 more people came to Scotland in 2008-9 than left.
- 6.3 Net migration is the difference between in-migration and out-migration with a positive figure representing greater numbers of immigrants than emigrants. GROS 2009 mid year estimates show that around 88,100 migrants came to Scotland in 2008-9, while around 66,500 people left Scotland, giving a net gain of 21,700. Scotland has seen net in-migration in each of the past 7 years, a reversal of the long term trend over previous decades when Scotland was a country of net out-migration. Net migration figures from GROS for 2002-3 to 2008-9 are shown in Table 6 below:

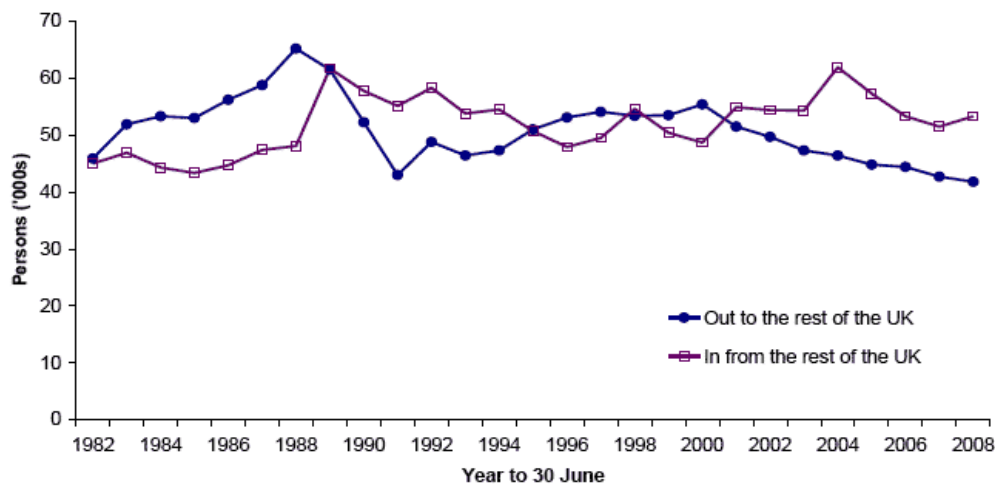
Table 6: Scottish net migration (2002-2009)

	Net gain (approximate)
2002-3	9,000
2003-4	26,000
2004-5	19,000
2005-6	21,000
2006-7	27,000
2007-8	20,000
2008-9	22,000

6.4 The net in-migration figure for 2006-7 was the highest recorded since current records began. Although the figures show a reduction in net migration thereafter, the figures recorded in 2007-8 and 2008-9 are still the fifth and third highest ever recorded.

6.5 The net in-migration in recent years can be attributed to net in-migration at both UK and overseas levels. At UK level (migration between Scotland and England, Wales and N Ireland) the notable trend is a steady reduction in out-migration over the last decade (see Figure 14 below).

Figure 14: Scottish migration to/from rest of the UK (1981 – 2008)

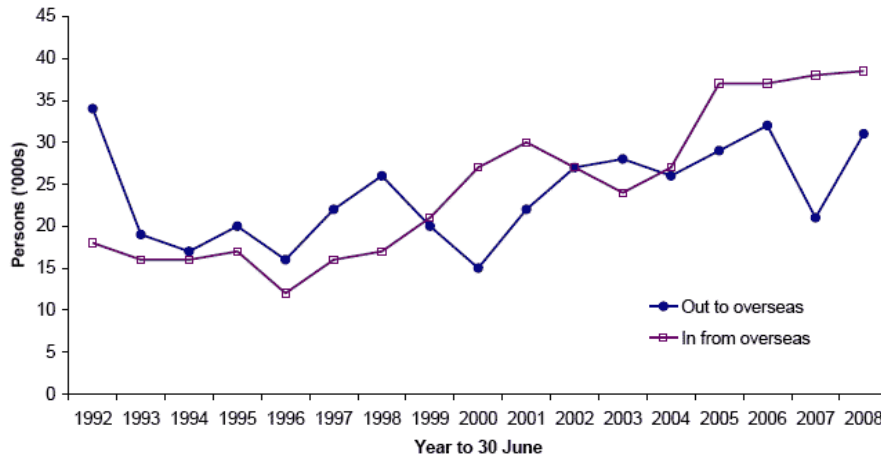


Source: GROS

6.6 At overseas level (migration between Scotland and countries outwith the UK) the notable feature is the upward trend in inward migration, especially the sharp increase recorded from 2003-4 to 2004-5 (coinciding with the incorporation of the A8 countries into the EU) (see Figure 15). In the year 2008-9 there was a net gain of around 4,500 at UK level and around 17,500 at overseas level. In-migration from the A8 countries in particular is a phenomenon which has come to the fore in recent years (see para 6.11 below) and has contributed significantly to the achieved level of net in-migration. It is interesting to note that the migration projects carried out as part of the Scottish Demography Research Programme focused on graduate migration and retention, and migration to and from the SE England; there was

very little mention of either European or worldwide migration (in or out) at that time in discussing major issues impacting on Scotland's population.

Figure 15: Scottish migration to/from overseas (1991 – 2008)



Source: GROS

6.7 Current GROS projections to 2033 (based on 2008 estimates) show the continuation of net in-migration, although dropping back to a lower level of around 12,000 by 2014-15, and continuing at that level until 2033. However, migration is the element of population change that is most open to short term fluctuation; projections are based on previous trends and do not take account of factors such as the recent economic downturn or the opening up of other EU countries to A8 migrants.

