



Office for  
Statistics Regulation

# The quality of the long-term student migration statistics

*(produced by the Office for National Statistics)*

A review of the continuing compliance with  
aspects of the *Code of Practice for Official Statistics*,  
produced by the Office for Statistics Regulation

July 2017

## Office for Statistics Regulation

We provide independent regulation of all official statistics produced in the UK. Statistics are an essential public asset. We aim to enhance public confidence in the trustworthiness, quality and value of statistics produced by government.

We do this by setting the standards they must meet in the *Code of Practice for Official Statistics*. We ensure that producers of government statistics uphold these standards by conducting assessments against the Code. Those which meet the standards are given National Statistics status, indicating that they meet the highest standards of trustworthiness, quality and value. We also report publicly on system wide issues and on the way statistics are being used, celebrating when the standards are upheld and challenging publicly when they are not.

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# Foreword

Statistics are an essential asset for the government and the public alike. As such, they are vital for informing decisions, as well as our understanding of important issues to answer key questions. The Office for National Statistics (ONS), as the largest independent statistical producer in the UK, has a key role to play in providing valuable statistics. One of the most high-profile statistical releases produced by ONS is the Migration Statistics Quarterly Report (MSQR). The MSQR presents estimates of migration to and from the UK, which are widely reported in the media.

The MSQR contains a range of sources of information on migration. The overall estimates of immigration and emigration are based on data from a large-scale survey of passengers, the International Passenger Survey (IPS). To understand the make-up of the migrant population, ONS breaks down these overall estimates by migrants' reason for migration.

There are many reasons why someone might migrate to or from the UK. One of the commonest reasons is for the purposes of study; the UK has a large population of international students. The MSQR includes an estimate of the number of students who enter the UK to study (student immigration) and an estimate of the number who leave the UK to study (student emigration). Since 2012, it also contains an estimate of the number of former students leaving the UK (former-student emigration).

Recently, a range of concerns about the robustness of the estimate of former-student emigration have been raised publicly and directly with us. On this basis, I decided that the Office should look into the quality of the student migration estimates.

In general, I am satisfied with the overall commitment ONS shows to high quality data and high value statistical outputs. ONS is making a range of improvements to its migration statistics to help ensure that they serve the needs of users. Its development programme is well under way, and we expect ONS to continue making progress with their planned changes.

However, I am concerned that the former-student emigration estimate does not bear the weight that is put on it in public debate. This estimate should add clarity on the pattern of student migration in the UK. Instead, it creates doubts by not providing a complete and coherent picture of former-student emigration, as these figures alone do not provide information on all the different outcomes for international students. This judgement applies only to the student migration component of ONS's migration statistics; it is not a judgement about the quality of the overall estimates of immigration and emigration derived from the IPS.

It is standard practice for new figures to be labelled as experimental while they bed in, but in this case, this did not happen. We therefore have asked ONS to make clearer in the MSQR that this estimate should be treated with caution and that it be labelled as an experimental component of the overall National Statistics on migration, while the ONS work programme continues. This is standard practice and it is unfortunate that this was not followed in this case when the new breakdown of emigration figures by previous reason for immigration was first introduced. ONS's work programme is expected to lead to greater clarity about the uncertainty and the issues with the former-student emigration estimate. ONS should work to complete these new developments as quickly as possible and share the findings with the users of the statistics.



**Ed Humpherson**

Director General for Regulation

# Summary conclusions

## Introduction

- 1 The estimates of long-term international student migration are some of the highest profile and most debated migration statistics and are used for a wide range of purposes. There is substantial interest in student migration statistics because international students account for a significant proportion of long-term immigration, and the statistics influence central government immigration policy. The statistics also contribute to a larger pool of information about international migration, along with other migration-related statistics published by ONS, the Home Office and the Department for Work and Pensions. To support well-informed debate and evidence-based decision making it is important that the student migration statistics uphold the highest standards of trustworthiness, quality and value. There have been long-standing concerns about the measurement of student migration. A recent report by the House of Lords Economic Affairs Committee summarised these issues<sup>1</sup>.
- 2 ONS produces quarterly estimates of the number of long-term international student migrants (students who enter or leave the UK for a period of 12 months or more). These estimates are based mostly on data from the International Passenger Survey (IPS), a large-scale ONS survey that collects information from passengers as they enter and leave the UK (see paragraphs A1.1 to A1.5). The IPS asks migrants questions about their behaviour, including their reason for migration. In the last few years, new questions have been added about departing migrants' previous reason for migration to better measure emigration.
- 3 In response to the range of concerns repeated publicly and raised directly with us about the robustness of the estimate of emigration of former students, the Office for Statistics Regulation carried out a review of the quality of the student migration statistics. We examined continuing compliance with the *Code of Practice for Official Statistics*<sup>2</sup>, specifically, Principle 4 (Sound Methods and Assured Quality) and Principle 8 (Frankness and Accessibility). This review covers just one element of the ONS migration statistics, that relating to students, and is not an analysis of the quality of the overall estimates of immigration and emigration derived from the IPS. Instead, it focuses on the ability of the IPS to categorise migrants as students.
- 4 We investigated a number of factors that determine the extent to which the IPS accurately captures long-term student migration, including the sample design, sources of bias, and the precision of the estimates. Our main focus was the 'student migration gap' – the large difference between the estimate of the number of migrants entering the UK for formal study (student immigration) and the estimate of the number of former students leaving the UK (former-student emigration).
- 5 The Authority's regulatory function has previously reviewed ONS international migration statistics. In June 2013 we published a monitoring review of the robustness of the International Passenger Survey<sup>3</sup>. The review concluded that, in general, the migration estimates derived from IPS at the level of UK aggregates (the overall estimates of immigration and emigration) are robust and meet user needs, but that the survey does not provide sufficient robustness to meet some important user needs for more local migration data; for example, at the local authority level or for smaller areas. The small migrant sample size of the IPS places limits on

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<sup>1</sup> <https://publications.parliament.uk/pa/ld201719/ldselect/ldconaf/11/11.pdf>

<sup>2</sup> <https://www.statisticsauthority.gov.uk/monitoring-and-assessment/code-of-practice/>

<sup>3</sup> [https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/12/images-internationalpassengersurve\\_tcm97-43098.pdf](https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/12/images-internationalpassengersurve_tcm97-43098.pdf)

the level of disaggregation by characteristics of these migrants, for example, by reason for migration. Our February 2016 update re-iterated these views<sup>4</sup>.

## Strengths

- 6 ONS is committed to continuously improving its migration statistics, for example, by regularly reviewing the IPS sample design and specific aspects of the methodology of the long-term estimates, in accordance with Principle 4, Practice 5 of the Code. In particular, the re-introduction of extra interviewer shifts at ports to pick up long-term migrants is important for maintaining the number of interviews with migrants ('long-term student migrant contacts') and the precision of the estimates (see paragraphs A1.18 and A1.19).
- 7 ONS has set out a clear development programme for student migration statistics, which includes analysing new administrative and survey data sources to address gaps in their understanding of former-student emigration (see paragraphs 56 to 67). These changes are expected to enhance the quality and public value of the statistics. We welcome ONS's collaboration with a range of stakeholders to deliver this programme and that it has made publicly available the details of these developments and future areas of investigation.
- 8 ONS publishes information on the methodology and quality of the migration estimates, with commentary that is accessible to non-expert users, in accordance with Principle 4, Practice 2 and Principle 8, Practice 1 of the Code. This includes a clear description of the sources of sampling and non-sampling error, an explanation of the measure of uncertainty around the estimates (confidence intervals), and the results of investigations into non-response bias and the impact of the timing of IPS interviewer shifts on sampling of long-term migrants.
- 9 ONS has identified a user need for more comprehensive commentary on the student migration statistics. It has published stand-alone research updates that explore trends in student immigration and former-student emigration in greater detail (see Annex 3). This aids user interpretation of the statistics, in line with Principle 8, Practice 2 of the Code. The research update format is flexible and allows ONS to provide additional contextual information as well as disseminate the findings of secondary analyses of the data.
- 10 It is encouraging that ONS is also using the research updates as an opportunity to develop innovative ways to present information. For instance, the April 2017 update contains a conceptual diagram that illustrates a range of possible outcomes for non-EU student immigrants and highlights the available data sources and evidence gaps. This is a helpful way of summarising the groups of former-student emigrants who are not captured by the IPS.

## Limitations and areas for improvement

- 11 ONS presents confidence intervals (CIs) alongside the estimates of student immigration and former-student emigration in the MSQR supplementary tables, but not in the MSQR itself, nor in the student migration research updates. This decision was made to avoid confusion between the upper CI and the central estimate and, therefore, to limit misrepresentation of the estimate in the public domain. However, it is important to reflect the level of uncertainty around an estimate where possible, including key reports. Therefore, we recommend that ONS presents CIs alongside the student migration estimates in any future student migration research update, in line with Principle 4, Practice 2 of the Code. To aid user interpretation and understanding of the student migration estimates, ONS should present additional information about the estimates and the uncertainty around them (**Requirement 1**).
- 12 In addition to publishing estimates of student immigration, student emigration and former-student emigration, ONS publishes the difference between the student emigration and immigration estimate as part of the MSQR data tables. This 'balance of flows' figure compares

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<sup>4</sup> <https://www.statisticsauthority.gov.uk/publication/the-robustness-of-the-international-passenger-survey-2/>

two different student migrant populations: those entering to the UK for formal study and those leaving the UK for formal study. Although the figure is a component of overall net migration, it is *not* a measure of student net migration; it does not reflect the outflow of students who originally entered the UK to study. ONS recognises this limitation of the ‘balance of flows’ figure and provides cautions in the footnotes of the MSQR data tables. ONS could go further and make this information more prominent in the data tables, to ensure that there is no potential misinterpretation of the student ‘balance of flows’ figure as a measure of student net migration (**Requirement 1**).

