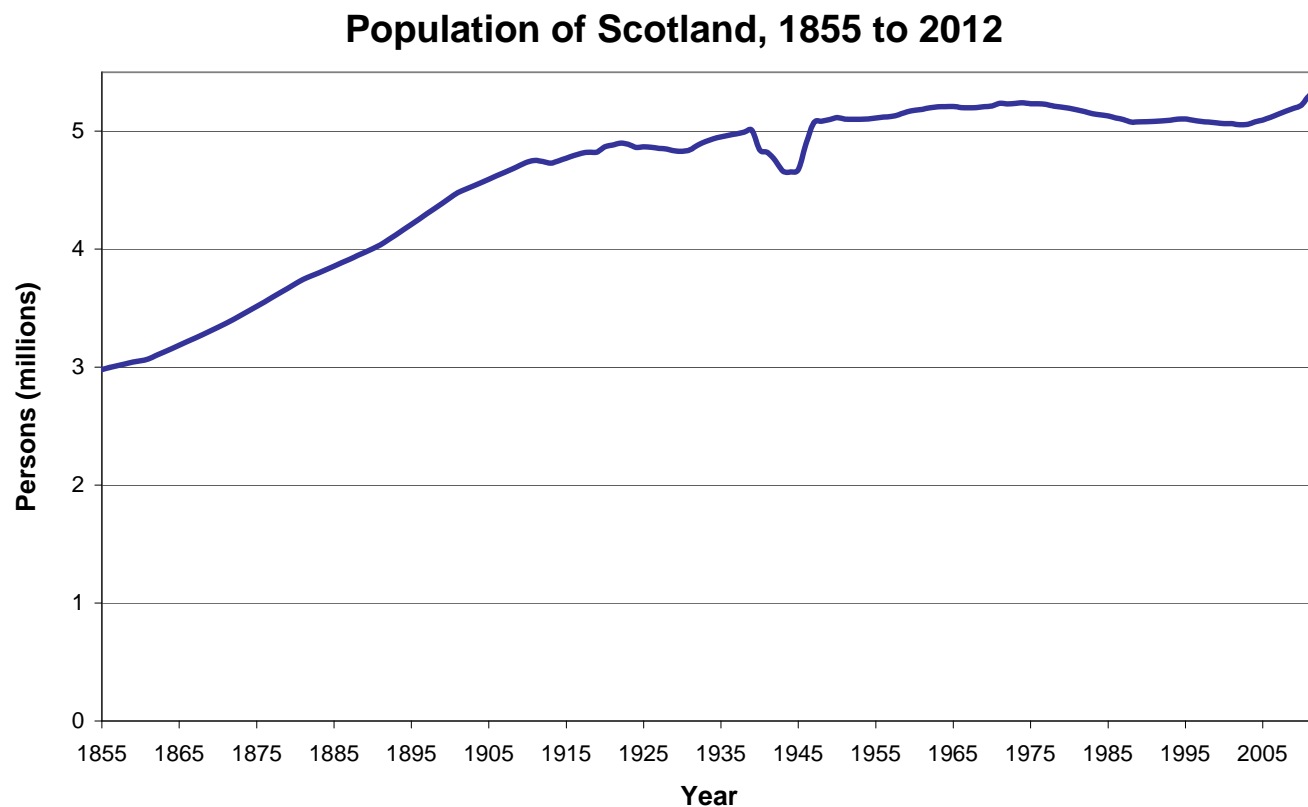


# Population Estimates Scotland & Estimating Migration

Population and Migration Statistics Branch

## Overview

The National Records of Scotland (NRS), produces detailed annual estimates of the resident population of Scotland as at 30 June each year.



The most authoritative population estimates come from the census.