Geographical variations in migration

6.8 GROS 2009 mid year estimates show the top destinations for migrants to Scotland (from elsewhere in the UK and overseas) to be Edinburgh and Glasgow (significantly ahead of other areas). For those from the UK the next most popular destinations are Fife, Highland and Aberdeen City; for those from overseas the next most popular destinations are Aberdeen City, Perth and Kinross and Fife. The top areas for out-migration are very similar, again showing figures significantly above other areas. Edinburgh and Glasgow are the biggest exporting areas. For those leaving for elsewhere in the UK, Fife, Aberdeen City and Highland are the next biggest exporting areas (the same as the destination areas); for those leaving for overseas, Fife, Highland and Dundee are the next most common exporting areas. Edinburgh, Glasgow, Aberdeen City, Highland, and Perth and Kinross are the top *net* importers of migrants for overseas and elsewhere in the UK. In terms of the urban-rural split, net in-migration is a feature for both urban and rural Scotland. However, as discussed in para 3.7, there are differences in age related migration patterns, with rural areas tending to be net exporters of young people (16 -24 year olds) and net importers of people in the older age groups.

Characteristics of migrants to Scotland

- 6.9 Forty-five thousand people moved to Scotland from elsewhere in the UK in 2008-9 (GROS 2009 mid year estimates) accounting for over half (52%) of all migrants to Scotland. The vast majority of UK migrants come from England (93% in 2007-8), with 3 regions - London, South East and North West - accounting for a significant proportion of all migrants from England (44% in 2007-8). In 2007-8, Scotland recorded net gains from each of the UK countries except Northern Ireland.
- 6.10 In the same period around 42,700 people moved to Scotland from overseas. International Passenger Survey (IPS) based estimates for Scotland indicate that almost half of such migrants are from the EU (48%) (with 41% from the EU15).
- 6.11 In relation to immigrants from A8 countries in the EU, the Workers Registration Scheme (WRS) provides some additional information, indicating that by March 2009 over 80,000 workers had registered in Scotland, representing around 7% of all A8 workers who have come to the UK under the scheme; not all these workers, however, will remain in Scotland as the scheme does not collect information on those leaving the country. At UK level, by far the most common country of origin for these workers was Poland, accounting for 66% of all applicants (reflecting the relative size of Poland to the other A8 countries) (UKBA (2009) Accession Monitoring Report).
- 6.12 Migrants to Scotland tend to be younger than the resident population. Almost half of UK migrants to Scotland (49%) and over two thirds of overseas migrants to Scotland (69%) in 2008-9 were aged between 16 and 34 (IPS/NHSCR based figures in GROS 2009 mid year estimates), compared to around a quarter of the Scottish population as a whole. The age profile of migrants was similar for men and women. Only 5% of migrants from the UK and one per cent from overseas are 65 or over. Figures for the Workers Registration Scheme suggest that the tendency for migrants to be young is even more pronounced for those from the A8 countries, with 81% of registered workers falling in the 18-34 age group (UK level figures reported in the UKBA (2009) Accession Monitoring Report).
- 6.13 GROS figures (IPS/NHSCR based figures in GROS, 2009) indicate an even split between male and female in-migrants from overseas, and slightly more female than male in-migrants from elsewhere in the UK⁴². For A8 workers, slightly more men than women have registered (56:44), although recent quarterly figures show an even 50:50 split between male and female applicants (reported in UKBA (2009) Accession Monitoring Report).

⁴² This may reflect a greater likelihood of women to register with a GP, as the figures are calculated using NHS records.

- 6.14 In terms of marital status, the UK Long Term International Migration (LTIM)⁴³ figures for 2008 indicate that almost two thirds of migrants to Scotland (61%) were single. Just over a third (34%) were married while the remainder were divorced or widowed.
- 6.15 The LTIM 2007 figures for the UK show that the main reasons for migration to the UK are work or study. Of those giving a reason, 40% had a job or were looking for a job, and 32% were coming to the UK for study purposes. While 16% were migrating to accompany or join a family member, work or study was likely to be the reason for the majority of the original migrants.
- 6.16 Scottish based research by Pires and McLeod (2006) reflects this UK situation. They found the main reasons for migration to Scotland to be economic (employment or study) rather than “lifestyle”. Lifestyle, though, was a bigger factor for migrants from elsewhere in the UK. They also found overseas migrants to be attracted to the UK as a whole rather than Scotland in particular.
- 6.17 Labour Force Survey figures for 2008 show that migrant workers make up 6.7% of the workforce in Scotland. The figures indicate a slightly lower employment rate amongst those born outwith the UK compared to those born in Scotland (71% compared to 76%); migrants coming to Scotland to study may account for some of this difference. Data from the same survey indicates that those born outwith the UK are spread across all employment sectors and occupational groups. However, they are particularly over-represented in the distribution and hotel and restaurant sectors, and particularly under-represented in the public administration, education and health sector. In terms of occupational group, non UK-born workers tend to be overrepresented at one end of the spectrum amongst professional occupations and the other end amongst elementary occupations; and are under-represented amongst administrative and secretarial workers.⁴⁴
- 6.18 Locally based research work in Scotland (much of which has focused on specific, often rural areas with a high concentration of A8 workers) suggests that the majority of overseas migrants in employment are in semi-skilled and unskilled work (de Lima et al; SER, Metcalf et al, all cited in Rolfe and Metcalfe, 2009), although they often have relatively high levels of qualifications; for example, a 2006 study of migrants in Tayside (SER, 2006) found nearly 60% of migrant workers to have a university degree and a further 16% to have a trade or professional qualification. These findings relating to qualifications fit with figures reported for the UK (LTIM, 2008) which indicate that two thirds of adult migrants to the UK were in professional or managerial positions or were students before moving to the UK.

