

Population statistics and sources guide

A comparison of the different types of population estimate that are published on the ONS website or planned for future publication. Includes information about whether these are official estimates of the population or used only for wider research, as well as the sources, coverage and main uses and comparability issues for the estimate.

Contact:
Nigel Henretty
pop.info@ons.gov.uk
+44 1329 447934

Release date:
17 November 2023

Next release:
To be announced

Table of contents

1. [Employee population by nationality](#)
2. [Population totals from Labour Force Survey](#)
3. [Census 2021](#)
4. [Admin-based population estimates \(ABPE\) from the Dynamic Population Model \(DPM\) – official statistics in development](#)
5. [Population totals from Annual Population Survey](#)
6. [Mid-2021 population estimates](#)
7. [Population by country of birth and nationality](#)
8. [Mid-2022 population estimates and revised mid-2021 population estimates](#)
9. [Rebased mid-2012 to mid-2020 population estimates](#)
10. [Related links](#)

1 . Employee population by nationality

Type of estimate

New experimental statistics about the population or supporting data and research.

Release information

- Data sources: Real-Time Information (RTI) and nationality from Migrant Worker Scan (MWS).
- Latest reference period: December 2022.
- Geographical coverage: UK.
- Lowest geographical breakdown: regions – Nomenclature Units for Territorial Statistics Level 1.
- Population definition: employees.
- Publication type: research.

Uses and guidance

Provides information on the number of employees to guide decisions on the need for and methods used in future reweighting exercises of the Labour Force Survey (LFS). The different definition to other population estimates means it is not comparable with official estimates of the population.

The estimates published on 15 March 2022 provide an update to the ad-hoc estimates published in March 2021. These are not indicative migration or population estimates and should not be used as such. Reweighted LFS estimates were published on 14 June 2022 for periods from January to March 2020, incorporating the latest RTI by nationality (from MWS) data. More information on this is available in the [Impact of reweighting on Labour Force Survey key indicators article](#).

Publication

[Employments from Pay As You Earn Real Time Information: Ad hoc estimates of payrolled employees by NUTS1 region and nationality, seasonally adjusted](#). Published 23 March 2023.

2 . Population totals from Labour Force Survey

Type of estimate

Labour Force Survey (LFS) population estimates, used for official Labour Market outputs.

Release information

- Data sources: Labour Force Survey.
- Latest reference period: published monthly.
- Geographical coverage: UK.
- Lowest geographical breakdown: regions – International Territorial Level 1.
- Population definition: usual residents of households.
- Publication type: official Labour Market estimates.

Uses and guidance

The main use of populations within the Labour Force Survey data is to provide contextual comparisons of the labour markets for different areas, and for use as a denominator for calculating rates from within the published LFS datasets. They are not comparable with the official mid-year population estimates.

The population totals used for the LFS estimates and the adjusted experimental estimates use projected growth rates from Real-Time Information (RTI) data for EU and non-EU populations based on 2021 patterns. This means the total population used does not take into account any changes in migration, birth rates or death rates, and so on, since June 2021. As such, estimates may be under or overestimating the true values.

Publication

These statistics are used in the production of labour market statistics, but do not currently form a separate publication of population estimates from the Labour Force Survey.

3 . Census 2021

Type of estimate

Official statistics from the 2021 Census, giving a picture of the population as at March 2021.

Release information

- Data sources: 2021 Census.
- Latest reference period: 21 March 2021.
- Geographical coverage: England, and Wales.
- Lowest geographical breakdown: Output area and postcodes.
- Population definition: all resident people on Census night – households and communal establishments.
- Publication type: official estimate of population as at 21 March 2021.

Uses and guidance

Census 2021 is our best estimate of the population of England and Wales as on Census Day (21 March 2021). It underpins subsequent official mid-year population estimates.

Publication date

On 28 June 2022 we released the [First results from Census 2021 in England and Wales](#) and two statistical bulletins, one focused on England and Wales and one focused on Wales, to explain these data. Further [census data and analysis](#) have been released regularly.

