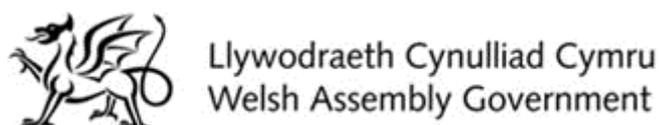


Estimating International Migration for Population Estimates - An Information Paper

National Statistics Centre for Demography



July 2006

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Section 1: Introduction and Context

1. The National Statistics Centre for Demography (NSCD) provides a focus for collaboration between the partners in UK official demographic statistics. The Office for National Statistics (ONS), alongside the General Register Office for Scotland (GROS), the Northern Ireland Statistics and Research Agency (NISRA) and the Welsh Assembly Government (WAG), delivers a UK-wide work programme on population statistics under the direction of the UK Population Committee.
2. The NSCD recognises that there has been significant interest in the level of international migration across the UK. This interest has grown following the accession of 10 countries to the European Union in May 2004; in particular nationals of the eight Central and Eastern European accession countries, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia, known as the A8 countries. Given the associated inward movement of people from these countries to the UK, the NSCD has decided to publish this short paper to assist understanding of how international migration is accounted for within the population estimate series.
3. The remainder of this paper:
 - notes how international migration is defined (Section 2);
 - explains how international migration is estimated (Section 3);
 - discusses migration from A8 countries (Section 4);
 - describes other administrative sources that could be used to estimate migration (Section 5); and
 - highlights issues that may arise in measuring migration in the future (Section 6).

Section 2: Definition of international migration used in population estimates

4. Across the United Kingdom the Registrars General of England and Wales, Scotland and Northern Ireland produce annual estimates of the *usually resident* population of each country. The Census provides the base for population estimates, which are updated each year to produce a series between Censuses. Population estimates have a wide variety of administrative, financial and statistical uses and are a key resource within Government.
5. Population estimates are updated using a standard technique known as the cohort component method. In simple terms the previous year's population estimate is "aged on" by one year (for example all three-year-olds become four-year-olds one year later), with births added and deaths removed. Net migration into the UK (international migration) and within the UK (internal migration) is then added to the estimates.
6. It is thus clear that a standard definition is needed when attempting to measure population migration. The definition in use for the UK usually resident population estimate series comes from the United Nations recommended definition of a long-term international migrant:

"A person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months), so that the country of destination effectively becomes his or her new country of usual residence. From the perspective of the country of departure the person will be a long-term emigrant and from that of the country of arrival the person will be a long-term immigrant."

[Recommendations on Statistics of International Migration, Revision 1. UN Statistics Division 1998. This is available at:

<http://unstats.un.org/unsd/demographic/sconcerns/migration/migrmethods.htm>]

7. Migration is by far the most difficult component of population change to estimate for a number of reasons, which include:
 - (i) there is no registration of population in the UK and hence no direct measure of migration. In some European countries (e.g. the Scandinavian countries) an administrative register greatly facilitates the measurement of migration. (Section 3 describes how migration is measured in the UK);

- (ii) the impact of illegal migration compounds measurement. By its very nature illegal migration is extremely difficult to measure and presents challenges in estimating migration accurately; and
- (iii) the definition of migration used in the population estimate series does not include visitors or short-term international migrants, some of whom are migrant workers. (The United Nations definitions of “short-term international migrant” and “migrant worker” are given in Annex A).

8. The population estimate series therefore reflects only those changes that are caused by long-term migration. The recent increase in migrants from Eastern Europe has highlighted this among users, some of whom require population bases that include short-term migrants or migrant workers. This is discussed further in Section 6.

