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Information paper

Quality and Methodology Information

General details

Title of output:Long-Term International MigrationAbbreviated title:LTIM EstimatesDesignation:National StatisticsGeographic Coverage:UKDate of last SQR or QMI*November 2015Contact details:migstatsunit@ons.gov.uk

Executive summary

This report relates to Long-Term International Migration (LTIM) statistics and aims to provide users with information on the usability and fitness for purpose of these estimates.

Main points:

- long-term international migration statistics estimate the flows and characteristics of migrants to and from the UK
- we define a long-term international migrant (applying the UN definition) as someone who changes his or her country of usual residence for a period of at least a year, so that the country of destination effectively becomes the country of usual residence
- International Passenger Survey (IPS) estimates of international migration are available online from 1975 and from 1964 to 1974 in paper publications
- more comprehensive Long-Term International Migration estimates (based primarily on the IPS, but supplemented with data from other sources, the About the output section has further details) are available from 1991
- provisional estimates are published quarterly, 5 months after the reference period, and final estimates for the previous calendar year, including more detailed IPS and long-term international migration estimates, are published annually in November
- it is necessary to use a combination of different sources that have different characteristics and attributes in order to produce international migration estimates
- international migration estimates are based on data from the IPS, which is a sample survey; 95% confidence intervals have been used for all IPS estimates inflow, outflow and net flow
- most European countries base their migration estimates on residence permits and/or population registers; the European Commission regulation 862/2007 makes sure that member states provide Eurostat with statistics on migration on a consistent basis, based on UN definitions, which the UK already uses

This report is part of our rolling programme of quality reports. The full programme of work being carried out on <u>Statistical Quality</u> is available on our website.

<u>Short-term migration estimates</u> and estimates of the <u>UK population by country of birth and nationality</u> are excluded from this report.

^{*} Quality and Methodology Information (QMI) reports replaced Summary Quality Reports (SQR) from April 2011

Further details on the methods used to compile Long-term International Migration statistics can be found in the Publications section: <u>Methodology to estimate Long-Term International Migration</u>.

This document contains the following sections:

- Output quality
- About the output
- How the output is created
- Validation and quality assurance
- Coherence and comparability
- Concepts and definitions
- Other information, relating to quality trade-offs and user needs
- Sources for further information or advice

Output quality

This document provides a range of information that describes the quality of the output and details any points that should be noted when using the output.

We have developed <u>Guidelines for Measuring Statistical Quality</u> based on the 5 European Statistical System (ESS) quality dimensions. This document addresses the quality dimensions and important quality characteristics, which are:

- relevance
- timeliness and punctuality
- coherence and comparability
- accuracy
- output quality trade-offs
- assessment of user needs and perceptions
- accessibility and clarity

About the output

Relevance

(The degree to which the statistical outputs meet users' needs.)

We define a long-term international migrant as someone who changes his or her country of usual residence for a period of at least a year, so that the country of destination effectively becomes the country of usual residence. This is consistent with the UN definition of an international migrant. Long-term international migration statistics estimate the flows and characteristics of migrants to and from the UK. These statistics are used by government, academia, special interest groups, the media, and the general public. International migration is also an important component of population change and is used in the production of <u>population estimates</u> and <u>population projections</u>.

There is no single, all-inclusive system for measuring long-term international migration. Therefore, it is necessary to use a combination of different sources that have different characteristics and attributes in order to produce international migration estimates. None of the data sources used, while offering the best data currently available, are specifically designed to capture information solely on long-term international migration.

Long-Term International Migration (formerly total international migration (TIM)) is the most comprehensive estimate of long-term migration. It is based primarily on a subset of the <u>International</u> <u>Passenger Survey (IPS)</u>, namely those international passengers sampled by the IPS who are migrants entering or leaving the UK by principal air, sea and tunnel routes. The IPS component is supplemented with the following adjustments:

• Home Office administrative data, which is used to calculate an adjustment for asylum seekers and their dependants not counted by the IPS; for 2013 data onwards, administrative data on non-

asylum enforced removals has also been included to adjust for those who have never claimed asylum but who are removed from the UK and who are not counted by the IPS

