

DIOC-E 2000 (RELEASE 3.0)

METHODOLOGY

The global bilateral migration database DIOC-E 2000 is the extension of the “Database on Immigrants in OECD Countries” (DIOC 2000) to non-OECD receiving countries. This methodological note offers detailed information on the coverage and sources of DIOC-E as well as the classifications used for the different variables.

As shown in **Table 1**, DIOC-E contains four separate files, each covering a specific theme: age, labour force status, occupation and emigration rates. The first three files contain four core variables: the country of residence, the country of birth, sex and educational attainment, which makes it possible to generate a great variety of cross-tabulations on the population characteristics by country of residence and country of birth. DIOC-E covers all individuals aged 15 and over.

Table 1: Thematic files DIOC-E 2000

File reference	1	2	3	4
Main theme	Age	Labour force status	Occupation	Emigration rates
Variables included	- Country of residence - Country of birth - Education - Sex - Age	- Country of residence - Country of birth - Education - Sex - Labour force status	- Country of residence - Country of birth - Education - Sex - Occupation	- Country of birth - Education - Sex
Reference	All 15+	All 15+	15+ employed	All 15+

1. Coverage

DIOC-E (release 3.0) contains information on demographic and labour market characteristics of the population of 32 OECD member countries and 68 non-members around the year 2000 by detailed country of birth. The OECD countries included are Australia, Austria, Belgium, Canada, Chile, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Israel, Italy, Japan, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States.

The non-members are Argentina, Armenia, Belarus, Belize, Benin, Bolivia, Brazil, Bulgaria, Burkina Faso, Cambodia, Cameroon, Colombia, Comoros, Costa Rica, Croatia, Cuba, Dominican Republic, Ecuador, El Salvador, Gambia, Ghana, Georgia, Guatemala, Guinea, Honduras, Hong Kong - China, India, Indonesia, Iraq, Ivory Coast, Jamaica, Jordan, Kenya, Kyrgyz Republic, Laos, Latvia, Lithuania, Macao - China, Malawi, Malaysia, Mali, Mauritius, Mongolia, Nepal, Nicaragua, Niger, Panama, Paraguay, Peru, Philippines, Puerto Rico, Romania, Russia, Rwanda, Senegal, Serbia, Seychelles, Sierra Leone, Singapore, South Africa, Sri Lanka, Tanzania, Thailand, Trinidad and Tobago, Uganda, Ukraine, Uruguay and Venezuela.

► Special cases

- **France:** Data for France only refer to metropolitan France.

2. Sources

The sources for DIOC-E are mainly census data from the 2000 round. Census data were used for 89 countries. Countries not conducting periodic censuses, but keeping population registers have provided data extracted from these registers; this is the case for Denmark, Finland, Norway and Sweden. For Germany, Israel and the Netherlands data is based on labour force surveys, and for Cameroon, Ghana and the Ivory Coast from household surveys.

Some of the countries that provided census or register data have applied a random rounding procedure intended to prevent the disclosure of individual information. This procedure consists in randomly rounding each data cell to the closest upper or lower multiple of 3 or 5. Any figure extracted from the database reflects this procedure and the population totals or subtotals may therefore vary slightly from one table to the other.

Regarding the countries that provided data based on national labour force surveys, several surveys over the years 1998-2002 have been stacked and the figures have been averaged over this period, to improve the reliability of the population estimates from the labour force surveys. The significance thresholds for individual surveys were adapted to reflect the increased sample size resulting from this operation, taking into account the overlap between two successive surveys. Due to confidentiality issues no cell with a population below these calculated thresholds can be published. Therefore, these cells were aggregated to the continental level instead of the country level.

For most of the countries the data were directly provided by the national statistic offices (NSO), for others public databases were used to access the data (IPUMS¹ for 20 countries, REDATAM² for 12 countries, and the websites of the national statistic offices from Ecuador (INEC) and Peru (INE)). Data of some African countries (Benin, Burkina Faso, Comoros, Mali, Niger and Senegal) data were collected in co-operation with Afristat.

