

Standard Documentation Metainformation

(Definitions, Explanations, Methods, Quality)

on

Regional Population Projections 2017-2036

This documentation applies to the reporting period:
2017

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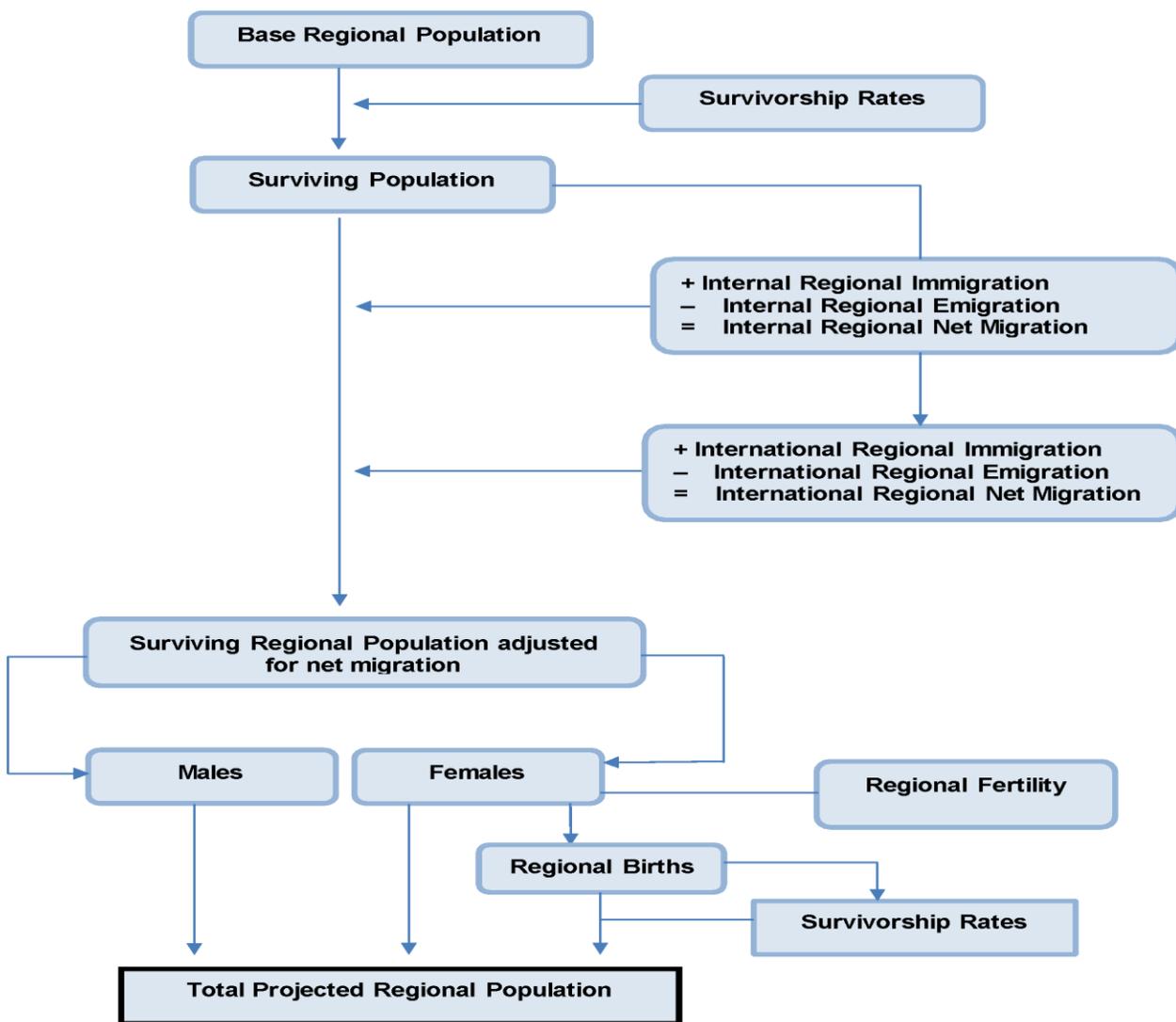
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1 Overview

The CSO produces regional population projections after every Census, by projecting the components of population change forward from the Census base population (see projections model below). Projections are provided under varying scenarios governing fertility, mortality and migration. On this occasion six regional projection scenarios were produced (for further detail see section 3.5).

Diagram of Regional Population Projections Model



2 General Information

2.1 Statistical Category

- Census data – The ‘usual residence’ concept is used to establish the ‘base population’ i.e. all persons usually resident and present in the State on census night *plus* absent persons who are usually resident in Ireland but are temporarily away from home *and outside the State* on census night.
- Survey data – The LFS provides current and historic regional migration flows to inform the future projections.
- Administrative data – The Vital Statistics unit provides current and historic regional births and deaths data which it receives from the General Register Office (GRO) to inform the projections.

2.1 Area of Activity

Population estimates and projections

2.2 Organisational Unit Responsible, Persons to Contact

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2.3 Objectives and Purpose; History

Regional population projections are published to provide users with demographic estimates for the purposes of planning, both in the public and private sector.

