Institute and Faculty of Actuaries

The demography of Scotland and the implications for devolution

IFoA response to the Scottish Affairs Committee

26 February 2016

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Actuaries' training is founded on mathematical and statistical techniques used in insurance, pension fund management and investment and then builds the management skills associated with the application of these techniques. The training includes the derivation and application of 'mortality tables' used to assess probabilities of death or survival. It also includes the financial mathematics of interest and risk associated with different investment vehicles – from simple deposits through to complex stock market derivatives.

Actuaries provide commercial, financial and prudential advice on the management of a business' assets and liabilities, especially where long term management and planning are critical to the success of any business venture. A majority of actuaries work for insurance companies or pension funds – either as their direct employees or in firms which undertake work on a consultancy basis – but they also advise individuals and offer comment on social and public interest issues. Members of the profession have a statutory role in the supervision of pension funds and life insurance companies as well as a statutory role to provide actuarial opinions for managing agents at Lloyd's.

Institute and Faculty of Actuaries

Pete Wishart
Scottish Affairs Select Committee
House of Commons
London
SW1H 9NB

26 February 2016

Dear Mr. Wishart

The demography of Scotland and the implications for devolution inquiry

1. The Institute and Faculty of Actuaries (IFoA) is pleased to submit evidence to the UK Parliament's Scottish Affairs Committee to assist with its inquiry on the demography of Scotland and the implications of devolution. This submission has been prepared by members of the IFoA's Scottish Board. We have only commented on those aspects of the inquiry where we have expertise, or have undertaken research or analysis.

2. We set out our response under the headings listed in the terms of reference of your inquiry. The key sources we have referred to are:

   a. The Registrar General's 'Annual Review of Demographic Trends 2014' (http://www.nrscotland.gov.uk/statistics-and-data/statistics/stats-at-a-glance/registrar-generals-annual-review/2014) (the 'Annual Review'), which includes comparisons with the rest of the UK.
   b. ONS population projections for the UK and the constituent countries, produced every two years. The latest set is the 2014-based projections which can be found at: http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-395151.
   c. The website of the National Records of Scotland (http://www.nrscotland.gov.uk), which provides details of Scotland's current demographic trends.

Question 2: What accounts for any differences in projections?

3. *Mortality*

   - Life expectancy at birth in Scotland, while increasing, is lower than in the UK as a whole, and lower than many other developed countries. (Annual Review page 4)
   - Death rates from cancer, coronary heart disease and stroke in Scotland are well above the rates for the other countries in the UK. (Annual Review page 7 and pages 33/34)
   - The most recent ONS (2014-based) population projections for the UK and its constituent countries used mortality assumptions that lead to the following life expectancies by year of birth:

Table 1 Life expectancy in the UK and constituent countries

Life expectancy - Males	2014	2025	2050	2075	2100
Scotland	76.6	80.1	83.8	87.1	90.2
England	79.2	82.3	85.8	88.8	91.8
Wales	78.1	81.4	84.9	88.0	91.1
Northern Ireland	78.2	81.2	84.8	88.0	91.0
UK	78.9	82.1	85.6	88.6	91.6

Life expectancy - Females	2014	2025	2050	2075	2100
Scotland	80.7	83.2	86.4	89.3	92.3
England	82.7	85.4	88.5	91.3	94.1
Wales	81.8	84.7	87.8	90.7	93.6
Northern Ireland	82.1	84.7	87.9	90.7	93.5
UK	82.5	85.1	88.3	91.1	93.9

- Scotland's life expectancy for both males and females is projected to remain below that of the rest of the UK for the whole of the ONS's projection period, but the gap is expected to narrow over time. The gap between male and female life expectancy in Scotland is also projected to get smaller.
- As well as considering life expectancy it is also important to consider healthy life expectancy or disability-free life expectancy. These may be changing at different rates to life expectancy, affecting social welfare and health costs.

4. Fertility

- There is evidence of delayed child bearing across the UK. Until the late 1970s, Scotland's total fertility rate (TFR) was slightly higher than that for England and Wales[1]. However, since the early 1980s, Scotland's TFR has dropped steadily below the levels for England and Wales.
- The most recent ONS (2014-based) population projections for the UK and its constituent countries used the following total fertility rate assumptions (ONS assumes that fertility reaches its long term rate around the year 2032 about 20 years after the date of the projection) :

Table 2 Fertility rates in the UK and constituent countries

Total fertility rate (TFR)	2014	Long term rate (from 2032)
Scotland	***1.59***	***1.70***
England	1.82	1.90
Wales	1.78	1.90
Northern Ireland	1.95	2.00
UK	1.81	1.89

[1] The ONS defines TFR as "the average number of children that a group of women would have if they experienced the age-specific fertility rates for a particular year throughout their child-bearing life".