⁴³ LTIM estimates of long term migration (ie, more than 12 months) are derived from International Passenger Survey data adjusted to take account of asylum seekers and people who change their original intentions.

⁴⁴ LFS data does not cover people in communal living arrangements so may underestimate those working in the agricultural sector where this is a more common feature. In addition, it should be noted that the sample weighting may lead to some under-representation of short term workers in the survey results.

- 6.19 The Scottish research cited in Rolfe and Metcalf (2008) reported the majority of (often A8) migrants to be in full-time employment (although often on temporary contracts) often in jobs characterised by long hours, low pay and low skill levels. The majority were concentrated in a small number of sectors: hospitality and catering; food processing; construction; agriculture. In relation to A8 migrants, specifically, the WRS gives the top employment sectors for Scotland as: hospitality and catering, administration, business and management⁴⁵, agriculture, and food, fish and meat processing (cumulative to March 2009). There was, though, some local evidence reported (in, again, Rolfe and Metcalf) of migrants beginning to move into work more appropriate to their skills and experience. Barriers to appropriate employment (cited in Rolfe and Metcalf) included language skills and “transferability” of qualifications.
- 6.20 LTIM figures for 2008 for the UK as a whole indicate that most migrants (of those who stated an intention) intend staying for one to 2 years (49%); a fifth intend staying for 3 to 4 years, and a third (31%) intend staying for more than 4 years. In their research on people who relocate to Scotland, Pires and McLeod (2006) report most migrants to be flexible in their intentions and not committed to staying in Scotland. Rolfe and Metcalf (2008), however, cite a number of local Scottish studies indicating that most A8 migrants in particular planned to stay in Scotland but were unsure for how long. Pires and McLeod report positive work experience and improved lifestyle as important factors in encouraging people to stay in Scotland. However, lifestyle itself was not enough on its own to make people settle. Rolfe and Metcalfe’s review reported some evidence of migrants beginning to move into work more appropriate to their skills and experience with a view to moving families over to Scotland and settling on a longer term basis; they also reported a number of studies noting access to social housing as a factor in the decision to settle in Scotland.
- 6.21 There is some evidence that migrant experiences in Scotland are generally positive (eg, Pires and McLeod). At the national level, Scottish Social Attitudes Survey data (cited in Rolfe and Metcalf) indicate that people in Scotland are more welcoming and have more positive attitudes towards migrants than people in other parts of the UK; however there are more mixed results in relation to some local studies (Glasgow and Fife) which report some hostility towards migrants, including perceived threats to jobs (in Rolfe and Metcalf). In addition to this, local studies with migrants themselves report some negative experiences (racism etc), and isolation and lack of integration were common complaints for those in rural areas in particular. The experience of migrants in rural areas has been reported to be different to those elsewhere; for example, there were difficulties in accessing affordable housing and other services, and the limited provision of English language training was noted as a particular issue (studies cited in Rolfe and Metcalf).

⁴⁵ The majority of those recorded in the “administration, business and management” category are employed by recruitment agencies and could be working in a range of sectors.

Characteristics of migrants leaving Scotland

- 6.22 GROS 2009 mid year estimates show that 66,500 people left Scotland in 2008-9. However, information on the characteristics of those leaving Scotland (or the UK) is limited, although GROS and ONS (LTIM) provide some data in this area.
- 6.23 On the personal characteristics of emigrants, GROS 2009 mid year estimates report that 62% of those leaving Scotland went to one of the other UK countries. Those going beyond the UK were split fairly evenly between those going to the EU and those going elsewhere (LTIM 2008). Like immigrants to Scotland, the majority of those leaving are between 16 and 34, proportionately younger than the resident population (GROS, 2009). GROS figures (GROS, 2009) indicate an even split (49:51) between male and female out-migrants from Scotland. The UK LTIM figures for 2008 indicate that over half (58%) of all adult out-migrants were single, slightly over a third (38%) were married, and the remaining 5% were divorced or widowed.
- 6.24 LTIM 2008 figures for the UK show that the main reason for migration from the UK was work, with 40% having secured a job and a further 24% intending to look for work. In contrast to in-migrants, only 7% were leaving to study. In relation to employment, LTIM data for 2008 indicates the occupations of those leaving the country (adults only) immediately prior to their migration. Those in professional and managerial roles accounted for 38%, a further 38% were in manual or clerical occupations, and just over a fifth (21%) were students.
- 6.25 Figures for the UK as a whole (LTIM 2008) indicate that most (62%) of those leaving the UK (of those who stated an intention) intended doing so for at least 4 years. In comparison to those coming to the UK, emigration seems more commonly to be a longer term arrangement.