Section 3: Ways to measure migration for population estimate purposes

International migration flows to and from the UK

9. There is no single comprehensive source of data on international migration to and from the UK. Estimates of international migration at the UK level are made using a combination of data from:
- the International Passenger Survey (IPS);
 - Home Office administrative sources on asylum seekers; and
 - the Irish Quarterly National Household Survey and National Health Service Central Register (for flows between the UK and the Republic of Ireland; data provided by the Central Statistics Office (CSO) in the Republic of Ireland)
10. The methodology to estimate Total International Migration is explained in detail in the appendices of the International Migration annual reference volume:
<http://www.statistics.gov.uk/StatBase/Product.asp?vlnk=507>
11. The richest source of migration information comes from the IPS, a large multi-purpose survey that collects information from passengers as they enter or leave the GB. It is based on voluntary, face-to-face interviews with a sample of passengers travelling via the principal airports, sea routes and the Channel Tunnel. The IPS interviews a quarter of a million passengers at GB seaports and airports every year, of which approximately 1 per cent are migrants. The migrant contacts are grossed up to produce national migration estimates using a complex weighting system based on total traffic flows.
12. In estimating international migration it is not possible to use the IPS alone as it does not cover all types of migration. It excludes migration via land routes between the UK and Republic of Ireland. It also excludes most asylum seekers entering and leaving the UK and some dependants of asylum seekers. It is therefore necessary to use the additional sources mentioned above to estimate flows not covered by the IPS. A further issue is that the IPS measures intended length of stay, which may or may not accord with actual length of stay in the UK or abroad. Adjustments are therefore made to account for people whose intended length of stay does not match the length of time they actually stay. Estimates are made for:

- (a) the number of people who initially come to or leave the UK for a short period but subsequently stay for a year or longer ('visitor switchers'); and
- (b) the number of people who intend to be migrants, but who in reality stay in the UK or abroad for less than a year ('migrant switchers').

13. The table below shows the relative contribution to Total International Migration estimates from the IPS and the adjustments for visitor switchers, migrant switchers, asylum seekers, and migration to and from the Republic of Ireland.

Table: Total International Migration (TIM) to/from UK (2004) (Thousands)

	Inflow	Outflow	Net
Total International Migration	582	359	223
IPS	518	310	208
Visitor and migrant switcher adjustments	23	20	3
Asylum seeker adjustment	36	16	21
Migration to/from the Republic of Ireland	4	13	-9

14. There is a wide programme of work across the NSCD that is aimed at improving migration and population statistics. A National Statistics Quality Review (NSQR) Report on International Migration Statistics was published in 2003 and a programme of research is being carried out to take forward the report's recommendations¹. This work is being conducted as part of the wider ONS 'Improving Migration and Population Statistics' (IMPS) programme, more details of which can be obtained from -

<http://www.statistics.gov.uk/about/data/methodology/specific/population/future/imps/default.asp>

¹ Further details, including the latest progress report, are available at: www.statistics.gov.uk/about/data/methodology/quality/reviews/population.asp

International migration flows to and from England and Wales

15. ONS is responsible for estimating international migration flows to and from England and Wales and for collating UK estimates. The method ONS uses to estimate international migration to and from England and Wales is exactly the same as for the UK as a whole. International migrants are assigned to Government Office Regions within England or to Wales using the sources outlined above. The current methodology is explained in detail in “Making a Population Estimate in England and Wales” which can be found at: www.statistics.gov.uk/StatBase/Product.asp?vlnk=575.
16. Although IPS data are robust at UK level, there are some concerns regarding the distribution of IPS data at regional level due to sampling error where estimates are based on small numbers of contacts. The current method may overstate in-migration to London since many migrants arrive at airports in London and it is the most well known destination within the UK. The geographical distribution of international migrants is currently under review as recommended by the NSQR.

International migration flows to and from Scotland

17. Estimates of migration between Scotland and countries outside the UK are made by GROS. These are based on the IPS with adjustments for flows to and from the Irish Republic, asylum seekers and visitor switchers. The approach used is similar to that used by ONS to estimate Total International Migration, but no adjustment is made for migrant switchers and a slightly different method of estimation is used for visitor switchers and asylum seekers. An estimate for unmeasured migration has also been included following the 2001 Census. Further information can be found at: www.gro-scotland.gov.uk/statistics/library/mid-2005-population-estimates/notes-and-definitions/index.html. A full review of the methodology for estimating international migration flows in Scotland is planned once the NSQR research into the geographical distributions of international migrants is completed.