4 . Admin-based population estimates (ABPE) from the Dynamic Population Model (DPM) – official statistics in development

Type of estimate

New [official statistics in development](#) about the population, supporting data and research.

Release information

- Data sources: predominantly administrative data.
- Latest reference period: mid-2022.
- Geographical coverage: England and Wales.
- Lowest geographical breakdown: local authority district level.
- Population definition: target is usual residents of households and communal establishments.
- Publication type: official statistics in development.

Uses and guidance

This research article provides updated admin-based population estimates (ABPE) for all local authorities in England and Wales for mid-2021 and mid-2022, using the Dynamic Population Model (DPM).

ABPE produced by the DPM provide timelier population estimates than our current methods, using a range of sources to estimate population counts and the components of population change. One of these sources is the Statistical Population Dataset (SPD). In February 2023, we [published comparisons of SPDv4 with Census 2021 estimates](#).

We continue to develop the SPD as an approximate of the usual resident population by combining administrative sources and applying a set of business rules. There are no plans to publish these in the future.

The DPM can adapt to quality issues in our underlying data sources, drawing strength across data sources and balancing information from population stocks and flows based on their respective measures of uncertainty.

More timely population estimates allow decision-makers to quickly see when things have changed, to ensure that public services are targeted to the right population groups in the right places. This is important to understand as we emerge from the coronavirus pandemic, and since our departure from the EU.

ABPE presented in this article are from research into methods that differ to those currently used for population and migration statistics. We continue to refine and evaluate our methods for producing ABPE. Therefore, these statistics have limited use for decision-making. However, ABPE demonstrate the potential to produce more timely and coherent estimates of the population compared with our current approaches.

The Office for National Statistics (ONS) will seek National Statistics status when the methods for producing ABPE reach an appropriate standard of quality and with regard to responses to the 2023 consultation with users.

Publication date

On 27 June 2023, we published [updated ABPE for all local authorities in England and Wales, mid-2021 to mid-2022](#). The article discusses what ABPE show about population change in England and Wales, as well as an overview of developments to the DPM.

Alongside this, we also published an [update on the data and methodology used by the DPM to produce ABPE](#).

We plan to publish our next release of ABPE in December 2023, which will include provisional ABPE for mid-2023.

5 . Population totals from Annual Population Survey

Type of estimate

Annual Population Survey (APS) population estimates, used for official Labour Market outputs.

Research information

- Data sources: Annual Population Survey.
- Latest reference period: published quarterly.
- Geographical coverage: UK.
- Lowest geographical breakdown: local authority district.
- Population definition: usual residents of households.
- Publication type: official Labour Market estimates.

Uses and guidance

The main use of populations within the APS data is to provide contextual comparisons of the labour markets for different areas, and for use as a denominator for calculating rates from within the published APS datasets. They are not comparable with the official mid-year population estimates and so, although they feed into the production of other official statistics, they are not an official measure of the population themselves.

The population totals used for the APS estimates and the adjusted experimental estimates use projected growth rates from Real-Time Information (RTI) data for EU and non-EU populations based on 2021 patterns. This means the total population used does not take into account any changes in migration, birth rates or death rates, and so on, since June 2021. As such, estimates may be under or overestimating the true values.

Publication

These statistics are used in the production of labour market statistics, but do not currently form a separate publication of population estimates from the Annual Population Survey.

6 . Mid-2021 population estimates

Type of estimate

Official statistics from 2021-based population and migration statistics.

Release information

- Data sources: 2021 Census, births, deaths and international migration estimates.
- Latest reference period: mid-2021 (30 June 2021).
- Geographical coverage: UK.
- Lowest geographical breakdown: local authority district.
- Population definition: usual residents of households and communal establishments.
- Publication type: official estimate of the population as at 30 June 2021.

Uses and guidance

This provides the official annual estimates of the population. They represent the highest quality annual estimates consistent with previous mid-year estimates produced from the traditional cohort component method of population estimates, underpinned by the 2021 Census for England, Wales and Northern Ireland, and rolled forward from the 2011 Census for Scotland.