- 13 ONS has demonstrated awareness of the limitations of the IPS, in terms of capturing student migrant flows, and it publishes information on sources of sampling and non-sampling error of the statistics. However, it could further enhance the public value of the statistics, and user confidence in the statistics, by publishing more information on the methodology (see paragraph 48). In particular, to inform users of the appropriateness and robustness of the IPS departure questions, ONS should publish details on how it tested responses to these questions and the steps taken to address any potential sources of bias and error (**Requirement 2**). We recognise that the scope of this requirement is wider than student migrants (as the information covers all migrant groups), but we judge that this is necessary to improve user understanding of the methods used to produce the former-student emigration estimates, in line with Principle 4, Practice 1 of the Code.
- 14 ONS should share with users the results of secondary analyses of IPS data, such as breakdowns of student departure contacts (see paragraphs A1.12 and A1.13), to provide insights into the composition of the former-student emigration sample and how it determines the former-student emigration estimate. Where possible, ONS should make the accompanying datasets of these analyses publicly available, following Principle 8, Practice 6 of the Code.
- 15 The ONS estimate of non-EU student immigration shows good coherence with other statistics, such as the Home Office visa data. In spite of definitional differences between the two data sources, in general, the trends align. This helps give users confidence that the IPS is reliably capturing the scale of non-EU student immigration and that the estimate is a high-quality measure, in line with Principle 4, Practice 3 of the Code. In contrast, the estimate of former-student emigration is the only source of information about when a student leaves the UK; the other sources of information do not confirm the point at which the student has left the country. This lack of ability to verify and triangulate the estimate means that assurances cannot be given to provide the same level of confidence in the former-student emigration figures.
- 16 In spite of the caveats of comparing the estimates of student immigration and former-student emigration, the size of the student migration gap has remained relatively stable over the four years for which data are available. This raises questions as to whether students are remaining in the UK in the numbers suggested by the IPS, or whether the IPS does not capture their departure, or a combination of the two. ONS has identified several possible drivers of the student migration gap: students may be legally staying for extended periods in the UK; students may be overstaying their study visa or visa extension after completing their course; or, the IPS may not be identifying outflows of all former students (see paragraphs 35 to 41). There is currently limited evidence, and a lack of available data sources, to test these different scenarios. Former-student emigration could reasonably be expected to be lower than student immigration, due to the range of outcomes of former students, but it is unclear whether it occurs on the scale seen in the ONS estimates.
- 17 Our main concern with the former-student emigration estimate is the quality of the estimate. While the IPS records the departure of some former students via its ‘previous reason for migration’ question, it potentially misses certain groups of former students, such as those who do not answer the question, or those whose answers to other IPS questions do not meet the UN definition of a long-term international migrant (see paragraphs 45 to 47). ONS is currently exploring the impact of possible unidentified students, but the extent to which the IPS reliably captures departures of former students remains unclear.

18 The former-student emigration estimate should represent the best available estimate of student emigration and should add clarity on the student migration gap. Instead, it creates doubts about the patterns of student migration and generates a narrative that is potentially misleading for a topic of major public interest and policy sensitivity. As the estimate may not provide a complete and coherent picture of former-student emigration, within the context of all student outcomes, it is not of sufficiently high quality to meet the needs of users, and, therefore, it is not compliant with Principle 4, Practice 2 of the Code. These doubts about quality threaten the public value of the student migration statistics.

## Our view

- 19 National Statistics status means that the statistics uphold the highest standards of trustworthiness, quality and public value. There is sufficient evidence that the student immigration estimate meets these criteria, as set out in the Code. In contrast, until ONS has a more complete and coherent picture of former-student outcomes, it is our judgement that ONS should publish the former-student emigration estimate, including the back-series to 2012, as experimental statistics (**Requirement 3**). With the benefit of hindsight, it would have been more appropriate to publish these statistics as experimental statistics when they were first introduced. This would have signalled clearly that the estimate, and any student net migration estimate derived from it, should be interpreted with caution. Also, it may have led ONS to conduct more detailed investigations into the drivers of the student migration gap earlier.
- 20 We have confined our review to the student migration estimates derived from the IPS; nothing should be inferred from it about the overall migration estimates. Former-student emigration only forms a part of the overall estimate of emigration. Our focus was not on the general approach to estimating people coming to and leaving from the UK, which is based on the long-established IPS. We focused on how migrating individuals are allocated into the category of 'student', and in particular, emigrants who were former students, which is based on a newer set of questions.
- 21 Our judgement about National Statistics status is therefore specific to the estimate of former-student emigration. ONS should clearly label the former-student emigration estimate as experimental statistics in all upcoming student migration statistics outputs, including the August 2017 MSQR (and accompanying data tables) and any upcoming student migration research updates. Once ONS is satisfied that it has a sufficient understanding of former-student outcomes, including the extent to which the IPS accurately captures student departures, it should write to the Office for Statistics Regulation to request re-assessment of the former-student emigration estimate. To build confidence in the statistics, ONS should inform users of the changes and update them on its progress.
- 22 ONS has already started to address the gaps in their understanding of former-student emigration, and the use of new data sources is expected to enhance the quality and public value of the student migration statistics. ONS should continue its work in collaboration with the Home Office on exit check data to: (a) use the data to improve its understanding of emigration of former non-EEA students, and (b) clearly document the methods used and the quality issues of the data (**Requirement 4a**). Similarly, ONS should: (a) use the data from the new ONS/Universities UK (UUK)/Centre for Population Change (CPC) survey to improve its understanding of how the IPS might be identifying former-student emigrants, and (b) clearly document the methods used and the quality issues of the data (**Requirement 4b**).
- 23 ONS should set out a clear plan for how it intends to use the exit check data and work as quickly as possible to implement this plan. While the results from the new survey will become available shortly after completion, the timescale for the development of the exit data for statistical purposes is less clear. Initially, the volume of data will be limited and it will take time to analyse these experimental data properly. But, over time, as more cohorts of international students complete their studies and depart the UK, the value of these data will increase. ONS should be realistic about the timescale for using the exit check data to gain insights into the

departures of former non-EEA students. Once the findings become clearer, ONS should comment on what they mean for its ability to reliably capture former-student emigration using the IPS and the quality of the IPS more generally.

## Requirements

| Requirement |  | To complete by   |
|-------------|--|--|
| 1           | To aid user interpretation and understanding of the student migration estimates, ONS should present additional information about the estimates and the uncertainty around them.  | August 2017 MSQR/next student migration research update    |
| 2           | To inform users of the appropriateness of the IPS departure questions, ONS should publish details on how it tested responses to these questions and the steps taken to address any potential sources of bias and error.  | August 2017 MSQR   |
| 3           | Until ONS has a more complete and coherent picture of former-student emigration, ONS should publish the former-student emigration estimate, including the back-series to 2012, as experimental statistics. ONS should clearly label the former-student emigration estimate as experimental statistics in all upcoming student migration statistics outputs, including the MSQR (and accompanying data tables) and any upcoming student migration research updates. | August 2017 MSQR   |
| 4a          | ONS should continue its work in collaboration with the Home Office on exit check data to: (a) use the data to improve its understanding of emigration of former non-EEA students, and (b) clearly document the methods used and the quality issues of the data.  | In line with ONS's existing development plans <sup>5</sup> |
| 4b          | ONS should: (a) use the data from the new ONS/UUK/CPC survey to improve its understanding of how the IPS might be identifying former-student emigrants, and (b) clearly document the methods used and the quality issues of the data.  | In line with ONS's existing development plans              |

<sup>5</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationdataandanalysisimprovingtheevidence/february2017>

# Introduction

- 24 There have been long-standing concerns about the measurement of student migration. A recent report by the House of Lords Economic Affairs Committee summarised these issues<sup>6</sup>. In response to the concerns raised publicly and directly with us about the robustness of the estimate of the number of former students leaving the UK (former-student emigration), the Office for Statistics Regulation examined several different aspects of the quality of the long-term international student migration statistics. We focused on a number of factors that determine the extent to which the International Passenger Survey (IPS) accurately captures long-term student migration, including the sample design, the questions, sources of bias, and the precision of the estimates. We also reviewed ONS's plans to develop these statistics, including the use of new administrative and survey data sources to enhance their understanding of outcomes of former students, and evaluated the presentation and communication of the statistics.
- 25 This review forms part of the Office's wider programme of work on international migration statistics which aims to increase their public value<sup>7</sup>. In January 2017 we published our assessment report on DWP's statistics on National Insurance Number Allocations to Overseas Nationals statistics<sup>8</sup>. In June 2017 we published a review of the Labour Force Survey employment estimates for non-UK nationals in the UK labour market<sup>9</sup>. These activities are informing a larger, systemic review of international migration statistics that will explore the barriers to and opportunities for delivering a more effective statistical system for migration in both the short and long terms.
- 26 The Authority's regulatory function has previously reviewed ONS international migration statistics. In June 2013 we published a monitoring review of the robustness of the International Passenger Survey<sup>10</sup>. The review concluded that, in general, the migration estimates derived from IPS at the level of UK aggregates (the overall estimates of immigration and emigration) are robust and meet user needs, but that the survey does not provide sufficient robustness to meet some important user needs for more local migration data; for example, at the local authority level or for smaller areas. The small migrant sample size of the IPS places limits on the level of disaggregation by characteristics of these migrants, for example, by reason for migration. Our February 2016 update re-iterated these views<sup>11</sup>.
- 27 Our concerns about the migration estimates lie at the lower, disaggregated levels, not at the higher, aggregated levels. This report summarises our investigations into the quality of the long-term international student migration statistics. It covers just one element of the ONS migration statistics, that relating to students, and is not an analysis of the quality of the overall estimates of immigration and emigration derived from the IPS. Instead, it focuses on the ability of the IPS to categorise migrants as students.
- 28 We gathered evidence by examining and analysing existing estimates in statistical bulletins and articles, and by holding a series of meetings with the ONS international migration statistics team. We use these findings to come to a decision about whether or not the student migration statistics are of sufficiently high quality to meet the standards of the *Code of Practice for*

