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#### Migration statistics

## **Better monitoring migrant populations and international mobility: progress made, challenges and ways forward**

**Prepared by the Organisation for Economic Co-operation and Development**

### *Summary*

This paper provides an overview of the work undertaken by the Organisation for Economic Co-operation and Development in order to address some of these challenges and to better respond to policy needs. In particular, the most recent update of the Database on Immigrants in the member countries of the Organisation for Economic Co-operation and Development, based on the 2010-2011 round of population censuses, allows measuring the main changes in the composition and characteristics of migrant populations and provides new estimates for emigration rates by skill level for more than 180 countries of origin worldwide. Furthermore, efforts have been undertaken to provide more up-to-date flow data in order to support evidence-based policy making in the field of migration management. This paper also addresses briefly some of the grey areas and potential improvements in terms of measuring migrant populations and international mobility.

The paper is presented for discussion to the Conference of European Statisticians seminar on Migration statistics.

## **I. Introduction**

1. Between the creation of the Organisation for Economic Co-operation and Development (OECD) in 1961 and the Great Recession, three periods can be distinguished concerning international migration movements in the OECD area. The first period is one of increasing temporary labour migration (“guest worker” migration). It ended in 1974 with the oil crisis, and opened on to 15 years of relative stability of migration flows. And between the fall of the Iron Curtain and the 2008 crisis, immigration flows to the OECD grew very rapidly, partly due to the development of free circulation in Europe. Overall, net migration to the OECD area in the 1990s was more than twice what it was during the previous decade. This has in turn drawn more attention to issues related to international migration, and this interest has never ceased to grow since then, as flows went global and high. But by the turn of the millennium, policy makers were lacking comparable international data to take informed measures and to build evidence-based migration policies.

## **II. Measuring migrant populations and their characteristics**

2. OECD is contributing to filling gaps in several ways. The Database on Immigrants in OECD Countries (DIOC) is one of the projects the OECD International Migration Division has undertaken in this view, with the help of the OECD Statistics Directorate.

3. With the 2000 round of population censuses, virtually all OECD countries have incorporated in their census a question on the country of birth of persons enumerated, as well as on their nationality. With this information, it was possible to provide, for the first time, a detailed, comparable and reliable picture of immigrant populations in OECD countries, reflecting the cumulative effect of movements within and to the OECD area over the past decades. And with additional information on the educational attainment of migrants, the cumulative impact of flows of human capital could be depicted and, in particular, the conventional wisdom on the brain drain confronted with actual data.

### **A. The database on immigrants**

4. The first edition of the Database on Immigrants in OECD Countries (DIOC) capitalised on this new source of information, supplemented if necessary by population registers and labour force surveys, to provide comprehensive and comparative information on a broad range of demographic and labour market characteristics of immigrants living in OECD countries. The database was compiled in collaboration with OECD national statistical offices.

5. DIOC includes information on demographic characteristics (age and gender), duration of stay, labour market outcomes (labour market status, occupations, sectors of activity), educational attainment and the place of birth. It provides the possibility of comparing immigrants both across OECD countries and with their respective native-born populations (in a large number of countries), thus shedding light on the differences and similarities between these groups. With parallel information on demographic and social variables on persons in origin countries who did not migrate, one can compare the situation of migrants with that of non-migrants on a broad range of characteristics, including educational attainment and labour market outcomes, thus improving our understanding of the migration-development nexus. It can also be used to address policy-related questions

related to the brain drain, the gender aspect of migration, health professionals' mobility or the role of low-skilled foreign-born workers in the service sector.

6. An update of DIOC based on 2005/06 data was produced in 2011. Given the smaller number of countries which held a mid-decade census, labour force surveys were more widely used for this edition.

7. OECD and the World Bank also joined their efforts in a project aimed at extending the coverage of the Database to non-OECD destination countries (DIOC-E or DIOC extended). This data collection made it possible to calculate emigration rates by skill level for more than 180 countries, and covered about three quarters of the migrants worldwide.

8. In the first quarter of 2014, the third edition of the Database will be released. Based on the 2010-11 round of population censuses, it allows measuring the main changes in size, composition and characteristics of migrant populations and provides new estimates for emigration rates by skill level for over 180 countries of origin worldwide. This edition also contains new information on international migration of teaching and health personnel and field of study. An updated version of this Database will be released at the end of 2014 and will include a number of non-OECD destination countries. This work is conducted in cooperation with the World Bank and the International Migration Institute at the University of Oxford.