Student/graduate migration

- 6.26 In 2008-9, around 24% of HEI students in Scotland were non-Scottish domiciled (based on residence in the 3 years prior to commencing studies). In relation to Scotland-UK student migration, Scotland continues to be a net importer of students. While 12,600 students domiciled in Scotland were studying elsewhere in the UK, 27,700 students from the rest of the UK were studying at Scottish HEIs. For overseas students, the most common countries of origin were India, China and the USA (from Scottish Government (2010) Students in Higher Education at Scottish Institutions 2008-9).
- 6.27 In relation to graduate migration, Bond's research (2007) into Scottish graduate migration and retention at UK level reports 2001 census figures indicating a net loss of 4,300 degree-educated people to elsewhere in the UK in the previous year. Bond reported 90% of all Scottish domiciled graduates to be working in Scotland 6 months after graduation, compared to 34% of graduates from elsewhere in the UK and 22% from other EU countries. Bond's survey focusing on Edinburgh University graduates found that 70% of respondents who had originated in Scotland were living there 5 years after

graduation, compared to 21% who had come to Scotland from elsewhere to study (included in these figures are those who had moved away from Scotland and returned within the 5-year period). The fact that the majority of those who come to Scotland to study leave after graduation suggests that there is scope to improve graduate retention amongst this group. The research reported that some of those leaving Scotland after graduation do so with the intention of returning. As with other research, key factors for those returning were employment opportunities and families and relationships. Views on the preferred environment for bringing up children were also mentioned by some.

- 6.28 The Fresh Talent: Working In Scotland Scheme (FT:WISS) which ran from 2005 to 2008 gave overseas students in Scotland the opportunity to enter the labour market (without the need for a work permit) for up to 2 years following completion of their studies, with almost 8,500 taking part in the scheme during its lifetime. A 2008 review found that FT:WISS was generally seen in a positive light by participants, and had been used by HEIs to promote Scotland as a place to study. However, there was some frustration reported amongst graduate participants at the type of work they were able to secure. Although it was not clear how many overseas students had been attracted to Scotland because of the Scheme, the review reported qualitative evidence from research in both the US and China that FT:WISS was a major factor in attracting students to Scotland, and noted an increase of over 3,000 overseas students coming to Scotland from 2005-6 to 2006-7 (with subsequent figures showing no further increase to 2007-8). FT:WISS came to an end and the Tier 1 Post Study Work category was introduced within the UK points based migration system in 2008. Since then, more than 4,800 Scotland based students have stayed on following graduation on Post Study Work.

The Scottish diaspora

- 6.29 Scotland has, until recently, been a country of net out-migration. Work by Carr and Cavanagh (2009) estimates that over a million people born in Scotland are currently living outside Scotland⁴⁶. This figure equates to around a fifth of the current Scottish population. The majority, almost 800,000, live in England (in addition there are over 50,000 Scots-born people living elsewhere in the UK). Around 80% of people born in Scotland are currently living in Scotland; this situation is significantly different from the situation for the UK as a whole which has 94% of those born there still resident. For the countries considered in Carr and Cavanagh's research, Scotland had one of the most concentrated diasporas, with the 5 most common destinations (England, Australia, US, Canada and New Zealand) accounting for over 90% of Scottish emigrants.

The same research uses census data to examine the “reverse diaspora” living in Scotland (ie, those living in Scotland who were born elsewhere), and reports that almost 13% of those living in Scotland in 2001 were born elsewhere; those born in England accounted for 8%.

⁴⁶ Carr and Cavanagh (2008); much of the analysis in this research draws on work carried out by the New Zealand Government Treasury in 2004.

Migration between Scotland and England

- 6.30 England is by far the most significant source of migrants to Scotland and destination for migrants leaving Scotland. Nearly 800,000 people in England were born in Scotland, while about 400,000 of those in Scotland were born in England (Carr and Cavanagh, 2009). Migrants moving between the 2 UK countries have somewhat different characteristics and experiences to other migrant groups. Research into English migrants to Scotland shows this group tend to have advanced qualifications and relatively high occupational status (Findlay & Stockdale, 2007) in relation to the general Scottish population, with the majority moving to Scottish cities. Pires and McLeod (2006) reported that, like other migrants, economic reasons were most significant for those moving from elsewhere in the UK, but lifestyle factors were found to play a bigger role in their decision regarding moving to Scotland.
- 6.31 Findlay's 2007 work examined Scots' migration to the South East of England in particular. Again, employment was the most common reason for migration, and significant numbers moved for career progression or achieved it once working in the area. The research concluded that, while the South East was an "escalator region" for all who work there, Scots did particularly well as a result of this phenomenon, both in comparison to Scots who stayed at home and to residents of the South East who were born in the area. Return migration was also a feature, with those returning to Scotland being mainly young, university educated people. Labour market uncertainties were found to be a key reason for returning to Scotland, but the chance of returning was increased when this was combined with a job opportunity and family pressures. The desire for children to grow up in Scotland also appeared to be a factor for some in decisions relating to return migration.
- 6.32 Although significant numbers of Scots migrate to the South East of England, the reverse is also true, and GROS figures show that Scotland has in fact made net gains in relation to Scotland-SE migration in recent years.

Internal migration within Scotland

- 6.33 Those moving around Scotland also contribute to the overall migration picture. This group includes migrants to Scotland making a further move following their original entry to the country. GROS 2009 mid year estimates show that those authorities attracting the highest numbers from elsewhere in Scotland were Glasgow and Edinburgh followed by South Lanarkshire, Aberdeen City and Fife. The same areas also lost the highest numbers of people. The big cities of Glasgow, Edinburgh and Aberdeen experienced the biggest *net* losses of people, while the biggest net gainers were South Lanarkshire, Aberdeenshire and Midlothian.

Current policy issues in relation to migration

6.34 Increased net in-migration is the only option for achieving short term population growth and progress towards the population target. Although recent trends in migration have been positive, maintaining these flows by continuing to attract and retain migrants, and retaining the Scots-born population, may prove to be challenging, particularly given current economic conditions. The Scottish Government's objectives in relation to managed migration differ from those of the UK as a whole, reflecting the different demographic patterns and economies of the UK countries, with Scotland keen to retain the Scots-born population and actively attract new (and return) migrants to the country. Current issues relate to how this might be achieved through policy levers available directly to the Scottish Government, as well as through influencing immigration policy at a UK level.

