About the Authors

FRANS J. WILLEKENS is director of the Netherlands Interdisciplinary Demographic Institute (NIDI) and professor of Population Studies, University of Groningen, The Netherlands. He is a member of Royal Netherlands Academy of Sciences (KNAW) and has been elected to the Cream of Science, which consists of about 200 top scientists in The Netherlands.

He studied agricultural sciences and economics at the University of Leuven, Belgium, and holds a PhD in Urban Systems Engineering and Policy Planning from Northwestern University, Evanston, Illinois, USA (1976). His current research interest is the modelling of life courses of individuals and groups as multistage stochastic processes. The models use longitudinal data and integrate insights from different disciplines. The research produces (synthetic) biographies of cohorts and individuals and provides a link between micro-level biographic change and macro-level demographic change.

Frans Willekens and colleagues took the initiative to establish the European Doctoral School of Demography (EDSD). Currently more than 20 universities and research institutes participate in the EDSD. The aim is a solid knowledge base to confront the demographic challenges Europe faces in the 21st century.

TOMÁŠ SOBOTKA is Research Scientist at the Vienna Institute of Demography of the Austrian Academy of Sciences and managing editor of the Vienna Yearbook of Population Research. He received his PhD in Demography from the Population Research Centre, University of Groningen (the Netherlands) in 2004. Previously he took the BA in Demography & Social Geography and the MA (1998) in Demography at the Charles University, Prague. His main research interests are postponement of childbearing and very low fertility in industrialized countries, demography of Central and Eastern Europe, second demographic transition, cohabitation and changes in living arrangements, and childlessness.

GERDA NEYER is head of the Laboratory of Population and Policy at the Max Planck Institute for Demography, Rostock, Germany. Her research focuses on the interrelationship between welfare-state policies, gender policies, and fertility development in contemporary Europe.

JAN M. HOEM is Director at the Max Planck Institute for Demographic Research in Rostock 1999-2007, emeritus since mid-2007. Previously he founded and led the Socio-demographic Research Unit of the Central Bureau of Statistics of Norway, was Professor of Insurance Mathematics at the University of Copenhagen, and later Professor of Demometry at the University of Stockholm. Several research visits to the United States. Editor of the electronic journal Demographic Research 1999-2006.

IUSSP Laureate 2006. He has published widely on methodological and empirical issues of demography.

AAT C. LIEFBROER received his PhD in Sociology from the Vrije Universiteit (VU) in Amsterdam. Currently, he is Head of the Department of Social Demography at the Netherlands Interdisciplinary Demographic Institute (NIDI) in the Hague. He holds a Professorship in Demography of Young Adulthood at the VU. Together with prof. dr. Francesco Billari, he is joint-chair of the Working Group on the Second Demographic Transition of the European Association for Population Studies. His main research interests all relate to social and demographic aspects of the life course, particularly among young adults. He has studied historical changes in the transition to adulthood, the impact of parental background, values and norms on life course decisions, cross-national differences in the transition to adulthood, the interplay between life-course events in different life-domains, and the consequences of life course transitions for well-being. He also continues to be involved in a number of large-scale data-collection efforts in the Netherlands.

TINEKE FOKKEMA received her PhD in Economics and Econometrics from the Vrije Universiteit (VU) in Amsterdam. Currently, she is a Senior Researcher at the Netherlands Interdisciplinary Demographic Institute (NIDI) in the Hague. She has participated to the development of the Generations and Gender Survey (GGS), one of the two pillars of the Generations and Gender Programme (GGP) designed to improve our understanding of demographic and social development across Europe and its determinants. She has been a member of the research team involved in the Population Policy Acceptance Study (PPAS), analysing values and attitudes towards fertility, parenthood and population related policies. Her principal research interests concern the ageing of populations, in particular the well-being and loneliness of older adults, and the patterns of intergenerational solidarity and exchange.

MICHEL POULAIN received his Master (1978) and his PhD (1980) in Demography from the Catholic University of Louvain (UCL). Previously, he obtained a Master in Physical Sciences (1969) at the University of Liege. Since 1995, he is professor at the faculty of Economic, Political and Social Sciences of the UCL. Poulain is also senior researcher at the National Research Institute (FNRS) and founder of the Groupe d'étude de Démographie Appliquée (GéDAP). He has a large experience in participating in international projects, and is an active member of ARLES (Alliance for Research on Longevity and Extreme Survival) and responsible for IDL (International Database on Longevity). Besides that he is involved in longevity studies in Belgium but also in old age validation in several countries (Italy, Spain, Georgia and Japan). Dr. Poulain is also a renowned specialist in comparative research on international migration and asylum.

NICOLAS PERRIN, GéDAP, Université catholique de Louvain, Louvain-la-Neuve (Belgium) works on international migration, foreign populations and related statistical data sources.

ALBERTO PALLONI is Board of Turstees Professor of Population and Sociology at the Institute for Policy Resarch and Department of Sociology, Northwestern University. In 2006, he was also President of the Population Association of America. He received his PhD in Sociology (and Demography) in 1977 from the University of Washington and joined the University of Wisconsin Faculty in 1980. Previously he obtained his B.S / B.A from the Catholic University of Chile from 1967 to 1971. Currently his research explores health and inequality in developed countries, mortality and health disparities, statistical models for the analysis of self reported health data, aging in developing countries, effects of HIV/AIDS on families and households in Sub-Saharan Africa, relations between early health status and adult socioeconomic achievement and health status.

CAROLINA MILESI is a post-doctoral fellow at the Center for Human Potential and Public Policy at the Harris School of Public Policy Studies, University of Chicago. Her research focuses on inequality of educational outcomes, particularly on the trajectories youth follow in post-secondary education and the educational impact of early health disparities. Her most recent work focuses on the impact that health conditions early in life have on the development of cognitive skills as children begin formal schooling. Carolina's research focuses on socioeconomic disparities in education and health. Her dissertation examined the trajectories youth follow in post-secondary education, and in particular the impact that increasingly alternative trajectories have had on the completion of a post-secondary degree. Her most recent work focuses on the impact that health conditions early in life have on the development of cognitive skills as children begin formal schooling. Carolina's research has been supported by the Spencer Foundation and the American Educational Research Association.

ROBERT G. WHITE is a doctoral candidate in Sociology and an affiliate of the Center for Demography and Ecology and the Center for Demography and Health of Aging at the University of Wisconsin, Madison. His research concerns health and social stratification and methods in lifecourse analysis and population health.

ALYN TURNER is a graduate student of Sociology at the University of Wisconsin-Madison. Her interests include social demography, stratification, sociology of education, and epidemiology. She defended her master's thesis in 2007, titled "Infant Health and Educational Success: Breastfeeding and High School Graduation." Her study assesses the impact of infant health on adolescent educational success and identifying mechanisms that potentially mediate this relationship. Alyn is currently

an Institute for Education Sciences Predoctoral Fellow at the Wisconsin Center for Education Research. She plans to finish her Ph.D. in Sociology at Wisconsin in the coming years.

VLADIMIR SHKOLNIKOV was trained as a mathematician at the Moscow Aerospace Institute. In 1987 he got his PhD in Social and Economical Geography (Academy of Sciences USSR) with a dissertation on Geographical Factors of length of life. In 1991 he became head of the Laboratory of Mortality analysis and Forecasting at the department of demography of the USSR academy of sciences. In 2000, he joined the Max Planck Institute for Demographic Research in Rostock. Currently, he heads the Data Laboratory at this institute. Vladimir Shkolnikov's research focuses on demographic modeling, mortality differentials, macro- and micro-level epidemiological studies, etc. He also coordinated important mortality databases like Human Mortality Database, Human Life Table Database, Kannisto-Thatcher Database on Old Age Mortality and designed and organized data for projects on fertility and family planning and on health and health-related behaviours

DMITRI JDANOV is a research scientist at the Data Laboratory of Max Planck Institute for Demographic Research in Germany. His main research interests are in mortality and health determinants in developed countries and in various mathematical models and methods for demographic data analysis (e.g. survival analysis and epidemiology, statistics of random processes, linear and nonlinear filtration of stochastic processes).

EMILY GRUNDY took the MSc in Medical Demography at the London School of Hygiene & Tropical Medicine and returned to its Centre for Population Studies (CPS) in 1998 as Reader in Social Gerontology. She was Head of the CPS from 2000 to 2003 and then was appointed Professor of Demographic Gerontology. She previously worked at the Age Concern Institute of Gerontology, King's College London, and prior to that in the Social Statistics Research Unit at City University and in the Department of Health Care of the Elderly University of Nottingham. Her research has focused on ageing, with main interests including families and social support in later life, especially in relation to health; trends and differentials in health and disability, and the long term consequences of marital and reproductive biographies for health and social support. Grundy is involved in large collaborative projects, both within and outside Europe. She chairs the European Population Association working group on Demographic Change and Care for Older People.