- an adjustment for visitor switchers (those who intend to enter, or leave, the UK for less than 12 months but will actually stay, or stay away, for longer) and migrant switchers (those who intend to enter, or leave, the UK for at least 12 months without those intentions being realised)
- <u>Quarterly National Household Survey</u> data on flows to and from the Republic of Ireland provided by the Irish Central Statistics Office (1991 to 2007)
- <u>Northern Ireland Statistics and Research Agency (NISRA)</u> data on migration to and from Northern Ireland (from 2008 onwards)

Statistics on international migration are available for a number of variables including citizenship, country of last or next residence, country of birth, age, sex, marital status, main reason for migration, usual occupation, and area of destination or origin within the UK. Some detailed statistics can only be derived from IPS data, because the characteristics of the other data sources used to calculate LTIM cannot be disaggregated to all IPS variables. The <u>IPS 3-series tables</u>, released each November, detail the additional data that is provided from the IPS.

There is significant interest in migration statistics, both nationally and internationally, and there is a need to understand how moves impact on society and the economy. Migration estimates are a fundamental component of our mid-year estimates. These are used by central and local government and the health sector for planning and monitoring service delivery, resource allocation and managing the economy.

Timeliness and punctuality

(Timeliness refers to the lapse of time between publication and the period to which the data refer. Punctuality refers to the gap between planned and actual publication dates.)

Provisional IPS and LTIM data are released each quarter, from November 2014 estimates are published 5 months after the reference period. For example, data for the year ending June 2015 was released in November 2015. Final IPS calendar year estimates are usually published in August. However, final Home Office data on asylum seekers and non-asylum enforced removals for the reference year are not usually available until the July following the reference year and migration data from NISRA are usually not available until the October following the reference year. So final estimates (<u>1, 2 and 3 series reference tables</u>) are released 11 months after the reference period, for example, estimates for 2014 were released in November 2015.

IPS estimates are less comprehensive than the LTIM figures, as they exclude the other adjustments described in the Relevance section above, but provide an early indication of how international migration is changing. More detailed <u>provisional LTIM estimates</u> are published alongside the provisional IPS data, and are broken down by citizenship and reason for migration.

There are more details on related releases in the <u>GOV.UK release calendar</u>, which provides 12 months advance notice of release dates. We will also notify you if there are any changes to the preannounced release schedule and provide the reasons for the change, as set out in the <u>Code of</u> <u>Practice for Official Statistics</u>.

How the output is created

International migration is made up from a number of components and can be summarised as:

2013 onwards

Long-Term International Migration equals: IPS flows plus Northern Ireland migration flows plus visitor switcher flows plus asylum seekers (including non-asylum enforced removals adjustment) minus migrant switcher flows

2008 to 2012

Long-Term International Migration equals:

IPS flows plus Northern Ireland migration flows plus visitor switcher flows plus asylum seekers minus migrant switcher flows

1991 to 2007

Long-Term International Migration equals: IPS flows plus Republic of Ireland migration flows plus visitor switcher flows plus asylum seekers minus migrant switcher flows

<u>Methodology to estimate Long-Term International Migration</u> provides an overview of the current methodology and is available in the Publications section. The change in calculating LTIM relating to processing of Republic of Ireland and Northern Ireland flows is outlined in the Accuracy section.

Validation and quality assurance

Accuracy

(The degree of closeness between an estimate and the true value.)

The International Passenger Survey (IPS) provides reliable data on international migration at the national level. This is supported by the small (0.8%) <u>difference between the 2001 to 2011 population</u> <u>estimates and the 2011 Census</u> and the similar patterns seen across other data sources, such as visas issued to citizens outside the EU.

One aspect of measuring accuracy is sampling variability. As with all surveys, IPS is subject to sampling variability. If many samples were drawn, each set of estimates would vary slightly. Approximately 800,000 passengers are screened for migration. For example, during some shifts at Heathrow, every 30th passenger might be selected for the full IPS questionnaire, but every 10th person is screened for migration. If the person is a migrant, they are asked the migration questions, but if they are not a migrant they are asked no further questions (unless they also happen to be the 30th person).