Replacement rate fertility is usually defined as a total fertility rate of 2.1. Scotland is significantly further below this compared to the other countries of the UK. However, Scotland's fertility rate is higher than that of a number of other EU countries.

5. *Migration*
   - Migration is a key component of the population increase in Scotland. Around 60 per cent of people moving to Scotland are from the rest of the UK, while around 40 per cent are from overseas. (Annual Review page 4)
   - In the year to mid-2014 it was estimated that around 49,240 people came to Scotland from the rest of the UK (around 1,540 higher than the previous year), and around 39,660 people left Scotland for the rest of the UK (around 140 fewer than the previous year). In the year to mid-2014 it was estimated that around 33,200 people came to Scotland from overseas (around 5,000 higher than the previous year), and around 25,200 people left Scotland to go overseas (around 900 fewer than the previous year).
   - The migration assumptions used by the ONS in its population projections imply that most of Scotland's population growth during this century will be due to in-migration (i.e. from within the UK). The same is true for Wales but is not the case, from 2018, for England.

6. *Implications of current trends*
   - The population of Scotland is projected by the ONS in its 2014-based projections to increase from 5.3 million in 2014 to 5.8 million in 2050, an increase of 7.6%. The UK as a whole is projected to increase over the same period from 64.6 million to 77.5 million, an increase of 20%. The difference in rate of growth is due to the combined effect of difference in projected mortality, fertility and migration rates.
   - According to the ONS's projections, the proportion of people in Scotland aged 75 and over is projected to increase from 8.1% in 2014 to 15.8% in 2050. For the UK as a whole the proportion is projected to increase from 8.1% to 15.0%. Scotland is therefore not alone in having an ageing population. Scotland's low fertility rate would on its own lead to a faster rate of ageing compared to the rest of the UK although this is offset somewhat by Scotland's lower life expectancy.
   - Between 2004 and 2014 average household size in Scotland fell from 2.22 people per household to 2.17 people per household. By 2037 it is projected to fall further to 2.03 people per household. (Annual Review page 59). This is the result of an ageing population and more people living alone or in smaller households.

Question 3: To what extent can either the Scottish Government or the UK Government influence Scotland's demography?

7. Based on the policies pursued by governments elsewhere, the Scottish and UK Governments may have limited scope to influence Scotland's demography by implementing various policies or by encouraging changes in behaviour. We cite some examples below, but recognise that not all of these would be politically feasible in the UK.

8. With respect to fertility, governments around the world have implemented a wide range of policies ranging from the coercive one child policy in China and forced sterilisation campaigns in India, to pro-natalist policies in a number of European countries in recent years. While the coercive policies have had a dramatic effect on fertility rates, the pro-natalist policies have tended to have a limited impact. The more successful pro-natalist policies tend to be around

making it easier for women to combine motherhood and a career, if they so wish, and encouraging the availability of affordable housing and child care.

9. Governments can influence mortality rates by their health policies and public health campaigns. Both of these can be targeted at specific parts of the population e.g. anti-smoking legislation, campaigns to reduce childhood obesity and healthy living campaigns for older people.

10. Finally governments can influence migration through a wide range of polices and campaigns which make their country more or less attractive as a place to live, work and raise a family compared to other countries.

Question 4: How does the life expectancy of someone born in Scotland today compare with someone born elsewhere in the United Kingdom and what are the policy implications of any differences?

11. Table 1 above shows the current and projected life expectancies of men and women born in the constituent parts of the UK.

12. The policy implications of this difference include:

    - To the extent that the lower life expectancy may be related to higher levels of poverty and deprivation, greater focus would need to be made on reducing these levels, perhaps particularly child poverty.
    - The difference in life expectancy could have implications around policy in the area of diet, smoking and drinking e.g. sugar taxes and minimum pricing of alcohol.
    - A review could be carried out into access to and outcomes from the Scottish health care and social services systems to identify areas for improvements. This could include the provision of care at the end of life. It is though worth noting that stillborn and child mortality rates are lower in Scotland than in the rest of the UK (see the General Registrar's report page 35).
    - As well as national life expectancy differences, there may be significant regional variations that merit a policy response. For example, a paper from the Glasgow Centre for Population Health discusses reasons for Glasgow's 'excess mortality' compared to similar cities in England (see http://www.gcph.co.uk/publications/548_exploring_socio-cultural_explanations_of_glasgow_s_excess_mortality).