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05 Measuring International Migration:
a Challenge for Demographers

Michel Poulain and Nicolas Perrin

Demographers consider international migration to be a topic of increasing importance for their discipline. However, policy-makers dealing with international migration show limited interest in the work of demographers. This paradox is particularly apparent in Europe, a setting where the issue of migration has become a key priority for European policy-makers. Specifically, in order to support the development of a common migration policy, the European Union is faced with an urgent need for better statistics on migration and asylum and the international migration statistics are frequently unreliable, not only in Europe, but in all countries around the world. A recent meeting organised by the UN's Statistical Division in New York[1] concluded firstly: the most recent set of recommendations on international migration statistics is not being followed, secondly: the requested data is often unavailable, and where it is available, is often unreliable and finally: that all the available data considered sufficiently reliable cannot be compared systematically because of different data sources, concepts and definitions. Accordingly, the task facing demographers is not an easy one. Nonetheless, it may be considered essential in terms of policy support.

1. Migration, a demographic phenomenon that is particularly difficult to measure

Migration is defined as a change in the place of usual residence, and residence, in turn, is defined as the place where the person spends most daily rest periods. In the case of international migration, the place of origin and the place of destination are located in two different countries, and so international migration can be defined as a change of country of usual residence. In practical terms, it means that one or more international borders will be crossed. However, border data collection is no longer used in the EU since the abolition of internal border controls, and so alternative data collection methods have to be used. Moreover, although border-crossing data is used in non-European countries, it is usually considered to be unreliable. Consequently, even if international migration is defined with reference to borders, border-crossing data is not the best source of information.

In demography, the collection of data on international migration is a uniquely complex affair because a single phenomenon and a single event (international migration), involving the same people (international migrants), is recorded by two different countries using two completely different data collection systems. Emigration figures produced by countries of origin and immigration figures collected by countries of destination would be similar if the two data collection systems used identical definitions and the data

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1   Expert Group Meeting on Measuring International Migration: concepts and methods, UNSD, New York, 4-7 December 2006.

were fully reliable. The idea of comparing these pairs of figures using a double-entry matrix is more than thirty years old.[2] In this double migration matrix, two figures are proposed in each cell M(i,j) for the migration flow between a specific pair of countries i and j: one on immigration to the country of destination and one on emigration from the country of origin. Low reliability is evident within the EU when comparing data on flows between pairs of EU Member States as reported by both the country of origin and the country of destination. Figure 1 shows an example of comparison of statistics for the migration flow between Italy and Germany in 2003.

GERMANY

23 702

9 778
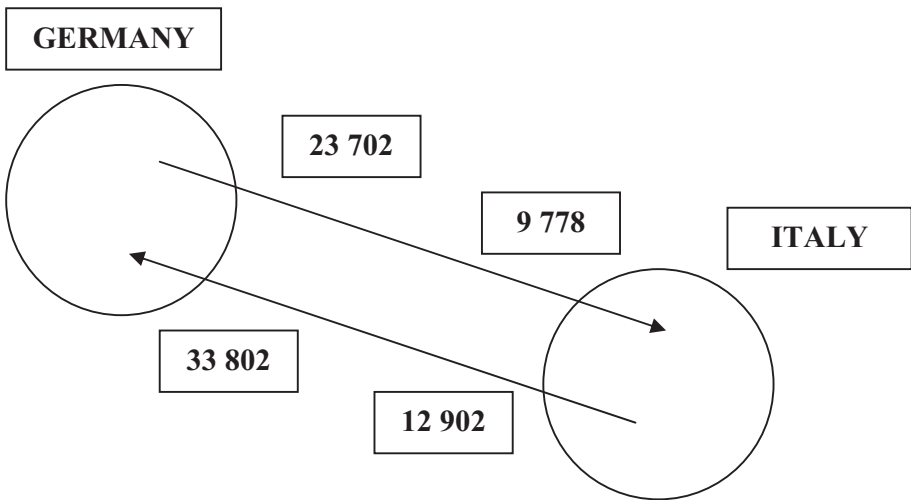
ITALY

33 802

12 902

↑
Figure 1. Migration flows between Italy and Germany in 2003: the immigration figure for Germany (33,802) may be compared to the emigration one for Italy (12,902), and the emigration figure for Germany (23,702) can be compared to immigration to Italy (9,778) (Source: Eurostat)

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2   Such double-entry matrices have been produced annually by the UNECE since 1972 and more recently by Eurostat. The two main proponents of using this tool to estimate the level of harmonisation of international migration flows were John Kelly (1987) and Michel Poulain (1999).

The double-entry matrix is an interesting tool for studying the reliability and comparability of statistical data on a general basis, especially in cases where it is generally agreed there is a major problem with reliability. Each of the 600 cells of the intra-EU25 migration matrix[3] include, for a given migration flow from country A to country B, both the number of emigrants recorded in country A and the number of immigrants registered in country B. In this way, the two figures in the same cell are directly comparable. Here are the general conclusions based on the 2002 double-matrix (Poulain et al. 2006):

- Belgium, Estonia, Greece, France, Ireland, Luxembourg, Hungary, Malta and the UK submitted no data at all (except that Ireland and Malta provided immigration and emigration data with the UK only and Malta also provided immigration data from Italy). As a consequence 56 cells include no data at all, either for emigration or for immigration.
- By contrast, both figures are available for 277 migration flows. This means that it is possible to compare the statistics in 46% of all cases. 134 cells only include immigration data, and the remaining 133 cells only emigration data.
- In the 277 cells where both figures are available, the total number of immigrants exceeds the total number of emigrants (508,800 immigrants compared to 448,636 emigrants). This does not necessarily mean that immigration is more systematically or better recorded than emigrations, as it may also be a consequence of better recording (of both immigration and emigration flows) in traditional countries of immigration.
- A comparison of immigration and emigration figures above zero shows that 59% of the figures are higher for immigration than for the corresponding emigration but the reverse is true in 41% of the cases (none are identical).
- A difference between immigration and emigration figures of less than 25% might be considered an acceptable level of reliability. Only 16% of the 277 cells are in this favourable situation. This represents only 5% of all intra-EU migration flows.
- In 23% of the cells, the emigration figure exceeds the corresponding immigration figure by a factor of more than two, while in 38% the immigration figure is more than twice the emigration one. In total about two out of three migration flows where both figures are available are in this unfavourable situation.

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3   This number corresponds to 25 EU Member States as sending countries, multiplied by 24 receiving countries.

The large differences observed between countries are considered to be mainly due to problems of coverage and completeness of the data collection. Differences in definition can explain only small differences between countries.[4] Accordingly, we may conclude that the harmonisation of definitions is necessary to improve the overall comparability of international migration data within the EU but is not sufficient to eradicate all the problems. The primary requirement is an overall improvement in the reliability of registration and data-collection processes.

How can the existence of such large differences between statistical figures that are supposed to describe the same migration flow be explained? Despite existing international recommendations on the harmonisation of definitions on international migration, the definitions actually used vary significantly between countries, within countries over time, and between sources of statistical information. Moreover, the definitions of immigration and emigration applied in a particular country do not necessarily match each other in terms of their time criterion. Consequently the absence of harmonisation of definitions may be responsible for the poor comparability of data. However, even if two countries use the same definitions to measure international migration flows, the problem of non-reliability of the data collection system may entail very large differences between the two figures for the same migration flow. To assess the level of reliability, we first of all have to consider the coverage of data collection by identifying all sub-populations that are involved and those that are excluded. The latter will automatically lead to differences between corresponding statistical figures. It is also important to take into consideration that international migrations are events that have to be reported by the migrants themselves to local administrations after entering or before leaving the country. For practical and financial reasons, and in the absence of strict administrative rules, it may not be in the migrants' interest to report themselves. Accordingly, the number of immigrants and emigrants will be underestimated. In some countries the level of under-registration may be as high as 90 percent for emigrations. In addition, immigration may be better registered for foreigners as some advantages may exist. For nationals returning to their home country, there is often no sense in registering their return as they did not register their emigration in the first place.

This investigation of the intra-EU double-entry migration matrix demonstrates the poor comparability of the available data. The same comparability problems probably affect data on the international migration of EU citizens outside the EU, as the same rules and practices apply. Fortunately, the legal immigration of non-EU nationals is better recorded in most EU Member States as the residence permit database is used (directly or indirectly) to measure these flows. However this is not true for emigration.

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4   Some checks have been carried out by the THESIM team in Sweden, Denmark and Belgium that show that differences in the time criterion can be responsible only for differences of less than 25%.

In addition, a large proportion of migration may be unauthorised and consequently not registered and not included in statistical figures.

In the field of population projections and forecasts, reliable international migration data is needed and, from a European policy point of view as well, international migration is very important and reliable data is much in demand. In this context, Eurostat, the UNECE and other international bodies are paying particular attention to the improvement of the overall reliability and comparability of international migration data. To achieve this improvement, the most recent key elements are the UN Recommendations on Statistics of International Migration (UN, 1998) and the new EU Regulation on Community Statistics on Migration and International Protection (European Union, 2007).