Current policy activity in relation to migration

6.35 Immigration policy is a reserved matter, although there are some policy levers available at a devolved level. At a strategic level Scotland has pursued several policy strands to date in this area, all designed to promote Scotland to potential migrants:

- Narrative of economic opportunity: This is intended to promote Scotland to high-value migrants, raising awareness of the economic opportunities and other benefits available in Scotland, and influencing attitudes towards Scotland as a place to live, work and learn.
- The Diaspora Plan: Linked to the narrative of success, this plan is aimed at Scots living elsewhere and non-Scots with experience of living in Scotland with a view to attracting them back to Scotland to live and work.
- Relocation Advisory Service: This service was established in 2004 to offer practical support and advice on a wide range of issues to those wishing to come to Scotland to live and work.
- FT:WISS: This scheme was designed to attract skilled labour to Scotland by offering graduates the opportunity to remain in Scotland to work for 2 years following completion of their studies. This came to an end in 2008, and the Scottish Government now actively promotes its successor, the Post Study Work migration route, via the UK migration system.

6.36 In relation to UK policy, the Scottish Government has continued to negotiate with the Home Office in relation to achieving Scottish flexibilities within the migration points system (eg, awarding additional points for those wishing to come to Scotland) to allow greater numbers of migrants to come to Scotland.

6.37 At a practical level there may be further scope for policy activity to address some of the identified barriers to settlement and integration in relation to, for example, facilitating access to services including housing and English language training, assisting people in obtaining suitable employment and recognition of overseas qualifications.

Current/future evidence requirements relating to migration

- 6.38 Unlike many other countries, the UK does not have comprehensive central records on in- and out-migration. International migration statistics are largely based on the International Passenger Survey which draws on a sample of passengers entering/leaving the UK at airports and sea ports. The method has a number of drawbacks. Only those coming to the UK for more than 12 months are classed as migrants, so short term seasonal workers are not included in the resulting figures. The sample used is small, particularly in Scotland where only about 200 people are included, limiting scope for reliable analysis. The system is based on intentions which may or may not be realised. The IPS data is supplemented by LFS data and NHS data to provide estimates of movement of migrants within the country. Estimates of internal migration (within Scotland or between the UK countries) are based on NHS records. However, work is continuing at ONS and GROS to improve migration statistics in order to provide a more accurate picture of in- and out-migration⁴⁷.
- 6.39 More robust data on the views and experiences of migrants in Scotland would be a useful contribution to the evidence base; much of the currently available information comes from small scale local level studies. Improved information on the motivations of migrants, in particular, would assist in fine-tuning policy efforts in attracting migrants to Scotland⁴⁸. Information on those leaving Scotland in particular is very limited. More information on their views and experiences could support policy thinking relating to retention (of the Scots-born population and the migrant population).

⁴⁷ This UK level work is being led by ONS via the Improvements in Migration and Population Statistics cross-government programme.

⁴⁸ A feasibility study for a survey of UK migrants has been carried out for the Home Office/UKBA. Such a survey would provide a possible source of information on the views and experiences of migrants. This work was commissioned under the previous administration and there is currently no plan to proceed with a full survey.

7. CONCLUDING REMARKS

7.1 Demographic change is complex. A range of factors impact on demographic change overall and individually on fertility and migration decisions, and morbidity and mortality rates and life expectancy. Context is crucial, making projections in relation to fertility and migration in particular open to uncertainty. For example, it is not yet clear how the economic downturn will impact on migration or fertility decisions in the medium term⁴⁹. Further, although it is possible to look at the drivers of population change – mortality, fertility, migration – and their impact separately, there are also links between them. To understand demographic change - and the implications for Scotland's population growth target - it is important to understand these linkages. For example:

- The current population structure is the main determinant of the future structure of the population, and it will require a considerable period of time before sustained changes in the drivers of population change influence the overall structure of the population. Therefore, we can be certain that Scotland's population will age over the coming decades, but changes in the drivers of population growth can influence the rate at which it ages.
- If the ageing population and reduction in the working age population makes Scotland less competitive, labour market participation rates may fall, and Scotland may become a less attractive place for migrants.
- Migrants have contributed disproportionately to the increased birth rate in Scotland in recent years. A reduction (or indeed increase) in migrant numbers may, therefore, also impact on the fertility rate. Migrants who choose to return home may also take children with them, thus impacting on the age profile of the population as well as total population numbers, although evidence from elsewhere suggests that the presence of children is a factor supporting long term settlement⁵⁰.
- While migrants to Scotland have a positive impact on demographic change in the short and longer term by boosting the numbers of those in the population of working age likely to have children, those migrating from Scotland come from the same age group and have the opposite impact. Thus, in and out-migration are of equal importance in growing the population, and retaining the current population (Scots-born and non Scots-born) is as important to growing the population as attracting new migrants.
- The ageing population will present new opportunities as well as challenges, particularly as overall demand patterns start to reflect the preferences of an older population. The opportunities presented by an ageing population are still unclear; increasing demand for care and medical services, the development of assistive technologies and the increasing numbers of healthy older people buying goods and services, though, could all create jobs and potentially attract migrants.

⁴⁹ The most recent GROS figures commented on in GROS (2010) Scotland's Population 2009 show only limited impact on migration or births.

