Method of projection

Legal marital status

The legal marital status projections are produced using a component methodology that is one based on assumptions of underlying marriage, remarriage and divorce rates. They have been produced using the multi-dimensional dynamic projection model LIPRO developed by the Netherlands Interdisciplinary Demographic Institute (NIDI). Further details of this package are available from the NIDI website at http://www.nidi.knaw.nl/en/research/projects/270101/.

The model requires assumptions to be made for all of the possible transitions between marital statuses. In addition, assumptions have to be made about the marital status distribution for both deaths and net migration.

With LIPRO, it is convenient to specify these assumptions as a function of an initial set of rates. For these projections, an initial set of marriage, divorce and (marital status specific) mortality rates by single year of age and sex has been derived from the 2006-07 components of change data used by ONS to update the population estimates by marital status. These initial rates were smoothed to remove any obvious peculiarities in age distributions.

The projections are adjusted within the LIPRO model to satisfy a number of consistency constraints. These include internal “two-sex” constraints (for example, that the number of men divorcing each year must equal the number of women divorcing) and the external constraint that the results of the legal marital status projection are fully consistent with the results of the 2006-based national (age and sex) principal projection for England & Wales. For more information on consistency constraints see here.

Cohabitation

As described above, the projections of legal marital status are produced by a component methodology that is one based on assumptions of underlying marriage and divorce rates. Ideally, projections of de facto marital status would be produced by including transitions into and out of cohabitation within such a model. However, whereas detailed historical data on transitions between legal marital status categories are readily available from registration data, data on cohabitation formation and dissolution is very limited. Theoretically, estimates could be made from sample surveys; however, in practice, the data is not of sufficient quality for this purpose. In particular, sample sizes are far too small to produce reliable data for individual ages.
As the model used for the legal marital status projections is a dynamic model, assumptions made about cohabitation transitions would affect the results for legal marital status. It would therefore be likely that the inclusion of necessarily speculative data on cohabitation would actually reduce the quality of the legal marital status projections.

Instead, assumptions have been made about the proportions cohabiting in each age/sex/legal marital status group and these have been applied to the results of the legal marital status projections.