2. The UN Recommendations and the EU Regulation

Harmonisation of these international migration statistics seems impossible to achieve, despite continuous efforts promoted by international bodies since at least 1930, under the leadership of the UN (Herm, 2006). The last revision[5] of the UN Recommendations on Statistics of International Migration (UN, 1998) proposes the following definitions for the country of usual residence and for long-term migrants:

- The country of usual residence is *the country in which a person lives, that is to say, the country in which he or she has a place to live where he or she normally spends the daily period of rest. Temporary travel abroad for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage does not change a person's country of usual residence.*
- A long-term migrant is *defined as 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.*

In order to ensure that the definition of an international migrant was in accordance with the definition of the country of usual residence and that of an international tourist, a long-term migrant is defined by a length of stay of at least twelve months.

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5   Different sets of international recommendations on this topic were first proposed by the ILO (in 1924) and subsequently, after the Second World War, by the UN. In the 1970s and 1980s, the UNECE initiated an in-depth data collection and analysis of the "double matrix". At the beginning of the 1990s, the UNECE, Eurostat and later the ILO, OECD and the Council of Europe joined forces to revise the 1976 UN recommendations on international migration and develop a joint data collection method.

To fulfil its objective of harmonizing international migration statistical data and ensuring the production of the requested data for policy support, the European Union has recently adopted a regulation that will oblige all Member States to produce reliable and harmonized statistics on international migration, also including asylum, residence permits, illegal migration and acquisition of citizenship.[6] This EU Regulation will require all EU Member States to produce a full set of statistics in the field, starting from 2008. It will explicitly request reliable figures and detailed metadata in order to improve the level of data comparability at EU level.

The definition of a long-term migrant, as recommended by the UN recommendations and the EU regulation, ignores the concept of short-term migration[7] and only considers long-term migrants renamed as (international) migrants. According to the UN Census recommendations, short-term migrants will still be counted as part of the resident population figure in the country of departure as their absence is for less than 12 months. This implies that short-term migration flows are disregarded when linking flows and stock figures, and that the EU definition of international migrants is complies if long-term migrants only are considered as a component of population change. Therefore, short-term migrants will need to be considered as a different category. It seems appropriate to consider these persons as seasonal workers, since they travel in relation to the labour market or as students. Another relevant group, tourists, should also be considered as international travellers who are not included among the short-term migrants group. Both groups of migrants need to be counted separately for the usual resident population and international migration statistics, and a clear distinction should be made between the two types of data in order to avoid any risk of misunderstanding when linking population stocks and migration flows. The EU decision to consider only long-term migrants in the migration data collection requested by the EU regulation is therefore appropriate and will avoid one obvious area where errors are likely. Using twelve months as a time limit for identifying international migrants as in the proposed EU regulation appears to be the most appropriate choice.

In the EU regulation, the definition of (international) migrants is based on a period *that is, or is expected to be, of at least twelve months.* This definition allows the possibility of using either an ex-post duration of twelve months or an intended duration of twelve months. In the UN Recommendations on Statistics of International Migration, the definition of long-term migration implicitly refers to a minimum period of at least 12 months after migration, and this is therefore an intended duration of stay in the

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6   European Parliament and Council Regulation on Community statistics on migration and international protection</Titre> <DocRef>(COM(2005)0375 – C6-0279/2005 – 2005/0156(COD))</DocRef>

7   According to the UN recommendations, a short-term migrant is defined in a similar way to a long-term migrant, but the duration of stay is between three and twelve months.

receiving country. In the implementation instructions of the same recommendations, three methods are proposed for estimating this duration of stay:

1. Asking the intended duration of stay is recommended when somebody is observed at a border crossing or when the person registers in the country of immigration, and only if that person has the right to live in the country (e.g. citizens or foreigners holding a permanent residence permit).
2. If the right to stay is not granted, the intended duration of stay is not relevant. We will then need to rely on the duration of validity of the residence permit in order to be able to identify long-term migrants as those having a residence permit for at least one year, and intending to live in the country for at least one year.
3. For asylum seekers and other foreigners who have not been granted a residence permit for at least one year, the duration of stay in the country may only be estimated one year after immigration, using population registers, registers of aliens or registers of asylum seekers. This will provide the actual, or ex-post duration of stay.

In effect, somebody entering the country with the right to stay for at least one year, but not asked intended duration of stay at the time of registration, can only be checked through population registration systems one year later, in order to identify long-term migrants. The same investigation is possible for those who are already considered as international immigrants because their intended duration of stay was at least one year and they had the right to live in the country for that minimum period. When doing this, consolidated statistics will only be available for the year t in the first semester of the year t+2. International statistical bodies will often not accept this delay, as policy-makers always request data that is as up – to - date as possible. Therefore an initial proposal could be as follows:

The declaration made on arrival of an intended duration of stay of at least twelve months, and the issue of a residence permit for one year may be seen in many countries as a possible source of information on international migration. However, this measurement needs to be confirmed by more reliable estimates of the actual duration of stay. There may be an opportunity for statistical bureaus to propose provisional figures based on a ratio observed in previous years but, in this case, the final figures should be released one year later in order to replace the provisional ones.

While there is a growing awareness of the impact of varying national definitions, the UN recommendations have not been formally adopted anywhere (Poulain et al. 2003). Until recently, national interests have taken precedence over the need for internationally comparable statistics. Obviously harmonisation at international level will occur only if focused political energy can lead to a substantial improvement in the estimation of migration flows. In the EU, there is a real prospect of this with the new regulation coming into force with the 2008 data collection.

3. Various data sources used

The availability of statistics on international migration flows is conditional upon the existence of a data collection system that has the potential to yield meaningful statistical information on changes of the usual place of residence. Data sources used to produce statistics on international migration flows in the EU countries are very diverse. The major types of sources can be summarised as follows:

• Population registration systems including centralised population registers and local population registers;
• Statistical forms completed for all changes of residence;
• Other administrative registers or databases related to foreigners, such as registers of aliens, residence permits or asylum seekers;
• Sample surveys such as special migration surveys or household surveys;
• Other sources including censuses.

Countries try to make the best possible use of national administrative data sources, since alternative statistical tools such as sample surveys have drawbacks, mainly, sampling size. Population registers are the most widely used source of statistical information on international migration among the EU Member States. The majority of those registers are centralised at national level.[8] A centralised, computerised, and comprehensive population registration system providing continuous recording of information on each member of the target population seems to be the best source of reliable statistics, provided that people obey the registration rules. However, in some countries the centralised population register does not cover the whole target population. Some foreigners are excluded as nationals and, in some countries, holders of permanent residence permits are included.[9]

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8   Central population registers are used to produce statistics on international migration flows for both nationals and non-nationals in the following ten countries: Belgium, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Austria, Finland, Spain and Sweden.
9   The Czech Republic, Hungary and Slovenia derive their statistics from the central population registers, but only on nationals. In Hungary the register does not cover the whole target population of foreigners, since only those with permanent residence permits are included. In the Czech Republic and Slovenia theoretically the population registers have full coverage, but data on foreigners are of inferior quality than in the aliens register from which they were transferred, because the transfers have not been complete. However, this state of affairs is treated as transitional and the population registers are to be used for both nationals and non-nationals in the future.

The same statistics can usually be derived from population registers run locally or based on forms (administrative or statistical) completed when registering changes of residence.[10] However, this requires additional input and introduces the possibility of errors when processing the documents, which may have a negative impact on the reliability of the data. Finally, in some countries, centralised population registers are in operation, but are not yet used for statistical purposes due to the lack, or poor quality of, some crucial characteristics .[11]

If there is no administrative data source covering the whole population, or data for some population categories is considered unreliable, more specific registers are used that contain only subsets of the population, e.g. a register of foreigners or register of residence permits. These special registers constitute a valuable source of data on international migration in the countries where the population register does not exist, or does not cover the whole target foreign population, or where the development of the population register has not been completed.[12]

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10 Population registers that operate at the local or regional levels are used to derive statistics on international migration flows in three EU countries: Germany, Italy and the Netherlands. Details regarding preparation of statistics vary from country to country.

11 This is the case in Poland and the Slovak Republic. For instance, in the Polish central population register there is no historical information on places of residence. In the Slovak population register there are a number of persons whose former Czechoslovakian citizenship has not been replaced by the new one (Czech or Slovak), so statistics on flows cannot be produced by citizenship. However, the population register in the Slovak Republic is now being reconstructed and will be used for statistical purposes in the future.