## **B. Statistical challenges and limitations**

9. While developing this database, a number of statistical issues have emerged.

10. First, many countries do not release information on small groups (cells that are below a certain size). The objective of this database is to provide a complete profile of emigrant populations, including for small countries. Hence considerations of this kind are important ones. In such cases, to address countries' concerns about confidentiality, the technique of random rounding has been used. In addition, imputation of some data has been necessary in the cases of countries which have not been able/ allowed to provide detailed information for all countries of origin.

11. Second, a major challenge is related to differences in the classifications used across countries. This is the case with classifications used to measure the educational attainment, where matching problems were mostly observed in the first edition of the database. These issues have been tackled by proactive work with the countries statistical offices at the earliest stages of the production.

12. Similar difficulties appeared around classifications by occupation. For example, the classifications used in the United States and in Mexico cannot be matched with the international classification, used by other OECD countries. In addition, information is not available at the same level of detail in all countries. Some countries do not provide 2-digit detail, but only 1-digit, which limits the scope of potential analyses. The database addresses this issue, by including various variables on occupation based on the different national classifications or aggregation levels.

13. An additional challenge concerns the variables provided by the different countries. For example, not all countries have been able to provide information on the years of residence or the field of study, or some countries were only able to provide aggregate information on these variables.

14. Finally, concerning the sources, the main issue is that census data is not available for all countries, in which case labour force surveys (LFS) are used instead. LFS have smaller sample sizes and do not allow detailed disaggregation especially in terms of occupation,

educational attainment and years of residence (also field of study?). This is particularly an issue in the 2005-06 update of the Database which is largely based on LFS data.

### **C. First results of the database on immigrants**

15. The first global results drawn from the database for 2010-11 give a quantitative measure of the extent to which the economic crisis has affected migrant populations and population movements. Please note that the Database is currently being finalised so the results presented here may differ slightly from those which will be published in March. However, the global picture should remain quite similar.

16. In 2010-11, about 100 million persons aged 15 years old and over were living outside their country of birth in the OECD. This represented a 36% increase from its 2000-01 level and a 9% increase in comparison with 2005-06. The slower growth of migrant stock in the OECD area in the second half of the decade reflects the decline in migration flows due to the economic crisis affecting many developed economies from 2007-08 as well as a higher return migration. Women represent 52% of the immigrant population, up from 51% in 2000-01.

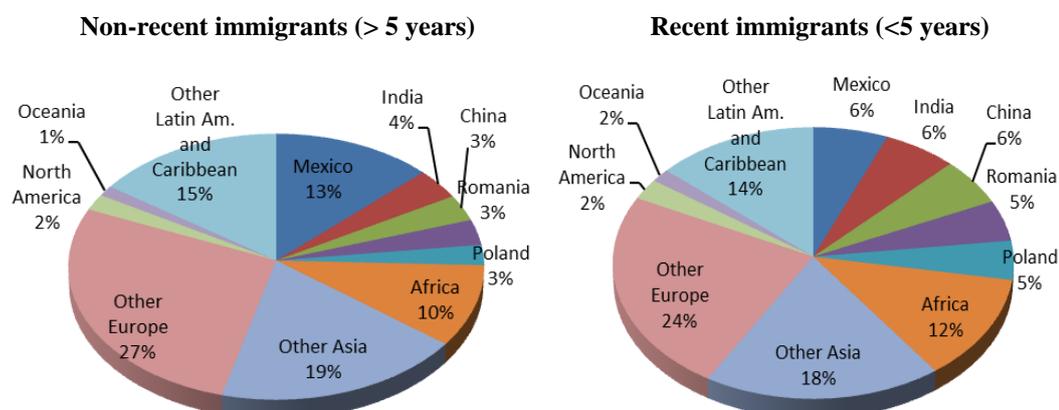
17. Europe is still the main region of origin of migrants in OECD countries in 2010-11, but despite the EU enlargement waves of the decade, its share declined from 35% to 33% over the period. Asia is the second region of origin with 27%, up 2 percentage points since 2000-01, closely followed by Latin America and the Caribbean, stable at 26%. Africa is the other region having seen its share increasing: 11% against 9% ten years earlier, which represents a 53% growth of the African-born population aged 15 and above living in OECD countries.