2.4 Periodicity

Regional population projections are published every five years. The publication is currently published around 30 months after the Census of Population is conducted (usually April of years ending in 1 or 6). This allows for the incorporation of Census revisions into the ongoing inter-censal population estimates that provide the base population for the projections.

2.5 Client

The projections meet a wide range of national requirements. The Irish Government and various public sector bodies such as the HSE etc. are the primary clients and the data is used as an input for a wide range of public policy and planning activities.

2.6 Users

2.7 Legal basis

There is no legal basis to the projections but there is also no actual data collected.

3 Statistical Concepts, Methods

3.1 Subject of the Statistics

The estimation of the possible future regional population

3.2 Units of Observation/Collection Units/Units of Presentation

There is no data collected. The summary data in the publication is presented at person level in thousands (rounded to one decimal place). Unrounded data at person level and single year of age is available on the CSO Statbank service:

3.3 Data Sources

- The Census ‘usual residence’ concept is used to establish the ‘base population’ i.e. all persons usually resident and present in the State on census night *plus* absent persons who are usually resident in Ireland but are temporarily away from home *and outside the State* on census night.
- Survey data – The LFS provides current and historic regional migration flows to inform the

future projections.

- Administrative data – The Vital Statistics unit provides current and historic regional births and deaths data which it receives from the General Register Office (GRO) to inform the projections.
- The regional population projections are required to be consistent with the State population and labour force projections. The State projections (link below) are typically published in advance of the regional projections.

<https://www.cso.ie/en/statistics/population/populationandlabourforceprojections/>

3.4 Reporting Unit/Respondents

Data contained in the published report is in thousands (rounded to one decimal place).

Individual unit level data for each scenario is provided on the CSO Statbank service:

[Population Projections Statbank link](#)

3.5 Type of Survey/Process

The Census (2016) is used to establish the base population. The process used to produce the estimates is called the demographic component method which projects the 2016 usually resident (base) population forward under the chosen assumptions governing births, deaths and net migration.

After the usually resident based population is aged a year, the appropriate survivorship ratios are applied, accounting for mortality and giving the surviving population. The gross inward and outward migration rates which these groups are assumed to experience in the year are applied to the population. The assumed fertility rates are applied to the female population aged 15 - 49 to give the number of births in the year (adjusted downward for infant mortality) to give the total projected population for that year. This population then becomes the base population for the following year and the process continues from 2017 to 2036.

The assumed outward and inward and internal migration flows are broken down by age and sex on the basis of the agreed distributions. This yields the surviving population adjusted for net migration but without an estimate of the number of children born in the year. The age specific fertility rates for the projection year are applied to the projected female population to estimate the projected births. These

births are then divided into males and females on the basis of the ratios experienced for recent years. The appropriate survivorship ratios are then applied to male and female births before these are added in to yield the total projected population.

This population then becomes the base population for the following year and the process continues from 2017 to 2036.

The regional projections used one fertility scenario (F2), one mortality rate and three migration rates (M1, M2 and M3), giving six population scenarios.

For the purpose of the regional projections the fertility, migration and mortality scenarios have been combined with two internal migration assumptions. These two internal migration assumptions reflect contrasting internal migration patterns, namely ‘Dublin inflow’ and ‘Dublin outflow’ internal migration.

The combination of these assumptions result in the following six variant projections for the regional data:

- **M1F2** for the ‘Dublin Outflow’ internal migration scenario
- **M1F2** for the ‘Dublin Inflow’ internal migration scenario
- **M2F2** for the ‘Dublin Outflow’ internal migration scenario
- **M2F2** for the ‘Dublin Inflow’ internal migration scenario
- **M3F2** for the ‘Dublin Outflow’ internal migration scenario
- **M3F2** for the ‘Dublin Inflow’ internal migration scenario

The assumptions are summarised in the table below and detailed in the publication.

Summary of Assumptions

F2 Fertility: Total fertility rate to decrease from 1.8 in 2016 to 1.6 by 2031 and to remain

constant thereafter to 2036

Mortality: Mortality rates for males and females are assumed to improve at 2.5% and 2.0% per annum respectively to 2036 resulting in gains in life expectancy from:

- 79.3 years in 2015 to 83.6 years in 2036 for males
- 83.3 years in 2015 to 86.5 years in 2036 for females

Internal Migration

Dublin Outflow: 2016 internal migration flows of -4,400 per annum from Dublin to other regions reverting to the 2006 pattern of -10,200 outflows from Dublin annually by 2021 and remaining constant thereafter

Dublin Inflow: 2016 internal migration flows of -4,400 per annum from Dublin reverting to the traditional pattern of +2,100 inflows from other regions to Dublin per annum by 2021 and remaining constant thereafter.

International Migration

M1 International Migration: High net migration of +30,000 per annum to 2036

M2 International Migration: Medium net migration of +20,000 per annum to 2036. This assumption reflects average net migration over the 20 year period 1997-2016

M3 International Migration: Low net migration of +10,000 per annum to 2036

These assumptions were agreed by an Expert Group which met during the period November 2018 to March 2019. The rationale underpinning the assumptions agreed by the Expert Group are outlined in the introduction chapter of the publication.

