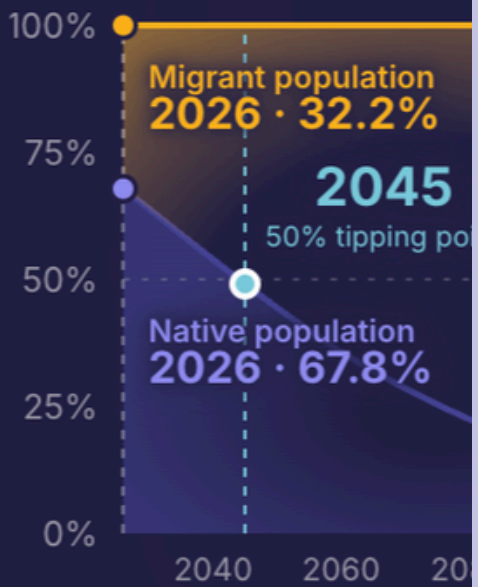


From Majority to Minority

 Germany

Projected population share



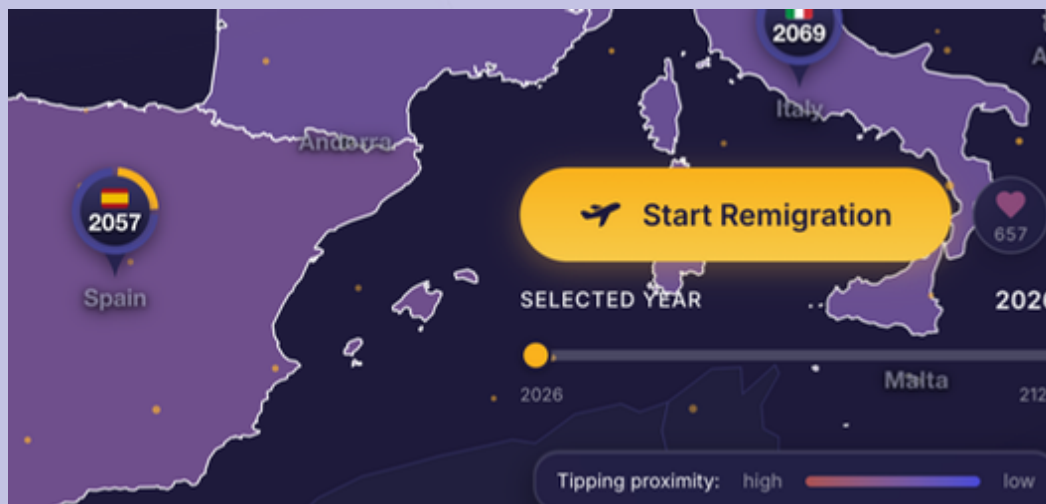
Spain

[View country methodology →](#)

Native–Migrant Split

 Spain · 2026

Modelled population



METHODOLOGY OF THE IFR DEMOGRAPHY DASHBOARD

The IFR Demography Dashboard is a project of the Institute for Remigration

CONTENT

1 Purpose and scope	5
1.1 Research question	5
1.2 Dashboard outputs	5
1.3 Projection, conditional scenario and forecast	5
1.4 Analytical scope and exclusions	6
2 Institutional perspective and terminology	6
2.1 Political significance of demographic majority change	6
2.2 Population replacement and majority change	7
3 Population groups and national operationalisations	8
3.1 Binary model structure	8
3.2 Native and migrant populations	8
3.3 Country of birth, parental origin, citizenship and ethnicity	8
3.4 First, second and later generations	9
3.5 Principle of the broadest defensible available definition	9
3.6 One-parent and two-parent definitions	9
3.7 Maternal assignment, mixed families and status continuity	10
4 Data collection and source methodology	11
4.1 Source hierarchy	11
4.2 Reference years and the 2015–2024 migration window	11
4.3 Published, derived and assumed values	12
4.4 Age and sex harmonisation	12
4.5 Data gaps, transparency and demands for improved official statistics	12
5 Cohort-component projection	13
5.1 State vector and annual time step	13
5.2 Leslie-matrix structure	13
5.3 Cohort ageing and terminal age	14
5.4 Annual calculation order	14
6 Fertility and newborn assignment	14
6.1 Total and age-specific fertility inputs	14
6.2 Construction of fertility coefficients	15
6.3 Assignment of newborns to model groups	15
6.4 Country-specific fertility limitations	16
7 Morality	16
7.1 Age- and sex-specific mortality inputs	16
7.2 Common versus group-specific mortality assumptions	17
7.3 Survival and ageing coefficients	17

CONTENT

8 Baseline migration regime	17
8.1 Gross immigration and emigration inputs	17
8.2 Ten-year averaging and age-sex allocation	18
8.3 Baseline continuation rule	18
8.4 Interpretation and limitations of constant-flow continuation	18
9 The demographic tipping point	19
9.1 Primary 50% majority crossing	19
9.2 Annual reporting precision	19
9.3 What the threshold does and does not establish	19
10 Remigration scenario	20
10.1 Purpose and conditional status	20
10.2 Relationship to the baseline model	20
10.3 Reduced immigration assumption	20
10.4 Regular emigration assumption	20
10.5 Rationale for different emigration rules	21
10.6 Additional remigration flow	22
10.7 Reverse tipping point and the 5% reference threshold	22
11 Comparability, uncertainty and limitations	22
11.1 Heterogeneous national definitions	22
11.2 Later-generation undercoverage	23
11.3 Fertility and mixed-family assumptions	23
11.4 Constant-parameter projection	23
11.5 Long horizons and conditional interpretation	23
12 Focused literature context	24
12.1 The demographic tipping point	24
12.2 Other forms of tipping points	24
12.3 Demographic change and its political significance	25
12.4 Demographic normalisation and harmonisation	26
13 Country methodology appendix	27
13.1 Austria	27
13.2 Belgium	27
13.3 Denmark	29
13.4 Finland	31
13.5 France	33
13.6 Germany	35
13.7 Ireland	37
13.8 Italy	40
13.9 Netherlands	42
13.10 Norway	44
13.11 Portugal	45

CONTENT

13.12 Spain	49
13.13 Sweden	51
13.14 Switzerland	53
13.15 United Kingdom	55

References

Scientific and methodological literature	57
United Nations sources	57
Institutional and programmatic sources	58
Historical statistical sources cited in Chapter 12	58

1. Purpose and scope

1.1 Research question

The IFR Demography Dashboard examines population change in 14 modelled countries; France is shown separately through external OJD scenarios. It distinguishes between an autochthonous or native population and a migrant-background population, referred to below as the migrant population. Depending on the national definition, the latter includes immigrants and specified groups of their descendants. Both populations are structured by sex and single year of age.

Its central question is:

Under the selected country definition and the stated assumptions about fertility, mortality, migration and group assignment, in which model year is the migrant-background group projected to exceed 50% of the total population?

The resulting year is a conditional projection, not an unconditional forecast. It shows the demographic trajectory produced by the stated assumptions if those assumptions continue to apply.

1.2 Dashboard outputs

The dashboard presents two principal outputs. The baseline projection identifies the demographic tipping point: the first model year in which the migrant population exceeds 50% of the total population. The remigration scenario identifies the reverse tipping point: the first model year in which the migrant share falls below 5% under a defined combination of reduced immigration, regular emigration and additional remigration.

Both outputs are conditional model results, but they answer different questions. The baseline shows the long-term implications of continuing demographic conditions, while the remigration scenario examines the demographic effects of a defined alternative migration path. The 5% threshold serves as a theoretical endpoint and a possible orientation point within that scenario; it is not presented as a universal scientific threshold.

The dashboard aims to make long-term demographic developments visible, facilitate comparisons of definitions and assumptions across countries, and strengthen the case for transparent, reproducible and more complete official demographic statistics.

1.3 Projection, conditional scenario and forecast

A projection answers a structured “what-if” question. It combines a starting population with specified fertility, mortality and migration assumptions. A scenario changes one or more of those assumptions in order to examine a conditional alternative. A forecast, by contrast, ordinarily expresses an assessment of what is expected to occur, often with probabilities or variants intended to represent uncertainty.

The dashboard publishes projections and scenarios, not probabilistic forecasts. Fertility, mortality, migration, policies, international crises, statistical classifications and family-formation patterns can all change. The farther a result lies in the future, the more it should be read as an indicator of the long-run implications of the assumptions rather than as a precise prediction of an event date.

1.4 Analytical scope and exclusions

The model focuses on national population composition by population group, sex and single year of age. It does not attempt to predict individual identity or political behaviour, nor does it assess the legal, administrative, economic or political feasibility of a remigration policy. These questions fall outside the scope of the demographic calculation.

2. Institutional perspective and terminology

2.1 Political significance of demographic majority change

The Institute regards the preservation of a stable native majority as essential to ethnocultural continuity, the rule of law, democracy and demographic sovereignty, and therefore as a legitimate political objective. The Institute situates this objective within broader principles recognised by the United Nations, including the right of peoples to self-determination and the protection of national or ethnic identity (United Nations General Assembly, 1966a, 1966b, 1992). In this broader normative context, collective identity, cultural continuity and self-determination are recognised as legitimate matters of public concern. A transition of the native population from a numerical majority to a numerical minority is politically significant because it affects the long-term composition of the demos and the conditions under which democratic representation, institutional continuity and collective identity develop.

The publication explicitly distinguishes between three levels of statement: a model result, scientific context and an institutional interpretation. A model result describes the demographic trajectory produced by the stated data and assumptions. Scientific context comprises empirical and theoretical research relevant to understanding demographic change and its possible consequences. An institutional interpretation explains the political significance that the Institute attributes to the modelled development. The dashboard provides the model result, the literature places it in a wider context, and the Institute states its interpretation openly. These levels inform one another, but they are not interchangeable. Chapter 12 brings the scientific context and the institutional interpretation into dialogue.

2.2 Population replacement and majority change

The dashboard describes the 50% threshold as a majority crossing or majority-minority transition. It marks the point at which the numerical relationship between the two model populations is reversed.

The Institute uses the term population replacement for the cumulative demographic process through which sustained replacement migration^[^replacement-migration] and subsequent demographic developments alter the composition of a country's population and can turn its previously majority native population into a numerical minority. The term describes a long-term change in population composition rather than a literal person-for-person substitution. The dashboard makes this development measurable; its wider scientific and political significance is discussed in Chapter 12.

^[^replacement-migration]: The United Nations Population Division (2000) uses replacement migration in a narrower technical sense for international migration required to offset population decline, workforce decline or population ageing. The Institute's use of sustained replacement migration focuses more broadly on the cumulative effects of continued migration on a country's population composition.

3. Population groups and national operationalisations

3.1 Binary model structure

For each country, the model distinguishes four age-structured groups: native women, native men, migrant women and migrant men. Every person in the model is assigned to one of the two population groups and to the sex category recorded in the underlying statistics.

This binary structure makes the demographic relationship between the native and migrant populations transparent while preserving differences by sex and single year of age. The two categories are analytical groups used for the projection; they do not describe the full internal diversity, identity or ancestry of every person included in them.