18. Mexico remains the main country of origin with over 11 million emigrants living in OECD countries in 2010-11. China takes the second place with 3.8 million emigrants, moving up two ranks compared to 2000-01 and India jumps from ninth to fourth place (3.4 million).

19. The number of highly educated immigrants in OECD countries rose sharply in the past decade, from 16 million in 2000-01 to 28 million in 2010-11, representing 29% of the total.

20. Examining the migrants' duration of stay allows to better understand how the composition and characteristics of migrants changed with the economic crisis. As can be seen in Figure 1, the recent immigrants, i.e. those arrived in the five years between 2005/06 and 2010-11, are substantially different from the non-recent ones (those who were already in the host country in 2005) in terms of distribution by country or region of origin.

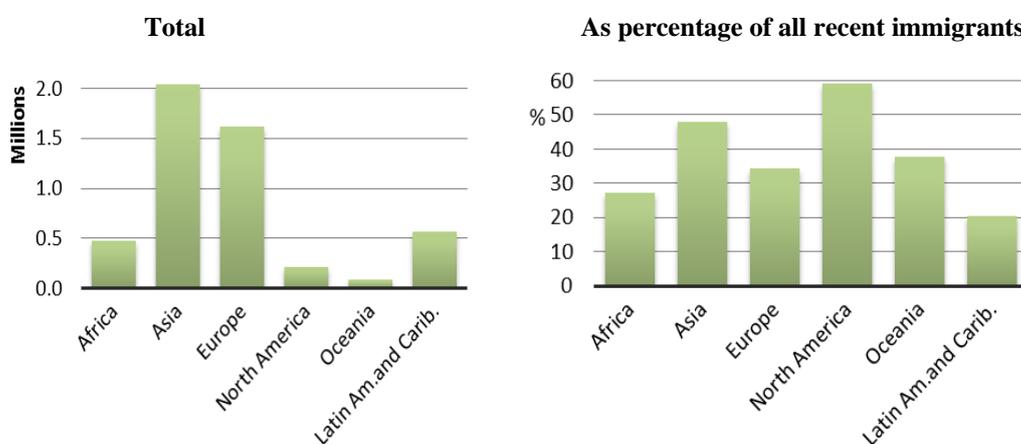
Figure 1.

**Distribution of immigrants by duration of residence and by place of birth, 2010-11**

Source: OECD Database on Immigrants in OECD Countries (DIOC) 2010-11

21. If the main country of birth of recent immigrants in OECD countries is Mexico, the share of Mexican-born among recent immigrants is only half what it is among the non-recent immigrants. By contrast, the share of immigrants born in India, China, Romania or Poland is almost twice higher among the recent immigrants than among the non-recent. One in eight recent immigrants was born in Africa, against only one in ten of the non-recent immigrants. By contrast, the share of recent immigrants born in the rest of Europe (other than Romania and Poland) is three percentage points below what it is among the non-recent ones.

Figure 2.

**Highly educated recent immigrants to OECD by region of birth, 2010-11**

Source: OECD Database on Immigrants in OECD Countries (DIOC) 2010-11

22. In 2010-11, five million tertiary educated persons had migrated to the OECD area in the five preceding years. Two million of these recent highly skilled migrants were born in Asia, accounting for almost half of all recent migrants from Asia. 1.6 million were born in Europe, around 600 000 in Latin America and the Caribbean, and half a million in Africa.

23. Unsurprisingly, migrants have been severely affected by the economic crisis. Their global unemployment rate was 9.6% in 2000-01 and remained unchanged in 2005/06 but was 2 percentage points higher five years later. Migrants originating from Africa were hit

hardest, as their already high unemployment rate went from 15% in 2005/06 to almost 20% in 2010-11. This increase in unemployment is explained by the presence of African migrants (especially men) in OECD countries (the United States, Spain, Italy, etc.) and sectors heavily hit by the crisis (construction and manufacturing).

24. Emigration rates to the OECD area are higher than ever before, notably for Latin America and the Caribbean. Indeed, almost 6% of all persons born in this region were living in OECD countries in 2010-11. Small countries are also particularly exposed to “brain drain”. The share of highly educated persons born in a country and living in the OECD area is notably high in a number of Caribbean countries. As a region, Africa is the most concerned with one in every nine tertiary educated persons born in Africa residing in an OECD country. Corresponding figures for Latin America and the Caribbean, Europe and Asia were one in 13, one in 20 and one in 30, respectively.