12 In the Central European countries (the Czech Republic, Hungary, Slovenia, the Slovak Republic) the registers of aliens are centralised and both immigration and emigration statistics are derived from them. In the Slovak Republic, the register of aliens was used for the first time to produce data on international migration of foreigners disaggregated by citizenship for the reference year 2003. In Slovenia the emigration figures are estimated on the basis of changes in foreigners' stock, vital statistics and immigration data. In Portugal and France the registers of aliens are used only to produce immigration figures. Portugal has a centralised information system. In France the situation is more complex than in all other countries. The statistics on international immigration of non-nationals are produced using several sources: (i) data from the Office des Migrations Internationales (OMI) covering non-EEA citizens who have received medical certificates; (ii) data from the Ministry of the Interior (AGDREF register) for EEA nationals and certain categories of non-EEA nationals who are not counted by the OMI; (iii) data from the French Office for the Protection of Refugees and Stateless Persons (OFPRA). In Greece no statistics on international migration are currently produced, but some statistics on immigration are to be compiled from two sources managed by two different ministries: the Register of Aliens kept by the Ministry of the Interior that covers non-European nationals, and the file for residence permits issued to EU citizens run by the Ministry of Public Order.

Theoretically, the collection of statistics based on the issue of residence permits and long-stay visas can compensate for the lack of sources on international migration. However, this source is limited to foreigners only and it can only therefore be used to supplement statistics for them. In addition, in some countries, minors have no obligation to hold a residence permit. Moreover, the act of obtaining a visa or a residence permit does not mean that this person is going to use it (at least when residence permits are issued abroad before the entry) or stay until its expiry, which would allow determining the actual duration of the stay. As far as inflows are concerned, the ability to distinguish first residence permits issued (for a length of validity of at least one year) from residence permits issued for a renewal (or for a shorter period) is probably the most difficult task for the ministries of the interior frequently involved in this new statistical process.

In addition, some countries have decided to rely on statistical surveys carried out at border controls, or among households.[13] Some information on international migration flows can also be derived from population censuses, but this source has a number of well-known limitations. For instance, censuses are carried out at long intervals, accommodate only a small number of questions and are not able to capture all migration events that occurred between subsequent enumerations. Moreover, only international immigrants may be easily identified, whereas international emigrants are no longer part of the enumerated population. Therefore, censuses cannot constitute a source of annual statistics on international migration. To be comprehensive, statistics should cover immigrants and emigrants irrespective of their citizenship. However, governments attach different levels of importance to particular flows. They are more interested in controlling the migration of foreigners, in particular immigration, which is reflected in the administrative procedures and data collection systems.

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13 Sample surveys are used to produce statistics on international immigration and emigration flows in three countries: Cyprus, Ireland and the United Kingdom. In Portugal, although this statistical tool is applied to the emigration of nationals and non-nationals and immigration of nationals, an estimation of the latter flow is prepared only for national purposes. In Portugal and Ireland the sample surveys are households surveys carried out within the country. Cyprus and the United Kingdom rely on sample surveys of border crossers. The United Kingdom also uses supplementary data sources to adjust statistics derived from surveys, namely data on asylum seekers, removals and long-term switcher visitors (visitors who became migrants) from the Home Office, and data on migration flows from Ireland provided by the Irish Central Statistical Office. Specific data sources are used in Malta. Data on international immigration comes from the Customs Department. People who intend to settle in Malta are recorded at Customs since they have to declare their personal effects. As for emigration, the only available information is that on Maltese emigrants requesting permission for permanent settlement in the United Kingdom received from the British High Commission.

All EU countries currently use the census as a source of data on stocks of foreign citizens and foreign-born population. It is rarely used to estimate international immigration and emigration flows, as it cannot supply full coverage of migration events and annual statistics.

Despite the differences that can exist between countries, methods for measuring migration may be ranked in terms of their appropriateness. The census is surely the least satisfactory solution as it can only indicate numbers of new immigrants from the time between two censuses. Cross border counting theoretically allows an estimate of exits as well as entries. However, the reliability of existing border counting systems is low and difficult to improve. Specific surveys can be considered an improvement, but the size of the sample limits their usefulness. The population register is undeniably better, as it is the only source to record both immigration and emigration The link between each individual's entry and exit can therefore be made and the real duration of the stay can be established. However, not all population registers are reliable. Only centralisation guarantees the reliability of the system, ensuring that the entries and exits are correctly recorded to avoid double counts. Even using a reliable, centralized population register does not guarantee international comparability between immigration and emigration figures, as the double matrices have shown.

4. The THESIM findings: data availability, reliability and comparability

For the years 2004-2006, the European Commission launched its 6th Framework Programme of Research. When scientific research was requested for policy support, among the key priorities, the following was proposed: "Better sources for statistics and better knowledge on migration flows to the EU". The THESIM project was selected to co-ordinate efforts by demographers from different European Research Centres.[14]

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14 THESIM means Towards Harmonised European Statistics on International Migration. The project was coordinated by GéDAP-UCL (Belgium) and involved the following institutions: NIDI (The Netherlands), INED (France), ICMPD (Austria), IcSTAT (Italy) and CEFMR (Poland). All the results of that EU project have been published in Poulain et al. (2006).

The ultimate aim of THESIM was to understand why the data-collection systems for statistics of international migration do not work properly, and to supply detailed metadata on all the EU Member States as an effective support to the implementation of the EU regulation. The three key topics tackled by THESIM were availability, reliability and comparability. The main findings and recommendations of the THESIM project follow:

The first problem is the absence of data, and the main recommendation is to use all potential sources and databases related to the given topics. However, the correspondence between different data sources should be checked carefully. For example, the number of foreigners entering the country for immigration could be captured through the usual population registration system, but also by using the residence permit database for non-EU citizens. Administrative databases exist in most countries, but no statistical data collection has been developed from these databases. With this aim in mind, strengthening the cooperation between the National Statistical Offices and the Ministries in charge of these administrative databases is recommended.

The mere availability of statistics is not an end in itself. Even if statistics are available, their poor quality may render them useless. The key aspect of data quality is reliability. The concept of reliability is understood here as the compliance of statistics with the national definition, and that may substantially differ from the internationally recommended one. Therefore, even if an incorrect definition is applied, but data collection is meticulous, data are classified as reliable. In such a situation data users can trust in the available statistics – therefore, there is a clear correspondence between concepts underlying the data and the produced statistics.

There are two main factors that make international migration statistics unreliable. The first one is the under registration of migrants, which refers in particular to countries where data collection systems rely on the self-declaration of international movements. The second relates to data coverage. Some data collection systems or administrative data sources may not cover the whole target population, and as a result, some subsets are systematically excluded and will therefore not be included in the statistics. The large majority of international migration statistics in the EU countries are derived from registration systems and deficiencies in registration are the most significant influence on data reliability. People do not register or deregister because there is no obligation to do so, or even if the obligation exists, there is no effective control. The willingness to report changes of place of residence and more specifically, emigration to another country, varies from one country to another. People take into account the advantages and disadvantages of registering when deciding whether or not to do so. In general, they have more interest in reporting their arrival than departure. Therefore, immigration statistics are considered more reliable. As regards data coverage, it should be noted

first of all that illegal flows of migrants, which are difficult to measure, are generally not included.[15] As for legal migrants, the most problematic group is asylum seekers. In general, asylum seekers are included only when they have been granted refugee status and received a temporary or permanent residence permit, but the situation may vary among countries.[16] Students are another example of people in this grey area.[17]

The lack of uniformity in the definitions of international migrants used in various countries has been recognized for a long time, but up to now, most efforts towards achieving international comparability of international migration statistics have not been successful. Furthermore, concepts underlying statistics of international migration flows vary significantly. Not only between countries, but also within countries over time and between different sources of statistical information. The main sources of variations in definitions used in the EU countries are the differences in the concept of place of residence and duration of stay that are applied to determine who is an international migrant. Because the datasets are usually not accompanied by detailed methodological information, these concepts remain a relatively uncharted area for most data users.

As far as the duration of stay is concerned, the threshold durations used by countries are extremely diverse. On the one hand, there are countries where duration of stay is of no relevance, any move in or out of a dwelling should be registered and this move is directly reflected in statistics. On the other hand, there are countries where only definitive movements (settlement or permanent migration) are counted. Leaving aside these extreme situations, the duration of stay criterion applied in migration statistics across the EU is usually set to a period of between three months and one year.[18] However, in all these countries the situation is far from fixed, and a convergence toward the one-year limit is seen as possible in the near future, especially in countries that currently have a short time limit.

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15 Spain is the only EU country where illegal migrants are included in the official statistics on international migration.

16 In Germany, Spain, Austria and the Netherlands they are recorded in the population register and also included in immigration statistics at the earlier stage of the asylum procedure. In Cyprus and Ireland they are covered by statistics based on surveys. In the United Kingdom asylum seekers are not covered by the survey that is the main source for international flow statistics, but the Home Office provides the estimates. By contrast, recognised refugees are never included in migration statistics in Hungary, Portugal, Malta and Belgium.

17 For instance they are not covered by international migration statistics in France, Portugal and Finland.

18 Only Cyprus, Sweden and UK strictly apply the one-year criteria for immigration as well as emigration, whatever the person's citizenship, while Finland does so for all emigrations but only for the immigration of non-nationals.

