

Sir Andrew Green K.C.M.G  
Weston House  
Deddington  
OX15 0TG  
Tel/Fax: 01869 337837  
e-mail; [afgreen@btconnect.com](mailto:afgreen@btconnect.com)

8 July 2014

Dear Sir Andrew,

### **The contribution of immigration to UK population growth**

1. Thank you for a very constructive meeting on 10 June.

2. I promised to follow up with some further detail on my suggestion that the ONS might consider writing a full paper on the impact of immigration on our population in the longer term. (I had in mind the excellent article on the accuracy of ONS population projections published in Population Trends 138).

3. As I explained, we believe that the population increase resulting from immigration is a major issue for government policy as well as a major concern for the public. At present, the population projections give the percentage of the projected population increase that is due to future immigration and also the percentage that will result from their descendants – at least in respect of the principal projection. This leaves the public with the impression that only 60 – 66% of our population increase is due to immigration. In fact, it is over 80% (see below) and, of course, 100% in the long term as long as fertility remains below the level of replacement. We believe, therefore, that there is scope for an important ONS research paper setting out what can be known about this relationship in the case of the UK.

4. It is, of course, possible to estimate the proportion of annual national population growth each calendar year during a specified period in the past (say 2001-10) attributable to international migration, by counting the net number of migrants to the UK in each calendar year in that period, and the births and deaths in that year in the UK to resident migrants irrespective of their year of arrival (i.e. not just 2001-2010). I attach, as Annex A, such a calculation by Professor Coleman; it gives an average over the period 2001-2010 of 86%. It is only a summary of a rather laborious set of calculations, which I do not attach. That estimate does not take into account the grandchildren or other recent descendants of those immigrants. Were that to be taken into consideration, the proportion of recent population growth broadly attributable to immigration

would be even higher, as a comparison of the ethnic group distributions in the 2001 and 2011 censuses would suggest.

5. I understand that an alternative method to assess the direct and indirect effects of international migration on population up to the present would be to perform a counterfactual projection from a specified date in the past up to the present, omitting international migration, sometimes known as a ‘Le Bras’ projection<sup>1</sup> - It requires alignment of the assumptions with known past demographic facts and adjustment (usually slight reduction) of the TFR to take into account the absence of immigrant populations, who normally have higher birth rates. Ideally a similar adjustment would be made in relation to death rates, were suitable data available. A start date would need to be chosen- perhaps 1991 which, of course, was also a census year. Any date earlier than 2001, however, would need estimates to replace the missing E&W data on natural increase according to birthplace for 1993-5 and for Northern Ireland for all years before 2001.

The counterfactual projection is then compared, for the years up to the present, with the actual observed population. The difference observed between them is the immigrant effect both from immigration and from the natural increase arising from that immigration (including generations after the second). An example for the UK is in ‘The Demography of Immigrant Populations: the case of the United Kingdom’ , Compton, P, Coleman, D.A. and J. Salt (2002), in Haug, W., Compton, P. and Courbage, Y. The demographic characteristics of immigrant populations. Strasburg, Council of Europe pp. 497 – 552. Population Studies no. 38, especially pages 539 - 547. This covers the period 1951 – 2001. I do not know if a more recent hypothetical projection of this kind has been made..

6. A more difficult but important question is what will be the proportion of population growth due to international migration from the base year of the latest national population projection (say 2012) to any specified year in the future, counting the contributions of migration not only from that base year but also including the future contributions from immigrants already resident at the base year.

7. Perhaps the best solution would be construct a ‘Le Bras’ projection from some specified point in the past to the present and simply continue it into

---

<sup>1</sup> Le Bras, H. (1991). Demographic Impact of post-war migration in selected OECD countries. Migration : the demographic impact. Paris, OECD: 15 - 26.

the future from the present on the basis of specified future assumptions of TFR, death rate and net migration. So far as we know, that has not yet been attempted.