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<sup>6</sup> <https://publications.parliament.uk/pa/ld201719/ldselect/ldeconaf/11/11.pdf>

<sup>7</sup> <https://www.statisticsauthority.gov.uk/publication/systemic-review-outline-international-migration-statistics/>

<sup>8</sup> <https://www.statisticsauthority.gov.uk/publication/nino-allocations-to-adult-overseas-nationals/>

<sup>9</sup> <https://www.statisticsauthority.gov.uk/publication/compliance-review-the-quality-of-labour-force-survey-estimates-produced-by-the-office-for-national-statistics/>

<sup>10</sup> [https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/12/images-internationalpassengersurve\\_tcm97-43098.pdf](https://www.statisticsauthority.gov.uk/wp-content/uploads/2015/12/images-internationalpassengersurve_tcm97-43098.pdf)

<sup>11</sup> <https://www.statisticsauthority.gov.uk/publication/the-robustness-of-the-international-passenger-survey-2/>

*Official Statistics*, specifically, Principle 4 (Sound Methods and Assured Quality) and Principle 8 (Frankness and Accessibility).

# Investigation and analysis

## The student migration gap

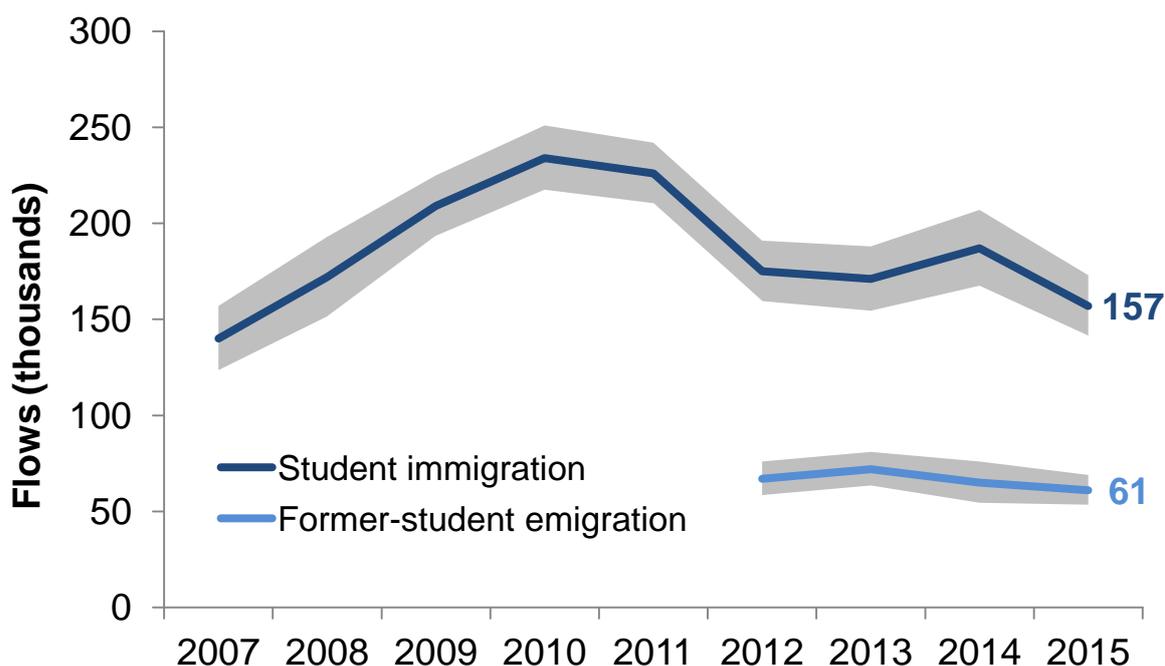
- 29 The estimates of long-term student immigration (the number of migrants entering the UK for formal study for 12 months or more) and former-student long-term emigration (the number of former students leaving the UK for 12 months or more) are mostly based on data from the IPS (see Annex 1 for more details). The former-student emigration estimate is based on data from a question about departing migrants' previous reason for migration. The 'previous reason for migration' question was introduced to the IPS in January 2012 following criticism from users of the lack of information about the number of students emigrating from the UK after completing their studies. Until 2012, ONS only published an estimate of the number of migrants leaving the UK for formal study (student emigration).
- 30 ONS also publishes the difference between the student emigration estimate and the student immigration estimate as part of the MSQR data tables<sup>12</sup>. This 'balance of flows' figure compares two different student migrant populations: those entering to the UK for formal study and those leaving the UK for formal study. The figure gives an indication of whether the UK experiences a net gain in the international student market, and is a component of overall net migration. However, it is *not* a measure of student net migration, as it does not reflect the outflow of students who originally entered the UK to study. The estimate of former-student emigration based on the 'previous reason for migration' question was designed to be more comparable with the student immigration estimate. ONS recognises the limitations of the 'balance of flows' figure and provides cautions in the footnotes of the MSQR data tables<sup>13</sup>. ONS could go further and make this information more prominent in the data tables to ensure that there is no potential misinterpretation of the student 'balance of flows' figure as a measure of student net migration (see paragraph 44).
- 31 Between 2012 and 2015, the estimate of student immigration has been considerably higher than the estimate of former-student emigration. The difference has fluctuated from one year to the next but averages around 110,000 per year (Chart 1). This 'student migration gap' is driven largely by non-EU students: for this group, the average difference is around 90,000 per year.

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<sup>12</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/migrationstatisticsquarterlyreportprovisionallongterminternationalmigrationltimeestimates>

<sup>13</sup> Footnote from Table 3 of the MSQR data tables: "Care should be taken when comparing inflow and outflow by main reason for migration. The outflow estimates are for emigrants' main reason for leaving the UK. A former immigrant's main reason for leaving the UK may well differ from their previous main reason for immigrating into the UK."

**Chart 1. Long-term international student migration flows with 95% confidence interval bands, 2007 to 2015**



Source: Provisional long-term international migration estimates, Tables 3 and 4 (ONS)<sup>14</sup>

- 32 A caveat of comparing estimates of student immigration and former-student emigration for the same year is that they relate to different cohorts of students. Students who arrive in the UK in any given year may leave after a year, two years or even four years, depending on the length of their course, and would only be identified as departing by the IPS in subsequent years. There is likely to be a time lag between changes to the number of students immigrating and the number of former students emigrating: it takes time for emigration to ‘catch-up’.
- 33 The impact of these changes on net migration is dependent on the number of students who remain in the UK: if all student immigrants left the UK after completing their course, then, on the whole, they would not contribute to net migration, regardless of the level of student immigration. For these reasons, the difference between the estimate of student immigration and former-student emigration (the “implied student net migration figure”) must be interpreted carefully. Nevertheless, the size of the student migration gap has remained relatively stable over the four years for which data are available. This raises questions as to whether students are remaining in the UK in these numbers, or whether the IPS does not capture their departure, or a combination of the two.

### What explains the student migration gap?

- 34 ONS has identified three possible drivers of the student migration gap: students may be legally staying for extended periods in the UK; students may be overstaying their study visa or visa extension after completing their course; or, the IPS may not be identifying outflows of all former students<sup>15</sup>.

<sup>14</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/migrationstatisticsquarterlyreportprovisionallongterminternationalmigrationltimeestimates>

<sup>15</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/longterminternationalmigration/internationalstudentmigrationwhatdothestatisticstellus>

### **Scenario 1: Students may be legally staying for extended periods in the UK**

- 35 The Home Office publishes annual statistics on changes in migrants' visa and leave status (previously called 'Migrant Journey')<sup>16</sup>. These offer some insights into whether non-EEA students maybe extended their stay (EEA students do not require a visa to study in the UK) as this could influence the gap. However, the number of visa extensions for study has dropped sharply in the last couple of years: in 2015, 53,339 former students were granted an extension of stay, compared with an average of 90,000 between 2011 and 2013<sup>17</sup>. Of those non-EEA students who were issued a study visa in 2010, 18% still had valid leave to remain in the UK after 5 years and 1% were granted permanent settlement<sup>18</sup>.
- 36 While these data sources cannot identify whether a student has left the UK or they continue to live in the UK (they do not measure departures), they do indicate that the number of non-EEA students immigrating would be expected to be higher than the number of former non-EEA students emigrating. The Home Office data show that around 1 in 5 visa-holding students extend their visa for reasons other than study, such as employment or marriage. This means that around 4 in 5 non-EEA students are expected to leave the UK once they have completed their studies. Therefore, the scenario where students may be legally staying longer than initially expected is unlikely to account for the entire long-term migration gap seen in the IPS estimates.