In addition to focussing on the improvement of the availability of data, it is crucial to demonstrate that this data is sufficiently reliable. Not only from a statistical viewpoint, but from a political perspective. For the same reason, adopting the same definition and time criterion is a valuable target. Improving the reliability and the coverage of each data source, in each country is the most important task to be achieved in the short term. Only after completing these checks may the figures be interpreted and become useful for analysis and policy support. This is the reason why demographers are cooperating with all National Statistical Institutes (NSI) and with EUROSTAT to improve the situation.

The improvement of migration statistics is necessary in order to create an objective basis for a new migration policy. It should also be considered as an element of good governance in terms of efficiency, accountability and transparency. The recent regulation on Community statistics on international migration and international protection could accelerate the process (European Commission, 2007). Until now, European migration statistics have been collected on the basis of a 'gentlemen's agreement', whereby EU Member States were invited to provide data following the proposed definitions and EU standards in terms of reliability. As a result, the data provided was irregular and incomplete. Countries tended to follow national definitions and these could vary considerably from the proposed EU definitions. Moreover, it was often almost impossible to check the reliability of the figures provided. In 2008, when the new regulation comes into force, Member States will be obliged to provide data following the harmonised definitions. This data should be reliable and accompanied by detailed metadata.

5. International migration in the EU 27: What does the most recent data reveal?

The most basic figure, the total number of usual residents in each EU Member State, is problematic in terms of reliability and comparability, because of both under-counting and double counting. Figures relating to citizens who left the country on a temporary basis, or to foreigners living in the country for a variety of reasons (including asylum seekers) may or may not be included in the stock of usual residents for a given country. Every non-recording of a person entering or leaving the country may involve problems of under-registration and, within the EU territory, problems of double counting.

A non-national is someone who does not hold the citizenship of the country where he or she lives. In each EU Member State there are non-nationals who are EU-citizens and others who are not. In terms of data collection, the administrative source for identifying

and characterising the non-national population is often different to that used for the total population. In several countries, discrepancies appear that are not easy to solve. In addition, some countries only provide detailed data on the non-national population at the time of the census, providing only estimated figures for the period between censuses.

The following figures are based on the EUROSTAT database,[19] with some additional information collected from the different websites of the National Statistical Institutes. Missing data has been estimated based on previous figures by the authors of this contribution. Up to now, only a few overall descriptive analyses of all international migration flows concerning the EU have been developed. The poor reliability of the aforesaid data is responsible for this and any comparative exercise would be incomplete and fragile. Accordingly, our aim here will be to enhance the main features that available statistical data on populations with a foreign background may reveal.

In order to identify the foreign population, the key variable will be citizenship, even if some comparability problems exist as explained above. The latest available data is summarised in table 1 for the EU 27 on 1st January 2005.[20]

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19   The Eurostat database is available online at http://epp.eurostat.ec.europa.eu/

20   The situation is shown for 1st January 2005, including Bulgaria and Romania although these countries were not yet EU Member States at the time.

Table 1. Non-national population in the EU Member States on 1st January 2005.
The data are extracted from the Eurostat Database and the figures in italics in the grey cells are
our own estimations based on the only previous available figures (absolute figures are presented
in thousands).[21]

↓

	Total Population	Non Nationals	% Non Nationals	Foreign EU Citizens	Non EU citizens	% Non EU Citizens	Largest foreign population	Largest non-EU population
Belgium	10 445.9	870.9	8.3%	599.7	271.2	31.1%	Italy	Morocco
Bulgaria	7 801.3	25.6	0.3%	3.9	21.7	84.9%	Russia	Russia
Czech Republic	10 220.6	254.3	2.5%	87.3	167.0	65.7%	Ukraine	Ukraine
Denmark	5 411.4	267.6	4.9%	70.0	197.6	73.8%	Turkey	Turkey
Germany	82 500.8	7 288.0	8.8%	2 212.1	5 075.9	69.6%	Turkey	Turkey
Estonia	1 347.0	250.0	18.6%	5.0	245.0	98.0%	Russia	Russia
Greece	11 075.7	900.0	8.1%	157.1	742.9	82.5%	Albania	Albania
Spain	43 038.0	3 371.4	7.8%	1 070.7	2 300.7	68.2%	Ecuador	Ecuador
France	60 561.2	3 500.0	5.8%	1 314.0	2 186.0	62.5%	Portugal	Algeria
Ireland	4 109.2	295.0	7.2%	200.0	95.0	32.2%	UK	USA
Italy	58 462.4	2 402.2	4.1%	470.9	1 931.3	80.4%	Albania	Albania
Cyprus	749.2	98.1	13.1%	58.9	39.2	40.0%	Greece	Russia
Latvia	2 306.4	487.2	21.1%	4.8	482.4	99.0%	Russia	Russia
Lithuania	3 425.3	32.3	0.9%	1.5	30.8	95.4%	Russia	Russia
Luxembourg	455.0	177.4	39.0%	152.9	24.5	13.8%	Portugal	Serbia and Montenegro
Hungary	10 097.5	143.8	1.4%	82.2	61.6	42.9%	Romania	Ukraine
Malta	402.7	12.0	3.0%	8.0	4.0	33.3%	UK	India
Netherlands	16 305.5	699.4	4.3%	233.1	466.3	66.7%	Turkey	Turkey
Austria	8 206.5	788.6	9.6%	235.1	553.5	70.2%	Serbia and Montenegro	Serbia and Montenegro
Poland	38 173.8	700.0	1.8%	16.0	684.0	97.7%	Germany	Ukraine
Portugal	10 529.3	265.0	2.5%	78.2	186.8	70.5%	Cape Verde	Cape Verde
Romania	21 712.6	40.8	0.2%	9.4	31.4	76.9%	Moldova	Moldova
Slovenia	1 997.6	44.3	2.2%	1.4	42.9	96.8%	Bosnia Herzegovina	Bosnia Herzegovina
Slovak Republic	5 384.8	22.3	0.4%	11.9	10.4	46.4%	Czech Republic	Ukraine
Finland	5 236.6	108.3	2.1%	36.2	72.1	66.5%	Russia	Russia
Sweden	9 011.4	481.1	5.3%	212.1	269.0	55.9%	Iraq	Iraq
United Kingdom	60 034.5	3 066.1	5.1%	1 173.9	1 892.2	61.7%	Ireland	India
EU 27	489 002.2	26 591.6	5.4%	8 506.1	18 085.5	68.0%		

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21 Data presented in italics in grey cells was not available in official statistics and we present here estimates
    based on previous data, mostly from censuses.

The first set of descriptive conclusions concerns foreign EU citizens living in another EU country e.g. Dutch people living in Italy or French people in Germany.

1. The smaller the country, the higher the proportion of foreign EU citizens living in this country. This is normal as in a smaller country there are automatically more international migrations compared to internal migrations, the latter being relatively more numerous in larger countries.
2. The central location of Belgium and Luxembourg and their respective roles in the European Union leads to higher numbers of foreign EU citizens living in these countries.
3. At the other extreme, countries like Greece, Portugal and Finland, which are at the periphery of the EU, have markedly lower proportions of foreign EU citizens. This may be partly explained by the fact that this external situation involves more exchanges with third countries. Ireland, which was traditionally a source of emigration, has recently experienced large immigration flows, mainly from new EU Member States. It is therefore currently experiencing an increasing proportion of foreign EU citizens compared to the proportion of non-EU citizens.
4. The numbers of citizens of a given EU country living in all other EU countries can be compared to the number of foreign EU citizens living in that particular country (table 2). As a direct consequence of the enlargement of the EU, Germany appears to be the most attractive country within Europe for other EU Member States. France, Spain and Belgium follow, preceding the United Kingdom and Luxembourg. Sweden heads the group of countries that are attractive to a lesser extent. At the opposite end of the table, Romania may be considered as the country of highest emigration, followed by Portugal and Poland. Italy, Bulgaria, Greece and Ireland follow, all having relatively large numbers of citizens living in another EU country compared to the number of foreign EU citizens living in these countries.
5. Finally, the preference for citizens of a given EU country to live in another EU country may be assessed by comparing actual figures with expected figures obtained through a simple bi-proportional model.[22] The larger *chi²* differences are presented in table 3, showing that the Portuguese people in Luxembourg and France, Irish people in the United Kingdom and Finns in Sweden are the most extreme situations. Without considering neighbouring countries, we can also observe the preponderance of Italians and Greeks in Germany, Italians in Belgium and Romanians in Spain and Italy.

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22 The estimated figure using the bi-proportional model is simply proportional to the product of the total population of the two countries concerned, so that the total number of expected figures will be equal to the total number of observed figures.