International migration flows to and from Northern Ireland

18. NISRA is responsible for estimating migration flows between Northern Ireland and countries outside the UK. Due to issues relating to the use of the IPS in Northern Ireland, international

flows are estimated using data from the Northern Ireland Central Health Index (CHI). The main issues are that the IPS does not cover the land border between Northern Ireland and the Republic of Ireland, and the uncertainty introduced when “Ireland” is given in response to survey questions – some people stating “Ireland” as their origin or destination may be referring to Northern Ireland. The CHI records registrations and deregistrations with family doctors in the province. This source is used to estimate inflows from all countries outside the UK. Figures on outflows to the Republic of Ireland are derived from data supplied by the Central Statistics Office (CSO) in the Republic of Ireland and figures on outflows to other countries are based on extrapolated deregistration data from the CHI. Further information can be found at: www.nisra.gov.uk/archive/demography/publications/dev_est_mig.pdf

Migration flows between and within England, Wales, Scotland and Northern Ireland

19. This paper refers to migration between the UK and the rest of the world. Other key aspects of migration that need to be estimated for the purposes of sub-national population estimates are the cross-border flows between the four constituent countries of the UK and internal migration flows between local areas within England and Wales, Scotland and Northern Ireland. The UK statistical offices estimate these migration flows using data from GP reregistrations.
20. A full discussion of this is outside the scope of this paper, but it is noted that there are interactions with international migration. This is because there is a need to measure within UK migration and some people who, on entry, were international migrants may be counted as an internal migrant when they move within the UK.

Methods used in other countries to estimate International Migration

21. International migration to and from the UK is primarily estimated using a port survey, namely the IPS. This is in contrast to other countries around the world, particularly within Europe, who base their estimates of international migration on administrative registers. For example, each of the Scandinavian countries operates a centralised population register. It is mandatory for a person to register if they intend to live in the country concerned, and to deregister if they leave the country to live elsewhere. The length of residence necessary to require registration differs between countries – for some it is six months or even less, for

others one year or more. Estimates of immigration from population registers tend to be of a high quality in terms of counts, as there are usually benefits of registering such as access to health care. Estimates of emigration tend to be less reliable as, despite being mandatory, there are few incentives to deregister.

22. Some other countries base their estimates of international migration on household surveys. For example the Republic of Ireland's principal source of information for estimating international migration flows is their Quarterly National Household Survey. Estimates of immigration are based on the number of respondents who state that they were resident abroad one year previously. Estimates of emigration are based on information from survey respondents on people who have left their household and moved abroad within the last year.

Section 4: Eastern European migration (A8)

23. On 1 May 2004, 10 new countries joined the European Union (EU). Those countries were: Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia. Since that date, nationals of Malta and Cyprus have had full free movement rights and rights to work throughout the EU.
24. Prior to enlargement, the 15 existing EU member states (EU-15) had the right to regulate access to their labour markets by nationals of the other eight countries (the A8). The UK Government put in place transitional measures to regulate A8 nationals' access to the labour market (via the Worker Registration Scheme) and to restrict access to benefits. Besides the UK, only the Republic of Ireland and Sweden from the EU-15 have allowed A8 nationals access to the labour market and benefits from 1 May 2004. Spain, Portugal, Finland and Greece have allowed this since April 2006. The remaining EU-15 countries will follow suit and full free movement of A8 nationals within the EU will be in place by 2011.
25. The UK policy to regulate access to the labour market for A8 nationals, alongside the restrictions in place in other EU countries, has had implications for the levels of migration from these countries to the UK. Estimates of long-term migration from the A8 countries to the UK are available from ONS international migration estimates; for 2004 these show an estimated net in-migration of 48,000 citizens of the 10 Accession countries. This estimate of long-term migration must be set in the context of accession to the EU occurring part way through 2004. Any longer term assessment of the impact of EU enlargement on UK migration will need to take into account that estimates of out-migration will not feed through until future years. Information on inflows and outflows of Accession country citizens for the calendar year 2005 will be published in October 2006.
26. The Worker Registration Scheme (WRS) provides another source of data on arrivals of A8 nationals working in the UK, but is indicative of migration rather than a direct estimate. Generally nationals of A8 countries who wish to work in the UK are required to register with the WRS². The WRS data make no distinction between short-term and long-term migrants and covers only the working population. In addition, A8 nationals who have subsequently left

² The main exceptions are self-employed people, A8 nationals living and working in Britain for one year prior to May 2004 and people employed by an A8 employer and posted in the UK temporarily.

the UK are not removed from the register. The data therefore only provide the total number of A8 nationals who have registered to work in the UK at some point. Thus the number of people registered on the WRS is *not* a measure of long-term migration to the UK.