### **Scenario 2: Students may be overstaying their study visa or visa extension**

- 37 Currently, there is no data source that measures how many non-EU students living in the UK have overstayed the duration of their visa. ONS has recently started working with the Home Office using exit check data, which should provide some indication on departures of students whose visa has expired and who could therefore be expected to have left the country (see paragraphs 58 to 63). The exit check data rely on matched visa records, so if there is no record of departure (because the data cannot be matched), it does not always follow that the student has overstayed their visa and remained in the UK illegally, but this could be a potential explanation.

### **Scenario 3: The IPS may not be identifying outflows of all former students**

- 38 For some students, there may be a discrepancy between the intended length of stay and the actual length of stay. For instance, many one-year taught Masters courses actually last less than a year – the course typically starts in September and ends in June or July of the following year. If these students state an intention to stay for 12 months or more, they will be classified as long-term immigrants on arrival, but may appear as short-term immigrants on departure if they state the actual period as under a year. The migrant and visitor switcher adjustment (see paragraphs A1.6 and A1.7) was developed to account for such changing intentions. ONS intends to review the switcher methodology in the next year to ensure it remains relevant and fit-for-purpose.
- 39 ONS is investigating in more detail how the IPS identifies students who may report a different actual duration in the UK compared with their original intentions. This involves comparing short-term intentions with short-term actual migration patterns and looking at other evidence to see how trips abroad during their studies might affect the way a student responds to the IPS.
- 40 Another area that ONS plans to explore further is the switching behaviour of departing migrants, who may state an intention to be away from the UK for less than 12 months, but do

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<sup>16</sup> <https://www.gov.uk/government/publications/statistics-on-changes-in-migrants-visa-and-leave-status-2015/statistics-on-changes-in-migrants-visa-and-leave-status-2015>

<sup>17</sup> <https://www.gov.uk/government/publications/immigration-statistics-october-to-december-2016/summary>

<sup>18</sup> <https://www.gov.uk/government/publications/statistics-on-changes-in-migrants-visa-and-leave-status-2015/statistics-on-changes-in-migrants-visa-and-leave-status-2015>

not return to the UK within this intended time. These former students may be identified as departing the UK for less than a year, although they actually become long-term emigrants. An analysis of the total number of former-student departure contacts revealed that roughly a third of all contacts are categorised as potential short-term emigrants (see Table A1), and these are not used to calculate the measure of former-student long-term emigration.

- 41 These areas of investigation are promising but also highlight the gaps in ONS's knowledge of the outcomes of student immigrants, and the need for ONS to conduct further investigations of existing IPS data. A planned one-off survey of university students could be helpful for examining discrepancies between intended and actual student emigration behaviours, although it will not necessarily capture responses from all students (see paragraphs 64 to 67).

## The 'previous reason for migration' question as a source of error

- 42 The IPS is a survey, and the estimates derived from it are subject to both sampling and non-sampling error, which may affect its ability to reliably measure student migration flows. Confidence intervals (CIs) give an indication of sampling error by representing the level of uncertainty around the estimate (Chart 1). The two main sources of non-sampling error are non-response (where the characteristics of respondents differ from those who do not respond to the survey) and incorrect information (where reporting by passengers may not reflect their actual behaviour).
- 43 In spite of the reduction in the number of student inflow and former-student outflow contacts in the IPS (see paragraph A1.10), the CIs of the overall estimate of long-term student immigration and former-student long-term emigration have remained stable (see paragraphs A1.22 and A1.23), and are small enough to detect significant changes between two estimates at different time points (see paragraph A1.24). CIs for breakdowns of the estimates, such as for EU and non-EU students, tend to be less precise. In general, the information in the supporting methodology documentation on sampling bias and uncertainty around the estimates is clear, well-written and accessible to non-expert users, in line with Principle 4, Practice 2 and Principle 8, Practice 1 of the Code.
- 44 ONS presents CIs alongside the estimates of student immigration and former-student emigration in the MSQR supplementary tables, but not in the MSQR itself, nor in the student migration research updates. This decision was made to avoid confusion between the upper CI and the central estimate and, therefore, to limit misrepresentation of the estimate in the public domain. However, it is important to reflect the level of uncertainty around an estimate where possible, including key reports. Therefore, we recommend that ONS presents CIs alongside the student migration estimates in any future student migration research update, in line with Principle 4, Practice 2 of the Code. **To aid user interpretation and understanding of the student migration estimates, ONS should present additional information about the estimates (see paragraph 30) and the uncertainty around them (Requirement 1).**
- 45 Passengers may inadvertently provide incorrect information or for some other reason not provide accurate information about their previous reason for migration or intended length of departure. For instance, if a student migrant has been in employment in the UK for a number of years following the completion of their course, it is possible that they may give a different primary previous reason for migration on departure ('work'). Or, if a non-EU student has illegally overstayed their visa, they may be less likely to tell ONS their true previous reason for migration. A former student may also state an intention to depart short term (and so not count as long-term emigrant), but not return.
- 46 The non-response rate in the IPS is low, and is unlikely to be higher among immigrants or former-student emigrants than other migrant groups (see paragraph A1.8). ONS also collects data on non-study responses to the 'previous reason for migration' question. The IPS departure questionnaire includes a 'study check' question, which asks respondents if they are currently studying in the UK. Comparing these data with the responses to the previous reason

for migration question gives an indication of whether the IPS is missing certain groups of students based on their answer to the ‘previous reason for migration question’.

- 47 We might expect most migrants who answered ‘yes’ to the study check question to give their previous reason for migration as ‘formal study’. However, a proportion of respondents gives a different previous reason for migration or does not answer the previous reason for migration question. ONS estimates that, for the year ending December 2015, up to 9,000 former students per year may not have been identified for these reasons<sup>19</sup>. Long-term students may have mixed motivations for migration, and some people who were in the UK to work or for other reasons may have also studied, so the information may not be incorrect. Nevertheless, these data suggest that the IPS may be underestimating the level of former-student emigration by excluding “unidentified” students.
- 48 ONS tested and piloted the ‘previous reason for migration’ question before it went live in January 2012, and also checked the structuring of the questions in the departure questionnaire following the publication of the first results in August 2013 (see Annex 1). **To inform users of the appropriateness and robustness of the IPS departure questions, ONS should publish details on how they tested responses to these questions and the steps taken to address any potential sources of bias and error (Requirement 2).** We recognise that the scope of this requirement is wider than student migrants (as the information covers all migrant groups), but we judge that this is necessary to improve user understanding of the methods used to produce the former-student emigration estimates, in line with Principle 4, Practice 1 of the Code.

## Is the student migration gap credible?

- 49 The Home Office routinely publishes comparisons of its visa statistics with other sources of information on student immigration<sup>20</sup>, including ONS’s estimate of non-EU student immigration, in order to provide a check on whether the trends are consistent. In spite of definitional differences between the two data sources<sup>21</sup>, in general, there is agreement between the trends in visa grants of one year and the ONS estimate of non-EU student immigration. This coherence with other statistics gives users confidence that the ONS estimate is a high-quality measure and that the IPS is reliably capturing the level of non-EU student immigration, in line with Principle 4, Practice 3 of the Code. In contrast, the estimate of former-student emigration is the only source of information about when a student leaves the UK; the other sources of information do not confirm the point at which the student has left the country. This lack of ability to verify and triangulate the estimate means that assurances cannot be given to provide the same level of confidence in the former student emigration figures.
- 50 There are a range of potential outcomes for international student migrants once they have completed their course, such as remaining in the UK for study or employment, leaving the UK for a short period of time or leaving the UK indefinitely. One of the biggest challenges ONS faces is to understand the relative size and importance of these different groups as drivers of the student migration gap. The IPS captures the departure of some former students via its ‘previous reason for migration’ question, but it potentially misses certain groups of former students, which may lead to an underestimate of the level of former-student emigration. ONS has started to explore the scale and impact of these different groups; a recent student migration research update contains a helpful conceptual diagram that illustrates a range of outcomes for non-EU student immigrants and highlights some of the evidence gaps<sup>22</sup>. Former-

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<sup>19</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalstudentmigrationresearchupdate/april2017>

<sup>20</sup> <https://www.gov.uk/government/collections/immigration-statistics-quarterly-release>

<sup>21</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/comparingsourcesofinternationalmigrationstatistics/december2016>

<sup>22</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalstudentmigrationresearchupdate/april2017>

student emigration could reasonably be expected to be lower than student immigration, due to this range of outcomes, but it is unclear whether it occurs on the scale seen in the ONS estimates.