Question 5: Does the Scottish Government have adequate policy levers to attract and retain people of working age to Scotland?

13. The actuarial profession are not experts on the causes and effect of migration and so can only make some high level points.

14. The question seems to presume that the Scottish Government wishes to attract and retain people of work age. Even if it does, it may have specific types of working age people that it wishes to attract or retain e.g. those with particular skills.

15. From the migration data provided by National Records Scotland, it at least appears that Scotland is able to attract more people of working age than it loses, either with respect to the rest of the UK or with respect to the rest of the world. However, the Scottish Government is

limited to the extent to which it can attract working age people from outside of the EU as it is bound by UK wide migration laws.

16. The reasons for people migrating are many and varied but include job opportunities, standard of living, tax rates (individual and corporate), government services, benefits, climate and culture. The Scottish Government has some ability through its employment and tax policies to attract and retain working age people. This includes attracting companies to Scotland, and retaining the ones already here, so that they provide employment opportunities. In addition to providing jobs which are sufficiently well paid, Scotland, if it is to attract more migrants has to be seen as a country where people want to bring up their family. The Scottish Government has the ability to implement suitable education and training policies to achieve this.

17. Political stability and security are factors that people seem to be increasingly taking into account when deciding whether to stay or migrate.

18. The relative ease with which people living in Scotland can move to other parts of the UK or, due to the common language and culture, to Ireland means that Scotland needs to monitor the policy changes being pursued in those other countries to ensure that its own policies are not putting it at a relative disadvantage.

Question 7: Should demographic trends (beyond just a share of population) be a factor in determining the funding settlement across the UK?

19. To the extent that it is desirable for funding settlements to be as stable as possible and not require frequent re-negotiation, taking future trends in the widest possible extent into account when designing such settlements would seem to be sensible. These future trends would include demographic trends. The funding settlement could include automatic balancing mechanisms which respond to changes in demographic variables. However, these variables do not tend to change dramatically from year to year and so one would not expect significant changes in funding requirements from one year to the next purely due to demographic changes. This could be like the approach taken to the review of the State Pension Age included within the Pensions Act 2014 whereby the Government Actuary has to provide a report every 5 years on “whether the rules about pensionable age mean that, on average, a person who reaches pensionable age within a specified period can be expected to spend a specified proportion of his or her adult life in retirement” (paragraph 27 (4)).

20. Any approach to funding settlements needs to be kept under review to ensure that it remains fit for purpose. A balance needs to be struck between simplicity and stability on one hand and fairness on the other.

Question 8: What impacts are Scotland’s demographic trends forecast to have on a) Scotland’s economy and b) the provision of services in Scotland?

21. Economists and demographers are divided about the impact of ageing populations on a country’s economy. A lot will depend on many other political and social choices made by the Scottish Government and the Scottish population. Slow changes in the population profile are likely to have less of an impact in the short and possibly medium term on the Scottish economy than the current reduction in the price of oil. This does not imply that nothing should be done in the short term but rather that any necessary change can be implemented in a gradual fashion.

22. If people are living longer and more healthily, then there should not be a dramatic impact on the demand for health services. However, if more of the extra years of life are spent in ill-health, e.g. with dementia, then there will be a greater demand for health and social care services. As household sizes continue to shrink then there may be fewer family members available to provide informal care of their elderly relatives and this will place an additional burden on the state.

23. Looking longer term, the low, below replacement-level, birth rate would, in the absence of significant levels of net inward immigration, lead to a reduction in the working age population and, as a result, to fewer teachers, nurses and doctors among other professionals. As the school age population would also be falling, the reduction in teaching staff may be manageable. However, the reduction in health care and social care professionals would be more critical given the increasing life expectancy and higher proportion of elderly people making up the population in Scotland.

24. Scotland's changing demographic profile will have an impact on the demand for financial services which is a key contributor to the Scottish economy. A greater proportion of people will be drawing down from their pension schemes which will affect the investment requirements for their funds.

25. There will also be an increased need to retrain older workers as they are likely to have to continue working for longer than people do at present.

26. Should you wish to discuss any of the points raised in further detail please contact please contact Matthew Levine, Policy Manager, at Matthew.Levine@actuaries.org.uk or on 0 20 7632 1489.

Yours sincerely,

Suzanne Vaughan
Chair, IFoA Scottish Board