3.2 Native and migrant populations

The migrant population and the native population are defined according to the selected national operationalisation. Depending on the country, both groups may be reported directly in the underlying statistics, or one group may be derived from the official total and the separately identified population group. In every case, the two groups are reconciled to the modelled total population.

The terms native population and migrant population serve as common model labels across the dashboard. Their precise statistical meaning and method of construction vary between countries. Each country chapter therefore identifies the underlying national variables, the groups included and excluded, the generational reach of the definition and any material reconstruction required.

3.3 Country of birth, parental origin, citizenship and ethnicity

European statistical systems do not publish one fully harmonised variable that identifies the same descendant population in every country. Available constructs include own country of birth, one or both parents' countries of birth, current or previous citizenship, official origin classifications, ancestry and ethnicity.

These variables are not interchangeable. Country of birth normally remains stable during a person's life, while citizenship can change. A foreign-born measure generally identifies only the first generation. A parental-origin measure can include parts of the second generation. Ethnicity may reach further across generations but measures a different construct. The selected axis is therefore always disclosed beside the country result.

3.4 First, second and later generations

Post-war immigration began several generations ago in many of the countries covered. Third, fourth and, in some families, later generations may consequently be present, while most official systems identify only foreign-born persons and some or all of their native-born children.

The disappearance of a family history from an official migration-background category does not prove that the history no longer exists; it may reflect the termination of a statistical rule, unavailable parental variables, citizenship change, intermarriage or survey design. The dashboard cannot reconstruct generations that the underlying data do not identify. The country chapters therefore document the observed generational reach and likely undercoverage rather than treating statistical invisibility as substantive absence.

3.5 Principle of the broadest defensible available definition

For each country, the dashboard's starting population uses the broadest available definition of the migrant population that is adequately supported by documented data and can be implemented consistently by sex and age. This approach is intended to include not only immigrants themselves but also identifiable groups of their descendants wherever the national statistics permit.

"Broadest" does not mean selecting the largest figure irrespective of its statistical basis. The chosen definition must have adequate population coverage, a clearly identifiable source and a reproducible method of construction. Where several defensible definitions were calculated, the country chapter explains the selection of the main model. Any retained alternative appears only in the optional sensitivity appendix and not in the dashboard.

3.6 One-parent and two-parent definitions

National statistical systems differ in their treatment of parental origin. Some definitions classify a person as part of the migrant population when at least one parent was born abroad or has foreign origin, while others require both parents to meet that condition. One-parent definitions therefore generally include a larger share of native-born descendants, particularly persons from mixed-parent families.

The dashboard follows the selected and documented definition available for each country. The country chapters identify the parental rule, explain the treatment of mixed-parent families and describe the resulting limits to cross-country comparability. The same definition is applied consistently in the baseline projection and the remigration scenario.

3.7 Maternal assignment, mixed families and status continuity

In the current binary fertility structure, each newborn is assigned to the same model group as the mother, meaning either the native or the migrant population. The model does not separately represent the father's group, mixed-parent combinations or later changes in self-identification and official classification. Once assigned, a person remains in the same model group throughout the projection.

This is a transparent simplification, not an empirical claim that group status must remain socially or statistically unchanged across generations. Depending on the national definition, permanent maternal assignment can extend status beyond the reach of the official starting measure. At the same time, the starting stock can omit later generations that are already statistically invisible. These effects may operate in different directions and are not assumed to cancel.

4. Data collection and source methodology

4.1 Source hierarchy

Source selection follows methodological fit:

1. an official national source is used when it supplies the required construct at adequate granularity;
2. Eurostat is used when its harmonised variable is closer to the model requirement or the national source lacks a required dimension;
3. a documented reconstruction is used only when the necessary cross-tabulation is not publicly available;
4. a more convenient but substantively different variable is not substituted without disclosure.

National sources therefore do not automatically override Eurostat, and Eurostat does not automatically override a more appropriate national multi-generational construct.

4.2 Reference years and the 2015-2024 migration window

The model uses the most recent suitable population data available for each country rather than forcing every country onto an older common year. Population, fertility, mortality and migration inputs may refer to different periods; the country chapters identify the population reference year, relevant differences in input periods and the principal sources used. The starting share reported for a country refers to this national input stock. Where the input stock predates 2026, the model subsequently advances it to the common 2026 projection state.

The standard migration input is the arithmetic mean of the ten annual observations from 2015 through 2024. Where the required official breakdown is available for a different ten-year window, the country chapter identifies that period explicitly. Observations before the relevant input window are retained for historical reference where available but do not affect the published projection.

4.3 Published, derived and assumed values

Every substantive input is classified as published, derived or assumed. Published values are taken directly from an identified source. Derived values are produced reproducibly from published data. Assumed values are imposed where the required observation is unavailable.

For each derived or assumed value, the country documentation identifies the missing dimension, source values, transformation rule, alternatives considered and likely direction of bias where that direction can reasonably be assessed. Missing data are never interpreted as zero.

4.4 Age and sex harmonisation

The projection requires population and event inputs by sex and single year of age. Where official data are available only in broader age bands, the workbook applies a documented allocation rule while preserving the published total. Possible rules include proportional allocation using an official single-age population profile or distribution according to a related official age schedule.

Such transformations reproduce the observed totals but cannot recover an unobserved within-band distribution. They are disclosed in the country chapter whenever they materially affect the model input.

4.5 Data gaps, transparency and demands for improved official statistics

The use of the best available data does not imply that the underlying statistics are complete or ideal. Where a required official cross-tabulation is unavailable, the methodology documents the search for suitable data, identifies the resulting approximation and explains its likely consequences.

This transparency allows readers to assess the model in light of the alternatives that are available. At the same time, the remaining limitations demonstrate the need for statistical authorities to publish more complete, comparable and reproducible demographic data. Better official statistics would reduce the need for approximations and improve the quality of future demographic analysis.

5. Cohort-component projection

5.1 State vector and annual time step

For every country and model group, the population is represented as a vector by single year of age. The current implementation contains ages 0 through 99 for each of the four sex-and-population groups. One projection step represents one year.

Let $\mathbf{P}[g,t]$ denote the age vector of group g in model year t . The annual projection combines demographic reproduction and survival in a group-specific Leslie matrix with the applicable migration components. The resulting vector becomes the starting population for the following year.

5.2 Leslie-matrix structure

A Leslie matrix is an age-structured projection operator. Its first row produces newborns from the female population at reproductive ages. Its sub-diagonal advances surviving members of each cohort to the next age. All other entries are zero in the basic model. The matrix formulation follows Leslie (1945).

For each of the four state groups, the demographic component can be written as:

$$\mathbf{P}[g, t+1] = \mathbf{L}^{(g)} \cdot \mathbf{P}[g, t].$$

Here, $\mathbf{L}^{(g)}$ denotes the Leslie matrix for group g , $\mathbf{P}[g,t]$ its age-structured population vector in model year t , and $\mathbf{P}[g,t+1]$ the intermediate population vector after fertility and survival have been applied, but before migration is added.

The matrices remain constant within a scenario. Population paths are nevertheless non-linear because the age structure changes: large and small cohorts move through reproductive and high-mortality ages over time.

5.3 Cohort ageing and terminal age

For ages below the terminal boundary, survivors at age a move to age $a+1$. The model uses age 99 as its final age category rather than as an accumulating open-ended 99+ group. Persons leave the model after reaching the terminal age.

This treatment has little effect on near-term population shares, but its influence can increase in very long projections as a larger number of cohorts reaches the upper age boundary. It is therefore one of the limitations to consider when interpreting results far into the future.

5.4 Annual calculation order

Within each annual step, the model:

1. calculates newborns from the current female age distribution and the fertility row;
2. advances surviving cohorts to the next age;
3. applies the migration components defined for the scenario;
4. replaces negative age-sex-group cells with zero;
5. rounds non-negative cells to whole persons;
6. uses the resulting vectors as the following annual state.

Migration is applied after the Leslie transformation. Persons entering through migration therefore affect fertility and survival from the following model step rather than receiving a half-year exposure in their arrival step.

6. Fertility and newborn assignment

6.1 Total and age-specific fertility inputs

The country preparation process supplies a fertility level for each model group and an age-specific distribution of births by maternal age. Total fertility determines the overall level, while the age profile distributes births across maternal ages. The population at age zero provides the prepared division of newborns by sex and model group.

Fertility by the mother's country of birth is preferred where it is published and substantively compatible with the selected population definition. Citizenship-based fertility is used only as a documented fallback. In some countries, a rate measured for foreign-born or foreign-citizen women must be applied to a broader group that includes native-born descendants. This mismatch is identified as a country-specific approximation.

6.2 Construction of fertility coefficients

Let $h \in \{N, G\}$ denote the mother's model group, with N representing the native population and G the migrant population; let $c \in \{F, M\}$ denote the child's sex, and $P[h, F, a]$ the female population of group h at maternal age a . The implemented newborn coefficient is:

$L^{(h, c)}[0, a] = (B[h, F, a] / B[h, F, \cdot]) \times (P[h, c, 0] / P[h, F, a]) \times q[h]$, where $B[h, F, a]$ is the prepared female-newborn birth distribution by maternal age, $B[h, F, \cdot]$ is its total, $P[h, c, 0]$ is the prepared age-zero population for child sex c , and $q[h]$ is any scenario-specific fertility multiplier. Fertility is unchanged in both the baseline projection and the published remigration scenario, so $q[h] = 1$.

When applied to the female population, these coefficients reproduce the prepared number of newborns by population group and sex. The matrix therefore incorporates the fertility level, the distribution of births by maternal age and the observed sex distribution of newborns. The total fertility rate (TFR) is not used as a direct annual birth probability for every woman.

6.3 Assignment of newborns to model groups

Newborns are assigned to the population group of their mother, with separate female and male rows preserving the observed sex distribution at birth. Once assigned, a person remains in the same group throughout the projection. This deliberate model assumption preserves the continuity of migration background across future generations, including where official statistics would eventually cease to record it. It is a consistent statistical classification and does not imply that individual identity, citizenship or social affiliation remains unchanged. The separate question of which generations are already identifiable in the starting data is addressed in Section 3.4.

6.4 Country-specific fertility limitations

In some countries, the available fertility statistics cover a narrower category than the migrant population used in the model. A fertility rate measured for first-generation or foreign-citizen women may therefore also be applied to native-born descendants. Where descendants have lower fertility, this can lead to a higher projected number of migrant births. The size and direction of the effect depend on the country and the available data. The model does not apply an additional correction factor; any mismatch between the fertility category and the model population is documented as a limitation.

The model assigns newborns according to the population group of the mother and does not separately model the father's background or mixed-parent combinations. The relevant country chapters explain where these assumptions are particularly important for interpreting the results.

