Article

Transformation of the population and migration statistics system: overview

Latest update on our population and migration statistics transformation journey.

Contact:
Ann Blake
pop.info@ons.gov.uk
+44 (0)1329 444661

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1 . About our transformation

This page provides an overview of our transformation of population and migration statistics to put administrative data at the core of what we do. This includes an update on our latest progress alongside links to all our related research reports. Your [feedback](#) on our latest update would be valuable.

2 . Our latest updates

Migration statistics tables – our plans for November

On 9 October 2019, we published a call for feedback on our proposed approach to updating the annual migration tables, which are usually released alongside the November Migration Statistics Quarterly Report (MSQR). This follows the preliminary adjustments made in the [August 2019 MSQR](#), where we were only able to adjust the highest-level tables because of further work being needed to develop a methodology for the more detailed data.

Many thanks for your feedback. We received a range of views, which we reviewed alongside the feasibility of applying an adjustment to the annual tables. Overall, users gave us a clear steer towards continuing to publish the tables in November so that the latest data would be available, even if we could not yet apply an adjustment to them. Our plan is therefore to publish the annual tables with unadjusted data on 28 November 2019 and to revise these tables when a full and final set of adjustments can be applied. This is likely to be in summer 2020.

We will make it clear to users that adjustments have not yet been applied to the annual tables in the November MSQR, signpost them towards the latest adjusted data and highlight that these data are still provisional. This decision does not impact on our regular quarterly migration tables, where we will continue to apply the adjustment to our long-term migration estimates (Tables 1 and 2) alongside publishing unadjusted International Passenger Survey data (Tables 3 and 4).

3 . Our mission – why transform?

It is our mission to provide the best insights on population and migration using a range of new and existing data sources to meet the needs of our users. This is increasingly important in a rapidly changing policy context, where we know our users need better evidence to support decision-making at both national and local levels.

As set out in our previous work on the [Administrative Data Census](#) project, the current population system is heavily reliant on the decennial census. While this provides granular data at the lowest levels of geography every 10 years, it delivers less detail throughout the interim years. Additionally, the quality of our population estimates declines as we move further away from the census year.

We have also long acknowledged that the International Passenger Survey (IPS), which underpins our [existing international migration estimates](#), has been stretched beyond its original purpose and that we need to consider all available sources to fully understand international migration.

Enabled by data-sharing powers in the [Digital Economy Act 2017](#) and guided by our [data security principles](#), we are therefore seizing the opportunity to make use of more data to give us a much richer understanding of how our population is changing.

4 . Why are these statistics so important?

Population and migration statistics underpin a wide variety of other statistics (such as unemployment rates), support a vast range of decisions and inform public debate. For example, the ability to forecast pensions, make decisions about local services (such as the number of school places or the provision of health services for an ageing population) and decisions about where to site new businesses.

In a rapidly changing policy context, we also know that our users are highly interested in how migration patterns are changing and what this means for society and the economy. For example, the contribution and impact that migration has on public services – such as education, healthcare – and on the UK labour market. This includes both the national picture but also what is happening at a more detailed regional and local level.

It is therefore essential that our population and migration statistics are robust, timely and meet this broad range of user needs.

5 . How are we transforming population and migration statistics?

Working in partnership across the Government Statistical Service (GSS), we are putting administrative data at the core of our population and migration statistics.

Using our data-sharing powers through the Digital Economy Act 2017, we have been progressing research into how we can link a range of government data sources to build an integrated system for measuring population and migration.

In January 2019, we published a research engagement report that updated users on our ambition for putting administrative data at the core of our statistics by 2020, dependent on acquiring access to the further data sources needed to fill gaps in coverage.

Since January 2019, we have made further progress towards our ambition. For population statistics, this includes our June 2019 update on developing administrative data-based population estimates (ABPEs), where our latest rules show promise for removing patterns of over-coverage seen in previous research. For migration statistics, this includes our improvements based on a preliminary adjustment using administrative data from the Home Office and the Department for Work and Pensions and our move to reclassify these statistics as Experimental Statistics to support ongoing development and innovation.

Whilst we continue to make progress in embedding more administrative data in our statistics, we know there is more we need to do to put administrative data at the core of these. Access to data continues to be one of our main challenges and we do not yet have all the sources we need to deliver a fully integrated administrative data-based statistics system. These are needed to fill important gaps in coverage for groups such as EU migrants, where our available data sources are more limited.

We are continuing to make important steps in addressing gaps in coverage – for example, collaborating with the Home Office and the Department for Work and Pensions to explore how further data could support us in measuring EU migration and improving our adjustment method. However, there are a range of factors we need to take into account and we are committed to meeting high standards in the data we use and how we incorporate that data in producing official statistics.