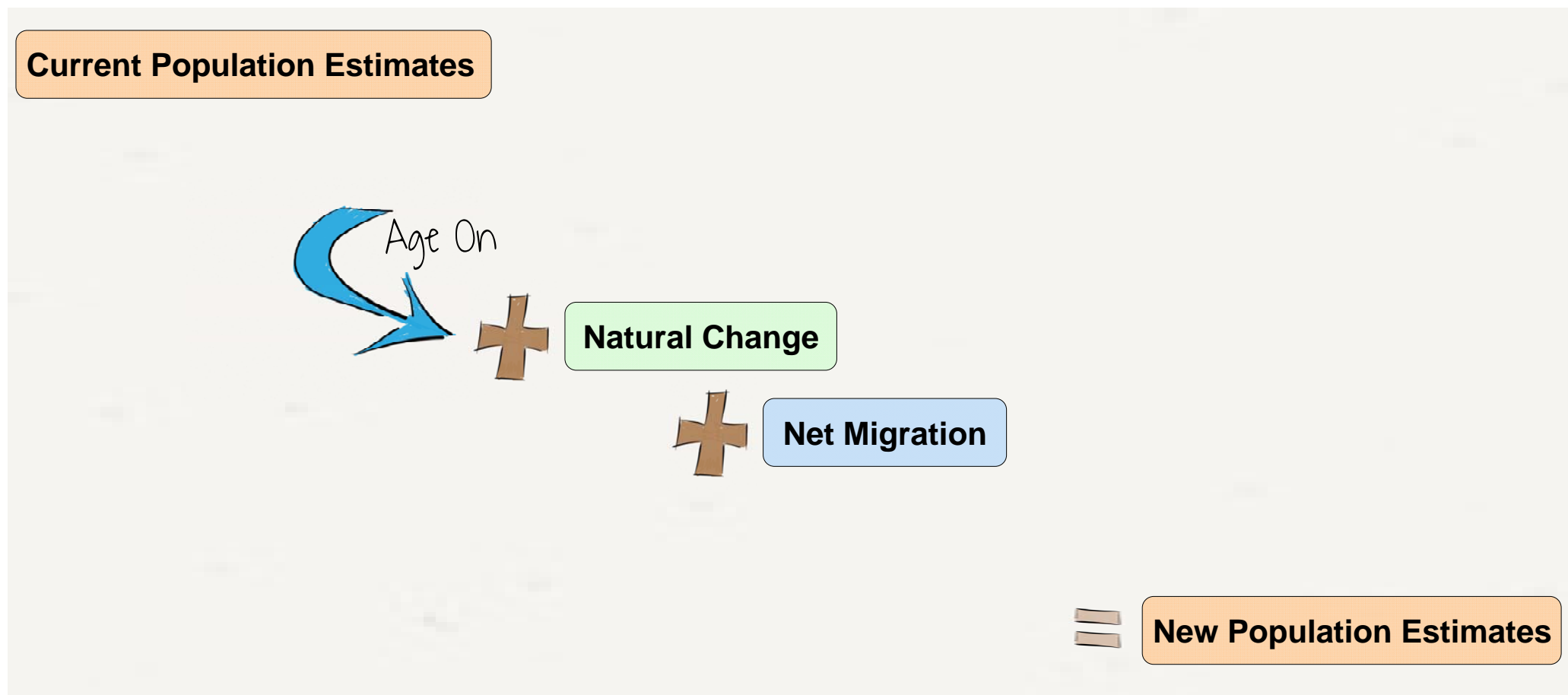
Population estimates from the census are updated each year with elements of population change in the previous 12 months to produce the annual mid-year estimates.

The population of Scotland was 5,313,600 at mid-year 2012.

This number consisted of 2,577,140 males and 2,736,460 females.