Table 2. Comparing the number of citizens of a given country living in another EU Member State and the number of foreign EU citizens living in that country.
The countries are ranked by decreasing chi2 differences between observed and expected figures.
↓

	Citizens living in another EU country	Foreign EU citizens living in the country	Chi^2 differences
Immigration countries			
Germany	623 280	2 190 253	1 321
France	491 190	1 182 066	755
Spain	437 080	1 046 593	708
Belgium	180 635	599 640	671
United Kingdom	657 527	1 161 659	529
Luxembourg	17 019	136 450	431
Sweden	103 969	211 390	271
Czech Republic	65 182	87 000	79
Cyprus	29 877	36 745	38
Austria	227 325	233 795	13
Emigration countries			
Hungary	88 793	82 054	-23
Malta	7 491	4 000[23]	-46
Denmark	92 878	69 398	-82
Latvia	22 879	4 808	-154
Estonia	27 421	4 023	-187
Slovenia	31 857	1 418	-236
Netherlands	359 618	206 980	-287
Finland	137 96	36 104	-345
Lithuania	66 177	1 462	-352
Slovak Republic	116 349	11 843	-413
Ireland	409 968	146 369	-500
Greece	399 523	134 445	-513
Bulgaria	212 390	3 861	-634
Italy	1 179 657	465 698	-787
Poland	631 751	15 193	-1 084
Portugal	930 135	65 402	-1 226
Romania	773 242	5 889	-1 229

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23 Estimated figure as no data is officially available

	Country of citizenship	Country of residence	Chi² differences
1	Portugal	Luxembourg	17 121
2	Ireland	UK	13 506
3	Portugal	France	12 462
4	Finland	Sweden	7 536
5	Greec	Germany	5 948
6	Romania	Spain	5 353
7	Netherlands	Belgium	4 616
8	Italy	Germany	4 434
9	Belgium	Luxembourg	4 198
10	Italy	Belgium	4 147
11	Romania	Italy	3 973
12	Austria	Germany	3 806
13	UK	Ireland	3 760
14	Cyprus	Greece	3 487
15	Estonia	Finland	3 042

The second group of descriptive conclusions concerns the non-EU citizens living in each EU country. When comparing the proportion of non-nationals in each EU country (table 1), the figures show a wide variation, with the highest value for Luxembourg (39%) and the lowest in Romania, Bulgaria, the Slovak Republic and Lithuania. For historical reasons, Latvia (21.1%) and Estonia (18.6%) also show high proportions due to their large Russian communities. Three traditional immigration countries – Austria (9.6%), Germany (8.8%) and Belgium (8.3%) – stand alongside Luxembourg as other major immigration countries. Greece (8.1%) and Spain (7.8%), two new immigration countries, have joined this group. France (5.8%), Sweden (5.3%), Denmark (4.9%) and Italy (4.1%), another new immigration country, come next. When considering the distribution among non-nationals of EU citizens and non-EU citizens, the proportion of non-EU citizens is very low in Luxembourg (13.8%) and relatively low in Belgium (31.1%) and Ireland (32.2%). In all other EU countries except Malta, Cyprus and Hungary, this indicator exceeds 50% and peaks above 95% in the three Baltic States, Poland and Slovenia.

When considering only non-EU citizens, the number of those who are living in any of the EU Member States can be compared with the total population of the country of origin (table 4). Albania is clearly the country with the largest proportion of the population who live in the EU. The number of Albanian citizens in the EU is equal to one quarter of the population of Albania. All the Republics of the former Yugoslavia24 also have an average ratio of one citizen living in the EU for twelve living in their home country. Some smaller islands like Cape Verde, Sao Tome and Principe, Iceland, Mauritius, Barbados and the Seychelles also have a high ratio. Similarly, larger populations like Morocco, Ecuador and Turkey are also high in this ranking. These are clearly the three largest non-EU communities represented in the EU with 1.5, 0.5 and 2.3 million citizens respectively, or in relative numbers 4.8%, 3.9% and 3.2% of their total populations.

Table 4. Number of non-EU citizens living in the EU compared to the total population of each country in 2005.

↓

Country	Number of citizens living in the EU	Total population of the country	Ratio
Albania	784 845	3 129 678	25.1%
Cape Verde	72 088	506 807	14.2%
F.Y.R of Macedonia	194 155	2 034 060	9.5%
Bosnia and Herzegovina	337 901	3 907 074	8.6%
Croatia	332 368	4 551 338	7.3%
Serbia and Montenegro	756 911	10 502 224	7.2%
San Marino	1 831	28 117	6.5%
Iceland	18 352	294 561	6.2%
Sao Tome and Principe	8 039	156 523	5.1%
Morocco	1 522 130	31 819 881	4.8%
Ecuador	510 995	13 228 423	3.9%
Mauritius	45 581	1 244 663	3.7%
Barbados	9 450	269 556	3.5%
Seychelles	2 770	80 654	3.4%
Turkey	2 333 807	73 192 838	3.2%

Source: The number of non-EU citizens is extracted from Eurostat database while the total population figures have been found on the UN Statistical Division web site.

Finally, the number of citizens observed from each non-EU country in each EU Member State can be compared to the expected number based on a simple proportional model.[25] For example, without any specific preference, the 1.5 million Moroccan citizens could be distributed among the EU countries according to the population of each EU country. If we consider that 8% of the EU population lived in Spain in 2005, therefore, the expected number of Moroccan citizens in Spain would be about 120.000 compared to 400.000, the observed figure. Table 5 shows the larger positive chi^2 differences between observed and expected figures. These positive differences indicate the preference of people with specific foreign citizenship, to live in that EU country. Albanians have a preference for Greece, their neighbouring country, while Russian citizens are particularly numerous in Estonia for historical reasons. Turks in Germany follow, with Ecuadorians and Colombians in Spain, Algerians in France and Cape Verdeans in Portugal. Ex-Yugoslavian citizens are most numerous in Germany and Austria; Moroccans will be found in France, Belgium and the Netherlands while Indians, Pakistanis and Americans are predominant in the UK. Table 6 compares the distribution of Moroccan and Turkish citizens living in the 27 EU Member States, according to data available for 2005.

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25 In the model, the expected number of citizens from a non-EU country within the territory of a given EU Member State is proportional to the number of citizens of that country in the whole EU and the total population of the EU Member State concerned, so that the expected total number of non-EU citizens will be similar to the one observed.

Table 5. The larger chi² differences between observed and expected numbers
of non-EU citizens living in every EU Member States (2005).
↓

	Country of citizenship	Country of residence	Chi² differences
1	Albania	Greece	3151
2	Russia	Estonia	2359
3	Turkey	Germany	2186
4	Ecuador	Spain	1909
5	Algeria	France	1497
6	Colombia	Spain	1338
7	Cape Verde	Portugal	1294
8	Bosnia Herzegovina	Austria	1136
9	Serbia Montenegro	Austria	1112
10	Serbia Montenegro	Germany	1063
11	Argentina	Spain	1031
12	Morocco	Spain	897
13	Norway	Sweden	853
14	Guinea Bissau	Portugal	815
15	Senegal	Luxembourg	733

Table 6. The distribution of the Moroccan and Turkish citizens living in the 27 EU Member States.

↓

	MOROCCO	%	TURKEY	%
Belgium	81 279	5.34%	39 885	1.71%
Bulgaria	26	0.00%	1 015	0.04%
Czech Republic	143	0.01%	520	0.02%
Denmark	2 902	0.19%	29 956	1.28%
Germany	73 027	4.80%	1 764 318	75.60%
Estonia	1	0.00%	6	0.00%
Greece	526	0.03%	7 881	0.34%
Spain	461 544	30.32%	1 347	0.06%
France	506 305	33.26%	205 589	8.81%
Ireland	161	0.01%	456	0.02%
Italy	294 945	19.38%	11 077	0.47%
Cyprus	11	0.00%	35	0.00%
Latvia	2	0.00%	38	0.00%
Lithuania	1	0.00%	56	0.00%
Luxembourg	252	0.02%	207	0.01%
Hungary	32	0.00%	629	0.03%
Netherlands	91 558	6.02%	100 574	4.31%
Austria	749	0.05%	116 882	5.01%
Poland	64	0.00%	180	0.01%
Portugal	660	0.04%	111	0.00%
Romania	0	0.00%	2 173	0.09%
Slovenia	3	0.00%	31	0.00%
Slovak Republic	11	0.00%	120	0.01%
Finland	621	0.04%	2 359	0.10%
Sweden	1 510	0.10%	12 269	0.53%
United Kingdom	5 797	0.38%	36 093	1.55%
TOTAL	1 522 130	100.00%	2 333 807	100.00%

6. A typology of the population with a foreign background

As the population with a foreign background includes the immigrant population and their descendents (even if the latter are born in the country and did not immigrate from abroad), the country of citizenship and country of birth no longer suffice as the variables for identifying them. As expressed by Extra and Gorter (2001), "collecting reliable information about the composition of immigrant groups in EU countries is one of the most challenging tasks facing demographers." Demographers are facing the problem, and the work developed by Eurostat (Krekels et al. 1998) and the Council of Europe (Haug et al., 2004) is exemplary on that issue. Nevertheless the notion of foreign background is still very complex and needs additional investigation. In order to define this concept within a statistical framework, particular objective criteria have to be selected. A combination of the following criteria is necessary to form an appropriate typology of the population with a foreign background. However, quite often some of these variables cannot be used, due to lack of basic information.