Data security is paramount. As we harness the power of an increasing volume and variety of data, we must ensure that we continue to protect and secure this appropriately. We are therefore continuing to work in close partnership across the Government Statistical Service (GSS) to ensure we apply appropriate safeguards and have an agreed approach to how we manage and share data.

Data quality is also crucial to the success of our transformation work. Once we have acquired further administrative data sources, we also need time to fully understand their strengths and limitations and assess the best way to integrate them into our statistics system. Our move to reclassify migration statistics as [Experimental Statistics](#) supports this process, by clearly signalling to our users how we are developing and evaluating our data sources and methods.

Our transformation journey

Our ambition – as set out in our [January 2019 report](#) – has been to put administrative data at the core of both population and migration statistics in 2020. However, based on our latest progress on data access, we have revised our plans to focus on the priority areas where we can best address user needs in the short-term, continuing to embed more administrative data as this becomes available and as our research progresses.

In 2020, we now plan to focus on delivering improved migration statistics by refining our preliminary adjustment methodology. We will then build on this – alongside continuing our ABPE development – to deliver improvements to population statistics from 2021 instead. This in turn will support the delivery of the best quality census outputs in 2022 and the delivery of a fully transformed population and migration statistics system based on integrated administrative data by 2023.

A summary of the milestones on our transformation journey are set out in the following table.

Date	What we aim to deliver
summer 2020	Improved international migration statistics (UK) by refining the adjustments made to our estimates using administrative data sources.
	Continued research into our approach for delivering population estimates based on more fully integrated administrative data sources (known as admin-based population estimates (ABPEs).
autumn 2020	Research to assess the impact of including the adjustments made to international migration statistics in the mid-year population estimates for England and Wales (reference year: 2019).
2021	Improved population statistics (England and Wales) by embedding adjusted international migration figures into our mid-year population estimates (reference year: 2020).
	Continued research into our approach for delivering ABPEs (reference year: 2020).
2022	2021 Census statistics published.
	Improved population and migration statistics based on our ABPEs approach (reference year: 2021), including an understanding of differences when compared with census outputs.
2023	Deliver transformed population and migration statistics system – informing the recommendation from the National Statistician on the future of the census.

This transformation journey – alongside the work to transform surveys across the Office for National Statistics (ONS) – also supports the ambition that "censuses after 2021 will be conducted using other sources of data" and importantly that the outputs we publish should be coherent and meet the needs of our users. This is essential to providing evidence to inform the recommendation to the UK government in 2023 about the future of population and housing censuses in England and Wales.

We have taken the decision not to benchmark the administrative data census outputs with the outputs from the 2021 Census. Instead, we will ensure that we use the best available sources to produce the best-possible outputs from the census – using our understanding of the differences between administrative data and the census, and the strengths of all data sources. We will iteratively develop our transformed population and migration statistics system, taking on board feedback from users and making the best use of new data and new methods as they become available. We will rigorously quality assure new methods and share the impact of any changes made, demonstrating the benefits and improvements before implementing them.

Alongside supporting the decision on the future of the census, our transformation journey also plays an important role in supporting our progress in measuring the global Sustainable Development Goal (SDG) indicators in the UK. Migratory status is one of the standard disaggregations required by the United Nations to measure and report on the global SDGs and our transformation work will help to improve the evidence base by providing more granular data in future.

What is happening in the next year?

To keep users of population and migration statistics updated on our progress towards these milestones, we plan to publish regular updates over the next year.

The following table summarises our upcoming publications and focuses on migration statistics given our aim to deliver further improvements to these in 2020. We plan to make these improvements when we are confident that it is the right time to do so, based on the best available data and taking on board feedback from our users. This includes extending our current EU adjustment (which applies up to 2016) as soon as possible, as user feedback shows this is a priority. However, we need to bring in further data to do this and so we are working across the Government Statistical Service (including with the Home Office and the Department for Work and Pensions) to assess what sources will be available to help us refine our methods.

Date	Publication
28 November 2019	November Migration Statistics Quarterly Report (MSQR) – we will use the same preliminary adjustment methodology applied in the August MSQR. Note: following user feedback, we will publish our annual statistics tables as part of the MSQR but these will not yet include adjustments as we are completing further development work.
spring 2020	February MSQR – we will update our adjustment methodology as appropriate, using the best available data. If we have sufficient understanding of new data sources, we will extend our EU adjustment beyond 2016. However, the work could also extend longer and be delivered in the May MSQR.
	Concepts and definitions for international migration statistics – we plan to publish an update and seek feedback on our research into how we define and measure migration (as set out in our framework, see Section 5). This includes our progress in using available administrative data to measure long-term migration and consider alternative definitions. This research feeds into our plans for transforming migration statistics and we will ensure it feeds in to our official estimates when appropriate.
	Update on admin-based population estimates (ABPEs) – we plan to publish an update on how we are developing ABPEs and the design for our hybrid stocks and flows approach.
	Impact of registration lags in admin data on mid-year population estimates – we plan to publish research exploring the impact of lags in administrative data registrations on the distribution of international immigration in the mid-year population estimates.
summer 2020	May MSQR – we will continue to update our adjustment methodology using the best available data, including updating on our progress on extending the EU adjustment.
	August MSQR – we expect to publish our completed adjustment methodology and a more fully revised set of annual tables, based on the best available data.
autumn 2020	Impact of August 2020 MSQR adjustments on mid-year population estimates – we plan to publish research into how the adjustments made to international migration statistics in August 2020 will impact on mid-year population estimates for England and Wales.