7. Mortality

7.1 Age- and sex-specific mortality inputs

For group g and age $a < 99$, the implemented one-year survival coefficient is:

$$S[g,a] = 1 - D[g,a] / P[g,a],$$

where $D[g,a]$ is the prepared annual number of deaths and $P[g,a]$ is the corresponding population. This coefficient is placed on the matrix sub-diagonal:

$$L^{(g)}[a+1,a] = S[g,a].$$

Life expectancy may be retained as contextual source information, but it is not itself the transition coefficient used in the projection

7.2 Common versus group-specific mortality assumptions

In most countries, official death statistics are not available separately for the native and migrant populations. National age- and sex-specific deaths are therefore distributed in proportion to the population of each group, resulting in the same underlying mortality pattern for both populations.

The Netherlands is the only exception in the current dashboard. Statistics Netherlands publishes deaths directly by origin group, sex and single year of age, allowing group-specific mortality patterns to be used. This country-specific treatment is documented in the Dutch country chapter.

7.3 Survival and ageing coefficients

Age- and sex-specific mortality rates are held constant throughout the projection. The annual number of deaths nevertheless changes as the size and age structure of each population group evolves. The model therefore captures the demographic effects of population ageing but does not incorporate future improvements or deteriorations in mortality and life expectancy.

8. Baseline migration regime

8.1 Gross immigration and emigration inputs

Immigration and emigration enter the model as separate gross-flow vectors by population group, sex and age. The calculation therefore does not project a single net-migration balance. Each country chapter identifies the statistical axis used for the flows, normally country of birth, and explains any country-specific construction required to obtain the four model groups.

8.2 Ten-year averaging and age-sex allocation

The prepared annual flow vectors are based on a ten-year arithmetic average, normally covering 2015-2024. The model uses the complete observed window and does not retrospectively exclude particular years as exceptional. The average therefore includes both periods of elevated migration and periods of restricted mobility. Refugee movements, policy changes, crises and temporary disruptions are part of the migration regime actually observed during the period; the window is not intended to construct a crisis-free “normal” level. Excluding selected years, using a median or applying a trimmed mean would introduce an additional judgement about which realised migration should count as normal. The arithmetic mean provides a transparent status-quo reference while reducing the influence of any single annual observation. Where the official data are published in age groups or without a complete sex breakdown, the country preparation applies a documented allocation rule and preserves the published flow total.

8.3 Baseline continuation rule

Where a national input population predates 2026, the model first advances it to the common 2026 state using the prepared immigration vector and regular emigration calculated relative to the current group stock. From the common 2026 state onward, the baseline repeats the prepared gross immigration and gross emigration vectors as constant absolute annual flows. For group g , the post-migration population is therefore:

$$P[g,t+1] = P[g,t] + I[g] - E[g],$$

where $I[g]$ and $E[g]$ are the fixed immigration and emigration vectors derived from the observed input period. Their absolute size and age-sex distribution do not change during the baseline projection.

8.4 Interpretation and limitations of constant-flow continuation

The baseline asks how the population would develop if the observed gross-flow regime continued in absolute terms. It does not assume that future migration will necessarily remain constant. The continuation rule provides a transparent reference path against which the effects of fertility, mortality, cohort ageing and the alternative remigration scenario can be assessed.

9. The demographic tipping point

9.1 Primary 50% majority crossing

Let the migrant-background population in year t be:

$$G(t) = \sum_{a=0}^{99} (P[G_F,a,t] + P[G_M,a,t]),$$

and the total model population be:

$$A(t) = \sum_{a=0}^{99} \sum_g P[g,a,t].$$

The migrant-background share is:

$$s(t) = G(t) / A(t).$$

The demographic tipping point is the first annual model state in which the migrant population exceeds 50% of the total population ($s(t) > 0.5$). In the binary model, this is also the first year in which the migrant population is numerically larger than the native population.

9.2 Annual reporting precision

The model advances in annual steps. The tipping point is therefore reported as the first model year in which the migrant share exceeds 50%. Any countdown shown in the interface measures the time remaining until the beginning of that model year; it does not assign the threshold itself to a specific day or month. If the threshold is not reached during the projection horizon, the dashboard reports “not reached within the model horizon.”

9.3 What the threshold does and does not establish

The 50% threshold marks a clearly defined change in the numerical majority between the two model populations. It does not imply that all social, cultural or political effects occur abruptly in that year. The Institute’s political interpretation of this demographic transition is presented separately. Where wider consequences are discussed, institutional assessments and findings from the available empirical literature are clearly distinguished.

10. Remigration scenario

10.1 Purpose and conditional status

The remigration scenario examines how the modelled population composition changes under one defined alternative migration regime. It is a conditional demographic scenario, not a forecast of policy adoption or a calculation of legal, administrative or economic feasibility. The political concept of remigration that informs the Institute's work is broader than this numerical scenario and is set out in Sellner (2024). The dashboard operationalises only the demographic assumptions specified below.

10.2 Relationship to the baseline model

The remigration scenario uses the same starting population, Leslie matrices, fertility assumptions and mortality assumptions as the baseline. For countries whose national input population predates 2026, the model first advances the population to the common 2026 state under the current migration regime. The alternative migration rules apply after that state, beginning with the transition into 2027.

10.3 Reduced immigration assumption

Native immigration remains at its baseline absolute flow. Migrant-background immigration is held at a constant absolute flow equal to 10% of the corresponding baseline input vector:

$$I[G,rem] = 0.10 \cdot I[G,base].$$

The reduced flow retains the prepared age-sex distribution and is not recalculated as a percentage of the migrant population remaining in a later year.

10.4 Regular emigration assumption

Regular emigration is calculated relatively from the current stock of each sex-and-population group. The prepared total regular emigration $E[g,0]$ is not an additional scenario assumption. It is the annual gross-emigration total already prepared from the observed country data for group g , normally as an average over 2015-2024 and summed across all ages. $P[g,0]$ is the corresponding population of that group in the national starting dataset. The group-specific emigration rate is:

$$e[g] = E[g,0] / P[g,0].$$

At age a in year t , regular emigration is then:

$$E[g,a,t] = e[g] \cdot P[g,a,t].$$

The number of regular emigrants consequently changes with the remaining population. The same group-level rate is applied to every age within the respective sex-and-population group. There is no common emigration rate across countries or model groups. For the published remigration scenario, the regular-emigration multipliers for the native and migrant populations are both set to 1.0, so the country- and group-specific rates derived from the observed data are carried forward without an additional increase or reduction.

For example, if the prepared annual emigration total for one group is 20,000 persons and its national starting population is 1,000,000, the resulting regular-emigration rate is 2%. If the population of that group later falls to 600,000, regular emigration falls proportionally to 12,000 persons.

10.5 Rationale for different emigration rules

The baseline projection continues the prepared gross-migration regime as fixed annual volumes after the common 2026 model state. Immigration and regular emigration therefore remain constant in absolute terms. This provides a transparent reference path and prevents the baseline migration balance from changing mechanically merely because the population size changes.

The remigration scenario serves a different analytical purpose. The migrant population is deliberately reduced through lower immigration and an additional fixed remigration flow. If regular emigration also remained fixed in absolute terms, it would represent an increasing share of the declining migrant population and would mechanically accelerate its reduction. Regular emigration therefore follows the country- and group-specific rates defined above, so that the number of regular emigrants decreases proportionally with the remaining population. The additional remigration schedule remains fixed because it represents the explicitly defined scenario component rather than ordinary emigration.

This distinction is a deliberate part of the scenario design and affects the timing of the reported thresholds. Relative regular emigration produces a later reverse tipping point than an otherwise identical scenario with constant absolute emigration.

10.6 Additional remigration flow

In addition to regular emigration, the scenario applies a fixed additional annual remigration flow to the migrant population. For migrant group (g) and age (a), the scheduled annual flow is:

$$R[g,a] = 0.01 \cdot P[\text{input},g,a],$$

where $P[\text{input},g,a]$ is the corresponding age-sex cell in the national starting dataset. Across both migrant groups and all ages, the nominal annual schedule therefore equals 1.0% of the migrant-background starting stock. It remains fixed in absolute terms and is not recalculated from the population remaining in each later year.

The fixed annual figure of 1% is a demographic scenario parameter, not a single policy measure or a prescribed mix of instruments. In practice, an equivalent reduction in the migrant population could result from a combination of enforced returns of persons without a legal right to remain, voluntary return, financial and structural incentives for return, and a reversal of existing push and pull factors. The model does not specify the proportion attributable to each mechanism. Assimilation is not part of the calculation, but could in reality also contribute to an equivalent reduction in the migrant population. The model does not assess the legal, political or administrative implementation of individual instruments.

10.7 Reverse tipping point and the 5% reference threshold

The reverse tipping point is the first model year in which the migrant share falls below 5%. The Institute uses this threshold as a theoretical endpoint and a possible orientation point for demographic normalisation and harmonisation. The restoration of a stable native majority and the establishment of a demographic balance in which continued immigration and assimilation no longer place the continuity of that majority into question could occur before this theoretical endpoint is reached. The 5% threshold is an institutional scenario parameter, not a universally established scientific threshold or a claim that demographic stabilisation can occur only once this value has been reached.

11. Comparability, uncertainty and limitations

11.1 Heterogeneous national definitions

The same IFR projection model is applied across the 14 modelled countries, but national statistics do not define the migrant population in exactly the same way. A definition based on foreign birth generally covers fewer generations than one based on parental origin or ethnicity. Cross-country comparisons must therefore always be interpreted together with the definition used in each country; the results do not represent a ranking based on one fully harmonised population category.

11.2 Later-generation undercoverage

Official statistics often identify only immigrants and parts of the second generation. Later descendants may therefore be absent from the migrant population recorded in the starting data. The point at which official statistics cease to classify later generations separately does not mean that a family history of migration - or, in some cases, identification with an ancestral country or culture of origin - has disappeared. Each country chapter states how many generations the selected definition covers and identifies the resulting undercoverage.

11.3 Fertility and mixed-family assumptions

Long-term results are influenced by the rules used to assign newborns and by the available fertility data. The model assigns newborns according to the mother's population group, retains this classification throughout the projection and does not separately represent mixed-parent couples or the father's background. Where the available fertility data cover a narrower population than the selected migrant definition, the country chapter documents the mismatch and its relevance for interpreting the result.

11.4 Constant-parameter projection

Fertility, mortality and migration assumptions remain constant throughout the baseline projection unless a scenario explicitly changes them. This does not mean that these conditions are expected to remain unchanged in reality. In particular, the baseline does not model an intergenerational convergence between the group-specific fertility schedules. If such convergence occurred, fertility differences would have a smaller effect on the long-term population paths of the two model groups than under the baseline projection. The magnitude of this effect cannot be determined without additional assumptions about when convergence begins, how quickly it proceeds and the level toward which the rates converge. Introducing a convergence path would therefore not eliminate assumptions, but replace the constant-parameter rule with a different set of transition assumptions. The baseline deliberately uses a limited and transparent set of parameters to provide a consistent reference path. It does not predict that the selected conditions will persist unchanged.