Since international migration estimates are based on a small number of interviews (around 4,000 long-term migrants are identified by the IPS each year), many variables can only be disaggregated to a certain level before being subject to unacceptable margins of error, for example, migration from individual countries by single year. Previous publications have used standard error expressed as a percentage to indicate the reliability of IPS estimates. This could only usefully be done for inflow and outflow estimates. Therefore, since August 2012, 95% confidence intervals have been used for all IPS estimates – inflow, outflow and net flow. This is the range within which is the true value of population parameters with known probability. For example the 95% confidence interval represents the range in which, over many repeats of the sample under the same conditions, we would expect the confidence interval to contain the true value 95 times out of 100. In other words there would be a 1 in 20 chance that the true value would be outside of the range of the 95% confidence interval. Users are advised to be cautious when making inferences from estimates with large confidence intervals. Confidence intervals have been calculated using 1.96 multiplied by the standard error.

Confidence intervals are published as an indicator of accuracy. However, these confidence intervals have some limitations as they are designed for the IPS as a whole, and not specifically for the subset of IPS migrants. Confidence intervals based on the IPS component of the estimate are shown for LTIM estimates, but users should be aware that there is no method for quantifying the error associated with the non-survey components of LTIM and these errors are unlikely to be random. The IPS comprises around 90% of the total LTIM estimate and is the only contributory source susceptible to measurable sampling error. Similarly, the reporting of statistically significant changes to LTIM figures are based on the sampling error associated with the IPS component of these estimates.

The IPS confidence intervals do not take account of non-sampling errors. Examples of non-sampling errors include non-response bias and measurement error. Non-response bias would be introduced if those who choose to respond to the survey have different characteristics to those who do not; or, if sampled passengers do not complete an IPS questionnaire because the number of interviewers is insufficient to cope with the volume of passengers. The weighting applied to the estimates on total passenger flows will account for these non-contacts, but if their migration characteristics are different

in some way then non-response bias would occur. Measurement error would be introduced, for example, if respondents provide incorrect information to the IPS interviewers.

The <u>Migration Statistics Quarterly Report: Information for Users</u> has further information on confidence intervals.

There are known issues with interviewees not being able to provide precise information. For example, immigrants stating an intention to reside in London, for example, may well stay there for only a very short time before moving to another part of the UK. The Labour Force Survey (LFS) provides more reliable data on the regional distribution of immigrants than the IPS, as it is based on where migrants actually live rather than on their initial intentions. However, the total IPS inflows are better for estimating the total inflow of migrants coming from abroad. A methodology (known as "calibration") has been developed that redistributes the IPS data to the regional distributions in the LFS.

The Home Office data, that are used to calculate the asylum seeker and non-asylum enforced removals adjustment, are a high quality source on asylum applications, refusals, forced and voluntary returns and withdrawals for principal applicants and their dependants, and appeals, as well as enforced removals of long-term migrants who have never claimed asylum. However, the data for asylum seekers do not correspond directly to the standard UN definition of a long-term international migrant. Broad assumptions must be made about the proportion of asylum seeker applicants that actually correspond to the UN definition.

One of the important features of IPS long-term migration data is that it is intentions based. IPS longterm migrants are those who state an intention to change their country of residence for at least a year. However, it is known that these intentions are not always realised. Some people entering or leaving the country intending to be visitors, (that is staying or being away for less than 12 months), will actually migrate for more than a year and are called visitor switchers. For these to be incorporated into a more comprehensive estimate of migration, they must be added to the IPS migration estimates. Also, some people entering or leaving the country intending to migrate, (that is staying or being away for more than 12 months), will actually stay or leave the country for less than a year. These people are known as migrant switchers and need to be removed from IPS migrant flows.

In 2004, new IPS questions were introduced to identify both migrant switchers and visitor switchers. For example, emigrants leaving the UK after being resident for a year or more were now asked how long they intended to stay when they initially arrived. Those who initially intended to stay for less than a year were flagged as former visitor switchers. Similarly, migrant switchers were identified by using these same questions and estimates of visitor and migrant switchers are now made by using this method. Details of the visitor and migrant switcher methodology can be found in the Methodology to estimate Long-Term International Migration.

We have published <u>International Passenger Survey Quality Information in Relation to Migration</u> <u>Flows</u>, which provides an overview of the quality and reliability of the IPS in relation to producing estimates of long-term migration flows.