- 51 Our main concern with the former-student emigration estimate is the quality of the estimate. While the IPS records the departure of some former students via its 'previous reason for migration' question, it potentially misses certain groups of former students, such as those who do not answer the question, or those who provide incorrect information about their intended length of absence from the UK (misstating when they expect to return). ONS is currently exploring the impact of possible unidentified students, but the extent to which the IPS reliably captures departures of former students remains unclear.
- 52 The former-student emigration estimate should represent the best available estimate of student emigration and should add clarity on the student migration gap. Instead, it creates doubts about the patterns of student migration and generates a narrative that is potentially misleading for a topic of major public interest and policy sensitivity. As the emigration estimate may not provide a complete and coherent picture of former-student emigration, within the context of all student outcomes, it is not of sufficiently high quality to meet the needs of users, and, therefore, it is not compliant with Principle 4, Practice 2 of the Code. These doubts about quality threaten the public value of the student migration statistics.
- 53 **Until ONS has a more complete and coherent picture of former-student emigration, it is our judgement that ONS should publish the former-student emigration outcomes, including the back-series to 2012, as experimental statistics<sup>23</sup> (Requirement 3).** With the benefit of hindsight, it would have made more sense to publish these statistics as experimental statistics when they were first introduced. This would have signalled clearly that the estimate, and any student net migration estimate derived from it, should be interpreted with caution. Also, it may have led ONS to conduct more detailed investigations into the drivers of the student migration gap at an earlier stage.
- 54 We have confined our review to the student migration estimates derived from the IPS; nothing should be inferred from it about the overall migration estimates. Former-student emigration only forms a part of the overall estimate of emigration. Our focus was not on the general approach to estimating people coming to and leaving from the UK, which is based on the long-established IPS. We focused on how migrating individuals are allocated into the category of 'student', and in particular emigrants who were former students, which is based on a newer set of questions.
- 55 Our judgement about National Statistics status is therefore specific to the estimate of former-student emigration. **ONS should clearly label the former-student emigration estimate as experimental statistics in all upcoming student migration statistics outputs, including the August 2017 MSQR (and accompanying data tables) and any upcoming student migration research updates (Requirement 3).** Once ONS is satisfied that it has a sufficient understanding of former-student outcomes, including the extent to which the IPS accurately captures student departures, it should write to the Office for Statistics Regulation to request re-assessment of the estimate. To build confidence in the statistics, ONS should inform users of the changes and update them on its progress.

## What is ONS doing to improve its understanding of student emigration?

- 56 To address the gaps in its knowledge of former-student emigration, ONS is accessing and exploiting new administrative and survey data sources. ONS is exploring two different options to supplement the IPS data. First, ONS is working with the Home Office to investigate the uses of exit check data, an important source of information on departures of non-EEA students that hold visas. Second, ONS worked with Universities UK (UUK), an advocacy group that

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<sup>23</sup> [https://www.statisticsauthority.gov.uk/wp-content/uploads/2010/12/images-assessmentanddesignationofexperimentalstatistic\\_tcm97-44327-1.pdf](https://www.statisticsauthority.gov.uk/wp-content/uploads/2010/12/images-assessmentanddesignationofexperimentalstatistic_tcm97-44327-1.pdf)

represents all UK universities, and the Centre for Population Change (CPC) at the University of Southampton, on a one-off online survey to gather information about student emigration intentions before students complete their degree. Below is a brief description of these two developments; more detailed information can be found in Annex 2.

- 57 We welcome these new developments and ONS's proactive engagement with stakeholders in the Home Office and the education sector, and the progress that ONS has made so far is encouraging. The data sources have the potential to offer rich information on student departures and improve ONS's understanding of how the IPS might be identifying students. Once the findings from these new data sources become clearer, ONS should comment on what they mean for its ability to reliably capture former-student emigration using the IPS and the quality of the IPS more generally.

## Home Office exit check data

- 58 The Home Office reintroduced exit checks for passengers leaving the UK in April 2015<sup>24</sup>. By linking passport or travel document information for passengers with visa data, the Home Office is able to confirm a person's exit from the UK and whether or not they leave before their visa expires. The exit check programme is dependent on visa information, and can only be used to track the movements of international students who require a study visa – this excludes all EEA students and certain groups of non-EU students, such as those from the United States or Australia. As visa-holding non-EEA students make up the biggest proportion of international students<sup>25</sup>, the perceived value of the exit check data is high. ONS intends to exploit other data sources to examine former EEA student departures (see Annex 2 for further information).
- 59 The Home Office exit check data are experimental statistics and the department published an initial report on the use of that data for statistical purposes in August 2016<sup>26</sup>. The exit check data will enable ONS to investigate patterns of non-EEA student departures. As ONS does not collect personal information from IPS respondents, it will not be able to link IPS data and exit check data.
- 60 It is important to note that the exit check data capture departures rather than migrations. The data set is based on Advanced Passenger Information collected by carriers, which does not include questions as to why, and for how long, a person is leaving the UK. Only a small proportion of the exit check data would relate to long-term international migrants, and an even smaller subset would relate to emigration of former students. However, the Home Office is confident that the data does provide sufficient information, subject to caveats in terms of coverage and completeness, to examine the movements of non-EEA students who hold visas.
- 61 The Home Office has put in place the arrangements for four ONS researchers to access the exit check database on Home Office premises. Two of the four ONS researchers are focusing specifically on issues related to student emigration. This will enable ONS to conduct cohort analyses and testing to better understand the value presented by combining immigration and travel information.
- 62 The timescale for development of the exit check data for statistical purposes remains unclear. ONS gained access to the exit check data in February 2017, but the volume of data currently available is limited and it will take time to analyse these experimental data properly. Given that many international students come to the UK for a three- or four-year course, and that the Home Office data on persons leaving the UK before April 2015 is incomplete and inconsistent, it will not yet be possible to validate the emigration of all former non-EEA students. Therefore, the value of these data will increase over time. ONS should be realistic about its timescale for

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<sup>24</sup> <https://www.gov.uk/government/publications/exit-checks-on-passengers-leaving-the-uk/exit-checks-fact-sheet>

<sup>25</sup> <https://www.hesa.ac.uk/data-and-analysis/publications/students-2015-16>

<sup>26</sup> <https://www.gov.uk/government/statistics/a-report-on-the-statistics-being-collected-under-the-exit-checks-programme>

using the exit check data to gain insights into the departures of former non-EEA students, and should set out a clear plan for how it intends to use these data.

- 63 **ONS should continue its work in collaboration with the Home Office on exit check data to: (a) use the data to improve its understanding of emigration of former non-EEA students, and (b) clearly document the methods used and the quality issues of the data (Requirement 4a).**

### **ONS/UUK/CPC international student survey**

- 64 The new ONS/UUK/CPC online student survey targeted all international students (EU and non-EU; undergraduate and postgraduate) two months before they completed their course. The survey asked students about their course (type, length); how long they have been in the UK; their intentions when they finish their course (and how sure they are of their intentions); and whether they have had trips away from the UK while studying (such as visiting family for Christmas), among other topics. The data from this experimental survey are expected to provide insights into how students are answering the IPS departure questions and allow ONS to compare students' intended and actual behaviours. Students who enrolled but dropped out of university without taking a degree were not part of the target population, although details of these students could still be on the list used to contact survey respondents.
- 65 The survey was a one-off exercise; the first wave of the survey started in March 2017 and was completed in May 2017, with a possible follow-up wave in 2017/18. ONS will obtain the first set of data in mid-2017 and will need to spend time analysing the quality (coverage and completeness) of the data. ONS plans to include some of the findings from the online survey in future student migration research updates, and also intends to collaborate with UUK and CPC on a joint report with the results from additional analyses on international student migrant characteristics.
- 66 The driver for this new survey was the limited value of existing sources of information on outcomes of former students, such as the Higher Education Statistics Agency's Destinations of Leavers from Higher Education survey, which has a low response rate among international students (see Annex 2). However, the ONS/UUK/CPC survey will also be subject to issues of coverage and representativeness of responses. For instance, there is likely to be response bias: not all universities and international students will choose to take part, and it may be unlikely that student overstayers will respond to the survey. The data quality is expected to be lower than the IPS due a likely lower response rate. It is important that ONS documents these limitations and explains them to users.
- 67 **ONS should: (a) use the data from the new survey to improve its understanding of how the IPS might be identifying former-student emigrants, and (b) clearly document the methods used and the quality issues of the data (Requirement 4b).**

# Annex 1: Detailed findings on methodology

## Long-term international migration estimates methodology – background

- A1.1 The IPS is a large-scale survey carried out by ONS to collect information from travellers and migrants as they enter and leave the UK. Around 700,000 interviews are conducted each year. The IPS is intentions-based – it asks migrants a number of questions about their behaviour, including their reason for migration and original reason for coming to the UK. The survey is designed to ensure that it captures a representative sample of passengers at airports, sea ports and tunnel routes, and it has a high response rate (80%). This design enables ONS to produce UK estimates of net migration, immigration and emigration which can be further broken down by citizenship and reason for migration<sup>27</sup>.
- A1.2 Approximately 90% of the data used to produce the long-term international migration estimates come from the IPS. The number of ‘migrant contacts’ (the number of interviews with migrants carried out the IPS in the relevant period) is grossed up to produce the total estimates of immigration and emigration. The weighting system is a complex, eight-stage process that calibrates the total set of survey respondents interviewed at a port or route to passenger traffic known to have passed through that port or route for the period in question<sup>28</sup>. Passenger traffic is provided by the Civil Aviation Authority (CAA), Department for Transport and Eurotunnel, among others.
- A1.3 A number of other data sources are used to supplement the estimates derived from the IPS, including the ONS Labour Force Survey (which provides a geographical distribution of migrants for calibration methodology), Home Office data (which adds information on asylum seeker and refugee flows), and Northern Ireland Statistics and Research Agency data (which adds information on long-term international migration to and from Northern Ireland and the rest of the world).
- A1.4 In addition, two adjustments are made to the immigration and emigration estimates to account for instances where passengers’ intentions may not be realised. Visitor switcher flows (people who enter or leave the UK intending to stay in or leave for less than 12 months, but actually stay in or leave for more than 12 months) are added to the estimates, whereas migrant switcher flows (people who enter or leave the UK intending to stay for 12 months or more but actually stay in or leave for less than 12 months) are subtracted from the estimates. Therefore, short-term international migrants, defined as those who stay in or leave the UK for less than 12 months, are not captured by the long-term international migration estimates. Since the short-term estimates are based on actual movements rather than intentions (they describe the number of journeys rather than the number of migrants), they are not directly comparable to the long-term international migration estimates.
- A1.5 It is important to note that only the overall estimate of student immigration presented in MSQR includes these different data sources and adjustments. The estimate of former-student emigration and breakdowns of the estimates, for example, for EU and non-EU students, are based *only on the IPS component*. Sums of these breakdowns are therefore usually lower than the adjusted overall estimates. For clarity, in this review of the quality of

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<sup>27</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/internationalmigrationmethodology>

<sup>28</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/leisureandtourism/methodologies/internationalpassengersurveymethodology>

the student migration statistics we present comparisons of estimates based only on the IPS component.