11.5 Long horizons and conditional interpretation

The further a result lies in the future, the more strongly it depends on the continuation of the model assumptions and on accumulated technical effects such as terminal-age treatment and rounding. A distant tipping point should therefore be interpreted primarily as an indication of the long-term direction and consequences of the selected assumptions, rather than as a precise forecast of the year in which the transition will occur.

12. Focused literature context

12.1 The demographic tipping point

The dashboard defines the demographic tipping point as the first model year in which the migrant population exceeds 50% of the total population. Within the binary model, this marks an unambiguous reversal of the numerical majority: the native population becomes a minority, while the migrant population becomes the majority.

The scientific literature does not identify 50% as a universal threshold at which social, cultural or political change suddenly begins. Demographic transformations develop over extended periods and may produce significant effects well before a numerical majority is crossed. From the Institute's perspective, the 50% threshold therefore marks the culmination of a long-term demographic transformation rather than its beginning. By this stage, cumulative migration, generational renewal and established settlement structures may already have created considerable demographic momentum, making a reversal of the development increasingly difficult.

The tipping point is politically significant not because every consequence begins at precisely 50%, but because it records that a long-running transformation has resulted in a reversal of the numerical majority. The literature on long-term demographic change provides context for this development, while the political significance attributed to the majority reversal represents the Institute's own assessment.

12.2 Other forms of tipping points

The 50% threshold used by the dashboard is not the only form of tipping point relevant to demographic change. Card, Mas and Rothstein (2008), for example, identified local residential tipping processes in US cities at minority shares ranging from approximately 5% to 20%. Once these context-specific thresholds were crossed, the decline of the white population in the affected neighbourhoods accelerated. These findings concern local settlement patterns and cannot be transferred directly to national population shares, but they demonstrate that demographic reactions may begin well before a country-wide majority is reversed.

Other research documents substantial demographic transformations at the level of regions and age groups. In Seine-Saint-Denis, the proportion of people under the age of 18 with at least one immigrant parent increased from approximately 19% in 1968 to 57% in 2005 (Aubry & Tribalat, 2011).

Experimental research has also found that information about an anticipated majority reversal can measurably affect political attitudes and intergroup perceptions before that reversal occurs (Craig & Richeson, 2014; Levy & Myers, 2021). A comparative study involving 499,075 respondents across 30 European countries further indicates that such responses depend strongly on the surrounding political and institutional context (Kende et al., 2024).

Political and strategic tipping points describe a further dimension. Dancygier (2017), for example, examines how demographic concentration can alter electoral incentives, political recruitment and patterns of representation. In *Strategie der Sammlung*, Sellner (2025) uses the concept of a strategic tipping point for the stage at which demographic and political power relations make a reversal of the prevailing trajectory increasingly difficult. As a strategic working hypothesis, he discusses a proportion of around 30% of non-assimilated voters. This is not identical to the dashboard's demographic tipping point and is not used in its calculation. It illustrates that strategic thresholds concern political capacity and power relations rather than a simple national population majority.

The dashboard's 50% threshold does not replace these local, behavioural or strategic tipping points. It identifies a distinct and clearly measurable event: the reversal of the numerical majority between the two model populations.

12.3 Demographic change and its political significance

Population composition influences the social and political environment in which institutions operate. Demographic concentration can affect electoral incentives, political representation and the mobilisation of group interests (Dancygier, 2017). Research has also examined relationships between ethnic diversity, social trust and perceptions of group status. These effects vary considerably between countries and local contexts and are shaped by integration policies, institutions and the geographical level at which diversity is measured (Dinesen, Schaeffer & Sønderskov, 2020; Kende et al., 2024).

This contextual variation does not make demographic composition politically irrelevant. Elections, representation and public institutions ultimately operate through populations whose size, geographical concentration and generational continuity change over time. Long-term immigration into low-fertility societies can therefore produce a fundamental transformation of population composition even without a single abrupt social rupture (Coleman, 2006).

The Institute regards the preservation of a stable native majority as essential to ethnocultural continuity, the rule of law, democracy and demographic sovereignty, and therefore as a legitimate political objective. The dashboard makes the demographic development underlying this question measurable. Its projections do not predetermine individual behaviour or every social consequence, but they show whether current trends lead to the native population losing its numerical majority and how a defined remigration scenario could alter that trajectory.

12.4 Demographic normalisation and harmonisation

The dashboard uses a migrant share below 5% as a theoretical endpoint and a possible orientation point for demographic normalisation and harmonisation. These terms do not constitute fixed scientific categories or a universally applicable Institute definition. Within this scenario, demographic normalisation describes the restoration of a stable native majority after a prolonged period of population replacement. Harmonisation refers to a demographic relationship in which immigration and the assimilation of minorities can take place without placing the continuity of the native majority into question. Such demographic stabilisation could occur before the 5% endpoint is reached.

The 5% value also has a historical reference. Before or at the beginning of the post-war labour-recruitment period, foreign nationals accounted for approximately 1.2% of the population of West Germany and 1.4% of the Austrian population in 1961. France, which had a longer history of immigration, recorded an immigrant share of 5.0% in 1946 and 5.4% in 1954. Switzerland represented a distinct European case due to its longer and more intensive history of cross-border labour migration: foreign nationals accounted for 6.1% of its population in 1950 and 10.8% in 1960 (Statistisches Bundesamt, 2004; Statistics Austria, 2021; Insee, 2023; Wanner, 2001).

Historical statistics used different categories and generally did not capture later generations in the same way as the dashboard. Their purpose here is therefore not to reconstruct one exact historical population structure, but to provide orientation. They show that a migrant share around 5% is compatible with demographic conditions under which the native population formed a clear and stable majority in several Western European countries. The reverse tipping point translates this general orientation into a transparent and measurable scenario endpoint.

13. Country methodology appendix

All IFR country projections use the same demographic model. The underlying statistical definitions reflect the categories published by national statistical authorities and are therefore not fully identical across countries. The following country sections document the selected definition, data construction, demographic inputs, principal sources and relevant points of interpretation for each country. Where the required detail is distributed across several official datasets, the model combines the best available data through a documented procedure.

13.1 Austria

Population reference year: 2025

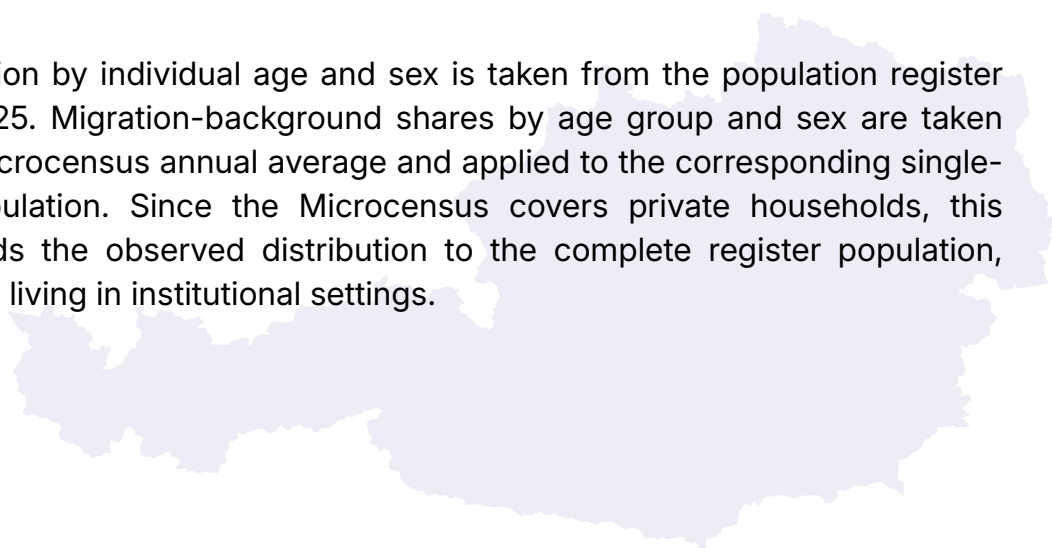
Definition and model selection

Austria applies the migration-background definition used by Statistics Austria in the Microcensus Labour Force Survey. A person is classified as having a migration background if both parents were born abroad, irrespective of the person's own place of birth or current citizenship. Within this population, persons born abroad are classified as first generation, while persons born in Austria are classified as second generation.

This definition was selected because it is the established national migration-background measure and provides the age- and sex-specific information required for the projection.

Population construction

The total population by individual age and sex is taken from the population register for 1 January 2025. Migration-background shares by age group and sex are taken from the 2025 Microcensus annual average and applied to the corresponding single-age register population. Since the Microcensus covers private households, this procedure extends the observed distribution to the complete register population, including persons living in institutional settings.



Fertility, mortality and migration

Fertility is differentiated using rates for Austrian and non-Austrian female citizens. This is a narrower classification than the migration-background definition because naturalised women remain in the migration-background population but are included among Austrian citizens in the fertility statistics. Age-specific fertility data from Statistics Austria determine the maternal-age profile.

The same age- and sex-specific mortality schedule is applied to both model populations. Baseline immigration and emigration are based on average gross flows for 2015-2024 and are classified by country of birth under the long-term migration definition.

Key methodological considerations

- The official migration-background measure covers the first and second generation; later descendants follow the classification of the published statistics.
- Fertility is differentiated by citizenship, a narrower axis than the parental-background definition used for the starting population.
- Migration flows are classified by the person's own country of birth, while the starting population also includes Austria-born descendants.
- Published age-group shares are transferred to individual ages within each group.
- The construction combines the register population at 1 January 2025 with the 2025 Microcensus annual average.

Model outputs

- Starting migrant share: 28.2%
- Baseline tipping point above 50%: 2052
- Reverse tipping point below 5%: 2091

Principal sources

- Statistics Austria: Migration background (<https://www.statistik.at/statistiken/bevoelkerung-und-soziales/bevoelkerung/migration-und-einbuergerung/migrationshintergrund>), accessed 20 May 2026.
- Statistics Austria: Population register data (<https://www.statistik.at/statistiken/bevoelkerung-und-soziales/bevoelkerung/bevoelkerungsstand/bevoelkerung-zu-jahres-/-quartalsanfang>), accessed 20 May 2026.

- Statistics Austria: Fertility indicators (<https://www.statistik.at/statistiken/bevoelkerung-und-soziales/bevoelkerung/demographische-indikatoren-und-tafeln/demographische-querschnittsindikatoren>), accessed 20 May 2026.
- Statistics Austria: Deaths by demographic characteristics (<https://www.statistik.at/statistiken/bevoelkerung-und-soziales/bevoelkerung/gestorbene/demographische-merkmale-von-gestorbenen>), accessed 20 May 2026.
- Statistics Austria: Life tables (<https://www.statistik.at/statistiken/bevoelkerung-und-soziales/bevoelkerung/demographische-indikatoren-und-tafeln/sterbetafel>), accessed 20 May 2026.
- Eurostat: Immigration by country of birth (https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table) and emigration by country of birth (https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table), accessed 20 May 2026.