27. Between 1 May 2004 and 31 March 2006 around 375,000 A8 nationals were registered for the first time on the WRS³. Over 95 per cent of WRS applicants have had their applications approved. Many of those registering with the WRS do not intend to stay in the UK for a year or more, and would therefore not be defined as long-term international in-migrants. This is evidenced by the fact that around half of registered workers state that they are in temporary employment and only around 6 per cent have dependants living with them in the UK. Indeed, similar research in the Republic of Ireland shows that of the 50,000 Personal Public Service Numbers issued to A8 nationals in the period May to December 2004, less than 50 per cent were still in use in Irish Inland Revenue returns at the end of December 2004.

28. Migration from A8 countries is currently having a significant impact on the total level of long-term migration to the UK. Further research is underway on estimating the levels of short-term migration of nationals from A8 countries to the UK (see Section 6).

³ Accession Monitoring Report May 2004 – March 2006.

<http://www.ind.homeoffice.gov.uk/6353/aboutus/accessionmonitoringreport7.pdf?view=Binary>

Section 5: Other administrative/statistical data sources

National Insurance numbers

29. Data are available on National Insurance Number (NINo) allocations to overseas nationals entering the UK - these can be based on either year of registration or year of arrival in the UK (see www.dwp.gov.uk/asd/asd1/niall/nino_allocation.asp for further information). This is a useful source of data on overseas nationals arriving in the UK, but will exclude children and also adults who do not apply for a National Insurance Number. National Insurance registrations will also exclude 'returners', that is people who have previously registered in the UK and who are returning after a stay abroad. Those applying for NINos could be either short-term or long-term in-migrants. The number of NINos does not provide any information on outflows or on length of stay of migrants in the UK, although research is being proposed to investigate the current economic activity status of NINos registered to overseas nationals as this could shed light on how long migrants stay (similar work has been undertaken in the Republic of Ireland).

Work Permits

30. Work permits are issued to non-EEA⁴ nationals who come to the UK for work, training or work experience for a specified time period. Statistics from the work permit system do not directly measure in-migration flows but give some indication of the number of people arriving in the UK from countries outside the EEA in order to work. Because a work permit applies to a specific job, the data will double count some employees who change jobs and have to apply for a new work permit. No information is available on when workers leave the UK – some may leave before the work permit expires.

Health data

31. Data on GP reregistrations are currently used to estimate within-UK migration. Data on new registrations may also be able to provide estimates of international migration and, indeed, are currently used for this purpose in Northern Ireland, though not elsewhere in the UK. There are several issues around migration definitions and the different ways data are collected across the UK that make the use of this source to estimate UK level international in-migration

⁴ EEA – European Economic Area comprises the countries of the European Union plus Norway, Iceland and Liechtenstein see http://ec.europa.eu/comm/external_relations/eea/index.htm for further details

challenging. For example, it is not necessary to intend to stay in the UK for a year to register with a family doctor.

32. GP registration data are also less suitable for estimating emigration than immigration, since many emigrants do not deregister with their family doctor on leaving the country; thus GP deregistrations undercount out-migration. In Northern Ireland, NISRA make an allowance for this specific issue when estimating international out-migration.

33. Developments with this administrative source are ongoing, for example as part of the National Programme for IT in the NHS, therefore the UK-wide usefulness of this source for international migration estimation may change in future.

Landing Cards

34. Landing cards are completed by all non-EEA nationals seeking to enter the UK. They contain limited information which allows an immigration officer to make a decision on whether to allow an individual entry to the UK and under what conditions. Statistics from the landing card system are used to measure the number of passengers granted entry to the UK by both category of entry and nationality. A landing card is completed for each journey; a person who makes more than one journey is counted on each occasion either in a specific category if given fresh leave to enter or as "passengers returning". Because of this it is not possible to say how many individuals are granted leave to enter the UK. No information is available on when individuals leave the UK.