## Visitor/migrant switcher methodology

- A1.6 The visitor and migrant switcher methodology was written around 2002 and is based on new questions that were added to the IPS in 2004 about how long respondents have been in the UK. If the respondent gives a time that implies they immigrated previously, then the IPS asks how long the person had originally intended to stay in the UK. For visitor switchers, separate calculations are made for those entering the UK who are EEA and non-EEA citizens, those leaving the UK who are EEA citizens and going to the EU, and all other citizens leaving the UK going anywhere in the world (four groups in total). For migrant switchers, a single calculation is made across all groups.
- A1.7 ONS intends to review the switcher methodology in the next year to ensure it remains relevant and fit-for-purpose<sup>29</sup>. Currently, switchers make up around 3-4% of the overall student immigration estimate. ONS told us that any changes to the methodology are not expected to affect the degree of the adjustment.

## Non-response in the IPS

- A1.8 ONS has carried out an analysis of non-response bias in the IPS<sup>30</sup>. The response rate has reduced slightly over time but remains high (78%). ONS examined the impact of sudden fast flows of passengers at some ports, and found that such events are independent of the characteristics of the passengers. The rate of non-contacts (where passengers cannot be contacted for other reasons, such as using a mobile phone) and the rate of minimum responses and refusals are also low, 2.6% and 2.9%, respectively; although there is some variation among ports, with Heathrow generally being higher.

## 'Previous reason for migration' question

- A1.9 The new question about migrants' previous reason for migration was introduced following a call from users for better information on emigration of former students. ONS investigated if data on emigration of former students could be obtained from any other existing data sources, but reached the conclusion that the only option was to add a new question to the IPS. The new question was piloted in July 2011 and went live in January 2012 for departing passengers. Part of the piloting process involved cognitive testing with university students to understand the potential responses to the question. Following the publication of the first results from the new question (in August 2013), ONS checked the structuring of the departure questionnaire and asked interviewers about the quality of responses to the question, but this did not flag up any areas of concern.

## IPS sample design

- A1.10 Each year, the IPS identifies around 4,000 long-term international migrants from approximately 700,000 interviews. Student migrants account for a relatively small proportion of all long-term migrant contacts: for the year ending December 2015, there were 614 inflow contacts (student immigrants) and 298 former-student outflow contacts (former-student emigrants). In general, the number of student inflow and former-student outflow

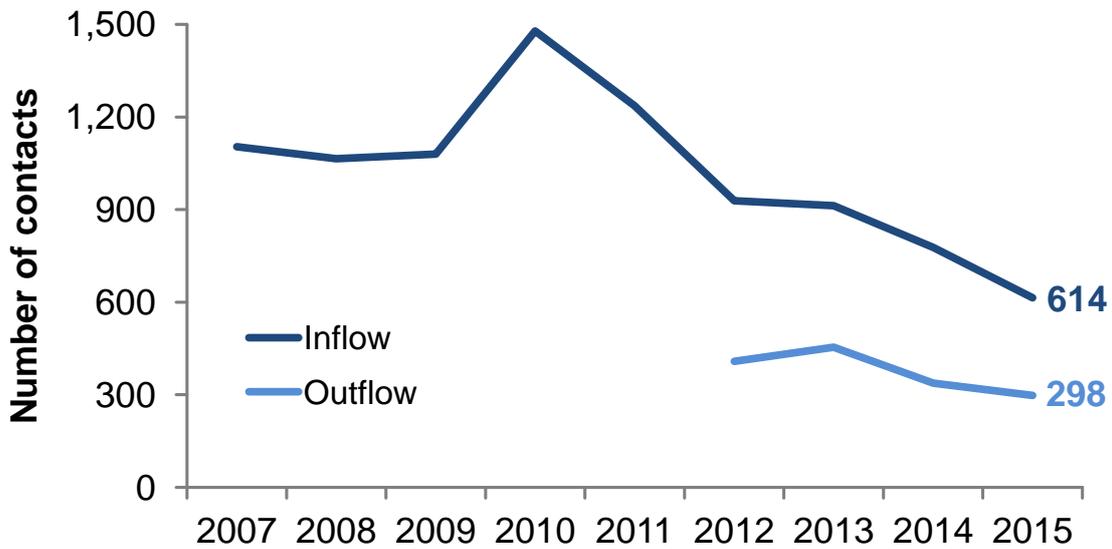
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<sup>29</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationdataandanalysisimprovingtheevidence/february2017>

<sup>30</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/internationalpassengersurveyqualityinformationinrelationtomigrationflows>

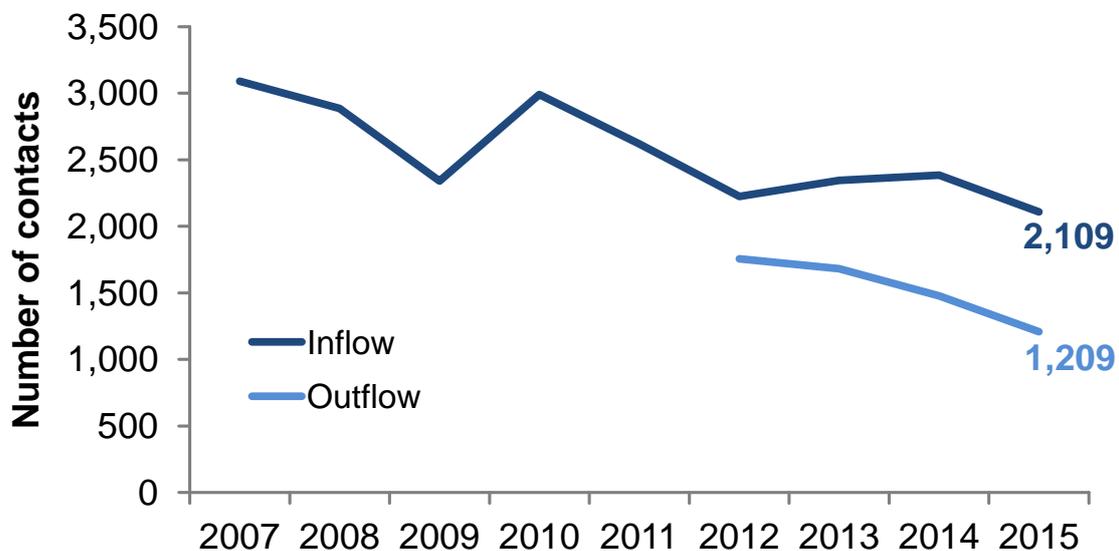
contacts has decreased over time (Chart A1), which reflects a reduction in the total number of long-term migrant contacts (Chart A2).

**Chart A1. The number of long-term student inflow and former-student outflow contacts in the IPS, 2007 to 2015**



Source: IPS table 1.02, margins of error, December 2016 (ONS)<sup>31</sup>

**Chart A2. The total number of long-term inflow and outflow contacts in the IPS, 2007 to 2015**



Source: IPS table 1.02, margins of error, December 2016 (ONS)

A1.11 Like the final estimates of long-term international student immigration and emigration, there is a discrepancy between the number of long-term student inflow and long-term former-student outflow contacts. It is important to note that the number of long-term former-student outflow contacts does not reflect all student departures captured by the IPS; some departures of former students are short-term departures. Therefore, to understand the true size of the former-student outflow sample, it is helpful to look at breakdowns of student departure contacts by intended length of departure. We examined all departure contacts

<sup>31</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/internationalpassengersurveymarginsoferrortable102>

who had lived in the UK for 12 months or more and who immigrated for the purposes of 'formal study'.

- A1.12 Only those students who intend to leave the UK for 12 months or more are counted as long-term emigrants, as per the UN definition. Some students who answer 'don't know' to the intended length of departure question are also included, as are a proportion of students who answer 'maybe 12 months or more'; the remainder are identified as possible migrant switchers. All other former students are classed as short-term emigrants (Table A1). The total number of former-student outflow contacts is closer to the number of long-term student immigrant contacts, but there remains a discrepancy between the two figures. This indicates that some of the difference between the estimate of student immigration and former-student emigration can be explained by the difference between the number of arrival and departure contacts.
- A1.13 For the year ending December 2015, long-term emigrants accounted for roughly two-thirds of former-student departures, and this proportion has fluctuated around 70% in the four years for which data are available (Table A1). Therefore, around 30% of long-term student immigrants may be counted as short-term emigrants on departure. These breakdowns of departure contacts provide valuable information on the different outcomes of former-student long-term immigrants, and we strongly encourage ONS to publish these data as part of future student migration research briefings.