13.2 Belgium

Population reference year: 2026

Definition and model selection

Belgium uses Statbel's origin classification, which combines current nationality, first registered nationality and the first registered nationality of both parents. The selected model includes non-Belgians and Belgians with a foreign background, including the published mixed-parental-background group. Naturalised persons consequently remain identifiable by origin. Because the classification is based on registered origin rather than only birthplace, it may retain parts of the third generation.

The broad version was selected because it is the most inclusive official origin measure available with a usable population breakdown.

Population construction

The 2026 population is divided using Statbel's official origin categories. Non-Belgians are available by individual age and sex. Belgians with a foreign background are available in broader age groups and are distributed within those groups using the corresponding population structure by sex.

Fertility, mortality and migration

Fertility is differentiated by the mother's citizenship. The rate observed for foreign citizens is applied to the broader migration-background population, which also includes Belgian citizens with a foreign background. The same age- and sex-specific mortality schedule is used for both populations.

Baseline immigration and emigration are derived from average gross flows for 2015-2024 and classified by country of birth. The flow definition therefore differs from the nationality-and-origin definition of the starting population.

Key methodological considerations

- The population, fertility and migration inputs use the official origin, citizenship and birthplace classifications available for each component.
- Belgians with a foreign background are published in broad age groups, which are distributed to individual ages within those groups.
- The origin definition can retain parts of later generations and consequently has a broader generational reach than definitions based only on birthplace.
- The fertility rate for foreign citizens serves as the available proxy for the broader population with a foreign background.

Model outputs

- Starting migrant share: 36.6%
- Baseline tipping point above 50%: 2044
- Reverse tipping point below 5%: 2099

Principal sources

- Statbel: Origin (<https://statbel.fgov.be/en/themes/population/structure-population/origin>), accessed Sept 28, 2026.
- Statbel: Population by residence, nationality, age and sex (<https://statbel.fgov.be/en/open-data/population-place-residence-nationality-marital-status-age-and-sex>), accessed Sept 28, 2026.
- Statbel: Natality and fertility (<https://statbel.fgov.be/en/themes/population/natality-and-fertility>), accessed Sept 28, 2026.

- Statbel: Life expectancy and life tables
(<https://statbel.fgov.be/en/themes/population/mortality-life-expectancy-and-causes-death/life-expectancy-and-life-tables>), accessed Sept 28, 2026.
- Eurostat: Immigration
(https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table)
and emigration
(https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table)
by country of birth, accessed Sept 28, 2026.

13.3 Denmark

Population reference year: 2026

Definition and model selection

The official Danish classification treats a person as being of Danish origin when at least one parent is both born in Denmark and a Danish citizen. The selected model extends the official immigrant-and-descendant population by adding persons classified as Danish origin for whom the register nevertheless records at least one foreign-born parent. Persons whose parental information is unknown remain in the Danish-origin population.

This broader construction was selected to make observable mixed parental backgrounds visible instead of limiting the population to the narrower official immigrant-and-descendant total.

Population construction

The starting population refers to 1 January 2026. Official immigrant and descendant counts are combined with a register-based addition for Danish-origin persons with at least one foreign-born parent. Because the added group is not published by sex, it is divided using the age-specific sex ratio of the Danish-origin population.

Fertility, mortality and migration

Fertility is derived for the official origin groups. The resulting migrant rate is applied to the broader model population, including the added mixed-background group. The same age- and sex-specific mortality schedule is used for both populations.

Baseline flows use migration by country of birth for 2015-2024. Where native emigration is not directly available in the required breakdown, it is estimated using the closest national birthplace structure.

Key methodological considerations

- The parental-background addition is divided by sex using the observed age-specific sex ratio of the Danish-origin population.
- Persons with unknown parental information retain their official Danish-origin classification.
- Fertility and migration follow the official origin and own-birthplace variables available for those components.
- The generational reach follows the parental information available in the Danish registers.

Model outputs

- Starting migrant share: 22.4%
- Baseline tipping point above 50%: 2156
- Reverse tipping point below 5%: 2065

Principal sources

- Statistics Denmark: Population by origin, age and sex (FOLK2) (<https://www.statbank.dk/FOLK2>), accessed 10 June 2026.
- Statistics Denmark: Parental birthplace cross-tabulation (KRYDS2) (<https://www.statbank.dk/KRYDS2>), accessed 10 June 2026.

- Statistics Denmark: Fertility (FERT1) (<https://www.statbank.dk/FERT1>) and births (FODIE) (<https://www.statbank.dk/FODIE>), accessed 10 June 2026.
- Statistics Denmark: Deaths (DOD) (<https://www.statbank.dk/DOD>), accessed 10 June 2026.
- Statistics Denmark: Historical life tables (HISB8) (<https://www.statbank.dk/HISB8>), accessed 10 June 2026.
- Eurostat: Immigration (https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table) and emigration (https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table) by country of birth, accessed 10 June 2026.

13.4 Finland

Population reference year: 2026

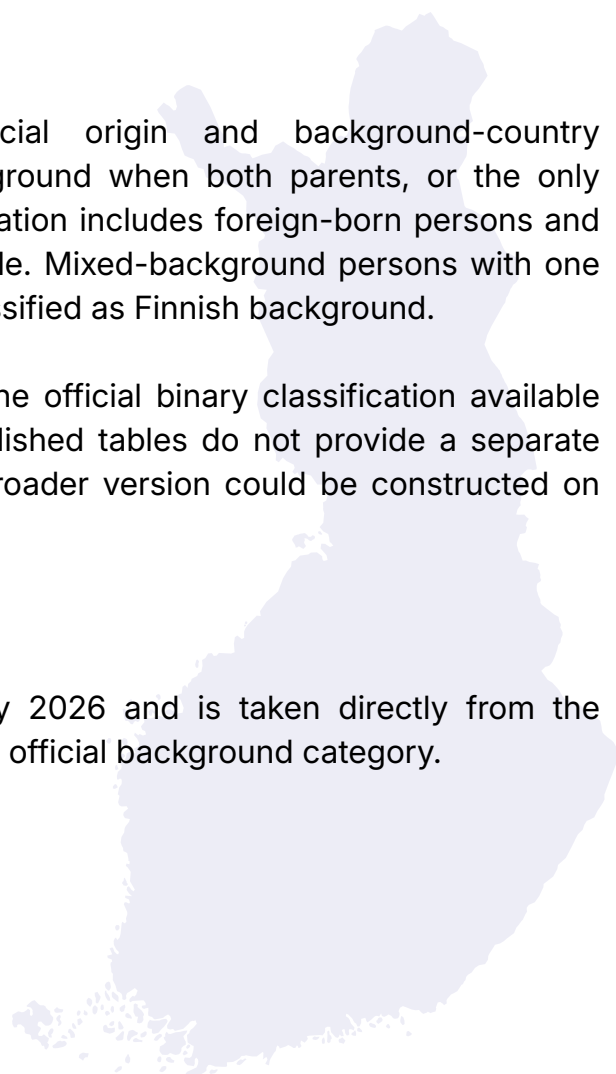
Definition and model selection

Finland follows Statistics Finland's official origin and background-country classification. A person is of foreign background when both parents, or the only known parent, were born abroad. The population includes foreign-born persons and Finland-born descendants who meet that rule. Mixed-background persons with one Finnish-background parent are generally classified as Finnish background.

This definition was selected because it is the official binary classification available directly by individual age and sex. The published tables do not provide a separate mixed one-parent category from which a broader version could be constructed on the same basis.

Population construction

The starting population refers to 1 January 2026 and is taken directly from the population register by individual age, sex and official background category.



Fertility, mortality and migration

Fertility is differentiated by the mother's official background, which closely matches the starting-population classification. A common national maternal-age profile distributes births by age. The same age- and sex-specific mortality schedule is used for both model populations.

National immigration and emigration series are classified by country of birth. Average gross flows for 2015-2024 enter the baseline projection.

Key methodological considerations

- Persons with one Finland-born parent generally belong to the Finnish-background population under the official definition.
- A common maternal-age profile is combined with the separately observed total fertility rates.
- The classification covers the first and second generation as defined by Statistics Finland.

Model outputs

- Starting migrant share: 11.7%
- Baseline tipping point above 50%: 2088
- Reverse tipping point below 5%: 2084

Principal sources

- Statistics Finland: Population by origin and background country (https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin__vaerak/11rs.px/), accessed 11 June 2026.
- Statistics Finland: Fertility by origin (https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin__synt/13zb.px/), accessed 11 June 2026.
- Statistics Finland: Births and fertility (https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin__synt/12ds.px/), accessed 11 June 2026.

- Statistics Finland: Deaths by age and sex (https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin_kuol/12ag.px/), accessed 11 June 2026.
- Statistics Finland: Life expectancy (https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin_kuol/12am.px/), accessed 11 June 2026.
- Statistics Finland: Immigration and emigration by country of birth (https://pxdata.stat.fi/PxWeb/pxweb/en/StatFin/StatFin_muutl/159q.px/), accessed 11 June 2026.

13.5 France

Population reference year: 2025

Publication status

Version 1 of the IFR Demography Dashboard does not publish an IFR projection for France. The France country view instead presents the scenarios published by the Observatoire de l'immigration et de la démographie (OID) on 21 September 2026 as an external reference.

Meaning of the displayed year

In the OID high scenario, people without migration ancestry become a minority around 2050. This is an approximate scenario result under the OID's definitions and assumptions. In the same high scenario, the OID places the point at which people of non-European origin become a majority of the total population in the mid-2070s.

Methodological distinction

The OID follows migration ancestry across three generations and uses its own population categories and scenario assumptions. The displayed year around 2050 is not an IFR model result and cannot be directly ranked against the IFR tipping points for the other countries.

Why France is presented separately

France's long immigration history makes the treatment of successive generations particularly consequential for long-term projections. For Version 1, the IFR has chosen to present the OID's recently published scenarios as a clearly labelled external reference.

Dashboard outputs and further work

No IFR baseline tipping point, reverse tipping point or remigration scenario is reported for France. The OID study does not include a remigration scenario. Dashboard 2.0 will revisit France within an extended, documented IFR country model.

Principal sources

- Observatoire de l'immigration et de la démographie, "Les scénarios démographiques de la France au XXI^e siècle", published 21 September 2026: <https://observatoire-immigration.fr/les-scenarios-demographiques-de-la-france-au-xxie-siecle/>

- INSEE: Third-generation descendants of immigrants (<https://www.insee.fr/fr/statistiques/6793242>), accessed 17 July 2026.
- Eurostat: Population by age and sex (https://ec.europa.eu/eurostat/databrowser/view/demo_pjan/default/table), accessed 17 July 2026.
- INSEE: Fertility evidence (<https://www.insee.fr/fr/statistiques/6793238>) and Eurostat: age-specific fertility (https://ec.europa.eu/eurostat/databrowser/view/demo_facbc/default/table), accessed 17 July 2026.
- Eurostat: Immigration by country of birth (https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table), Eurostat: Emigration by country of birth (https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table) and INSEE: Migration evidence (<https://www.insee.fr/fr/statistiques/8570316>), accessed 17 July 2026.
- Eurostat: Deaths by age and sex (https://ec.europa.eu/eurostat/databrowser/view/demo_magec/default/table) and life expectancy (https://ec.europa.eu/eurostat/databrowser/view/demo_mlexpec/default/table), accessed 17 July 2026.