25. “Brain drain” is more acute for women than for men. To illustrate, in more than six out of ten countries of origin, the share of tertiary educated women who were living outside their country of birth was higher than for men. In a number of countries, mainly in Africa, the difference even reached 10%.

26. If the highest emigration rates to OECD countries are recorded for small countries and island states in the Pacific or the Caribbean, the largest increases in emigration rates since 2000-01 are observed in European countries in the Balkans or the Baltic States.

#### **D. A unique tool**

27. This Database has proven a unique tool in analysing the size and characteristics of emigrant populations by country of origin. The addition of the 2010/11 data allows for an analysis over a decade but also includes a number of improvements and developments, such as the extension of the fields covered (e.g. emigration of education professionals). This work will continue with a view to further improve the quality and the relevance of the database for analytical and policy purposes.

### **III. Measuring international mobility**

#### **A. Standardised statistics on international migration**

28. At the end of the 90s, the growing migration flows to OECD countries and the diversification of destination countries urged for in-depth reflexions on migration flow definitions and international comparability. At this time, official data did not generally include information on the nature of the migration flows, that is, whether they are for work, family, humanitarian or other reasons. Empirical results have shown that integration outcomes vary widely by migration category although most long-term immigrants can enter the labour market once they have been admitted into the receiving country. The migration category is a matter of interest for policy since some categories are not subject to full discretion regarding admission by host country authorities. Cross-country differences in the distribution of migration by category in part explain differences in immigrants’ economic and social outcomes across countries (OECD, 2012). In addition, many of the standard national sources tended to include some short-term movements along with long-term flows and distinguishing between these two is also of interest.

29. Building on the major methodological work published by the United Nations (United Nations 1998) and OECD (Lemaître 2005), OECD started to publish standardised statistics for most OECD countries (for an overview, see Fron et al, 2007). Three objectives

have guided most of the choices made with respect to the publication of these standardised long-term migration flow data. They are: a) international comparability; b) the need for statistics on long-term migration; and c) disaggregating data by category of migration. These three objectives together have determined the choice of residence permit data as the main data source used.

30. Permanent migrants are defined here as persons who have been granted the right of permanent residence upon entry or persons admitted with a permit of limited duration but more or less indefinitely renewable, plus entering persons with the right of free movement who are expected to stay (i.e. excluding short-term movements and students). Note that this includes status changes, i.e. persons who were first admitted on a what would be considered a temporary category and who afterwards changed category, as could be the case of asylum seekers who have seen their request accepted and received a permanent residence permit or international students who take up employment or marry a resident in the host country..

31. Another limitation of data based on residence permits is that a permit may be granted but not actually used, which may lead to some overestimation. On the other hand, it is possible that an immigrant may be granted more than one permit, for example a person entering for family reunification may also receive a work permit allowing him or her to work part-time and such double-counting cannot always be excluded. Also, the date when the permit was delivered may not correspond to the date of actual entry in the country.

32. In the first years of existence of this dataset, flows of migration within free circulation areas were reallocated to categories such as work or family according to their labour market status, but it has proven uncertain to accurately estimate this distribution. These movements are now presented separately from regulated movements. The category of work-related migration is now restricted solely to the discretionary worker migration.

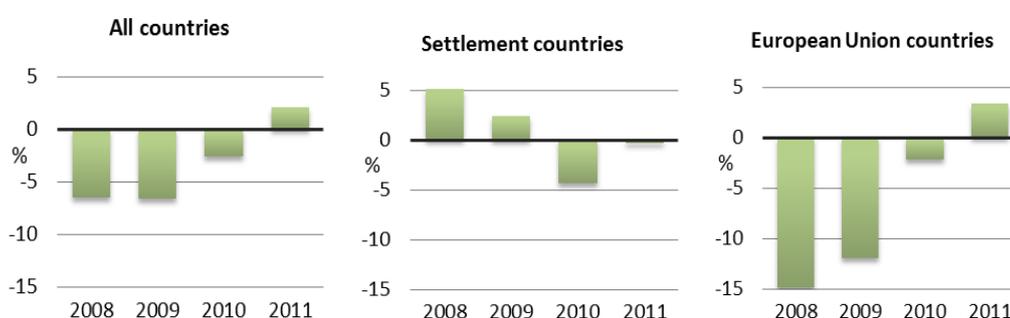
## B. Major trends during the economic crisis

33. In the first years of the crisis, flows of permanent migration to the OECD have dropped significantly, by 7%, both in 2008 and in 2009 (Figure 3). European Union countries experienced a severe decline in flows, but this probably has to be weighted by the fact that flows to some European countries had increased very sharply prior to the crisis. Permanent flows to settlement countries have been much more stable over the crisis period, displaying variations comprised between +5% and -4%.