Schools Census

35. This provides an annual snapshot of data on school pupils. Differences exist across the UK in what is measured within the Schools Census, but some variables are available as proxies for migration. For example, information is collected on whether English is the second language in England and Northern Ireland, while the data in England also contain an ethnicity flag. Schools Census information relates to the "stock" of children rather than new children in schools. Thus this source is of limited use as a measure of "flow" migration, but comparing stocks over time, for example stocks of children with English as a second language, could give some indication of the overall levels of child migration.

Births to non-UK-born mothers

36. The mother's country of birth is collected at birth registration and increases in numbers of births to mothers born outside the UK could give some indication of international migration inflows. However this is a very imprecise measure of migration as it cannot tell us how long ago the mothers came to the UK, nor how long they intend to stay (whether they are long-term or short-term migrants).

Section 6: The way forward and issues ahead

37. The National Statistician has recently set up a cross-governmental task force to identify timely improvements that could be made to UK estimates of international migration and migrant populations at both national and local level. The task force will (i) identify the scope for improving administrative and survey sources of information on migrants, and (ii) recommend development of methods using these sources to improve estimation of both flows and stocks of international migrants. The task force will report to the National Statistician in late Summer 2006 and she will submit proposals to Ministers subsequently.
38. The task force will consider data sources that might be useful for the estimation of both long-term and short-term migrants (see Section 2). Short-term migrants entering the UK are not currently included in UK population estimates; however, as mentioned, earlier there is an increasing level of interest in the numbers and characteristics of short-term migrants coming to the UK, not least as a result of increased movements of people from the expanding EU. ONS is currently conducting work as part of the IMPS project to assess the feasibility of producing estimates of short-term migrants, thus providing the potential for population estimates on alternative population bases to be produced. It is planned that this work will report by the end of 2006.
39. In the future there are a number of issues and developments that will impact upon the estimation of international migration within the UK – these are outlined below.

Further Expansion of the EU

40. As previously mentioned in Sections 1 and 4, 10 countries, including eight Central and Eastern European countries, joined the European Union in May 2004 resulting in higher immigration from these new Member States. Bulgaria and Romania are expected to join the EU in the near future. Other countries such as Turkey and Croatia are also candidates for joining the EU. No decision has yet been made as to the level of access to the UK labour market offered to nationals of new Member States, but any new countries joining the EU may have some impact on migration to the UK.

e-Borders

41. The e-Borders programme is a joint initiative between the Immigration Service, Customs, the Police and UK Visas to record electronically the passport details of everyone entering and leaving the UK (including UK citizens). By linking entry and exit records, there is the potential for e-Borders to deliver improved statistics on international migration: both numbers of long and short-term migrants could be produced by age, sex, nationality and country of origin/destination. ONS is currently liaising with the Home Office to discuss the options for gaining access to this potentially rich data source. While this source is very promising in the longer-term, it is unlikely to provide comprehensive information for at least another five years. It is not intended to provide all the information on migrants required for statistical purposes, for example, it will not give information on where in the UK migrants are going to or coming from.

ID Cards and the Citizen Information Project (CIP)

42. The Citizen Information Project, conducted by ONS on behalf of the Treasury, has recommended that:

- there is significant value to both citizens and the public sector in greater sharing of contact details of everyone in the UK across the public sector, and that this should be implemented through the Identity Cards Scheme on the basis that the scheme eventually becomes compulsory; and
- the Identity & Passport Service should be responsible for developing the National Identity Register (NIR) as an adult population database to be used as the definitive source of contact details for public sector systems and business processes.