13.6 Germany

Population reference year: 2025

Definition and model selection

Germany applies the broad migration-background definition used by the Federal Statistical Office in the Microcensus. A person has a migration background when they or at least one parent were not born with German citizenship. The category includes foreign citizens, naturalised immigrants, ethnic German resettlers and their Germany-born descendants. The starting population generally covers the first and second generation.

The model was selected because it follows an established broad official definition and supplies the age- and sex-specific population breakdown required for the projection. Ethnic German resettlers remain included in accordance with the published Microcensus total.

Population construction

The total population by individual age and sex comes from Eurostat. Migration-background shares from the 2025 Microcensus are published by five-year age group and sex and are transferred to the corresponding single-age population structure.

Fertility, mortality and migration

Fertility is differentiated using rates for German and foreign female citizens. The foreign-citizen rate is applied to the broader migration-background population, which also contains naturalised persons and German citizens with a migration background. Eurostat data provide the maternal-age profile.

Observed deaths by age and sex are divided according to the population structure, so both groups use the same age- and sex-specific mortality schedule. Baseline immigration and emigration use average gross flows for 2015-2024 classified by country of birth. The movements recorded in 2022 remain part of the observed ten-year average.

Key methodological considerations

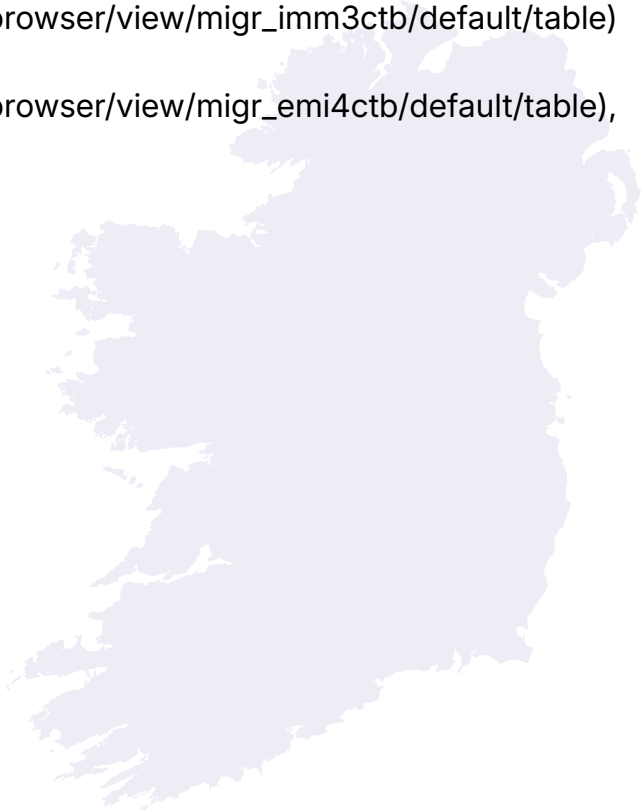
- The Microcensus definition generally identifies the first and second generation; later descendants follow the official statistical classification.
- Fertility is differentiated by present citizenship, a narrower axis than the migration-background definition.
- Migration flows are classified by the person's own country of birth, while the starting population also incorporates parental citizenship at birth.
- Five-year Microcensus age-group shares are transferred to individual ages within each group.
- Microcensus shares for private households are applied to the complete population series, including institutional settings.

Model outputs

- Starting migrant share: 31.0%
- Baseline tipping point above 50%: 2045
- Reverse tipping point below 5%: 2111

Principal sources

- Federal Statistical Office: Migration-background definition (<https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Migration-Integration/Glossar/migrationshintergrund.html>), accessed Sept 28, 2026.
- Federal Statistical Office: Microcensus migration-background results 2025 (<https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Migration-Integration/Publikationen/Downloads-Migration/migrationshintergrund-endergebnisse-2010220257004.html>), accessed Sept 28, 2026.
- Federal Statistical Office: Fertility in 2024 (https://www.destatis.de/DE/Presse/Pressemitteilungen/2025/07/PD25_259_12.html), accessed Sept 28, 2026.
- Federal Statistical Office: Deaths and life expectancy (https://www.destatis.de/DE/Themen/Gesellschaft-Umwelt/Bevoelkerung/Sterbefaelle-Lebenserwartung/_inhalt.html), accessed Sept 28, 2026.
- Eurostat: Population (https://ec.europa.eu/eurostat/databrowser/view/demo_pjan/default/table), deaths (https://ec.europa.eu/eurostat/databrowser/view/demo_magec/default/table), immigration (https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table) and emigration (https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table), accessed Sept 28, 2026.



13.7 Ireland

Population reference year: 2022

Definition and model selection

Ireland uses the 2022 Census ethnicity classification. White Irish persons and Irish Travellers are assigned to the native population. All other stated ethnicity categories, including White Other, are assigned to the migrant model population. Missing ethnicity responses are distributed proportionally within each detailed citizenship category. The model therefore uses an ethnicity-based rather than a foreign-born classification and can retain group distinctions across several generations.

The ethnicity-based model was selected because it captures later-generation group continuity that a birthplace-only definition would omit and provides a common statistical axis with the selected United Kingdom model.

Population construction

Missing ethnicity responses are allocated proportionally within each detailed citizenship category using F5083. Where citizenship is also unstated, the migrant allocation rate is 21.77%, based on respondents with unstated citizenship but stated ethnicity. The age-sex distribution is estimated by combining F5083, F5006 and F5064 through iterative proportional fitting (IPF), while retaining the existing single-age weights. This reconstruction matches published totals but relies on assumptions about missing responses and their distribution.

Fertility, mortality and migration

Fertility is differentiated using the closest available national classification, the mother's country of birth, and transferred to the two ethnicity-defined populations. The same age- and sex-specific mortality schedule is used for both groups.

Baseline migration uses the available gross-flow series for 2015-2024 classified by citizenship. The population, fertility and migration components consequently use three different statistical axes.

Key methodological considerations

- Population, fertility and migration use different classifications - ethnicity, mother's country of birth and citizenship - which are not fully equivalent.

- Missing ethnicity is allocated using observed proportions within citizenship categories, including the citizenship-not-stated category. This assumes comparable ethnicity patterns among respondents with and without missing answers.
- Age-sex allocations are reconstructed from aggregate tables rather than individual records and therefore involve additional assumptions.
- Ethnicity is self-reported and can retain group distinctions across more generations than birthplace-based definitions.
- The population baseline uses the detailed 2022 Census; figures for 2026 are model projections, not observed ethnicity counts.
- Five-year census age groups are distributed across individual ages using the existing within-group age weights.

Model outputs

- Starting migrant share (2022): 18.67%
- Projected migrant share (2026): 21.61%
- Baseline tipping point above 50%: 2090
- Reverse tipping point below 5%: 2070

Principal sources

- Central Statistics Office: Census ethnicity by age and sex (F5064) (<https://data.cso.ie/table/F5064>), accessed 17 June 2026.
- Central Statistics Office: Population estimates by age and sex (PEA11) (<https://data.cso.ie/table/PEA11>), accessed 17 June 2026.
- Central Statistics Office: Births (VSA91) (<https://data.cso.ie/table/VSA91>) and Eurostat: age-specific fertility (https://ec.europa.eu/eurostat/databrowser/view/demo_facbc/default/table), accessed 17 June 2026.
- Eurostat: Deaths by age and sex (https://ec.europa.eu/eurostat/databrowser/view/demo_magec/default/table), accessed 17 June 2026.
- Central Statistics Office: Irish life tables (<https://www.cso.ie/en/statistics/birthsdeathsandmarriages/irishlifetables/>) and Eurostat: life expectancy (https://ec.europa.eu/eurostat/databrowser/view/demo_mlexpec/default/table), accessed 17 June 2026.
- Central Statistics Office: Immigration and emigration by citizenship (PEA24) (<https://data.cso.ie/table/PEA24>) and related flow series (PEA23) (<https://data.cso.ie/table/PEA23>), accessed 17 June 2026.

13.8 Italy

Population reference year: 2024

Definition and model selection

Italy combines a foreign-born first generation with an Italy-born second generation defined by at least one foreign-born parent. The required second-generation detail is distributed across several official datasets, which are combined across age ranges.

The first-plus-second-generation model was selected because it includes a substantial Italy-born descendant population that a foreign-born-only definition would omit.

Population construction

The 2024 population combines the foreign-born stock with reconstructed second-generation components. Ages 15-74 use EU Labour Force Survey evidence by broad age and sex groups. Ages 0-14 use an updated and scaled national estimate. Ages 75 and older are extrapolated from the observed second-generation relationship at ages 55-74. Broad groups are distributed to individual ages using the available population structure.

Fertility, mortality and migration

Fertility is differentiated by the mother's country of birth. The foreign-born rate is applied to the combined first- and second-generation model population. The same age- and sex-specific mortality schedule is used for both groups.

Baseline gross migration flows are classified by the migrant's own country of birth. They therefore directly describe first-generation movements but not the second-generation component of the starting population.

Key methodological considerations

- The second-generation population is constructed from official sources with different reference years, age groupings and statistical designs.
- For ages 75 and older, the observed second-generation relationship at ages 55-74 is extended to the older population.

- The foreign-born fertility rate serves as the available proxy for the combined first- and second-generation population.
- Migration flows describe movements by own birthplace and therefore directly represent the first-generation component.
- The construction covers the first and second generation.

Model outputs

- Starting migrant share: 16.5%
- Baseline tipping point above 50%: 2069
- Reverse tipping point below 5%: 2110

Principal sources

- Eurostat: Population by age and sex (https://ec.europa.eu/eurostat/databrowser/view/demo_pjan/default/table) and foreign-born population (https://ec.europa.eu/eurostat/databrowser/view/migr_pop3ctb/default/table), accessed 23 July 2026.
- Eurostat: Labour Force Survey population by migration status (https://ec.europa.eu/eurostat/databrowser/view/lfst_r_pgaum/default/table), accessed 23 July 2026.
- ISTAT: Annual Report 2022, Chapter 3 (https://www.istat.it/storage/rapporto-annuale/2022/Capitolo_3.pdf), accessed 23 July 2026.
- Eurostat: Fertility (https://ec.europa.eu/eurostat/databrowser/view/demo_facbc/default/table), deaths (https://ec.europa.eu/eurostat/databrowser/view/demo_magec/default/table), immigration (https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table) and emigration (https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table), accessed 23 July 2026.
- ISTAT: Demographic indicators 2024 (https://www.istat.it/wp-content/uploads/2025/03/Indicatori_demografici_2024.pdf) and Eurostat: life expectancy (https://ec.europa.eu/eurostat/databrowser/view/demo_mlexpec/default/table), accessed 23 July 2026.

