

Extended abstract

Post-war immigration to Western European countries has created substantial foreign-origin or ethnic minority populations. In some groups, residential segregation and lack of integration into the social and economic system has persisted into the second generation. Projections, summarised elsewhere[1], have been made of the these foreign-origin populations in a number of European countries. This paper presents projections of ethnic minority populations of the United Kingdom to mid-century and beyond. The UK is unusual in Europe in employing self-assigned 'ethnic' criteria to denote the populations of foreign origin in its censuses. These attributions are potentially permanent across generations, unlike the shorter-term assumptions used in the definition of the 'foreign-origin' populations employed in the Continental European projections. In Continental practice, 'foreign-origin' refers explicitly only to those born abroad of foreign parents, or those born in the receiving country with one or two foreign parents. The third generation and subsequent generations are considered to be assimilated to the national population and are statistically invisible. As the United Kingdom lacks a system of population registration, projection of ethnic groups is rather complicated, as will be noted below. The main sources of ethnic diversification in United Kingdom since the 1950s have been first, immigration from the New Commonwealth, then from other countries outside Europe, and more recently from the new EU member states. The Irish population in the United Kingdom is of much longer standing and is now diminishing in size.

Aim

Building on previous work up to 2001[2], this project will estimate the level and trend of fertility, mortality and migration by ethnic group up to 2006 and use those data on level and trend to make projections of the future population size and age-structure of the ethnic populations of the United Kingdom, on various assumptions.

Methods and data used

In the absence of vital statistics on ethnic groups, indirect methods must be used to estimate vital rates. The 'own child' method applied to data from surveys such as the Labour Force Survey and from the 2001 census data are used to derive fertility estimates for ethnic groups, distinguishing between the UK-born and foreign-born population. The 'own-child' method of fertility estimation is conceptually simple but complex in practice, relating co-resident children of various ages up to 15 years of age to their putative mothers so that children can be assigned to birth-cohort and to the age of mother. The numbers of births related to mothers at risk are cumulated over several successive surveys, each of which will provide data relating to a partially overlapping set of calendar years. In this way a very large sample size can be built up. Mothers and children are matched [3]and the matched sets cumulated to produce ASFR and TFR. This procedure has already been applied to data from 1961 to 2001 on the LFS data in previous work and is now being extended up to 2006, and adjusted to the previous period. The own child method is to be further applied to the 2001 census data, including separately for the UK and non-UK born. These estimates will be compared with data derived from other indirect methods including those used by the Office for National Statistics [4] in the short-range updating of ethnic population estimates.

Earlier efforts to derive ethnic life-tables have been inconclusive and unusable because of small numbers of vital events at younger ages used. In the absence of

reliable estimates, the age-specific mortality rates of the general population, from GAD, will initially be applied to all groups. But the ONS Longitudinal Study and other sources will be used where possible to produce more refined estimates.

Migration is the most troublesome of the major components to estimate according to ethnic origin. The census, ONS migration data and surveys will be used to produce estimates. In the UK, migration data are routinely available only for broad categories of birthplace, nationality and country of origin / destination, for broad categories of age, economic status and purpose of journey, and on a fairly small sample size. Ethnic origin of migrants is imputed through the one-year migration question in the LFS and the census, linked with their questions on ethnic origin and birthplace and checked for compatibility with Total International Migration Statistics by birthplace, citizenship and country of origin, using approaches developed by ONS among others.

Results

The main variables produced are age-specific vital rates, cumulative fertility and migration profiles according to the standard major categories of ethnic origin, including 'White non-British', further sub-divided according to birthplace (UK / non-UK). These are the basis for population projections made on the cohort-component method to mid-century and beyond of the main ethnic minority populations, including mixed populations, based on year 2006. Mixed populations are projected using the contributions to their numbers from mixed unions, mostly between whites and other groups. The transmission of ethnic identity over generations is based on transitions calculated from commissioned census tables, of ethnic origin of offspring compared with those of mothers. That accommodates the effects of inter-ethnic marriage, and preferences for the identification of children by parents, and is checked against inter-ethnic union estimates.

Preliminary results show a general decline in fertility rates over the time-period with considerable diversity across the ethnic groups. Earlier projections based on 2001 data and assumptions indicate that the UK ethnic minority population would increase to about 20 million by mid-century. This, however, is highly dependent upon future levels of migration, which is by far the most important variable determining the outcome. Assumptions concerning the level of migration, not those on the pace of convergence of fertility, emerge as the dominant determinant of change in the proportion of the population according to origin. Without migration, only relatively modest further growth of the ethnic minority populations would be expected. And although levels of inter-ethnic union vary greatly between groups at present, in the long run it is likely that the growth of populations of increasingly complex mixed origin will make the definition and elaboration of ethnic groups as currently understood meaningless for a growing proportion of the future population. Possible implications of projected changes are discussed.

1. Coleman, D.A., *Immigration and Ethnic Change in Low-Fertility Countries. A third demographic transition*. Population and Development Review, 2006. **32**(3): p. 401 - 446.

2. Coleman, D.A. and M.D. Smith, *The projection of ethnic minority populations: problems and data needs. Background paper no. 2, part 4 Mortality*. 2005, Oxford: Oxford Centre for Population Studies. 25.
3. Cho, L.-J., R.D. Retherford, and M.K. Choe, *The Own-Children Method of Fertility Estimation*. 1986, Honolulu: University of Hawaii Press for the Population Institute, East-West Center.
4. Large, P. and R. Ghosh, *Estimates of the population by ethnic group for areas within England and Wales*. *Population Trends*, 2006(124): p. 8 - 17.