8. Any paper on the subject would include the point that, in the long run given the TFR and mortality rates assumed in the ONS Principal Projection, all UK population increase would eventually be a result of immigration, as the assumed net reproduction is below 1. Demographic momentum alone, of course, without any migration, would add a few million up to the 2030s before the population began a slow decline. A graph of the projected population under the zero net migration assumption would illustrate the point.

9. In writing this letter I am conscious that the real expertise on such matters lies with the ONS. My concern is one of public understanding which, I believe, falls far short of what is desirable on a matter of such importance to our future.

With best wishes



/ Annex A

**United Kingdom. Contribution to population growth from migration, 2001 - 2010.**  
including the natural increase of the whole immigrant population irrespective of year of arrival.

| calendar year  | Natural increase (births - deaths)                  |   |   |          | published total UK natural increase (check) | Net migration   |                |                | Total Growth                 |  |             |
|----------------|---|---|---|----------|---|-----------------|----------------|----------------|------------------------------|--|-------------|
|                | births from mothers born UK minus deaths of UK born | births from mothers not born UK minus deaths of non-UK born | births from all mothers inc not stated minus deaths born all birthplaces. | total UK |   | total net 1000s | born UK        | born abroad    | UK population growth numbers | Population growth from migration numbers | percent     |
| 2001           | 6692  | 60167   | 66855   | 66859    | 171   | 171000          | -61000         | 232000         | 237855                       | 231167                                   | 97.2        |
| 2002           | -4130   | 66653   | 62561   | 62523    | 153   | 153000          | -98000         | 251000         | 215561                       | 219653                                   | 101.9       |
| 2003           | 7751  | 76596   | 84361   | 84347    | 148   | 148000          | -99000         | 247000         | 232361                       | 224596                                   | 96.7        |
| 2004           | 45371   | 87522   | 132914  | 132893   | 245   | 245000          | -116000        | 361000         | 377914                       | 332522                                   | 88.0        |
| 2005           | 42955   | 96943   | 139886  | 139898   | 206   | 206000          | -93000         | 299000         | 345886                       | 302943                                   | 87.6        |
| 2006           | 65333   | 111010  | 176339  | 176343   | 198   | 198000          | -134000        | 332000         | 374339                       | 309010                                   | 82.5        |
| 2007           | 72413   | 125157  | 197558  | 197570   | 233   | 233000          | -97000         | 330000         | 430558                       | 358157                                   | 83.2        |
| 2008           | 79621   | 135756  | 214686  | 215377   | 163   | 163000          | -88000         | 251000         | 377686                       | 298756                                   | 79.1        |
| 2009           | 90034   | 140574  | 230587  | 230608   | 198   | 198000          | -48000         | 246000         | 428587                       | 338574                                   | 79.0        |
| 2010           | 98462   | 147169  | 245605  | 245631   | 252   | 252000          | -42000         | 294000         | 497605                       | 399169                                   | 80.2        |
| <b>2001-10</b> | <b>504502</b>                                       | <b>1047547</b>  | <b>1551352</b>  |          |   | <b>1967000</b>  | <b>-876000</b> | <b>2843000</b> | <b>3518352</b>               | <b>3014547</b>                           | <b>85.7</b> |

Note:

This calculation combines data from England and Wales, Scotland and Northern Ireland. The natural increase due to immigration is determined by the number of births to immigrant mothers and the number of deaths to persons born abroad, irrespective of the year that those persons entered the UK. That is, it is not just based upon immigrants arriving in 2001-10. This calculation takes no account of the children of immigrant fathers and UK-born mothers. The check column is the total published UK natural increase. It cannot be reconciled exactly with the sum of nat. incr. E&W + Scotland + NI.

Coleman, D., P. Compton, et al. (2003). Demography of Migrant Populations: the case of the United Kingdom. The Demographic Characteristics of Immigrant Populations. Population Studies, No. 38. W. Haug, P. Compton and Y. Courbage. Strasbourg, Council of Europe: 497 - 552.