13.9 Netherlands

Population reference year: 2026

Definition and model selection

The Netherlands follows the current Statistics Netherlands origin classification. A person has an origin outside the Netherlands when they or at least one parent were born abroad. Naturalised persons remain classified by origin. Persons born in the Netherlands whose parents were also born there are classified as Dutch origin even when migration occurred in an earlier generation.

This definition was selected because it is a directly published broad national classification available by individual age and sex and is supported by a comparatively well-aligned fertility series.

Population construction

The starting population refers to 1 January 2026 and is taken directly from Statistics Netherlands by individual age, sex and origin group.

Fertility, mortality and migration

Fertility is differentiated directly by the mother's origin under the Dutch classification. Deaths are also available by origin, sex and age, allowing group-specific mortality inputs rather than a purely proportional allocation.

Baseline gross migration flows for 2015-2024 are classified by the person's own country of birth. This flow classification does not identify Netherlands-born descendants in the same way as the starting-population definition.

Key methodological considerations

- Migration flows use own country of birth, while the population definition additionally incorporates parental birthplace.
- Persons born in the Netherlands to two Netherlands-born parents are classified as Dutch origin under the official system, including later descendants.
- The Dutch origin concept has a broader reach than definitions limited to foreign-born persons.

Model outputs

- Starting migrant share: 29.1%
- Baseline tipping point above 50%: 2058
- Reverse tipping point below 5%: 2080

Principal sources

- Statistics Netherlands: Person with an origin outside the Netherlands (<https://www.cbs.nl/nl-nl/onze-diensten/methoden/begrippen/persoon-met-een-herkomst-buiten-nederland>), accessed Sept 28, 2026.
- Statistics Netherlands: Population by age, sex and origin (<https://www.cbs.nl/nl-nl/cijfers/detail/85384NED>), accessed 28 September 2026.
- Statistics Netherlands: Fertility by mother's origin (<https://www.cbs.nl/nl-nl/cijfers/detail/85730NED>), accessed 28 September 2026.
- Statistics Netherlands: Deaths by origin, age and sex (<https://www.cbs.nl/nl-nl/cijfers/detail/85449NED>), accessed 28 September 2026.
- Statistics Netherlands: Life expectancy (<https://opendata.cbs.nl/#/CBS/nl/dataset/37360ned/table>), accessed 28 September 2026.
- Statistics Netherlands: Immigration and emigration by country of birth, age and sex (<https://www.cbs.nl/nl-nl/cijfers/detail/85468NED>), accessed 28 September 2026.

13.10 Norway

Population reference year: 2026

Definition and model selection

Norway combines Statistics Norway categories 2, 3, 5 and 6. These cover foreign-born persons with foreign-born parents, Norway-born persons with foreign-born parents, foreign-born persons with one Norway-born parent, and Norway-born persons with one foreign-born parent. Foreign-born persons with two Norway-born parents remain in the native population.

This model was selected to include observable mixed parental backgrounds instead of limiting the population to the narrower official immigrant and Norway-born-to-immigrant-parents categories.

Population construction

The starting population refers to 1 January 2026. The official immigrant and second-generation groups are available by individual age and sex. The additional mixed-background categories are available only as sex totals and are distributed by age using the closest observed immigrant and descendant profiles.

Fertility, mortality and migration

Fertility is differentiated by the mother's immigrant status and then applied to the broader population that also includes mixed-background categories. The same age- and sex-specific mortality schedule is used for both populations.

Baseline immigration and emigration use average gross flows for 2015-2024 classified by country of birth.

Key methodological considerations

- The additional mixed-background categories are distributed by age using the directly observed profiles of the closest official immigrant and descendant groups.
- Fertility and migration use the mother's immigrant status and the person's own birthplace respectively, while the starting population additionally incorporates parental birthplace.
- Foreign-born persons with two Norway-born parents remain in the native population under the selected parental-origin rule.
- The generational reach follows the parental information represented in the Statistics Norway categories.

Model outputs

- Starting migrant share: 28.2%
- Baseline tipping point above 50%: 2058
- Reverse tipping point below 5%: 2095

Principal sources

- Statistics Norway: Population by immigration category, age and sex (13055) (<https://www.ssb.no/en/statbank/table/13055/>), accessed Sept 28, 2026.
- Statistics Norway: Population by immigration category (05182) (<https://www.ssb.no/en/statbank/table/05182/>), accessed Sept 28, 2026.
- Statistics Norway: Fertility (12482) (<https://www.ssb.no/en/statbank/table/12482/>) and births (08555) (<https://www.ssb.no/en/statbank/table/08555/>), accessed Sept 28, 2026.
- Statistics Norway: Period life table (07902) (<https://www.ssb.no/en/statbank/table/07902/>), registered deaths (08393) (<https://www.ssb.no/en/statbank/table/08393/>) and life expectancy (05375) (<https://www.ssb.no/en/statbank/table/05375/>), accessed Sept 28, 2026.
- Eurostat: Immigration (https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table) and emigration (https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table) by country of birth, accessed Sept 28, 2026.

13.11 Portugal

Population reference year: 2024

Definition and model selection

Portugal uses foreign birth as its population definition and therefore represents the first generation. This definition is available with the age-and-sex detail required for the starting population and aligns with fertility and immigration data classified by country of birth. Comparable annual age-sex data for the second generation are not available. Emigration is based on citizenship, the complete published series available for that component.

The foreign-born model was therefore selected as the most consistent reproducible basis for Portugal. Its generational reach differs from the broader definitions used in several other countries.

Population construction

The 2024 total population is available by individual age and sex. The foreign-born population is available in age groups and is distributed to individual ages within those groups.

Fertility, mortality and migration

Fertility is differentiated by the mother's country of birth and is therefore aligned with the first-generation population definition. The same age- and sex-specific mortality schedule is used for both populations.

Immigration is classified by country of birth. The 2024 immigration structure combines the national total with the latest available birthplace composition. Emigration is classified by citizenship, the complete published series available for this component.

Key methodological considerations

- The foreign-born definition covers the first generation; Portugal-born descendants remain in the native population under this statistical axis.
- The 2024 immigration breakdown combines the national total with the latest available birthplace composition.
- Emigration is classified by citizenship, the complete published series available for this component.
- The foreign-born population is transferred from published age groups to individual ages within each group.

Model outputs

- Starting migrant share: 16.0%
- Baseline tipping point above 50%: 2064
- Reverse tipping point below 5%: 2132

Principal sources

- Eurostat: Population by age and sex (https://ec.europa.eu/eurostat/databrowser/view/demo_pjan/default/table) and population by country of birth (https://ec.europa.eu/eurostat/databrowser/view/migr_pop3ctb/default/table), accessed 15 June 2026.

- Pordata: Total fertility rate
(<https://www.pordata.pt/pt/estatisticas/populacao/nascimentos-e-fecundidade/indice-sintetico-de-fecundidade>), accessed 15 June 2026.
- Eurostat: Fertility by mother's age and country of birth
(https://ec.europa.eu/eurostat/databrowser/view/demo_facbc/default/table), accessed 15 June 2026.
- Eurostat: Deaths by age and sex
(https://ec.europa.eu/eurostat/databrowser/view/demo_magec/default/table), accessed 15 June 2026.
- Statistics Portugal: Complete life tables 2022-2024
(https://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_publicacoes&PUBLICACOESpub_boui=729186107&PUBLICACOESmodo=2), accessed 15 June 2026.
- Eurostat: Immigration by country of birth
(https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table)
and emigration by citizenship
(https://ec.europa.eu/eurostat/databrowser/view/migr_emi1ctz/default/table),
accessed 15 June 2026.

13.12 Spain

Population reference year: 2025

Definition and model selection

Spain publishes the relevant first- and second-generation information across separate population and survey sources rather than in one current age-sex table. The model combines foreign-born persons with Spanish-born persons who have at least one foreign-born parent.

This combined definition was selected because it is the broadest reproducible measure that can be aligned with the available Spanish population and survey data while retaining naturalised persons.

Population construction

The total population by individual age and sex refers to 1 January 2025. The foreign-born population is allocated from official age-sex data. The second generation is reconstructed from the 2021 ECEPOV microdata, shifted by cohort to 2025 and scaled to the published 2021 benchmark total.

Fertility, mortality and migration

Fertility is differentiated by the mother's country of birth. The foreign-born rate is applied to the combined first- and second-generation model population. The same age- and sex-specific mortality schedule is used for both groups.

Baseline immigration and emigration use average gross flows for 2015-2024 classified by country of birth.

Key methodological considerations

- The second-generation population is constructed from the 2021 ECEPOV structure and aligned with the 2025 population base.
- Published survey benchmarks anchor the level of the reconstructed component.
- Source age groups are transferred to individual ages within each group.
- The foreign-born fertility rate serves as the available proxy for the combined first- and second-generation population.
- The construction covers the first and second generation.

Model outputs

- Starting migrant share: 24.5%
- Baseline tipping point above 50%: 2057
- Reverse tipping point below 5%: 2081

Principal sources

- National Statistics Institute: Population table 56934 (<https://www.ine.es/jaxiT3/Tabla.htm?t=56934>), accessed 26 May 2026.
- National Statistics Institute: Population table 60128 (<https://www.ine.es/jaxiT3/Tabla.htm?t=60128>), accessed 26 May 2026.
- National Statistics Institute: ECEPOV (<https://www.ine.es/dynt3/inebase/index.htm?capsel=9570&padre=8981>), accessed 26 May 2026.

- Eurostat: Fertility
(https://ec.europa.eu/eurostat/databrowser/view/demo_facbc/default/table), deaths
(https://ec.europa.eu/eurostat/databrowser/view/demo_magec/default/table), immigration
(https://ec.europa.eu/eurostat/databrowser/view/migr_imm3ctb/default/table) and emigration
(https://ec.europa.eu/eurostat/databrowser/view/migr_emi4ctb/default/table), accessed 26 May 2026.
- Eurostat: Life expectancy
(https://ec.europa.eu/eurostat/databrowser/view/demo_mlexpec/default/table), accessed 26 May 2026.

13.13 Sweden

Population reference year: 2024

Definition and model selection

Sweden includes persons born abroad and persons born in Sweden with one or two foreign-born parents. This is broader than the standard official foreign-background category, which includes foreign-born persons and Sweden-born persons with two foreign-born parents.

This definition was selected because the Swedish register directly identifies persons born in Sweden with exactly one foreign-born parent. It therefore permits mixed parental backgrounds to be included directly without reconstruction.

Population construction

The starting population refers to 2024 and is taken directly from the Swedish population register by individual age, sex, own birthplace and parental birthplace category.

Fertility, mortality and migration

Fertility is differentiated by the mother's own country of birth. The foreign-born rate is applied to the broader model population, including Sweden-born descendants and mixed-background persons. The same age- and sex-specific mortality schedule is used for both populations.

Baseline gross flows for 2015-2024 come from Statistics Sweden and are classified by country of birth. The official series includes the register adjustments recorded in 2023 and 2024; these observations remain in the ten-year average.