Figure 3.

### Inflows of permanent immigrants into selected OECD countries, 2008-2011

Percentage change over previous year

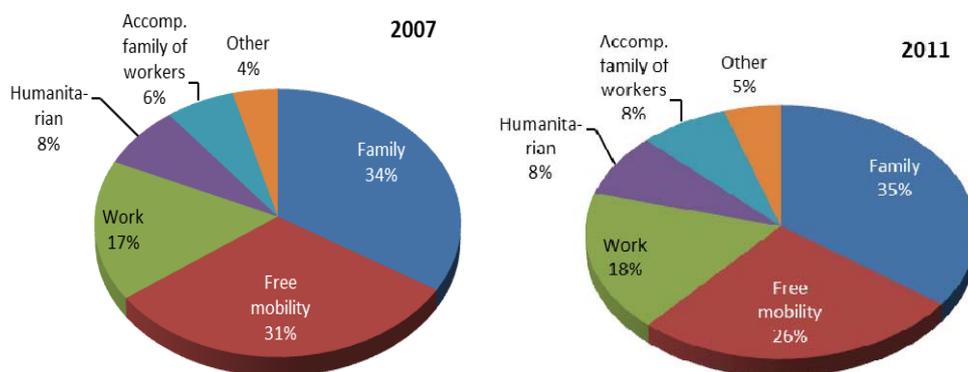


Note: All countries: 23 OECD countries covering 95% of migration flows to the OECD. European Union countries for which standardised statistics are available. Settlement countries: Australia, Canada, New Zealand and United States.

Source: OECD International Migration Outlook 2013 – Standardised statistics.

34. Overall, the composition of the permanent flows to OECD countries reveals that the most frequent reason for migration is inked with family (Figure 4). In 2007 and in 2011, more than a third of the movements concerned family migration. Migration within zones of free circulation is in fact the only category which has seen its share declining during the economic crisis.

Figure 4.  
Permanent immigration in OECD countries by category of entry, standardised statistics

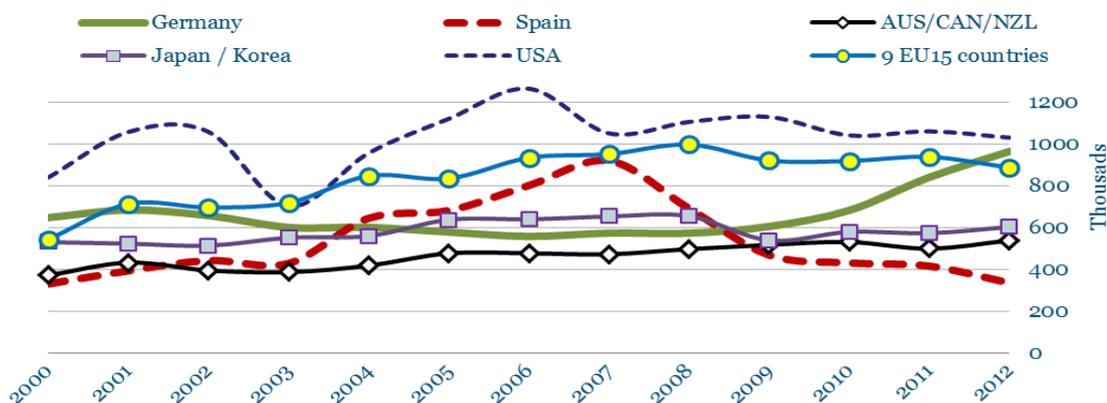


Source: OECD International Migration Outlook 2013 – Standardised statistics.

### C. On-going developments

35. As can be seen in Figure 5, the magnitude of migration flows to OECD countries increased again significantly during the 2000s and particularly since 2003. Even if a declining trend has been observed since the 2007 peak, flow levels remain higher than they stood in 2000. Policy makers’ interest has developed accordingly, and so has the demand for more up-to-date and detailed statistics.