Between 1991 and 2007, we used data from the Central Statistics Office (CSO) in Ireland to estimate migration flows between the UK and the Republic of Ireland. Their data were used because there were no routes between the 2 countries surveyed by the IPS. However, evidence suggests that the CSO estimates of flows from the Republic of Ireland to the UK were underestimated. Although IPS flows have not been used in the past, the data have in fact been captured on routes between the UK and Republic of Ireland since 1999. We have been monitoring these flows and comparing both sources of data and now consider the IPS to be the better source. As a result we ceased using data from the CSO to measure international migration between the UK and Republic of Ireland from 2008, and started to use the IPS to measure these flows instead.

With any change in estimating migration to and from the Republic of Ireland, it is sensible to review the methodology for measuring international migration to and from Northern Ireland to ensure that migration over the land border is accounted for. Until 2007, different methods were used by us and NISRA to estimate international migration to and from Northern Ireland. We now use the health card estimates already used by NISRA. Health card data contain records for individuals who were

previously resident outside the UK and register with a GP in Northern Ireland. We will use the best data source available and ensure consistency for users.

These adjustments are necessary to produce a more comprehensive estimate of international migration.

Coherence and comparability

(Coherence is the degree to which data that are derived from different sources or methods, but refer to the same topic, are similar. Comparability is the degree to which data can be compared over time and domain, for example, geographic level.)

Different countries operate within different regulatory and legislative frameworks that determine the broad approach taken to measuring migration. Countries that operate strict border controls usually use precise administrative data on migrant flows. Most European countries base their estimates on residence permits and/or population registers.

There is also a lack of consistency of fundamental concepts. Different countries, even within the EU, use different definitions of what constitutes a migrant. We use the UN definition of a long-term international migrant, which is someone who changes their country of usual residence for a period of at least a year, so that the country of destination effectively becomes the country of usual residence. By contrast, Italian migration statistics are based on changes in country of usual residence of at least 3 months duration.

The European Commission regulation 862/2007 aims to harmonise definitions across Europe by ensuring that member states provide Eurostat with consistent statistics on migration, based on UN definitions, which the UK already uses.

There are additional administrative data sources and databases available that may provide information on movements into the UK. These sources are not specifically designed to measure international migration, but may serve as further references on the topic. A <u>Reconciliation of ONS</u> <u>International Migration Estimates</u>, which compares 3 important administrative sources (patient registrations, national insurance number allocations and the worker registration scheme) with IPS-based estimates of both long- and short-term international migration, has been carried out. The conclusion was that IPS-based estimates are broadly comparable to administrative sources.

A discussion on the differences between international migration data from the Labour Force Survey (LFS) and Annual Population Survey (APS) and these Long-Term International Migration(LTIM) and International Passenger Survey (IPS) data can be found in the report <u>Estimating International</u> <u>Migration: An exploration of the definitional differences between the Labour Force Survey, Annual Population Survey, International Passenger Survey and Long-Term International Migration.</u>

Potential sources of migration data	Comparability with ONS estimates of international migration
 Home Office - these figures include statistics on immigration, asylum and nationality. The <u>data</u> available from the Home Office covers: passenger arrivals, admissions and refusals at air, sea and Channel Tunnel ports in the UK asylum applications, decisions and appeals people refused entry at port and then removed, enforced removals and voluntary 	These provide a measure of longer term immigration of persons subject to immigration control who are allowed to remain in the UK. However, the definition of settlement differs from that of migration used in the IPS.
 departures people detained under immigration powers immigration appeals applications for an extension of stay, including settlement Eurostat - Eurostat publish tables on	We supply <u>Eurostat</u> with IPS data for the
 international migration and asylum by: individual European country the European Union (EU) as it was constituted on 1 May 2004 	 following variables: residency by age citizenship by age sex by age
the former EU15	These are fed through with data supplied by other European countries to populate
 the Economic and Monetary Union the European Economic Area the European Free Trade Association 	the <u>Eurostat Migration Tables</u> . Further information on consistency of migration statistics between other European countries is available from the <u>Statistics</u>
the European Free Trade Association	Explained section of the Eurostat website.
National Insurance Number (NINo) - National Insurance Number allocations are made by the Department for Work and Pensions to overseas nationals entering the UK who wish to work or claim benefits in the UK. United Nations - the United Nations Statistics Division (UNSD) collects and disseminates statistics on international migration flows and on the stock of migrant population through the Demographic Yearbook data collection system.	This source does not capture movement of international migrants arriving to the UK for non-work purposes. These issues are discussed further in the DWP publication – <u>National Insurance Number Allocations to</u> <u>Overseas Nationals Entering the UK</u> . UNSD collects data from national statistical authorities using a set of questionnaires that are sent to over 230 national statistical offices. Further information on consistency of migration statistics between other countries is available from the <u>International</u> <u>Migration Standards and Methods</u> section of the UN website.
United Nations Economic Commission for Europe (UNECE) - the Population Activities Unit of UNECE disseminates basic demographic data on the countries of central and eastern Europe, including all the members of the Commonwealth of Independent States. Many western European countries are also included.	For migration, the <u>Population Unit</u> within UNECE produces the rate of net migration increase for these countries since 1982.