⁵⁰ See, for example, research by Devoretz and Pivnenko (2004) looking at applications for Canadian citizenship.

- 7.2 In addition, the implications of particular aspects of demographic change can also be complex, reaching beyond the immediate observed impact, for example:
- A low fertility rate has implications for the numbers of people entering the working age population in future years and the future supply of paid (and unpaid) carers for older people who will form an increasingly large proportion of the population.
 - The biggest contributing factor to the population age profile is fertility, rather than mortality (ie, low fertility will reduce the numbers in the younger age groups, thus increasing the proportions in the older age groups). So, the increased birth rate in recent years will impact on the age profile in a positive way, although it will not affect the absolute number of older people in the population.
 - An increased fertility rate will boost the population in the longer term but in the short term will have a negative impact on the dependency ratio.
 - There is potential to increase labour market participation amongst women and those in the 50 plus age group but these groups may also feel they have to or want to care for the increasing numbers of elderly people in the ageing population, or for grandchildren to allow younger parents to work.
- 7.3 In the light of the current situation and projections, there are choices to be made: should policy-makers try to influence demographic trends (eg, through migration and fertility/family policies) or should they work to respond to the new population profile, or (more likely) a combination of both? Implicitly, Scotland's population target indicates a role for government in influencing demographic trends, with policy activity concentrating on migration/retention and improving HLE. It is, though, important to at least be aware that fertility is part of the equation, particularly in the longer term.
- 7.4 At a more specific level, key issues for policy in the area of demographic change might include the following:
- The attraction and retention of migrants (and the Scots-born population in England and elsewhere) to maintain, and grow, the working age population and support GDP growth.
 - The development of economic conditions that ensure the right type of jobs to attract and retain people.
 - Creation of conditions that support an increased fertility rate.
 - Consideration of how to fund FPC and other services for the increasing number of older people in the population.
 - The development of further initiatives to improve HLE (to bring benefits at the individual level, but also to increase labour market participation and reduce health and care costs for society as a whole).
 - The identification of opportunities presented by the ageing population.
- 7.5 With demographic change impacting on so many policy areas at national and local levels, it is crucial that good quality information is available to allow informed decisions to be made. This paper has drawn on some of the data

currently available in relation to demographic change. Given the issues identified and the evidence presented, it will be important that Scottish Government analysts, other public sector bodies and academia work together - and in conjunction with policy makers - to ensure the best evidence is available in relation to demographic change in Scotland.

8. ANNEX 1 – ESRC/SE SCOTTISH DEMOGRAPHY RESEARCH PROGRAMME: SUMMARY OF FINDINGS

The Scottish Demography Research Programme funded 6 projects looking at key aspects of demographic change in Scotland in the areas of ageing, fertility and migration with 2 projects funded in each area. The Research Programme followed on from a joint ESRC/Scottish Executive seminar in 2004 which presented academic research to potential users in government and the voluntary and private sectors.

Fertility

The 2 projects funded examined factors contributing to the difference in fertility rates between Scotland and England, and variations in fertility rates across Scotland, within a context of historically low fertility levels in the UK and Scotland in particular.

Why is fertility in Scotland lower than in England?

Researchers: Graham, Boyle, Bouliotis (University of St Andrews), Gayle (University of Stirling) and Ermisch (University of Essex)

Scotland's fertility rate has declined steadily since the 1960s (reaching its lowest level in 2002) and, in a reversal of the previous situation, Scotland now has a lower fertility rate than England. This project used comparative analysis of data from the British Household Panel Survey for English and Scottish women (defined by place of birth) to provide an insight into the causes of low fertility in Scotland. Key findings included the following:

- Although Scottish women have fewer children than women in England, there was no difference in fertility expectations between the 2 countries, and similar levels of childlessness.
- Scottish women have their first birth earlier than English women, but then wait longer for their second and subsequent births. This appears to be a factor in the lower fertility rate in Scotland.
- Fewer Scottish women have a third or fourth child.
- Black and ethnic minority women are more likely to have 3 or more children, and these groups make up a higher proportion of the population in England than Scotland.
- Better educated women in Scotland were significantly less likely than their English counterparts to have a third child.

Fertility variations in Scotland: actual, expected and ideal fertility

Researchers: Beckett-Milburn, Dey, Jamieson, Wasoff (University of Edinburgh), Boyle, Graham (University of St Andrews)

Fertility in Scotland has declined since the 1960s, and remains below replacement level despite increases in the number of annual births since 2002. There are, though, significant variations in the birth rate across Scotland, and this research sought to examine the factors that lead to this variation. The research was based on a module of commissioned questions in the 2005 Scottish Social Attitudes Survey. Key findings include the following:

- There is a gap between fertility ideals and actual fertility in Scotland.
- Higher levels of education were associated with lower levels of fertility, and a bigger gap between actual fertility and fertility expectations.
- Those in part-time work were more likely to start their families earlier and have more children.
- Those in full-time work were more likely to think that their work progress would be affected if they had another child; those who thought their employers provided a poor fit between work and family were most likely to think their work progress would suffer if they had another child.
- Social and environmental factors were also linked with fertility; those with a lot of friends with children and those living in areas that were perceived as a good place to bring up children were more likely to have more children; those who practised gender equality in the home were less likely to have larger families.

Migration

In relation to migration, the 2 projects concentrated on migration between Scotland and the South East of England, and migration following the completion of higher education in Scotland (focusing on Edinburgh University graduates in particular). Scotland was, historically, a country of net out-migration, but this work was carried out a time when Scotland was experiencing a period of net in-migration.