Key methodological considerations

- Fertility and migration are classified by own birthplace, while the starting population additionally includes Sweden-born descendants.
- The official migration series includes the register adjustments recorded in 2023 and 2024; these observations remain in the ten-year average.
- The generational reach follows the parental birthplace information published in the Swedish register.

Model outputs

- Starting migrant share: 35.4%
- Baseline tipping point above 50%: 2046
- Reverse tipping point below 5%: 2099

Principal sources

- Statistics Sweden: Population by Swedish/foreign background (https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_BE_BE0101_BE0101Q/UtlSvBakgFin/), accessed 28 May 2026.
- Statistics Sweden: Fertility (https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_BE_BE0401_BE0401F/BefProgFruktTot24/), accessed 28 May 2026.
- Statistics Sweden: Deaths (https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_BE_BE0101_BE0101I/DodaHandelseK/), accessed 28 May 2026.

- Statistics Sweden: Life expectancy
(https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_BE_BE0101_BE0101I/Medellivsl/), accessed 28 May 2026.
- Statistics Sweden: Immigration and emigration by country of birth
(https://www.statistikdatabasen.scb.se/pxweb/en/ssd/START_BE_BE0101_BE0101J/ImmiEmiFod/), accessed 28 May 2026.

13.14 Switzerland

Population reference year: 2024

Definition and model selection

For persons aged 15 or older, Switzerland follows the Federal Statistical Office's broad population-with-a-migration-background concept, covering the first and second generation. For ages 0-14, the baseline uses directly observable register variables and includes children born abroad or born in Switzerland without Swiss citizenship. Swiss-born Swiss citizens with two foreign-born parents consequently remain in the native population within this age range.

The model uses the official broad definition from age 15 and a directly observable register classification for children. This keeps the baseline tied to current data for both age ranges.

Population construction

The total population by individual age and sex comes from STATPOP for 2024. For ages 15 and older, migration-background shares from the Swiss Labour Force Survey are applied to the register population. For ages 0-14, the division is constructed directly from STATPOP using own birthplace and citizenship.

Fertility, mortality and migration

Fertility is differentiated by the mother's citizenship and is applied to populations defined more broadly by migration status. The same age- and sex-specific mortality schedule is used for both populations.

Baseline gross flows for 2015-2024 are classified by country of birth. The principal Swiss migration tables supply immigration and emigration by birthplace, sex and age.

Key methodological considerations

- Below age 15, Swiss-born Swiss citizens with two foreign-born parents remain in the native population under the register-based rule.
- The construction combines the survey-based national migration-status definition from age 15 with register variables below age 15.
- Fertility is differentiated by citizenship, while the population definition from age 15 also includes naturalised persons and Swiss-born descendants.
- Migration flows use own birthplace, the official variable available for cross-border movements.

Model outputs

- Starting migrant share: 39.5%
- Baseline tipping point above 50%: 2038
- Reverse tipping point below 5%: 2088

Principal sources

- Federal Statistical Office: Population by migration status (<https://www.bfs.admin.ch/bfs/en/home/statistics/population/migration-integration/by-migration-status.html>), accessed 26 May 2026.
- Federal Statistical Office: STATPOP population tables (<https://www.pxweb.bfs.admin.ch/pxweb/en/>), accessed 26 May 2026.
- Federal Statistical Office: Fertility (<https://www.bfs.admin.ch/bfs/en/home/statistics/population/births-deaths/fertility.html>), accessed 26 May 2026.
- Federal Statistical Office: Period life table (https://www.pxweb.bfs.admin.ch/pxweb/en/px-x-0102020300_102/px-x-0102020300_102/), accessed 26 May 2026.
- Federal Statistical Office: Immigration by country of birth (https://www.pxweb.bfs.admin.ch/pxweb/en/px-x-0103020200_103/px-x-0103020200_103/) and emigration by country of birth (https://www.pxweb.bfs.admin.ch/pxweb/en/px-x-0103020300_103/px-x-0103020300_103/), accessed 26 May 2026.

13.15 United Kingdom

Population reference years: 2021 for England and Wales and Northern Ireland; 2022 for Scotland

Definition and model selection

The United Kingdom uses census ethnicity. White British - including the corresponding Scottish categories - and White Irish persons form the native population, while all other ethnic groups, including White Other, form the migrant population. In Northern Ireland, the available White category is treated as native. The definition can retain migration-related group distinctions across several generations.

The ethnicity model was selected because it is available across the UK censuses and includes later-generation group continuity that a foreign-born-only definition would omit.

Population construction

The starting population combines the 2021 censuses for England and Wales and Northern Ireland with the 2022 Scottish census. England and Wales provide detailed ethnicity data by age and sex. Scottish age groups are distributed to individual ages. For Northern Ireland, minority shares from broader age groups are applied to the detailed population structure.

Fertility, mortality and migration

Fertility is differentiated by the mother's country of birth and applied to ethnicity-defined populations. The same age- and sex-specific mortality schedule is used for both groups.

Baseline migration uses the official long-term international migration series for 2015-2024 classified by nationality. Where the longer series does not provide a sex breakdown, the distribution observed in 2022-2024 is applied. The post-2020 movements remain part of the observed average.

Key methodological considerations

- The model combines census ethnicity with fertility by country of birth and migration by nationality, the official variables available for the respective components.

- The starting population combines the 2021 censuses for England and Wales and Northern Ireland with the 2022 Scottish census.
- Northern Ireland's broader ethnicity age groups are aligned with its detailed population structure.
- Ethnicity is self-reported and can retain migration-related group distinctions across more generations than birthplace-based definitions.
- The observed 2015-2024 migration average includes the post-2020 movements recorded in the official series.

Model outputs

- Starting migrant share: 23.1%
- Baseline tipping point above 50%: 2053
- Reverse tipping point below 5%: 2095

Principal sources

- Office for National Statistics: Ethnic group by age and sex, Census 2021 (<https://www.ons.gov.uk/datasets/RM032/editions/2021/versions/1>), accessed 28 May 2026.
- Scotland's Census (<https://www.scotlandscensus.gov.uk/search-the-census/>) and Northern Ireland Census 2021 (<https://www.nisra.gov.uk/statistics/census-2021/census-2021-results>), accessed 28 May 2026.
- Office for National Statistics: Parents' country of birth (<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/parentscountryofbirthenglandandwales/2021>), accessed 28 May 2026.
- Office for National Statistics: Long-term international migration (<https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/longterminternationalimmigrationemigrationandnetmigrationflowsprovisional>), accessed 28 May 2026.
- Office for National Statistics: Single-year life tables (<https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/datasets/singleyearlifetablesukandconstituentcountries>), accessed 28 May 2026.

References

Country-specific statistical sources are listed in the respective country chapters and are not repeated here.

Scientific and methodological literature

- Aubry, B., & Tribalat, M. (2011). Les concentrations ethniques en France: évolution 1968-2005. *Espace populations sociétés*, 2011(2).
<https://doi.org/10.4000/eps.4663>
- Card, D., Mas, A., & Rothstein, J. (2008). Tipping and the dynamics of segregation. *Quarterly Journal of Economics*, 123(1), 177-218.
<https://doi.org/10.1162/qjec.2008.123.1.177>
- Coleman, D. A. (2006). Immigration and ethnic change in low-fertility countries: A third demographic transition. *Population and Development Review*, 32(3), 401-446. <https://doi.org/10.1111/j.1728-4457.2006.00131.x>
- Craig, M. A., & Richeson, J. A. (2014). On the precipice of a majority-minority America. *Psychological Science*, 25(6), 1189-1197.
<https://doi.org/10.1177/0956797614527113>
- Dancygier, R. M. (2017). *Dilemmas of inclusion: Muslims in European politics*. Princeton University Press.
- Dinesen, P. T., Schaeffer, M., & Sønderskov, K. M. (2020). Ethnic diversity and social trust. *Annual Review of Political Science*, 23, 441-465.
<https://doi.org/10.1146/annurev-polisci-052918-020708>
- Kende, J., Jacobs, D., Green, E. G. T., Tropp, L. R., Huo, Y. J., Dovidio, J. F., Jiménez, T. R., Schildkraut, D. J., & Klein, O. (2024). Integration policies shape ethnic-racial majorities' threat reactions to increasing diversity. *Science Advances*, 10(22), eadk8556. <https://doi.org/10.1126/sciadv.adk8556>
- Leslie, P. H. (1945). On the use of matrices in certain population mathematics. *Biometrika*, 33(3), 183-212. <https://doi.org/10.1093/biomet/33.3.183>
- Levy, M., & Myers, D. (2021). Racial projections in perspective: Public reactions to narratives about rising diversity. *Perspectives on Politics*, 19(4), 1147-1164.
<https://doi.org/10.1017/S1537592720003679>

United Nations sources

- United Nations General Assembly. (1966a). International Covenant on Civil and Political Rights. General Assembly Resolution 2200A (XXI), 16 December 1966. <https://2covenants.ohchr.org/About-ICCPR.html>
- United Nations General Assembly. (1966b). International Covenant on Economic, Social and Cultural Rights. General Assembly Resolution 2200A (XXI), 16 December 1966. <https://2covenants.ohchr.org/About-ICESCR.html>
- United Nations General Assembly. (1992). Declaration on the Rights of Persons Belonging to National or Ethnic, Religious and Linguistic Minorities. General Assembly Resolution 47/135, 18 December 1992. <https://www.ohchr.org/en/instruments-mechanisms/instruments/declaration-rights-persons-belonging-national-or-ethnic>
- United Nations Population Division. (2000). Replacement Migration: Is It a Solution to Declining and Ageing Populations? ESA/P/WP.160. United Nations. <https://digitallibrary.un.org/record/412547>

Institutional and programmatic sources

Sellner, M. (2024). Remigration: Ein Vorschlag (3rd ed.). Verlag Antaios.

Sellner, M. (2025). Strategie der Sammlung. Manuscript.

Historical statistical sources cited in Chapter 12

- INSEE. (2023). Histoire des migrations et diversité des origines géographiques des immigrés. In Immigrés et descendants d'immigrés en France, édition 2023. <https://www.insee.fr/fr/statistiques/6793226>
- Statistisches Bundesamt. (2004). Datenreport 2004: Zahlen und Fakten über die Bundesrepublik Deutschland (2nd updated ed.). Bundeszentrale für politische Bildung. https://www.destatis.de/GPStatistik/servlets/MCRFileNodeServlet/DEHeft_derivate_00018262/Datenreport2004.pdf
- Statistics Austria. (2021). Migration & Integration: Zahlen, Daten, Indikatoren 2021. https://www.statistik.at/fileadmin/publications/Migration_und_Integration_2021.pdf
- Wanner, P. (2001). Einwanderung in die Schweiz: Demografische Situation und Auswirkungen. Swiss Federal Statistical Office. <https://www.bfs.admin.ch/bfsstatic/dam/assets/337505/master>

Institute for Remigration
As of October 3, 2026

contact@remigration-institute.com

remigration-institute.com

x.com/remigrationinst

instagram.com/remigrationinst