

Article

Improving our travel and tourism statistics: February 2025 update

Update on our progress towards planned improvements to our travel and tourism statistics, including official statistics in development.

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Table of contents

1. [Main points](#)
2. [Development of travel and tourism statistics](#)
3. [Methodological development of overseas travel and tourism estimates](#)
4. [Initial findings from our ongoing transformation work](#)
5. [Understanding comparability of estimates over time](#)
6. [Future developments](#)
7. [Glossary](#)
8. [Provide feedback](#)
9. [Related links](#)
10. [Cite this article](#)

1 . Main points

- This article gives an update on changes to the data collection and methods underpinning our travel and tourism statistics, as outlined in our [Improving our travel and tourism statistics: changes from July 2024 article](#).
- Several changes have been made to the International Passenger Survey (IPS) data collection; this includes harmonisation with the Civil Aviation Authority departing passenger survey, and replacement of the IPS arrivals survey with the Great Britain Tourism Survey (GBTS) to collect the post-departure spend of Great Britain (GB) residents abroad.
- We are developing new methods to produce estimates for GB, following these data collection changes; this includes changes to data processing, weighting, and estimation.
- We are sharing our indicative Quarter 3 (July to Sept) 2024 estimates for nights, spend, and visits for overseas residents to showcase our progress using these developing methods.
- We invite users to provide feedback on these indicative estimates and our methods developments, as part of the continued transformation of our travel and tourism statistics.

These are official statistics in development, published to invite user feedback as we progress with planned improvements to our travel and tourism statistics. The methods are currently under development, which means quality assurance is ongoing and the estimates are subject to change. We advise caution when considering these estimates, which should not be used for policy- or decision-making.

2 . Development of travel and tourism statistics

Overview of travel and tourism statistics transformation

This article provides an update on the data collection changes and methodological developments we are undertaking to transform our travel and tourism statistics, as set out in our [Improving our travel and tourism statistics: changes from July 2024 article](#). These changes follow a statistical review that concluded with our [Travel and tourism review: final report](#), published in May 2022. This review explained why these changes are required, and discussed how they would allow for more accurate and coherent statistics.

This update outlines progress against these planned changes. It also provides a first look at indicative estimates of visits, spend, and nights for overseas residents visiting Great Britain for Quarter 3 (July to Sept) 2024. We are sharing these indicative estimates and the progress in our method development with users to invite feedback, as part of our continued transformation of our travel and tourism statistics (see [Section 8: Provide feedback](#)). We advise caution when considering these estimates, which should not be used for policy- or decision-making. Additional development and assurance work is required to understand the quality of the new estimates before we can publish our full Quarter 3 2024 outputs.

Since June 2024, we have implemented several changes to the data collection and methodology of our travel and tourism statistics. These include:

- harmonising the International Passenger Survey (IPS) departures data collection with the Civil Aviation Authority's departing passenger survey, including moving to new interviewing locations at airports and the Dover seaport and using a new departure schedule sampling frame; this has resulted in changes in the sample selection, sample size, and interviewing practices
- discontinuing the IPS arrivals data collection and using the Great Britain Tourism Survey (GBTS) to collect post-departure spend abroad for Great Britain (GB) residents
- discontinuing the IPS in Northern Ireland (NI), with NI travel and tourism data now provided by the Northern Ireland Statistics and Research Agency (NISRA)
- ongoing development of new methods to produce robust estimates for GB, following these data collection changes

We continue to work on the development of these travel and tourism statistics, as set out in [Section 6: Future developments](#), and will keep users informed of our ongoing progress.

Keeping our users informed

We have actively engaged with users throughout our development work, to share information and for the purpose of consultation. We have hosted several working groups, which have included experts in the field, key data users, and partnering organisations. These working groups allow attendees to share knowledge, insights on best practice, and feedback on our methods. Participation and feedback from users help us to ensure that our developing statistics meet user needs.

We also send out regular travel and tourism updates to all users. These updates highlight the main publication dates, project progress updates, and upcoming events. If you would like to sign up, you can [subscribe to our GovDelivery newsletter](#).