The exact national source and reference period for each file is given in **Table A.1**.

► Special cases

- **India:** The data for India are based on the Census 2001, but the educational and age structure was derived from the National Sample Survey (NSS).
- **Israel:** The data are derived from the Israeli labour force survey 2001, since census data are only available for 1995.
- **Netherlands:** Since data on education are not available from the population register, labour force survey data were used for all files.
- **Germany:** The main data source is the German Microcensus.

¹ <http://www.ipums.org/>

² <http://celade.cepal.org/cgi-bin/RpWebEngine.exe/PortalAction?>

3. Variables and classifications

Country of birth (coub)

The variable country of birth identifies the specific country where people were born to describe the immigrant population by detailed country of origin. When coding the country of birth, the objective was to minimize residual categories (i.e. “other”). An attempt was made to preserve the maximum information available while distinguishing between continental/regional residual categories whenever this was possible (i.e. “other Africa”, “other Europe”, “other Asia”, “other South and Central America and Caribbean”, “other Oceania”, “other North America”).

With regard to split, recomposed or newly constituted countries, there was little choice but to respect the coding in the national data collection, which varies from one country to another. In the United States, for example, people born in Korea have a choice of three ways to indicate their country of birth: Korea, North Korea or South Korea. More than 80% of them indicated they were born in Korea, without further specification. In the Japanese census data, it is not possible to identify in which part of the Korean peninsula a person was born; the place of birth of people born on the current territories of the Republic of Korea or the Democratic People’s Republic of Korea is therefore noted “Korea unspecified”. In the censuses of many OECD countries, the Czech Republic and the Slovak Republic are aggregated under the name of the former Czechoslovakia. The same applies to the former USSR and the former Yugoslavia.

To produce a consistent list of countries of birth across receiving countries, some minor adjustments had to be made, especially with respect to small islands and overseas territories. This recoding explains the small differences that might exist with national estimates for foreign-born and native-born populations. The following recodings were carried out:

Table 2: Small islands and overseas territories

Australia	Denmark	France	Norway	Portugal	United Kingdom	United States ¹
- Heard & McDonald Islands	- Faeroe Islands - Greenland	- French southern territories - French Guiana - French Polynesia - Guadeloupe - Guyane - Juan De Nova - Martinique - Mayotte - New Caledonia - Réunion - Saint Bathélemy - Saint Martin - Saint-Pierre-et-Miquelon - Tromelin Island - Wallis and Futuna Islands	- Svalbard and Jan Mayen Islands	- Madeira Islands - Azores Islands	- Channel Islands - Isle of Man - Isle of Sark - Guernsey - Jersey	- US minor islands and Territories - Outlying Areas - Christmas Island - Wake Island - Palmyra Atoll - Navassa Island - Midway Islands - Johnston Atoll - Howland Island - Baker Island

Note: ¹ In DIOC-E, persons born in Puerto Rico are considered as foreign-born in the United States.

Regarding imprecise or missing information on the place of birth, there are two coding possibilities. For foreign-born people whose country of birth is not known or is too imprecise to fall into one of the continental categories, the country of birth is coded as “other” (OTH). Since the definition of the category “other” is specific to each reporting country, the overall “Other” category does not have any particular meaning in terms of country or region of origin. For people whose birth status (native or foreign-born) is unknown, the country of birth is coded as “unknown” (UNK). As can be seen in **Table A.2**, for most countries, the share of the population for whom the place of birth is completely undetermined is very small. However, a few countries have a significant proportion of the population with an unknown place of birth (in particular

Australia, the Dominican Republic, Germany, New Zealand, Rwanda, the Slovak Republic and Switzerland). For the whole sample, the share of people with an unknown place of birth is less than 1%.