**Table A1. Breakdown of the number of former-student long-term immigrant contacts by intended length of departure, all nationalities 2012 to 2015**

| Intended length of departure     | 2012         | 2013         | 2014         | 2015         |
|----------------------------------|--------------|--------------|--------------|--------------|
| 3-6 months                       | 107          | 94           | 90           | 109          |
| DK, maybe 3 months or more       | 31           | 19           | 17           | 23           |
| 6-12 months                      | 9            | 17           | 12           | 8            |
| DK, maybe 6 months or more       | 17           | 11           | 9            | 10           |
| Up to 2 years                    | 22           | 30           | 19           | 19           |
| Up to 4 years                    | 17           | 11           | 6            | 12           |
| 4 years and more                 | 356          | 380          | 294          | 256          |
| DK, maybe 12 months or more      | 12           | 9            | 4            | 6            |
| DK how many years                | 14           | 24           | 17           | 8            |
| <b>Total</b>                     | <b>585</b>   | <b>595</b>   | <b>468</b>   | <b>451</b>   |
| Short-term emigrant contacts     | 164          | 141          | 128          | 150          |
| Long-term emigrant contacts      | 421          | 454          | 340          | 301          |
| Proportion of long-term contacts | <b>72.0%</b> | <b>76.3%</b> | <b>72.6%</b> | <b>66.7%</b> |

Source: *International Passenger Survey inflow contacts for study by quarter and outflow contacts for former long-term student immigrants by intended length of departure, UK, 2012 to 2015 (ONS)*<sup>32</sup>;

DK = 'Don't Know';

The cells shaded dark grey indicate contacts that are categorised as long-term emigrants – in the LTIM estimates a proportion of the contacts in the cells shaded light grey are also categorised as long-term emigrants, but at this proportion has not been applied to the number of IPS contacts in this analysis, all contacts for "DK, maybe 12 months or more" have been included in the long-term emigrant contacts total. It should be noted that only non-UK born long-term emigrants are asked about their previous reason for immigration.

- A1.14 The ability to detect long-term student migrants is dependent on the number of passengers travelling to and from the UK for travel and tourism. The more passengers, the bigger the

<sup>32</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/adhocs/007231internationalpassengersurveyinflowcontactsforstudybyquarterandoutflowcontactsforformerlongtermstudentimmigrantsbyintendedlengthofdepartureuk2012to2015>

size of the population that can be sampled, and therefore, the less likely that a long-term student migrant is identified. Recently, there has been a large increase in the total number of passengers travelling to and from the UK and ONS considers this to be the main driver of the reduction in the number of student migrant contacts<sup>33</sup>. A consequence of the increasing number of passengers is that ONS would need to substantially increase the number of IPS interviews, or employ a more targeted way to identify migrants, to increase the number of student migrant contacts. This approach was deemed to be too resource-intensive; instead, ONS is focusing on gaining access to new administrative and survey data sources to supplement IPS data (see Annex 2).

- A1.15 The number of long-term student inflow and long-term former-student outflow contacts varies by student nationality (Table A2). Non-EU students make up the biggest proportion of former-student outflows. Both the number of EU and non-EU student outflow contacts has decreased since 2013, but proportionately, the decrease is larger for non-EU students. The trends in the number of former-student outflows reflect the trends in the estimates of former-student emigration.

**Table A2. The number of former long-term student contacts emigrating for 12 months or more, by nationality, 2012 to 2015**

| Nationality  | 2012       | 2013       | 2014       | 2015       |
|--------------|------------|------------|------------|------------|
| UK           | 13         | 19         | 12         | 12         |
| EU           | 57         | 63         | 53         | 47         |
| Non-EU       | 351        | 372        | 275        | 242        |
| <b>Total</b> | <b>421</b> | <b>454</b> | <b>340</b> | <b>301</b> |

Source: International Passenger Survey inflow contacts for study by quarter and outflow contacts for former long-term student immigrants by intended length of departure, UK, 2012 to 2015 (ONS)

- A1.16 Student immigration and emigration are seasonal; the majority of students start their course in September and finish their course in May or June. This clustering of student arrivals and departures is reflected in the long-term inflow and long-term outflow contacts for each sampling quarter. Most student immigrants are identified in sampling quarter 3 (Table A3), whereas most former-student outflows are identified in sampling quarter 2 and quarter 3 (Table A4).

**Table A3. The number of long-term student inflow contacts by sampling quarter, 2012 to 2015**

| Nationality | Year | Q1  | Q2 | Q3  | Q4 |
|-------------|------|-----|----|-----|----|
| EU          | 2012 | 10  | 6  | 72  | 8  |
|             | 2013 | 17  | 5  | 101 | 12 |
|             | 2014 | 12  | 4  | 103 | 13 |
|             | 2015 | 8   | 5  | 77  | 10 |
| Non-EU      | 2012 | 116 | 59 | 557 | 89 |
|             | 2013 | 78  | 67 | 517 | 87 |
|             | 2014 | 85  | 59 | 442 | 51 |
|             | 2015 | 57  | 36 | 360 | 47 |

Source: International Passenger Survey inflow contacts for study by quarter and outflow contacts for former long-term student immigrants by intended length of departure, UK, 2012 to 2015 (ONS)

<sup>33</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/internationalpassengersurveyqualityinformationinrelationtomigrationflows>

**Table A4. The number of former-student outflow contacts by sampling quarter and nationality, all intended lengths of departure, 2012 to 2015**

| Nationality | Year | Q1 | Q2  | Q3  | Q4 |
|-------------|------|----|-----|-----|----|
| EU          | 2012 | 9  | 40  | 24  | 13 |
|             | 2013 | 13 | 28  | 33  | 14 |
|             | 2014 | 13 | 30  | 35  | 8  |
|             | 2015 | 8  | 33  | 23  | 12 |
| Non-EU      | 2012 | 77 | 125 | 179 | 84 |
|             | 2013 | 76 | 120 | 177 | 90 |
|             | 2014 | 84 | 106 | 120 | 53 |
|             | 2015 | 40 | 130 | 121 | 58 |

Source: International Passenger Survey inflow contacts for study by quarter and outflow contacts for former long-term student immigrants by intended length of departure, UK, 2012 to 2015 (ONS)

- A1.17 This clustering raises the possibility that student immigrants could be more likely to be missed in the IPS sample during July to September, when most student emigration journeys are expected to take place. During 2017, ONS is carrying out a pilot exercise as part of a periodic check that groups of migrants are not missed by the IPS interviewing hours being between 6am and 10pm. The results of this analysis are expected to be published early 2018<sup>34</sup>.
- A1.18 ONS conducts regular reviews of the IPS sample design ('sample optimisation exercises') to ensure the efficiency of the sample and to minimise the loss of information from a smaller sample size, in accordance with Principle 4, Practice 5 of the Code. The last exercise was completed in 2016, and this included the re-introduction of 'migration filter shifts' in October 2016. These are extra arrival or departure shifts with more intensive sampling to pick up migrants. The filter shifts target migrants at eight of the largest ports (Heathrow, Birmingham, Manchester, Glasgow, Luton, Newcastle, Stansted and St. Pancras), which have greater variation in migrant numbers between interviewing shifts.
- A1.19 The aim of filter shifts is to maintain the number of long-term migrant contacts at the level of the 2014 sample, while maintaining, or even increasing, the precision of the estimates. ONS estimates that, without these migration filter shifts, the number of long-term migrant contacts would be lower by about 800 (roughly 20%). The first estimates to include the additional migration filter shifts will be for the year ending December 2016 were published in May 2017.

## Precision of the long-term student migration estimates

- A1.20 ONS started adding 95% confidence intervals (CIs) to the long-term international migration estimates in August 2012. CIs are a measure of uncertainty and reflect the precision of the estimate; the smaller the CI, the more precise the estimate. CIs are determined by both the size of the sample (the larger the sample, the smaller the CI) and the variability of the sample (the greater the variability, the greater the CI).
- A1.21 CIs of the long-term international migration estimates apply to the IPS component only; it is not possible to measure uncertainty of the migrant/visitor switcher and the NISRA data or Home Office asylum data components. As a result, reported CIs of IPS estimates of student migration and the final student migration estimates (including adjustments) are identical.

<sup>34</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationdataandanalysisimprovingtheevidence/february2017>

A1.22 In spite of the reduction in the number of student inflow and former-student outflow contacts, the CIs of the overall estimate of long-term student immigration and former-student long-term emigration, as a proportion of the estimate, have remained reasonably stable over the same period (Table A5). This suggests that the precision of the estimates has not been greatly affected by the reduction in the number of student migrant contacts.