These estimates are useful for planning and policy purposes as well as for use in onward analysis, such as for sampling and weighting surveys and use in population and household projections.

Publication date

[Population estimates for the UK, England, Wales, Scotland and Northern Ireland: mid-2021](#). Published 21 December 2022.

7 . Population by country of birth and nationality

Type of estimate

Official statistics about population and migration statistics.

Release information

- Data sources: Annual Population Survey (APS).
- Latest reference period: year ending June 2022.
- Geographical coverage: UK.
- Lowest geographical breakdown: local authority district.
- Population definition: usual residents of households.
- Publication type: official estimate of the population when broken down by country of birth and nationality.

Uses and guidance

The Annual Population Survey (APS) is not designed to measure long-term international migration flows but does give insights into changes and size of the non-UK born and non-UK national population. The population estimates in the statistical bulletin that accompanies the publication are referred to as “stocks”, but it is not possible to directly compare stocks from the APS with estimates of migration flows. These estimates are also not comparable with the population totals in the official mid-year population estimates.

Publication date

Discontinued. Please see the [statement on the Population of the UK by Country of Birth and Nationality series](#) published on 27 October 2022.

Future developments

We are [transforming the way we produce population and migration statistics](#) to make best use of all available data. On 24 November 2022, we published provisional measures that roll forward the Census 2021 data in our [international migration research, progress update article](#). This produces updated levels of non-UK born living in England and Wales in June 2022.

We planned to update these with our most up-to-date estimates of net migration and to provide an overall UK estimate. National Records Scotland have yet to publish results from the Scottish Census on the non-UK born population, so we are currently unable to provide an update for the UK.

In the future, with the support of our partners, including all devolved administrations, our ambition is to produce a UK estimate of the non-UK born population. Our aim is to publish estimates of the non-UK born population that are consistent with overall population estimates.

8 . Mid-2022 population estimates and revised mid-2021 population estimates

Type of estimate

Official statistics from 2021-based population and migration statistics.

Release information

- Data sources: 2021 Census, births, deaths and international migration estimates.
- Latest reference period: mid-2022 (30 June 2022).
- Geographical coverage: England and Wales.
- Lowest geographical breakdown: local authority district.
- Population definition: usual residents of households and communal establishments.
- Publication type: official estimate of the population as at 30 June 2022.

Uses and guidance

This provides the official annual estimates of the population. They represent the highest quality annual estimates consistent with previous mid-year estimates produced from the traditional cohort component method of population estimates, underpinned by the 2021 Census for England and Wales.

These estimates are useful for planning and policy purposes as well as for use in onward analysis, such as for sampling and weighting surveys and use in population and household projections.

Publication date

[Population estimates for England and Wales: mid-2022](#). Published 23 November 2023.

9 . Rebased mid-2012 to mid-2020 population estimates

Type of estimate

Official statistics from 2021-based population and migration statistics.

Release information

- Data sources: 2011 Census, 2021 Census, births, deaths and international migration estimates.
- Latest reference period: mid-2020.
- Geographical coverage: England and Wales.
- Lowest geographical breakdown: local authority district.
- Population definition: usual residents of households and communal establishments.
- Publication type: official statistics.

Uses and guidance

These are the best population estimates to use for a comparable time-series of estimates with mid-2021 and later estimates.

Publication date

[Rebasing of mid-year population estimates following Census 2021, England and Wales](#). Published 23 November 2023.

10 . Related links

[What's coming up on population and migration statistics](#)

Article | Released 17 November 2023

An overview of upcoming population and migration publications as we make improvements to how we measure population and migration.

[Population and migration statistics transformation in England and Wales, research overview: 2023](#)

Article | Released 26 June 2023

A summary of our research on the future of population and migration statistics in England and Wales, underpinning our consultation on the proposed new system.

[Population and migration statistics transformation in England and Wales, technical topic guide: 2023](#)

Methodology | Released 26 June 2023

Supplementary information on research using administrative data for the future of population and migration statistics.