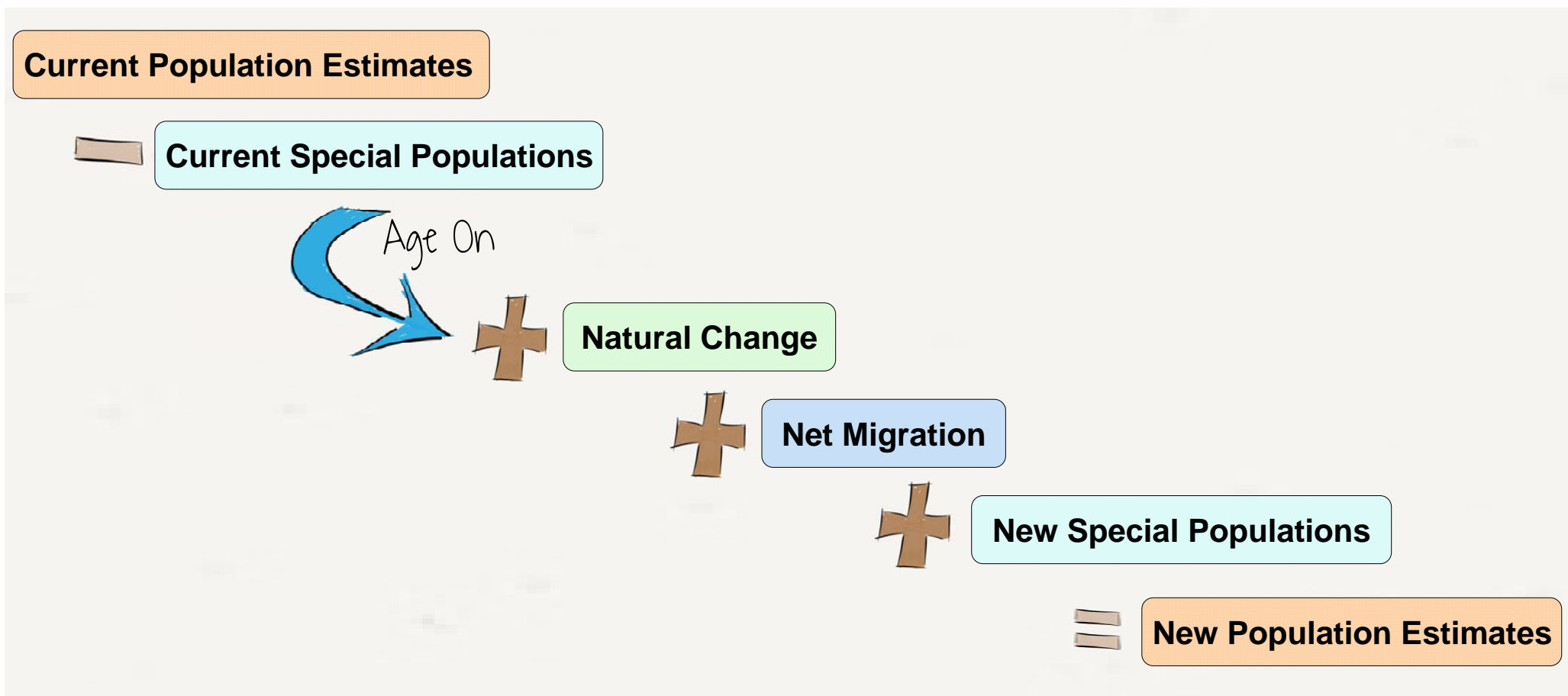
## The Cohort Component Method

Population estimates for Scotland are made using the cohort component method.



## The Method in Scotland

Adjustments are made for some special population groups e.g. members of the armed forces and prisoners