- country of citizenship
- citizenship at birth
- citizenship of parents at birth
- citizenship of grandparents and ancestors
- country of birth
- country of birth of parents
- country of birth of grandparents and ancestors
- ethnic affiliation or attachment to a distinct ethnic group
- physical characteristics such as colour of skin or race, as accepted in the US or South Africa

As mentioned above, building a typology including all these characteristics is not a realistic objective. In addition, for a specific country, some variables may be essential or, conversely, may have little impact. Being considered as a member of a distinct ethnic group may be more acceptable in some countries than others. Some of these criteria have an important negative impact on the daily life of the person(s) concerned, and their use and the development of an *ad hoc* typology could be problematic. In these cases, proposing such a typology, even for statistical purpose, would be unacceptable as it could lead to discrimination resulting from such classification. Finally, if these variables were to be collected through questions in censuses or surveys, self-reported answers may introduce a particular bias. In this situation it may even appear impossible to statistically identify populations with a foreign background.

Officially, some EU countries like France and Belgium prefer to provide and use statistics on citizenship, despite several attempts to propose a more appropriate classification. The use of the country of birth is less common. Within Europe, the Nordic

countries and the Netherlands use typologies based on the country of birth including that of the parents. In the United Kingdom and the United States, race and/or ethnicity are commonly used, while in some Central European countries the concept of "ethnic nationality" is preferred. In conclusion, any typology would be specific not only to the information available in a given country, but also to the perception towards each of the variables used to build this typology.

As a scientific support for policy development and a better understanding of the diversity of the population with a foreign background we have developed the following typology for Belgium. Based on the data extracted from the *National Population Register* and the last censuses carried out in 1991 and 2001 the following variables can be obtained:
- current citizenship
- all changes of citizenship from 1991 onwards
- citizenship at birth as reported in the 1991 census if the person was enumerated
- country of birth
- year of first immigration in the country as reported in the 1991 census for those living in the country at that time
- year of first immigration in the country as recorded in the *National Population Register* for those who immigrated since 1991.

The proposed typology does not take into consideration the characteristics of parents. However, it has been possible to identify children who received Belgian citizenship at birth but who have at least one parent with a foreign background (non-Belgian citizens at birth). Based on this information it is possible to identify some groups on the basis of a distinction between:
- persons currently holding Belgian citizenship or not
- persons who held Belgian citizenship at birth or not
- foreigners who have been naturalized or not
- foreigners born abroad who immigrated to Belgium and foreigners born in Belgium
- persons who have immigrated to Belgium, according to their age at immigration and their duration of stay in the country.

Table 7 presents a comparison of the population with any foreign background and the population with a Moroccan background on the same date. A distinction is made between different types of immigrants in terms of age of arrival and duration of stay. Figure 2 shows the evolution of different sub-groups and allows one to trace the population with a foreign background in Belgium from 1991 until 2005.

Table 7. Typology of population with a foreign background developed for Belgium. Comparative figures for population with any foreign background vs. Moroccan background on 1st January 2005 ↓

	All people with a foreign background	People with a Moroccan background	% All	% Moroccans
Total	2 022 548	299 283	100.0	100.0
Belgian citizenship at birth	451 525	56 448	22.3	18.9
Of whom both parents have a foreign origin	105 760	35 822	5.2	12.0
Of whom only the father has a foreign origin	196 015	15 481	9.7	5.2
Of whom only the mother has a foreign origin	149 750	5 145	7.4	1.7
No Belgian citizenship at birth	1 571 023	242 835	77.7	81.1
Of whom born in Belgium	505 756	105 004	25.0	35.1
Of whom not naturalised	173 282	16 154	8.6	5.4
Of whom naturalised	332 474	88 850	16.4	29.7
Of whom born abroad and immigrants	1 065 267	137 831	52.7	46.1
Of whom not naturalised	698 128	65 197	34.5	21.8
Immigrated during the last 5 years, aged up to 12	32 504	1 847	1.6	0.6
Immigrated during the last 5 years, aged over 12	212 056	31 482	10.5	10.5
Immigrated more than 5 years ago, aged up to 12	107 726	5 883	5.3	2.0
Immigrated more than 5 years ago, aged over 12	345 842	25 985	17.1	8.7
Of whom naturalised	367 139	72 634	18.2	24.3
Immigrated during the last 5 years, aged up to 12	4 925	566	0.2	0.2
Immigrated during the last 5 years, aged over 12	8 239	2 223	0.4	0.7
Immigrated more than 5 years ago, aged up to 12	129 006	19 510	6.4	6.5
Immigrated more than 5 years ago, aged over 12	224 969	50 335	11.1	16.8

Source of data: INS, Registre National. Typology and calculations done by GéDAP-UCL.
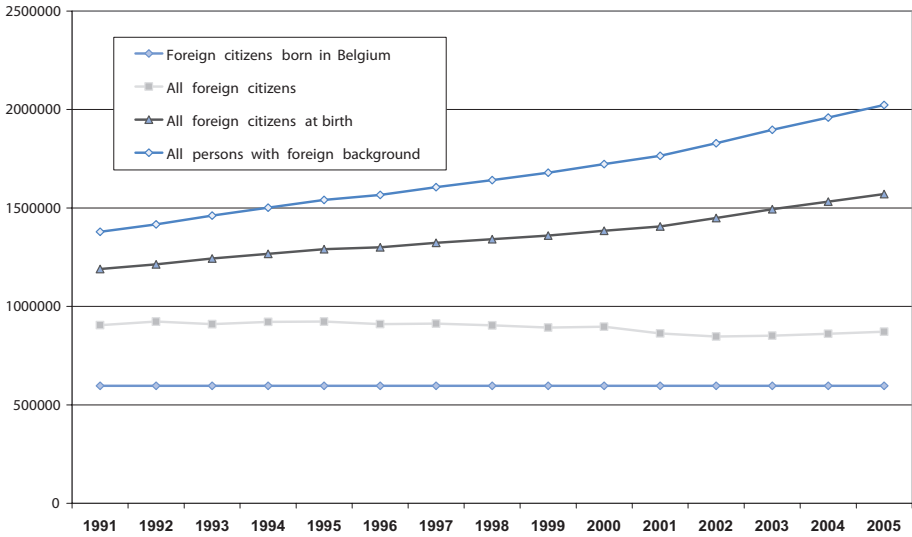
Figure 2. Evolution of different sub-populations with a foreign background according to the proposed methodology.
Source of data: INS, Registre National. Typology and calculations done by GéDAP-UCL.

While the number of foreign citizens born abroad, as well as the total number of foreign citizens, is very stable in Belgium, the number of persons not holding Belgian citizenship at birth is increasing. This increase is even larger when we consider all persons with foreign background.

Finally, Figure 3 represents the age and gender structure of the foreign population not holding Belgian citizenship, compared to the total population with a foreign background. The differences, which are larger for younger people than older ones, are due to naturalisation and to the large number of children with a foreign background who received Belgian citizenship at birth.
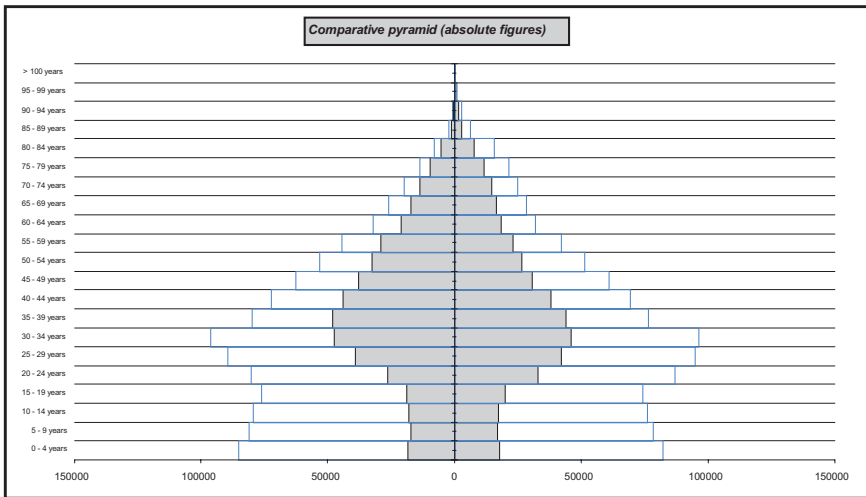
↑

Figure 3. Age and sex structure of the foreign population not holding Belgian citizenship (in grey) and the whole population with any foreign background on 1st January 2005.
Source of data: INS, Registre National. Typology and calculations done by GéDAP-UCL.

7. Conclusion

Statistical data is necessary to understand the evolution of migration trends more precisely and objectively. It is also necessary for population forecasts and developing migration policies. However, collecting such data may be difficult and the figures are easily misused. At present, availability is still limited, reliability is often very poor and comparability is still a remote goal at EU level. Even if data related to stocks may be considered to be relatively reliable and easily available, the poor situation concerning flow data must be recognised.