**Table A5. Estimates (Est) of long-term student immigration and former-student long-term emigration with 95% confidence intervals (CI), 2012 to 2015**

| Estimate                  | Nationality  | 2012       |           | 2013       |           | 2014       |           | 2015       |           |
|---------------------------|--------------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|
|                           |              | Est        | CI        | Est        | CI        | Est        | CI        | Est        | CI        |
| Immigration               | EU           | 28         | 7         | 40         | 9         | 48         | 11        | 36         | 8         |
|                           | Non-EU       | 139        | 13        | 122        | 13        | 134        | 17        | 112        | 13        |
|                           | <b>Total</b> | <b>175</b> | <b>16</b> | <b>171</b> | <b>17</b> | <b>187</b> | <b>20</b> | <b>157</b> | <b>16</b> |
| Former-student emigration | EU           | 15         | 6         | 18         | 7         | 19         | 9         | 15         | 5         |
|                           | Non-EU       | 49         | 6         | 50         | 6         | 44         | 6         | 43         | 6         |
|                           | <b>Total</b> | <b>67</b>  | <b>9</b>  | <b>72</b>  | <b>9</b>  | <b>65</b>  | <b>11</b> | <b>61</b>  | <b>8</b>  |

Source: Provisional long-term international migration estimates, Tables 3a and 4a (ONS)

A1.23 The stability of the CIs may be the result of the continuous optimisation of the IPS sample. ONS expects the re-introduction of migration filter shifts to *increase* the precision of the long-term international migration estimates, by better capturing variability of the immigrant and emigrant populations at different ports. ONS has assessed the impact of migration filter shifts on precision by calculating the ratio of sampling errors with filter shifts to the corresponding values without filter shifts. This analysis reveals that the increase in precision of the student immigration and former-student emigration estimates will be limited (1% and 5%, respectively).

A1.24 The CIs of the overall estimates of student immigration and former-student emigration are small enough to detect significant changes between two estimates at different time points, although the change must be large for this to occur. For example, there was a statistically significant reduction in the number of student immigrants between December 2015 and December 2016 (provisional estimate) from 157,000 to 132,000<sup>35</sup>.

A1.25 ONS also provides CIs for breakdowns of the estimates, such as for EU and non-EU students<sup>36</sup>. These estimates tend to be less precise as they are based on a smaller number of contacts, particularly for EU students, and therefore trends in these estimates must be interpreted more carefully. ONS does not report more granular breakdowns of the data (for instance, by country of citizenship); at this level, the size of the confidence interval often exceeds the estimate itself, and the estimates are too imprecise to be meaningful.

<sup>35</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/bulletins/migrationstatisticsquarterlyreport/may2017>

<sup>36</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/datasets/migrationstatisticsquarterlyreportprovisionallongterminternationalmigrationltimeestimates>

# Annex 2: Developments to the student migration statistics

## Home Office exit check data

- A2.1 The success of the exit check data depends on the ability to link passport or travel document information for passengers travelling via air, sea and rail routes, with visa data. The vast majority of commercial airlines already provide passenger information to the Home Office via the Advanced Passenger Information system (API, also known as Semaphore), and the Home Office is planning to extend this to maritime and rail routes.
- A2.2 The exit checks programme is designed primarily for operational and enforcement purposes, but the Home Office also intends to carry out statistical analyses on the data. In August 2016 the Home Office published a report outlining the statistics being collected under the exit check scheme<sup>37</sup>. The exit check programme combines data on persons entering the UK, and the permission that they have to stay in the UK, with data on persons leaving the UK; for example, combining the API and Travel Document Information (TDI) from exit checks with data on visas and other forms of permission (extensions of leave, asylum claims). This database allows the Home Office to track the movements of non-EEA nationals (but not British or EEA nationals, because they are not subject to immigration controls).
- A2.3 In general, at the time of the first report coverage of the exit check data was good (100% for outbound routes and approximately 90% for inbound rates) but not complete – it does not include certain routes, such as the Common Travel Area with the Republic of Ireland and those leaving on private boats and flights, and inbound route coverage for rail and maritime travel is not as good as air travel. Work with carriers since the report's publication may have improved these numbers further. There are also issues with the completeness of the API data – not all data for every passenger for every journey are contained in the database, and there is some variation in completeness among different carriers and different modes of travel. Incomplete data could potentially produce a high number of false positives where no record of departure has been found<sup>37</sup>.
- A2.4 Some of these limitations are unlikely to impact non-EU students. For example, the proportion of international travellers who leave the UK via Ireland is likely to be small. Similarly, while there is some variation among nationalities in the percentage of API data that can be matched to visa systems, the rate for the two biggest non-EU student groups, from Chinese and India, is relatively high (88-95%).
- A2.5 ONS intends to exploit other data sources to examine EU student migration (see paragraph A2.9). This is particularly important in the context of Brexit, which is expected to raise new questions about the number of EU students in the UK and their migration behaviour.
- A2.6 The Home Office has not yet published plans for future statistical releases based on the exit check data, but told us that it is considering producing another update to the August 2016 report. The content of the Home Office reports is likely to be influenced by the scope and outcome of ONS's investigations and analyses. The Home Office told us that it wants to collaborate closely with ONS to interrogate the data and answer outstanding questions around student migration.

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<sup>37</sup> <https://www.gov.uk/government/statistics/a-report-on-the-statistics-being-collected-under-the-exit-checks-programme>

## Higher education data

- A2.7 As part of ONS's investigations into the student migration gap, it met with a small number of universities across the country, including Southampton, York and East London, to gather qualitative evidence about universities' experience of international student migration. ONS asked questions about student behaviours, for example, the rate of drop-outs, to understand potential impacts on student migration. Practices for collecting information on students appear to vary among universities; there is no consistent set of questions or methods. Overall, universities had no clear evidence that students go home after completing their studies as they are not able to measure these behaviours accurately. Any confidence in statistics based on university administrative data will depend on the quality of these data.
- A2.8 The Higher Education Statistics Agency (HESA) collects information on the number of international students in Higher Education establishments in the UK. HESA carries out an annual Destination of Leavers from Higher Education (DLHE) survey, which collects information on what leavers from higher education programmes are doing six months after qualifying from their course<sup>38</sup>. The survey targets both UK and international students, but the response rate for international students is low (34% for the 2014/15 survey). By definition, the survey cannot target students who have dropped out of university without taking a degree. HESA launched a consultation for a new DLHE survey in 2016, and published its proposed model in March 2017<sup>39</sup>. One of the key proposed changes is a shift in the timing of the survey, from six months to 15 months post-graduation. This change may not improve the response rate of international students, and, therefore, the value of these data for understanding outcomes of former students remains limited.

## Administrative data linkage

- A2.9 Longer-term, ONS plans to link different administrative data source to produce an 'integrated data system' to gain insights into international student migration<sup>40</sup>. For instance, ONS plans to link HESA course completion data with the Home Office API data to analyse whether students (EU and non-EU) are leaving the UK after they complete their course. Additionally, ONS plans to link HESA data with HMRC data to examine whether EU students are staying on after completing their course to find employment. ONS told us that there are other potential sources of data on EU students, for example, the electoral register or mobile phone records, but that these are not individual-level data sources and therefore, they cannot be linked to the Home Office or HESA data.

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<sup>38</sup> <https://www.hesa.ac.uk/news/30-06-2016/sfr237-destinations-of-leavers>

<sup>39</sup> [https://www.hesa.ac.uk/files/NewDLHE\\_model.pdf](https://www.hesa.ac.uk/files/NewDLHE_model.pdf)

<sup>40</sup> <https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationdataandanalysisimprovingtheevidence/february2017>

# Annex 3: Notes on the presentation and communication of student migration statistics

- A3.1 Following the introduction of the new question about previous reason for migration to the IPS in January 2012, ONS published a short guide to interpreting the results of the new question alongside the August 2013 MSQR. This contained a short section on student migration that highlighted the discrepancy between the estimate of student immigration and former-student emigration, and a brief discussion of possible drivers of the gap. As these were the first preliminary estimates, ONS stressed that the “initial estimate should not be taken as a measure of the long-term contribution of students to net migration”<sup>41</sup>.
- A3.2 In January 2016, ONS published a separate briefing article on international student migration that contains a more comprehensive overview of the patterns of long-term student immigration and former-student emigration and a list of possible explanations for the student migration gap. It includes a comparison of the ONS long-term migration data with other sources of information on student arrivals, such as the Home Office visa data and HESA’s student registration data, and a discussion of the limitations of comparing these data sources. The briefing laid out ONS’s plans for developing and improving international student migration statistics, particularly those of former-student emigration, by gaining access to, and linking, new administrative datasets.
- A3.3 In November 2016, ONS published a short update to the student briefing paper to highlight progress since January 2016 and additional areas and questions that it is investigating to improve understanding of former-student emigration<sup>42</sup>. In February 2017, ONS published its development plan for all international migration statistics with longer-term goals. It outlines how ONS is currently meeting the demand of migration statistics users, the steps it is taking to address gaps in the evidence, and how these improvements will meet demand in future<sup>43</sup>.
- A3.4 In April 2017, ONS published a further student migration research update that includes a conceptual diagram of the different outcomes of non-EU international students and estimates of the number of students who follow these different outcomes<sup>44</sup>. This is a helpful and innovative way of presenting the data on the groups that are not captured by the IPS, and is a good example of compliance with Principle 8, Practice 2 of the Code.
- A3.5 The briefing papers and updates are well-written and accessible, and clearly highlight the issues and challenges associated with measuring international student migration. We welcome ONS’s commitment to improving the student migration statistics and their plans to gain access to, and use, new administrative datasets to better understand former-student emigration.

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<sup>41</sup><https://www.ons.gov.uk/file?uri=/peoplepopulationandcommunity/populationandmigration/internationalmigration/methodologies/internationalmigrationmethodology/howtointerpretable4tcm77325519.pdf>

<sup>42</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/updateoninternationalstudentmigrationstatistics/november2016>

<sup>43</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationdataandanalysisimprovingtheevidence/february2017>

<sup>44</sup><https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalstudentmigrationresearchupdate/april2017>