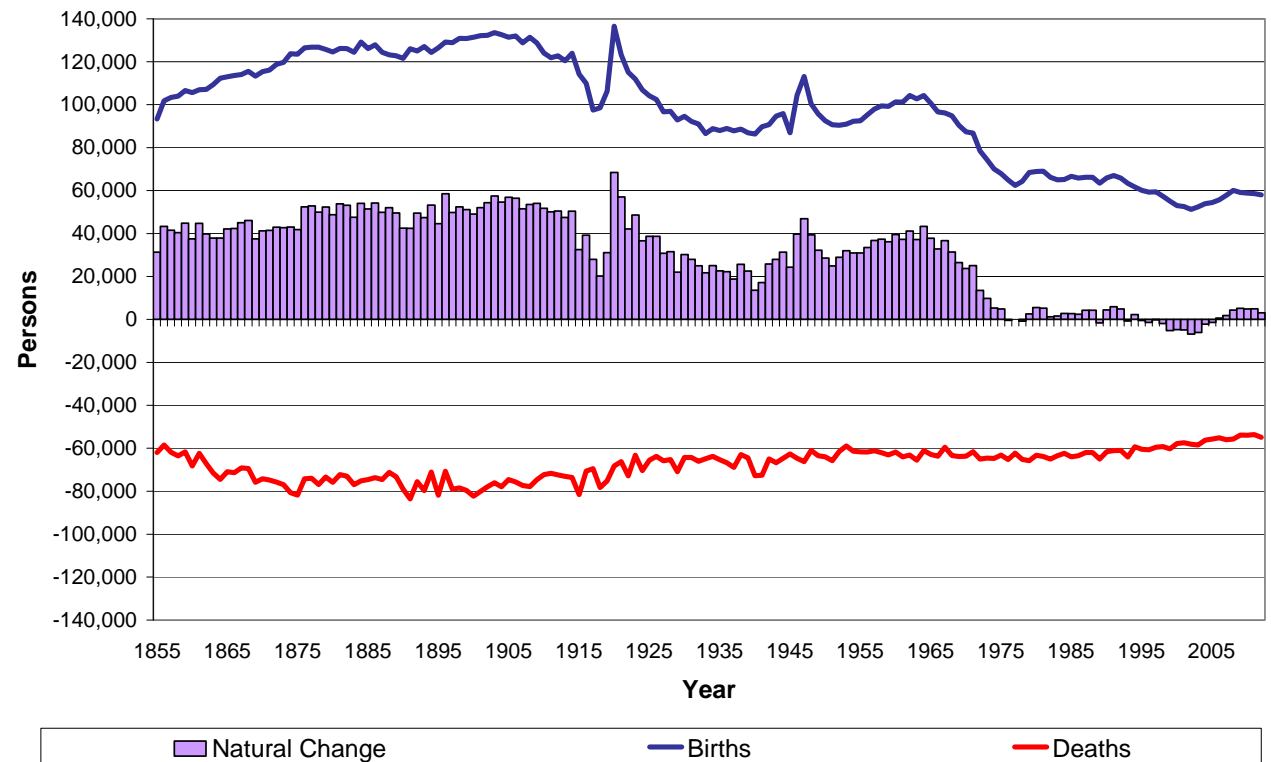


## Natural Change

Data on births and deaths is obtained from the compulsory civil registration system.

Births are added to the population at age zero and are allocated to the area of usual residence of the mother.

Deaths are subtracted from the mid-year population by age and sex at the area of usual residence of the deceased.



## Migration

Migration is the most difficult component of population change to estimate.

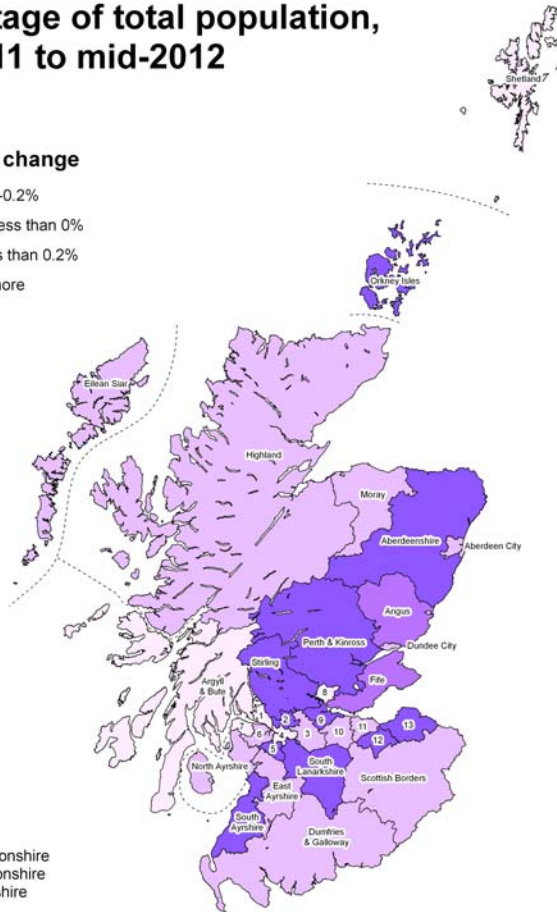
There is no comprehensive system which registers migration in the UK, either moves to or from the rest of the world, or moves within the UK.