43. The CIP project is now closed. Its recommendations have been accepted by the UK Government and are being taken forward by departments and agencies, including those responsible for similar information on children. The National Identity Register, defined in the Identity Cards Act 2006, will deliver many of the CIP benefits in the longer-term by effectively acting as the UK adult population register, subject to any further legislation needed to implement specific applications. For further details see: <http://www.gro.gov.uk/cip/>

Integrated Population Statistics System (IPSS)

44. It is proposed that in the longer term, the Integrated Population Statistics System (IPSS) will provide more frequent detailed statistics on the population through making best use of information already available to Government. The vision of the IPSS is to combine data from the 2011 Census with survey and administrative data, linked at individual person level, to create a single, comprehensive population statistics database; this would then be updated over time using administrative records, survey data, the address register, and any future population register (see above). For further information see either of the links below:

<http://www.statistics.gov.uk/CCI/nugget.asp?ID=531&Pos=1&ColRank=2&Rank=448>

<http://www.statistics.gov.uk/about/data/methodology/specific/population/future/imps/components/developing.asp>

Conclusion

45. Further information and statistics on international migration will be published later this year. Progress updates on the ONS 'Improving Migration and Population Statistics' (IMPS) project will be published in August 2006 alongside the Mid-2005 Population Estimates for England and Wales and the UK. Total International Migration estimates for the UK for calendar year 2005 will be published in October 2006. The NSCD will continue to monitor the issues and developments outlined above; in addition, the cross-governmental task force will help to identify improvements that could be made to estimates of international migration and migrant populations at both national and local levels.

National Statistics Centre for Demography

July 2006

Annex A: Alternative migration definitions developed by the United Nations

The United Nations recommended definition of a short-term international migrant is:

“A person who moves to a country other than that of his or her usual residence for a period of at least 3 months but less than a year (12 months), except in cases where the movement to that country is for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage. For purposes of international migration statistics, the country of usual residence of short-term migrants is considered to be the country of destination during the period they spend in it.”

[Recommendations on Statistics of International Migration, Revision 1. UN Statistics Division 1998. This is available at:

<http://unstats.un.org/unsd/demographic/sconcerns/migration/migrmethods.htm>]

The definition of a migrant worker is:

“A person who is to be engaged, is engaged or has been engaged in a remunerated activity in a State of which he or she is not a national”.

[International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families – UN 1990. This is available at:

<http://www.unhchr.ch/html/menu6/2/fs24.htm>]

The UN definitions provide a clear delineation between short-term and long-term migrants according to their length of stay in the receiving country. However, migrant workers may be either short-term or long-term migrants, or indeed neither if they stay in the receiving country for less than three months. A migrant worker who stays in the UK for less than 12 months will not be defined as an international migrant and therefore cannot be included in the UK population estimates. For example, migrant workers arriving from Central and Eastern Europe (see Section 4) will not be included in the population estimates if they stay in the UK for less than a year. Similarly, international (long-term) migration estimates used in the population estimate series cannot be interpreted as representing all migrant workers, although some migrant workers will be included in the estimates. Some users require a population base that includes all migrant workers for the purposes of analysing the economy.

Annex B: National Statistics Centre for Demography Contact Details

The National Statistics Centre for Demography (NSCD) provides a focus for collaboration between the partners in UK official demographic statistics. Contact details for the partners are given in the table below:

<p>Office for National Statistics Migration Statistics Unit Office for National Statistics Room 2300, Segensworth Road, Titchfield, Fareham, Hampshire PO15 5RR E-mail: migstatsunit@statistics.gov.uk Web: http://www.statistics.gov.uk/</p>	<p>General Register Office for Scotland Statistics Customer Services Dissemination & Census Analysis Branch General Register Office for Scotland Ladywell House EDINBURGH EH12 7TF E-mail: customer@gro-scotland.gsi.gov.uk Web: http://www.gro-scotland.gov.uk/</p>
<p>Northern Ireland Statistics & Research Agency Customer Services (Demography and Census) Northern Ireland Statistics and Research Agency McAuley House 2-14 Castle Street BELFAST BT1 1SA E-mail: census.nisra@dfpni.gov.uk Web: http://www.nisra.gov.uk</p>	<p>Welsh Assembly Government Population & Census Branch Statistical Directorate Cathays Park CARDIFF CF10 3NQ E-mail: stats.popcensus@wales.gsi.gov.uk Web: http://www.wales.gov.uk/statistics</p>