Figure 5.  
Inflows to OECD countries by destination, 2000-2012



36. OECD has launched a project aiming at developing further the standardised statistics on permanent flows. First objective is to improve the timeliness of the data currently published. Another objective is to extend the coverage to all OECD countries as a number of countries are still not covered – although the countries included account for 95% of the inflows to OECD. A third objective is to include new breakdowns, notably by nationality and gender.

37. For this purpose a questionnaire on data availability has been sent to the members of the OECD Expert Group of Migration in order to examine the feasibility of such developments. The results of this questionnaire allowed to carry on with the project as for example data by nationality are generally available, so are data by gender, and also, infra-annual data are available in two-thirds of the countries.

Table 1.

**Inflows to OECD countries, 2011-2013, partial data**

Country	2011	2012	2013	% change 2011-12	% change 2012-13	Period covered	Months
Australia	210 700	242 400	254 700	15	5	Jul-Jun	12
Canada	117 300	128 600	133 700	10	4	Jan-Jun	6
Denmark	48 200	52 900	55 500	10	5	Jan-Oct	10
Finland	23 700	21 300	21 400	-10	0	Jan-Nov	11
Germany	381 000	447 000	501 000	17	12	Jan-Jun	6
Ireland	33 700	32 100	40 200	-5	25	May-Apr	12
Netherlands	59 600	57 500	57 800	-4	1	Jan-Oct	9
New Zealand	40 700	40 400	39 000	-1	-3	Jul-Jun	12
Norway	15 900	16 600	16 600	4	0	Jan-Jun	6
Sweden	93 100	111 100	116 600	19	5	Jan-Nov	11
Switzerland	138 600	146 100	151 500	5	4	Sep-Aug	12
<b>Total*</b>	<b>1 162 500</b>	<b>1 296 000</b>	<b>1 388 000</b>	<b>11</b>	<b>7</b>		

Source: National sources.

38. As already mentioned, timeliness is a key objective, and in order to provide as timely as possible data and information, infra-annual data are necessary. Table 1 is an example of what OECD provided to a high-level meeting at the end of last year. This table shows a comparison of the available 2013 data on migration flows with the data for the corresponding period of the previous year. This type of information is relevant in terms of policy making, as it gives an idea of the variation. It is interesting to note that in 2012, seven of the eleven countries show a positive variation on 2011, and that for all countries but one, there is an increasing trend in 2013. However, currently, these figures available are not comparable between countries. So OECD aims at improving the timeliness while keeping the comparability of the statistics on permanent flows.

39. OECD is also about to launch a wide reflexion on the measurement of temporary workers through its OECD Expert Group on Migration. The objectives are to better capture the reality of temporary migration, in particular to deal with the status changes, and to examine which categories are growing in importance in migration policies and should be subject to heightened attention.

## IV. Other topics

40. OECD is also working on several issues such as return migration, which is looked at carefully, especially in times of crisis, although it is difficult to adequately assess the magnitude of the phenomenon. The same goes for irregular migration and illegal movements, which are regularly dealt with in OECD publications and meetings.

41. A topic of high importance for a number of OECD member countries and members of the OECD Expert Group on Migration is the emigration of nationals, especially, within free circulation areas. Capturing emigration and emigrant populations' profiles can help to define policies to better mobilise the Diasporas and reduce the possible negative impact of high emigration rates, especially those of the highly-skilled.

42. Attracting and retaining skilled migrants and in particular students is a goal shared by many OECD countries. OECD has provided estimations of "stay rates" for international students. The stay rate is estimated as the ratio of the number of persons who have changed status (whether for work, family or other reasons) to the number of students who have not renewed their permits. However, this measure is not without limitations. Because the change-of-status statistics are based on permit data, they do not include citizens of the European Economic Area (EEA) for European countries, who do not need a student permit to study in another country of EEA.

## V. Conclusion

43. As international migration is increasingly shaping the societies of OECD countries, obtaining better and more comparable information on migration flows and the characteristics of immigrant and expatriate populations is an increasingly important challenge. It is both a prerequisite for better informed policy making as well as for a balanced public debate in this domain.

44. Significant progress has been made in this respect over the past decade by OECD and its partners, through the Database on Immigrants in OECD countries (DIOC) and through the standardisation of migration statistics by migration category. At the same time, there remain a number of important gaps in the statistical infrastructure in terms of measuring migrant populations and international mobility that need to be addressed. These include the emigration of nationals and mobility within free circulation areas, which are among the most difficult flows to measure; the issue of return migration and the retention of skilled migrants and, finally, the evolution of irregular flows.

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