If you have any feedback or suggestions on our work to develop these travel and tourism statistics, please contact us at travel.and.tourism@ons.gov.uk.

3 . Methodological development of overseas travel and tourism estimates

We implemented several changes to the International Passenger Survey (IPS) data collection design from July 2024 (see [Section 2: Development of travel and tourism statistics](#)). We have since been making necessary methodological developments to enable the production of statistics following these changes. This section sets out the progress we have made in each of these methodological development areas.

Data processing

We have made changes to data processing, as a result of the new data collection design. Many of these changes were complex. The first round of data collection using this new design has helped to identify additional data processing changes required.

We then carried out quality assurance throughout the data processing stage. We have also continued the methodological developments required, such as weighting. We are still investigating some data quality issues identified during data processing. This will form part of the ongoing improvements to our travel and tourism statistics. Any impact on future estimates will be clearly identified.

Weighting

Changes to the IPS sample design mean we need to implement a new weighting approach that is appropriate. This will ensure that the survey data captured through the IPS produce statistics that are representative of the population.

The sample design follows three stages of selection. Interviewer shift times are sampled at the first stage, followed by a selection of scheduled flights within those shifts. Interviewers then select passengers at the departure gate for the selected flights.

Different types of design weights are required to produce the final travel and tourism estimates from those three stages:

- shift design weights, which account for the random selection of shifts from dates and timeslots
- flight design weights (used for airport passengers only), which account for differences in flight schedule at different times of day
- passenger design weights (used for airport passengers only), which account for the number of booked passengers and the number interviewed for each sampled flight

These weights must be carefully considered together to determine the overall effect of choices in our weighting approach. This is because a change in one can lead to adjustments in others.

The creation of new IPS weights has accounted for all aspects of the sample design, response and non-response, and the ports and times that are not sampled. We have also calibrated estimates to known passenger totals from the Civil Aviation Authority for airports, Department for Transport for seaports, and Eurostar for the Channel crossings.

We have derived the initial weights and the estimates, and testing and analysis is in progress on the Quarter 3 (July to Sept) 2024 dataset. Further investigation is required to validate assumptions and the methodological choices made.

We also aim to test the effects of different weighting options to ensure an appropriate approach is taken. We will continue to test and improve the weighting process as we receive additional quarters of data. These may result in revisions to the estimates as we continue our development. We will document these investigations, provide further details on the methods, and seek quality assurance from methodological experts before formally adopting our final weighting approach.

Estimation

Our main IPS estimates include number of visits, number of nights, and spend. They are produced for Great Britain (GB) and overseas residents, each broken down by domains of geography and visit purpose.

We expect our estimates of number of visits to be the most accurate, because they strongly correlate with the passenger totals used as calibration constraints. Spend is most difficult to estimate because of its highly skewed distribution and the presence of outliers. Our initial investigations confirm that estimates are highly sensitive to the way we identify and treat outliers, and more work is required here. The approach for spend also differs between overseas residents (where all information is collected at the point of their departure from GB at the end of their trip) and GB residents, who are interviewed as their trip is beginning (where some of their spend is collected).

Great Britain residents' overseas spend

Total spend on overseas visits by GB residents is no longer collected on the IPS arrivals survey, since that survey was stopped in July 2024. GB residents are now sampled on the new IPS departures survey only and are asked about their spend-to-date at the beginning of their visit (pre-departure spend). The date they are expecting to return to GB (arrival) is also asked at this point.

To collect spend while overseas (post-departure spend), we have added a set of arrivals questions on the [Great Britain Tourism Survey](#) (GBTS). These questions ask an online panel of GB residents about recent visits they have returned from overseas. Our intention is to fit a model to the GBTS data using variables about visits that are also collected on the IPS. A post-departure spend amount will then be predicted for IPS respondents using this model.

Initial investigations show that our Quarter 3 2024 estimates of total spend are sensitive to choice and fit of model. At this stage, we are not able to share indicative estimates of GB residents' overseas spend. Further work is required to fully understand the most appropriate model choice and the effect of this on estimates and quality. After this, we can make an informed decision on a final model for estimation purposes.