Scottish migration to, and return from, SE England

Researchers: Findlay (University of Dundee), Houston (University of Edinburgh), Mason (University of Strathclyde)

The South East of England has traditionally been a key destination for those migrating from Scotland. This research sought to investigate the drivers of migration between Scotland and the South East using data from the 2002 census and a survey of Scottish migrants to the area. Key findings included:

- Employment opportunities were found to be the dominant reason for initially leaving Scotland for the SE of England
- Around 60% of migrants to the South East achieve upwards mobility in the course of their careers, and Scots in the SE enjoyed greater occupational mobility than those who remain at home or those born in the SE.
- Return migration was also common, particularly among young, university educated people. A common reason for return migration was job insecurity. Return migration was particularly likely when this was coupled with job opportunities in Scotland and family pressures.

Scottish graduate migration and retention

Researchers: Bond and Charsley (University of Edinburgh)

This research used analysis of existing data (2001 census, HESA and GROS) along with a survey of recent graduates from Edinburgh University (year 2000) to examine graduate migration from Scotland, and the factors associated with students choosing to leave or remain in Scotland after graduation. Main findings included:

- Scotland is a net importer of students. Twenty-six per cent of students at Scottish universities come from outwith Scotland, while 8% of students from Scottish homes attend universities outwith Scotland.
- 79% of graduates in Scottish universities were working in Scotland 6 months after graduation.
- Those originally from Scotland were far more likely to remain in Scotland suggesting scope for improving graduation retention amongst those who came to Scotland to study. This was true 6 months after graduation (for all students) and 5 years after graduation (for Edinburgh University students).
- The 3 main factors which influence migration decisions were: employment opportunities (with quality of work rated more highly than salary), social connections (family and friends) and expectations for the future.

Ageing

The 2 projects related to population ageing examined its impact on the economy as a whole and the demographic, health and financial outcomes for older people themselves. The research was carried out at a time when figures showed the population to be shrinking as well as ageing and was projected to continue shrinking and ageing.

Macroeconomic impacts of demographic change in Scotland
 Researchers: MacGregor, Swales, Wright (University of Strathclyde)

This project used modelling techniques to explore the economic impact of Scotland's changing demographic profile on the economy, drawing in particular on projections relating to the ageing population and migration. The analysis was carried out a time when Scotland's population was projected to decline, and highlighted the following:

- The number of people of working age would continue to decrease, leading to increased competition in the employment market (especially for younger workers), higher wages, and reduced competitiveness in international markets, which in turn could affect economic growth.
- In addition government spending would reduce in line with a lower population, and consumption of goods and services would also fall, leading to lower output and lower employment.
- The study projected net in-migration of 20,000 per annum would be needed to maintain the population and the working age population and protect the economy. Higher wages in Scotland were not predicted to be sufficient to attract sufficient migrants from elsewhere in the UK, and questions were raised about the potential of the Fresh Talent initiative to attract enough people of working age from outwith the EU.

Scotland's ageing population: micro simulation of the baby-boomers
Researchers: Bell and Bowes (University of Stirling)

This research used micro simulation techniques to examine issues related to an ageing population, focusing in particular on care of the elderly and specifically on the Scottish policy of free personal care for the elderly. The research found that:

- In its first 2 years of implementation the introduction of FPC had not resulted in a reduction in the level of informal care provided by family and friends of elderly people.
- Men are more likely to believe that children should care for their parents, although women do more of the caring.
- The belief that children should care for parents declines with age, until 65 when the numbers believing that children should care for parents rises again.
- Baby boomers are significantly less likely than others to believe that children should care for parents, and have no wish to be a burden on their children.
- Higher levels of education are associated with lower probability of providing direct care for a parent but a higher probability of providing financial assistance. Possible explanations for this include the higher opportunity costs and practical barriers for those on higher incomes who are more likely to live further away from their parents.

9. ANNEX 2 - RESEARCH CENTRE FOR POPULATION CHANGE

The previous Scottish Demography Research Programme (cited in this paper) represents a key body of work in this area. A range of other work has also been carried out, some in Scotland and some at UK level (some of which is drawn on in this paper). In relation to new academic research, the newly established ESRC funded Centre for Population Change (CPC) will provide one important source of evidence and expertise in this area. The CPC is a collaboration between Southampton University and a consortium of Scottish universities (Dundee, Edinburgh, St Andrews, Stirling and Strathclyde) working in partnership with ONS and GROS. The CPC aims to carry out work that will improve our understanding of the key drivers and implications of population change within the UK.

The current work programme of the Centre includes a range of projects based around 4 themes:

- Dynamics of fertility and family formation
- Household dynamics and living arrangements across the life course
- Demographic and socio-economic implications of national and transnational migration
- Modelling population growth and enhancing the evidence base for policy

In relation to understanding the drivers of population change in Scotland, fertility and migration are key themes for the CPC, and specific projects will investigate, eg, factors affecting fertility decision-making, and the experiences of migrant workers. In addition the modelling work carried out by the Centre should improve the accuracy of population projections and the possibilities for exploring policy implications of demographic change. Although the “ageing population” is not a separate theme in relation to the CPC programme, this issue will be picked up across a number of themes and individual projects; in this area, a project of particular relevance to Scotland will examine rural ageing, rural migration and provision of social care.

All the CPC projects will include Scotland, via UK datasets or primary research based in both Scotland and England.