Annual LTIM estimates from 1991 onwards can be directly compared with one another. However, annual estimates before 1991 use a different methodology and cannot be directly compared with more recent figures.

When looking at specific variables there are small discontinuities in the series since 1991. For example, the IPS alone was used to create the geographical distribution of international migration between 1991 and 1998, but since 1999 the LFS has been used to adjust the discrepancy between where respondents to the IPS stated they intended to live upon arrival in the UK and where they actually live.

Other discontinuities include questions that were introduced into the IPS from 2004 to get estimates of visitor and migrant switchers, which replaced the broad assumptions used to estimate these components before 2004. Also, from 2008 there were changes made to estimating migration between the UK and Republic of Ireland, and to and from Northern Ireland.

Concepts and definitions

(Concepts and definitions describe the legislation governing the output, and a description of the classifications used in the output.)

We use the UN recommended definition of a long-term international migrant (the Relevance section has further details) these <u>Recommendations on the Statistics of International Migration, Revision 1</u> <u>UN Statistics Division 1998</u> are explained in detail on the UN website. This 12 month migrant definition is also used for the UK usually resident population estimate series.

There is also a summary of how the Long-Term International Migration estimates are calculated, LTIM FAQ and Background Notes, which also contains definitions and terms used in documentation.

Other information

Output quality trade-offs

(Trade-offs are the extent to which different dimensions of quality are balanced against each other.)

Provisional estimates provide a good early indication of recent migration trends. Final estimates take account of adjustments and updates to Civil Aviation Authority and the Department for Transport information, which are used to weight the observed data collected by the IPS.

Additionally, the supplementary migration data used in the calculation of LTIM may also have been updated between the release of provisional and final LTIM estimates.

The differences between the provisional and final estimates of IPS and the provisional and final estimates of LTIM are minimal. For more information please refer to <u>LTIM FAQ and Background</u> <u>Notes</u>.

Assessment of user needs and perceptions

(The processes for finding out about uses and users, and their views on the statistical products.)

The <u>consultation on country groupings</u> ran from 21 January 2014 to 18 March 2014. As a result of the consultation we now produce our quarterly IPS data tables to the new country groupings and in November 2015 we extended our <u>3 series tables</u> to include data for the new country groupings. As of February 2016 we now include new country groupings in the <u>2 series</u> tables too.

The <u>consultation on the reporting of International Migration Statistics</u> ran from 20 June 2014 to 18 July 2014. The main findings were:

A shortened Migration Statistics Quarterly Report (MSQR) was favoured by 3 of the 5 users, with less repetition and more flexibility to report on emerging trends. Removing Table 1 on revised net migration from the bulletin was favoured by 4 of the 5 users, as long as the revised estimates are clearly highlighted and linked. These changes were implemented for the November 2014 MSQR.

More information on the reliability of migration estimates, and a clearer explanation of confidence intervals and statistically significant changes was requested by 4 out of 5 users. A new section on the accuracy of migration estimates has been added to MSQR.

Where possible, 3 of the 5 users were keen for us to announce short stories in advance of publication, although it was noted that we do need to retain the flexibility to produce ad-hoc pieces of analysis in response to emerging trends. We will aim to announce short stories 3 months in advance, but will continue to respond to emerging issues using existing published material.