Throughout the year, we will continue to work closely with the Office for Statistics Regulation (OSR) to update them on our progress and to review when we will reapply for National Statistics status for ONS international migration statistics.

6 . What have our users told us?

Our users sit at the heart of our [framework for transforming these statistics](#) (Figure 1), which describes the important questions we need to answer to meet their needs.

Figure 1: Our framework for transforming population and migration statistics

To meet our users' needs we need to provide coherent statistics on the size (or stock) of the population and how it changes over time (flows, both nationally and locally). We also need to tell a clear story about what is contributing to this change and show how different groups in the population impact on society and the economy, including on our workforce, communities and public services such as the NHS and schools. This needs to be recognised as the story that is being experienced by our users.

Our users have also told us that they want us to deliver these statistics frequently and in a timely manner to be able to make evidence-based decisions. Our statistics also need to be relevant in a rapidly changing society, and we need to be able to report on their quality.

[Feedback gathered](#) shows support for how we are reviewing current data sources and looking to maximise the value of administrative data in future, whilst challenging us to provide more evidence to ensure we instil confidence in these statistics.

To make sure that our transformation journey continues to be as open and transparent as possible, we will:

- regularly publish research and methods as we develop them

- continue to present analysis showing the coherence between different sources of information

- engage with our users and stakeholders, seeking regular feedback

- use our research findings, the best available data and methods, and the feedback from users to make decisions about which improvements to make each year

- implement changes to our statistics when and where appropriate, clearly communicating these changes to users in advance of making them

How can users get in touch?

We welcome your feedback on this update and on our transformation journey. If you would like to get in touch, please contact us by email at pop.info@ons.gov.uk.

We have recently presented our research at the 2019 Royal Statistical Society Conference, the British Society for Population Studies Conference and the Migration Statistics User Forum. You can also see us at the upcoming [International Conference on Administrative Data Research](#).

We are also working with local authorities, experts from academia and other government departments through invited engagement groups to help shape and quality-assure our work. Additionally we are engaging with other national statistical institutes (NSIs) across the UK and internationally to share experiences and seek feedback on our plans.

7 . More about our transformation journey

- For a comprehensive list of descriptions for the names and terms used in our outputs, see our glossary.

- Research outputs provide more information on using administrative data to produce population statistics.

- Previous research using administrative data to produce estimates on the size of the population (previous admin-based population estimates (ABPEs)) is available.

- Our August 2017 report highlights our progress towards developing a better understanding of student migration to and from the UK.

- In May 2018, we published an update on the migration statistics transformation programme.

- Our report on international migration data sources sets out how we are using Home Office administrative data to further our understanding of international migration.

- Our January 2019 report, Update on our population and migration statistics transformation journey: a research engagement report, updates users on our progress and seeks feedback on our future plans.

- In May 2019, we published our research into international migration and the education sector, exploring what current data sources tell us about school places, pupil attainment and the number of teaching staff in schools.

- In June 2019, we published our analysis using activity-based rules and records from single and linked data sources to develop our approach for producing admin-based population estimates. Initial rules have been combined to produce the first admin-based population estimates (ABPE) using this approach. Alongside this, we also published a short note outlining our discussions on the measurement of illegal migration.

- On 15 August 2019, we published our analysis plans on the contribution and impact of international migration on the health sector. Alongside this, we published a report on international migration and the healthcare workforce and our analysis of migrant labour force within the tourism industry.

- On 21 August 2019, we published our latest research into understanding different migration data sources, setting out how we can draw on combined strengths of survey and administrative data sources to provide our best assessment yet of international migration. This research was then reflected in the August Migration Statistics Quarterly Report for the first time.

8 . More about our official population and migration statistics

- For national and subnational mid-year population estimates for the UK and its constituent countries, see the Population estimates for the UK, England and Wales, Scotland and Northern Ireland statistical bulletins.

- All information and publications on international migration produced by the Office for National Statistics (ONS) are available on our International migration page.

- All information and publications on the size of the population produced by the ONS are available on our Population estimates page.

- You can find more information on the main concepts and definitions used for migration, country of birth and citizenship across the Government Statistical Service (GSS) in the relevant GSS harmonisation guidance.