10. REFERENCES

- Anderson et al (2007) Growing Up in Scotland: Sweep One Overview Report, Scottish Government
- Anderson et al (2008) A Scottish Longitudinal Study of Ageing: A Scoping Study, Scottish Government
- Bell, D (2010) Presentation: Agreeing Priorities and Delivering Outcomes
- Bell, D (2009) Presentation: Rural Ageing and Social Care
- Bell, D (2010) Presentation: The Ageing Population: Global and Local Issues
- Bell, D and Bowes, A (2006) Scotland's Ageing Population: Microsimulation of the Baby Boomers
- Bond, R (2007) Scottish Graduate Migration and Retention – A Case Study of the University of Edinburgh 2000 cohort, ESRC
- Brown, R and Danson, M, in Scottish Affairs, no. 64 (summer 2008) Fresh Talent or Cheap Labour? Accession State Migrant Labour in the Scottish Economy
- Carr, J and Cavanagh, L (2009) Scotland's Diaspora and Overseas-born Population, Scottish Government
- Cavanagh, L, Eirich, F and McLaren, J (2008) Fresh Talent: Working in Scotland Scheme: An Evidence Review, Scottish Government
- Dey, I (2007) Fertility Variations in Scotland: Socio-cultural Attitudes and Interactions, ESRC
- Dey, I and Wasoff, F (2007) Fertility Variations in Scotland: Actual, Expected and Ideal Fertility, CRFR, University of Edinburgh
- Devoretz & Pivnenko (2004) The Economic Causes and Consequences of Canadian Citizenship, IZA Working Paper, Bonn
- Department of Work and Pensions (2010) When Should the State Pension Age Increase to 66? DWP, London
- Faggian, A, Li, C and Wright, R (2009) Presentation (Scotland's Universities and the Economy: Impact, Value and Challenges, University of Strathclyde, June 2009): Graduate Migration Flows
- ESRC/Scottish Executive (2005) Demographic Trends in Scotland: A Shrinking and Ageing Population, ESRC
- ESRC/Scottish Government (2007) Scotland's Demographic Trends: Insights from Scotland's Demography Research Programme, ESRC
- Eurostat data various years
- Findlay, A (2006) Scottish Demography: Scottish Migration to and Return From SE England, ESRC
- Findlay, A and Stockdale, A (2007) English Migration to Urban Scotland, ESRC
- Fraser of Allander Institute (2008) Report to GROS: Economic Impact of Scottish Demographic Change, University of Strathclyde
- GROS (2008) Scotland's Population 2007
- GROS (2009) Scotland's Population 2008
- GROS (2010) Scotland's Population 2009
- GROS (2010i) Life Expectancy for Administrative Areas in Scotland, 2007-9
- GROS (2010ii) Life Expectancy in Special Areas
- Graham, E et al (2007) Why is Fertility in Scotland Lower than in England, ESRC
- Graham, E (2006) Policy Interventions and the Reversal of Scotland's Fertility Decline, University of Glasgow
- Gray, A (2004) Population Ageing and Health Care Expenditure in Ageing Horizons, Issue No 2, Oxford Institute of Ageing

Harkins, J and Duddleston, A (2006) Scottish Household Survey Topic Report: Characteristics and Experiences of Unpaid Carers in Scotland, Scottish Government

HM Treasury (2008) Long-term Public Finance Report: An Analysis of Fiscal Sustainability

Home Office/UK Border Agency (2009) Accession Monitoring Report (May 2004 – March 2009), UKBA/DWP/HMIC, Communities and Local Government

Home Office/DWP/ONS (2009), Migration Statistics 2008 Annual Report

Kreyenfeld and Hank (2002) A Multilevel Analysis of Child Care and the Transition to Motherhood in Western Germany DIW Discussion Paper No. 290

McGregor, P (2006) Macroeconomic Impacts of Demographic Change in Scotland, ESRC, 2006

MacLardie, J and Murray, L (2008) Evaluation of the Pilot Relocation Advisory Service Phase 2, Scottish Government

ONS, Labour Force Survey, various years

ONS Statistical Bulletin (2010) Health Expectancy at Birth and at age 65 in the UK, 2005-2007, ONS

ONS Statistical Bulletin (2009) Migration Statistics Quarterly Report, no.3, November 2009, ONS

Pires, C and MacLeod, P (2006) Experience of People who Relocate to Scotland, Scottish Government Social Research

Rolfe, H and Metcalf, H (2009) Recent Migration into Scotland: The Evidence Base, Scottish Government

Scottish Council of Economic Advisers (2009) Second Annual Report

Scottish Government (2009) Free Personal and Nursing Care, Scotland, 2007-8, Scottish Government

Scottish Government (2009) Participation in Higher Education at Scottish Institutions 2007-8, Scottish Government

Scottish Government (2010) Health of Scotland's Population: Life Expectancy and Healthy Life Expectancy

Scottish Government (2010) Caring in Scotland: Analysis of Existing Data Sources on Unpaid Carers in Scotland

Scottish Government (2010) Scotland's National Dementia Strategy

SER (2006) Tayside Migrant Labour Population Survey, Communities Scotland, Edinburgh

Sleebos (2003) Low Fertility Rates in OECD Countries: Facts and Policy Responses in OECD Labour Markets and Social Policy Occasional Papers

Vestri (2007) Evaluation of the Impact of Free Personal Care for the Elderly (Scottish Government)

ISSN 0950 2254

ISBN 978 0 7559 9732 9

web only publication

www.scotland.gov.uk/socialresearch

APS Group Scotland
DPPAS10887 (10/10)



ISBN: 978-0-7559-9732-9