It was requested that more prominence be given to local area migration data and short-term migration estimates within the MSQR by 2 users. More links to these products will be added from the MSQR.

Overall, there were some clear differences in users needs, suggesting that a suite of products, which can support the main bulletin, is needed. Users also requested a single web page which could provide links to all migration-related data. The migration theme page could be developed to provide this.

A previous consultation on international migration statistical outputs took place in 2012.

The main outcomes to this 2012 consultation were:

- population by nationality and country of birth tables will no longer be updated quarterly, but will be published annually in August, to include figures referring to the previous calendar year
- local area migration indicators will no longer be updated quarterly, but will be published annually in August
- we should continue to publish quarterly data on international migration flows and the Migration Statistics Quarterly Report

The Public Administration Select Committee (PASC) published a report in July 2013 on <u>Migration</u> <u>Statistics</u> following a review conducted in April 2013.

In July 2014, the UK Statistics Authority confirmed that Migration Statistics had retained their National Statistics status, as detailed in the <u>Assessment report</u>.

We consult users on its statistical work programme every 4 years via our website. Our most recent consultation was held between 1 November 2010 and 24 December 2010 and responses were used to inform our work programme between 2011 to 2012 and 2014 to 2015. Stakeholders were asked to provide information on which of our outputs they use, how they use them and how they might be affected by possible reductions in areas of our work following the 2010 spending review. The consultation confirmed there is widespread user support for important population statistics, such as the Long-Term International Migration (LTIM) and International Passenger Survey (IPS) estimates. The results of this consultation are available on the <u>user engagement</u> section of our website.

The Migration Statistics Improvement Programme (MSIP) was a substantial programme that included taking forward the recommendations of the 2006 Interdepartmental Task Force on Migration Statistics and the more recent Treasury Select Committee report Counting the Population. Phase 1 of MSIP ended in May 2010 and resulted in significant improvements to migration and population statistics including:

- revised population estimates at local authority level for 2002 to 2008, based on improved model based immigration estimates; including the use of more timely administrative data and an adjustment for student moves, pre and post-university, based on new data
- improved the IPS sample to optimise it for migration, for example by introducing new sites to reflect the changing flows of migration
- published estimates of short-term migrants and publication of the Local Area Migration Indicators Suite
- improved access to administrative data relevant to estimating migration, including data from the Higher Education Statistics Agency
- improved reporting through the production of Migration Statistics Quarterly Reports, which include migration data from other government departments

Phase 2 of the MSIP ran until March 2012. It consisted of 3 main work streams:

- 1. reconciling administrative sources and population estimates
- 2. improving migrant distribution

3. statistical benefits of e-Borders

The MSIP team held a series of end of programme seminars to present research and findings to stakeholders and statistical users, to make sure they were fully engaged with the programme achievements. This series of seminars aimed to review the success of the programme, and outlined plans for taking forward future improvements. More <u>information on the improvement programme</u>, including details on the nature of each work stream, is available on our website.

Also, in July 2009 the UK Statistics Authority reported on <u>Migration Statistics - The Way Ahead</u>, and the recommendations can be found in their report.

Sources for further information or advice Accessibility and clarity

(Accessibility is the ease with which users are able to access the data, also reflecting the format in which the data are available and the availability of supporting information. Clarity refers to the quality and sufficiency of the release details, illustrations and accompanying advice.)

The <u>international migration data</u> and supporting information are available from the National Statistics website.

International Passenger Survey (IPS) estimates of international migration are available online from 1975 and from 1964 to 1974 in paper publications. Further details and advice are obtainable from the Migration Statistics Unit, who can be contacted by email: <u>migstatsunit@ons.gov.uk</u>.

Our recommended format for accessible content is a combination of HTML webpages for narrative, charts and graphs, with data being provided in usable formats such as CSV and Excel. Our website also offers users the option to download the narrative in PDF format. In some instances other software may be used, or may be available on request. For further information please contact: migstatsunit@ons.gov.uk.

There is more information regarding conditions of access to data in:

- terms and conditions (for data on the website)
- copyright and reuse of published data
- pre-release access (including conditions of access)
- <u>accessibility</u>

In addition to this Quality and Methodology Information report, quality information is available in the background notes of the <u>migration statistics statistical bulletin</u>.