International standards exist, but the last updated UN recommendations cannot easily be followed, especially when data collection is based on a 'gentlemen's agreement'. Within the EU, the recent adoption of a regulation on Community Statistics on Migration and International Protection represents a real hope, as Member States will be forced to produce reliable statistics and associated metadata. Nevertheless, such a regulation cannot improve the situation to a satisfactory level and the key problem will be the implementation phase. The role of demographers will be essential in helping countries to fulfil the requirements of the regulation and to ensure Eurostat of the quality of the figures provided. Considering the various national situations, producing fully accurate and comparable figures seems an unattainable goal. But the total accuracy of the

figures is not a goal in itself. Reliable and comparable data represents an objective that may be reached by improving the data collection systems, using different data sources in combination and estimating comparable figures with the help of ad hoc methodologies.

Stock data on population by country of citizenship provides more reliable and comparable information, and allows a description of the situation within the EU. But here we should also consider that policies granting citizenship to foreigners vary largely between countries and may result in statistics that are not strictly comparable. Several criteria may be used to define the population with a foreign background living in a country and depending which criteria are used, the size and characteristics of the corresponding population may be different. This again demonstrates that important challenges exist in the field of international migration data collection and that the scientific support expected from demographers is enormous.

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Astracts

Laudation for Ron Lesthaeghe
Frans J. Willekens

Ron Lesthaeghe is among the 10 most influential demographers of the past half century worldwide. Since 1988, he has been cited close to 1,000 times in top journals (Social Science Citation Index). About 50 percent of these citations are in demography journals and about 40 percent in sociology journals. These indicators of creativity, innovation and energy quantify the large impact of Ron had and continues to have on both demography and sociology. The prizes and rewards confirm the status and impact. Ron's professional career should inspire junior scholars. It is shown that events and experiences in early stages of his professional life are strong predictors of achievements later in life.

Does Persistent Low Fertility Threaten the Future of European Populations?
Tomáš Sobotka

This contribution looks at selected trends and cross-country differences in fertility, many of which are commonly seen as the main 'causes' of the envisioned future demographic decline of Europe. I analyse fertility changes in conjunction with migration, discussing their impact on likely future population trends in Europe. Many evolving fertility trends are assessed with an eye on addressing the following hypotheses:
- Extremely low period total fertility rates, observed at present in many parts of Europe, are linked to the rapid postponement of childbearing and are likely to be temporary;
- Very low fertility rates are often related to various economic, cultural and institutional constraints which may be reduced in the future;
- The second demographic transition is closely linked to fertility postponement, but not necessarily to below-replacement fertility level;
- If migration is taken into account, population replacement rates are close to the threshold necessary for stable or increasing population in most regions of Europe

In conclusion, this article discusses findings on the current positive association between the second demographic transition and period fertility level and summarises reasons why European fertility rates might increase in the future. When fertility trends are considered jointly with migration, very low fertility and the possibility of a marked population decline constitute a regional problem rather than a threat for Europe as a whole.

Education and Permanent Childessness: Austria vs. Sweden. A Research Note
Gerda Neyer, Jan M. Hoem

In this research note we extend our previous study of the association between educational attainment and permanent childlessness in Sweden (Hoem et al., 2006) to cover Austria, and we make comparisons between the two countries. In both investigations we have defined educational attainment in terms of both educational level and educational field. We find largely the same pattern of childlessness by educational field in both countries; in particular at each educational level women educated for teaching jobs or for health occupations typically have lower childlessness than other lines of education. However, for most groups childlessness is higher in Austria, and for academic educations it is much higher. We attribute these differences to institutional differences in the two countries which may bring about a different culture of reproductive behaviour.

Recent Trends in Demographic Attitudes and Behaviour: Is the Second Demographic Transition Moving to Southern and Eastern Europe?
Aart C. Liefbroer, Tineke Fokkema

As one of the 'founding fathers' of the concept of the Second Demographic Transition (SDT), Ron Lesthaeghe has demonstrated convincingly that demographic change in many Western countries is related to changes in attitudes and values regarding family life. It is less clear, though, whether the SDT is spreading to Eastern and Southern Europe. The aim of this chapter is to shed light on this issue by tracing attitudinal change and demographic change throughout Europe from the mid-1990s onwards. We use data on family-relevant attitudes from the 1994 and 2002 International Social Survey Program and data on cohabitation and parenthood drawn from the Labour Force Surveys held in EU countries since the mid-1980s. The results suggest that the SDT is indeed spreading to Eastern and Southern Europe, but also pose some challenging new puzzles for future research.

Measuring International Migration: A Challenge for Demographers
Michel Poulain, Nicolas Perrin

Demographers consider international migration to be a topic of increasing importance for their discipline. However, policy-makers dealing with international migration show limited interest in the work of demographers. This paradox is particularly apparent in Europe, a setting where the issue of migration has become a key priority for European policy-makers. Specifically, in order to support the development of a common migration policy, the European Union is faced with an urgent need for better statistics on migration and asylum and the international migration statistics are frequently unreliable, not only in Europe, but in all countries around the world. A recent

meeting organised by the UN's Statistical Division in New York[1] concluded firstly: the most recent set of recommendations on international migration statistics is not being followed, secondly: the requested data is often unavailable, and where it is available, is often unreliable and finally: that all the available data considered sufficiently reliable cannot be compared systematically because of different data sources, concepts and definitions. Accordingly, the task facing demographers is not an easy one. Nonetheless, it may be considered essential in terms of policy support.

Early Childhood Health, Reproduction of Economic Inequalities and the Persistence of Health and Mortality Differentials
Alberto Palloni, Carolina Milesi, Robert White, Alyn Turner

The persistence of adult health and mortality socioeconomic inequalities and the equally stubborn reproduction of social class inequalities are salient features in modern societies that puzzle researchers in seemingly unconnected research fields. Neither can be satisfactorily explained with standard theoretical frameworks.

In the domain of health and mortality, it is still unknown if and to what an extent adult health and mortality inequalities across the socioeconomic ladder are entirely the product of attributes of the socioeconomic positions themselves and/or the partial result of health conditions established earlier in life that influence both adult health and economic success.

In the domain of social stratification, the persistence of inequalities across generations in various domains, such as educational attainment, wages, income, and wealth, has proven to be remarkably resistant to satisfactory explanations. Although the literature on social stratification is by and large notoriously silent about the role played by early health status in shaping adult social and economic opportunities, new research on human capital formation contains plenty of hints suggesting that this is a serious error of omission.

This paper is mostly about theory, models and alternative ways of obtaining empirical estimates. We first propose a model representing some of the aforementioned relations. We then suggest the use of a novel methodology to falsify the main propositions derived from the theory. In practice this methodology will enable the investigator to formulate simple procedures to estimate (a) the degree to which social mobility, or lack thereof, is influenced by early health conditions and (b) the contribution of early health status to observed adult health differentials. The model is novel insofar as it incorporates both early conditions as determinants of traits that enhance (inhibit) social mobility as well as conventional factors affecting adult health and socioeconomic status. This

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1   Expert Group Meeting on Measuring International Migration: concepts and methods, UNSD, New York, 4-7 December 2006.

formulation enriches current social stratification theory as an explanatory tool for social and economic inequalities; it also strengthens theories that attempt to explain adult health and mortality differentials.

The Relationship Between Childhood Conditions and Older-age Health: Disease Specificity, Adult Life Course, and Period Effects.
Vladimir M. Shkolnikov and Dmitri Jdanov

This contribution is a discussant's commentary on "Early childhood health, reproduction of economic inequalities and the persistence of health and mortality differentials" by A. Palloni, C. Milesi, R. White, and A. Turner

The Challenges of Ageing: Prospects for the Family Support of Older People in 21st Century Europe.
Emily Grundy

Europe is ageing and by 2020 close to a quarter of the population in any European countries will be aged 65 and over. By 2050 it seems most probable that people aged 80 and over will account for one in ten people in several of Europe's largest countries, including Britain, France, Germany, Italy and Spain. The relatively old populations of many European countries today are the long-term consequence of historical changes in birth and death rates known as the first demographic transition. However, in many European countries the process of population ageing has been accelerated and accentuated by more recent changes in family related behaviour identified by Professor Lesthaeghe and others as constituting a Second Demographic Transition. These changes seem to have involved a shift to more individualistic aspirations and behaviours and a weakening of traditional family bonds. This has led to concerns that family support for older people in need of assistance may be eroding just as the numbers potentially needing such support are increasing. Moreover, pressures on state financed and mediated transfers to the older population will be challenged by changes in the ratio of 'workers' to 'pensioners' and associated changes in economic productivity and the costs of pensions. Does this mean that population ageing is a disaster for Europe? In this paper I will examine short and longer term prospects with a particular focus on demographic change and the family support of older people – and the support provided by older people and its implications both for society as a whole and for the well-being of older people. I will argue that in many respects short term prospects are highly favourable, although in the longer term rather less so. I will also examine changes in possible needs for support and consider various possible policy options and paradoxes.