One complexity of this new design are GB residents departing in different quarters who return in the quarter of interest, for example, GB residents departing in Quarter 1 (Jan to Mar) or Quarter 2 (Apr to June) and returning in Quarter 3 of the same year. In anticipation of needing to account for this, GB residents were interviewed on the IPS departure survey in Quarters 1 and 2 2024 under the old design. We are investigating how best to incorporate these cases into our Quarter 3 2024 estimates that account for differences between the new and old designs. For the small percentage of GB residents who departed in Quarter 3 or Quarter 4 (Oct to Dec) 2023, a marginal adjustment will be applied to these cases.

4 . Initial findings from our ongoing transformation work

These are official statistics in development, published to invite feedback from users (see [Section 8: Provide feedback](#)) following the latest changes to our travel and tourism statistics. The methods are currently under development, which means quality assurance is ongoing and the estimates are subject to change. We therefore advise caution when considering these estimates, which should not be used for policy- or decision-making.

Tables 1, 2 and 3 show indicative estimates of overseas residents' travel to Great Britain (GB) in Quarter 3 (July to Sept) 2024, together with their estimated 95% confidence intervals (CI).

Our provisional estimates for Quarter 3 2023, published in January 2024 in our [Overseas travel and tourism, provisional: July to September 2023 bulletin](#), are provided alongside these new estimates for comparison. Final estimates for this time period can be found in our [latest overseas travel and tourism quarterly datasets](#). Estimates for Quarter 3 2023 are for overseas residents' travel to the UK, whereas estimates for 2024 onwards are for travel to GB.

Table 1: Overseas residents' number of visits to the UK for July to September 2023 (provisional estimates) and to Great Britain for July to September 2024 (new indicative estimates)
Number of visits, UK and Great Britain (GB)

	Estimated number of visits	95% CI lower bound	95% CI upper bound
2023 Q3 (UK)	10,869,000	10,477,000	11,261,000
2024 Q3 (GB)	10,493,000	10,049,000	10,937,000

Source: International Passenger Survey from the Office for National Statistics

Notes

1. Q3 refers to Quarter 3 (July to Sept).

Table 2: Overseas residents' spend in the UK for July to September 2023 (provisional estimates) and in Great Britain for July to September 2024 (new indicative estimates)
Spend in £ millions, UK and Great Britain (GB)

	Estimated spend in £millions	95% CI lower bound	95% CI upper bound
2023 Q3 (UK)	10,077	9,519	10,635
2024 Q3 (GB)	10,244	9,570	10,918

Source: International Passenger Survey from the Office for National Statistics

Notes

1. Q3 refers to Quarter 3 (July to Sept).

Table 3: Overseas residents' nights spent in the UK for July to September 2023 (provisional estimates) and in Great Britain for July to September 2024 (new indicative estimates)
 Number of nights spent, UK and Great Britain (GB)

	Estimated nights spent	95% CI lower bound	95% CI upper bound
2023 Q3 (UK)	99,493,000	93,356,000	105,630,000
2024 Q3 (GB)	90,830,000	85,193,000	96,467,000

Source: International Passenger Survey from the Office for National Statistics

Notes

1. Q3 refers to Quarter 3 (July to Sept).

These indicative estimates are subject to revision as we continue our investigations, development, and quality assurance. We will share our revised estimates, including more detailed breakdowns of these headline estimates covering the full Quarter 3 2024 outputs, once this additional development and quality assurance is complete.

5 . Understanding comparability of estimates over time

A time series is made up of data collected over a period, allowing for comparison of estimates and analysis of trends. By introducing new methods to produce travel and tourism estimates, we risk introducing a break, or discontinuity, in the time series of these statistics, which could make comparison over time more difficult.

It can be challenging to establish whether any discontinuities in the data are a result of real-world differences (for example, changes in international travel patterns), or method-driven changes. As we have not trialled our new data collection methods alongside our old data collection methods, known as a parallel run, we plan to use a discontinuity analysis to investigate the potential impact of our change in methods on the estimates. This will aim to provide users with assurance and confidence in the outputs from the new methods.