Migration estimates are derived from three key sources of data:

- The National Health Service Central Register (NHSCR),
- The Community Health Index (CHI), and
- The International Passenger Survey (IPS).

**Within Scotland migration as a percentage of total population, mid-2011 to mid-2012**

**Percentage change**



1. West Dunbartonshire
2. East Dunbartonshire
3. North Lanarkshire
4. Glasgow City
5. East Renfrewshire
6. Renfrewshire
7. Inverclyde
8. Clackmannanshire
9. Falkirk
10. West Lothian
11. City of Edinburgh
12. Midlothian
13. East Lothian



## Internal Migration

The NHS Central Register (NHSCR) system records the movements of patients between NHS Board areas in the UK.

The Community Health Index (CHI) holds records of people registered with an NHS doctor in Scotland.

Estimates from the CHI are controlled to ensure that they are consistent with the NHSCR data.



Each time a patient transfers to a new NHS doctor, the NHS Central Register (NHSCR) is notified and the patient is considered to have made a migrant move.

Counts of these re-registrations are used as a proxy indicator for moves within the UK.

## International Migration

National Records of Scotland currently use the Long-Term International Migration (LTIM) estimates produced by Office for National Statistics for the national estimates of international migration to and from Scotland.

The International Passenger Survey (IPS) provides an estimate of international migrants into the United Kingdom, the allocation of these migrants to Scotland is based on the Labour Force Survey.

The outflow of international migrants from Scotland is based directly on the IPS data.

International migration flows between Scotland and overseas are allocated to each NHS Board area and given an assumed age and sex distribution using proportions recorded on the NHS Central Register (NHSCR).

For international inflows the recorded moves from overseas to Scottish NHS Boards on the NHSCR are used to estimate the proportion of migrants entering each area.

NHSCR records hold limited data on international outflows from NHS Boards to overseas.

International outflows are allocated to NHS Board areas based on:

- International inflows from two years prior to the reference date;
- Outflows to the rest of the UK; and
- The population share of each NHS Board.

The international inflows stand as a proxy for non-British out-migrants.

The moves to the rest of the UK and population share stand as a proxy for British out-migrants.

Age and sex distributions of international migrants are obtained from the NHS Central Register (NHSCR) in a similar way.

For in-migrants the age-sex distribution on the NHSCR is used.

For out-migrants the age-sex distribution is based on:

- Out-migrants to the rest of the UK leaving from that NHS Board,
- In-migrants from overseas two years prior to the reference date, aged on by two years.

NHS Central Register (NHSCR) flows undercount the number of migratory moves.

Compared with Long-Term International Migration estimates by sex there are fewer men in both in-migrant and out-migrant groups on the NHSCR.

A sex ratio adjustment increases the number of male migrants at young adult ages where there is a large majority of women seen in the NHSCR data.

## Further work

Investigating other sources of data such as:

- Higher Education Statistics Agency (HESA) data
- Council Tax data

Further work will use 2011 Census data on previous address and country of birth to evaluate our migration data and assumptions.

The Beyond 2011 Programme is also exploring the future provision of population statistics in Scotland. As part of this Programme National Records of Scotland are investigating a range of solutions, to produce population statistics in future.

More detailed information can be found in the [Methodology Guide](#) within the Mid Year Population Estimates section of the National Records of Scotland (NRS) website

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