<https://www.cso.ie/en/releasesandpublications/ep/p-rpp/regionalpopulationprojections2017-2036/>

3.6 Characteristics of the Sample/Process

3.6.1 Population and Sampling Frame

The Census of Population data (2016) is used to establish the base population. The population is incremented forward each year, using the process described in 3.5.

3.6.2 Sampling Design

Not relevant.

3.7 Survey Technique/Data Transfer

Not relevant.

3.8 Questionnaire (including explanations)

Not relevant.

3.9 Participation in the Survey

Not relevant.

3.10 Characteristics of the Survey/Process and its Results

3.11 Classifications used

The regional population are classified by sex and single year of age.

3.12 Regional Breakdown of Results

The population are categorised according to the NUTS 3 regional classification

<https://www.cso.ie/en/releasesandpublications/ep/p-rpp/regionalpopulationprojections2017-2036/appendix2conceptsanddefinitions/>

4 Production of the Statistics, Data Processing, Quality Assurance

4.1 Data Capture

Not Relevant.

4.2 Coding

Not Relevant.

4.3 Data Editing

Not Relevant.

4.4 Imputation (for Non-Response or Incomplete Data Sets)

Not Relevant.

4.5 Grossing and Weighting

Not Relevant.

4.6 Computation of Outputs, Estimation Methods Used

Not Relevant.

4.7 Other Quality Assurance Techniques Used

The CSO are assisted with the projections work by an Expert Group consisting of representatives of government departments, as well as universities and other relevant bodies.

5 Quality

5.1 Relevance

The CSO regional population projections are the primary source of such estimates and are critical with regards to providing evidence based data for future planning and policy formulation. External users who make significant use of the population estimates data include, but are not limited to:

The ESRI, The Department of Finance, The Department of Health, The Department of Children and Youth Affairs, The Department of Environment and Natural Resources, The Oireachtas, Special Interest Groups (particularly those with an interest in migration) and National media organisations.

5.2 Accuracy and Reliability

5.2.1. Sampling Effect & Representivity

The base population is sourced from the national Census of Population and therefore is fully representative and highly accurate. Precision estimates are not calculated as part of the process.

5.2.2 Non-Sampling Effects

Not relevant

5.2.2.1 Quality of the Data Sources used (other than survey register)

The Census provides the base population. Future fertility, mortality and migration flows are difficult to estimate but the Expert Group use their expertise to provide the best estimates possible.

5.2.2.2 Register Coverage

Not relevant

5.2.2.3 Non-response (Unit and Item)

Not relevant.

5.2.2.4 Measurement Errors

Measurement error is not formally measured for this release. However new regional projections are completed following the publication of the Census of Population (every 5 years).

5.2.2.5 Processing Errors

a. Data capture errors

Not relevant

b. Data editing

Not relevant

5.2.2.6 Model-related Effects

The components method model, with the different scenarios, is the entire basis for the projections. Therefore, altering the scenarios fundamentally alters the outcome.

5.3 Timeliness and Punctuality

5.3.1 Provisional Results

No provisional outputs are published.

5.3.2 Final Results

Final results covering the projection period 2017-2036 were published on June 25th 2019

5.4 Coherence

New regional population projections are completed following the publication of the Census of Population (every 5 years).

5.5 Comparability

Not relevant

5.6 Accessibility and Clarity

5.6.1 Assistance to Users, Special Analyses

The regional population projections covering the period 2017-2036 are published on the CSO website. The publication contains a detailed chapter on each regional projection scenario. Information describing the methodology is contained in the introduction and the background notes of the publication. The publication contains summary data.

More granular data at single year of age and sex for each scenario is provided via the CSO Statbank service: [Population Projections Statbank link](#)

A press release highlighting key aspects of the publication is also provided on release day:

<https://www.cso.ie/en/csolatestnews/pressreleases/2019pressreleases/pressstatementregionalpopulationprojections2017-2036/>

5.6.2 Revisions

The projections are not revised but new projections are produced following each Census.

5.6.3 Publications

5.6.3.1 Releases, Regular Publications

The projections are published on the CSO website every five years. The most recent Publication covering the period 2017-2036 was published on June 25th 2019.

<https://www.cso.ie/en/releasesandpublications/ep/p-rpp/regionalpopulationprojections2017-2036/>

5.6.3.2 Internet

The projections are published on the CSO website. See link below to the most recent publication.

<https://www.cso.ie/en/releasesandpublications/ep/p-rpp/regionalpopulationprojections2017-2036/>

More granular data at single year of age and sex for each scenario is provided via the CSO Statbank service: [Population Projections Statbank link](#)

5.6.4 Confidentiality

The data relates to future population and labour force estimates. Additionally, single year of age is top-coded to 99 plus. All data is fully anonymised.

6 Additional documentation and publications

The main Population homepage containing both current and historic demographic releases can be accessed at the following link:

<http://www.cso.ie/en/statistics/population/>