One way we can investigate discontinuity is by fitting State Space Models (SSM), a type of time series analysis, to the published back series. The SSM-projected figures are intended to serve as a proxy for what might have happened had there been no methodological changes and if past travel patterns had continued.

Initial work to develop SSMs has produced models that fit the observed data well and accurately recreate the International Passenger Survey (IPS) yearly seasonal trends. We can use these models and associated confidence intervals, alongside our new travel and tourism estimates for Quarter 3 (July to Sept) 2024, to identify whether a deviation in the time series has occurred.

We plan to continue work on this as our estimates develop and change. We aim to provide updates on our progress in future publications and invite user feedback on our findings.

6 . Future developments

Method development and quality assurance

We have shared some indicative travel and tourism estimates in this article. Additional development and assurance work is required to understand the quality of the new estimates before we are in a position to publish the full Quarter 3 (July to Sept) 2024 outputs.

We need to evaluate our weighting approach further, ideally including:

- comparison of its effectiveness on additional quarters of data
- continuing testing and analysis, including the effects of different weighting options available, to ensure a robust and appropriate approach is taken
- validating any assumptions or simplifications made

Additionally, we will conduct further work on the model-related aspects of estimating Great Britain (GB) residents' spend overseas, derived from Great Britain Tourism Survey (GBTS) data. We need to further investigate model choice and the effect this has on estimates and quality.

We will continue to review and improve our sample design, and will conduct further investigation of existing data quality issues evident at the data processing stage.

The development and quality assurance, outlined above, will increase our confidence in our methods and estimates. This will enable the release of more extensive estimates of overseas residents' visits to GB, and enable the first release of estimates of GB residents' visits, spend, and nights abroad, which we aim to publish for Quarter 3 (July to Sept) 2024. These statistics will initially be released as official statistics in development, with appropriate caveats outlining how they should and should not be used.

Development of data sources

We aim to incorporate Northern Ireland (NI) travel and tourism data, provided by the Northern Ireland Statistics and Research Agency (NISRA), into our estimates for our Travel Trends 2024 annual release. This will enable production of UK travel and tourism estimates.

We have already harmonised our data collection methods with the Civil Aviation Authority (CAA). We plan to incorporate data from the CAA departing passenger survey, alongside IPS data, in our estimates. We are aiming to implement this in our estimates for our Quarter 1 (Jan to Mar) 2025 release, following completion of the required research and methodological development work.

7 . Glossary

Calibration

An estimation procedure that constrains sample-based estimates of auxiliary variables to known totals (or accurate estimates).

Discontinuity

Changes in time series resulting from a sudden change in the average level of the series or a complete shift in periodic effects, such as seasonal patterns.

Overseas residents

An overseas resident is a person who permanently resides outside the UK.

Time series

A series of successive observations on an event collected over a period of time.

Visits

The figures for visits relate to the number of completed visits, not the number of visitors. Anyone entering or leaving more than once in the same period is counted on each visit.

Visits by overseas residents

A visit by an overseas resident is a visit for a period of less than 12 months. UK citizens residing overseas for 12 months or more coming home on leave are included in this category.

Visits outside the UK by residents of Great Britain

Visits for a period of less than 12 months by people permanently residing in Great Britain, who may be of foreign nationality.

Weight

A number used to indicate the relative importance of each item in a group. Used in many contexts, including sample and population weighting, index weighting, and non-response weighting.

8 . Provide feedback

If you have any feedback or suggestions on the work we are doing to develop our travel and tourism statistics, please contact us at travel.and.tourism@ons.gov.uk

9 . Related links

[Improving our travel and tourism statistics: changes from July 2024](#)

Article | Released 14 June 2024

An article outlining changes to our travel and tourism statistics from July 2024.

[Travel and tourism review: final report](#)

Article | Released 16 May 2022

Final report of the travel and tourism review, including the findings of the review and the next steps for this work.

[Overseas travel and tourism, provisional: April to June 2024](#)

Bulletin | Released 18 October 2024

Estimates for overseas travel and tourism, including visits, spending, number of nights, and purpose of visit.

10 . Cite this article

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