For some countries, data on the country of birth are not available; therefore, a migrant definition based on citizenship is used. Immigrants are assumed to be individuals holding the nationality of another country than their country of residence. This is the case of Armenia, Bulgaria, Comoros, Gambia, Ghana, Indonesia, Ivory Coast, Japan, Jordan, Lithuania, Senegal, Serbia, Singapore and Seychelles. This definition has some shortcomings, notably while there is an overlap between foreigners and the foreign-born, there is generally a difference between the two population figures. The overlap is due to two reasons. First, the foreign-born population can include nationals due to naturalizations and second, depending on the legislation in the receiving countries, native-born persons might hold a foreign nationality, e.g. children and grand-children of immigrants. However, this seems less to be the case for the eleven countries for which the immigrant definition is based on citizenship.

The detailed list of the countries and regions of birth represented in the database is provided in **Table A.3**.

► Special cases

- **Germany:** The basic source of data is the German Microcensus for the years 1998 to 2002, in which only the place of birth, but not the detailed country of birth is reported. Since foreign-born persons can be properly identified, the nationality of the foreign-born is assumed to be an acceptable proxy for their country of birth. However, in the German case there is a large number of foreign-born ethnic Germans (*Spätaussiedler*) who were automatically granted German nationality upon their arrival in the country. For these persons the country of origin would be unknown by using nationality as proxy leading to a vast undercount of people born in East European countries and in the former USSR. To overcome this issue the 2005 Microcensus is used to complement the data, since it records the former nationality of naturalised persons. Thus the Microcensus 2005 is used for the foreign-born population and the microcensuses 1998-2002 are used for the native-born population. Regarding the foreign-born, only persons who arrived before 2002 are included to make the data as comparable as possible. Since there is only one broad category for the country of nationality for the former USSR in the Microcensus 2005, the different countries of the former USSR were identified within this category according to their share in the Central Alien Register over the years 1992-2002.
- **Indonesia:** Nationality is only identified for 12 countries. The share of foreigners for whom the country of nationality is unknown is around 63%.
- **Jordan:** The variable nationality is only coded at a regional level (i.e. Jordan, Arab Asian countries, non-Arab Asian countries, western European countries, eastern European countries, American countries). Therefore, the maximum level of detail is region of birth. The percentage of foreign-born for which the country of birth remains unknown is high (46%).
- **Kenya:** The variable country of birth was only surveyed for selected African countries: Ethiopia, Somalia, Sudan, Tanzania, Uganda and “Other Africa”.
- **Malaysia:** The share of foreign-born for whom the country of birth is unknown is around 24%.
- **Mongolia:** Only five countries of birth are identified in the census. The share of foreign-born for whom the country of birth is unknown is around 21%.
- **Philippines:** The share of foreign-born for whom the country of birth is unknown is around 50%.
- **Singapore:** The original data of country of birth included the following categories: “Malaysia”, “Indonesia”, “China, Hong Kong and Chinese Taipei”, “South Asia” (including India, Pakistan, Bangladesh and Sri Lanka), “Other Asian Countries”, “European Countries”, “USA and Canada” and “Others”. “India” could be identified from the category “South Asia”, based on information from the United Nations Global Migration Database version 0.3.6 by applying the number of

Indian-born by sex and age, whereas the educational attainment structure remained unchanged. The other countries of the “South Asia” category, Pakistan, Bangladesh and Sri Lanka, were classified with “Other Asian countries” into one category “Asia”. The category “China, Hong Kong and Chinese Taipei” is coded as China.

Education (edu_ifs)

The education variable identifies the highest level of education completed. The different educational attainment levels correspond to the International Standard Classification of Education (ISCED; cf. UNESCO 1997³) and were aggregated to three broad categories:

- **Basic education - ISCED 0/1/2:** This category includes persons who completed pre-primary programs (ISCED 0), the initial stage of organized instruction; primary (ISCED 1), the stage that gives to the students the basis of reading, writing and mathematics, and lower secondary (ISCED 2), the phase designed to complete the provision of basic education that starts in level 1.
- **Secondary education - ISCED 3/4:** This category comprises persons who completed upper secondary education (ISCED 3), the level that generally begins at the end of the full-time compulsory education, and post-secondary but non-tertiary education (ISCED 4).
- **Tertiary education - ISCED 5A/5B/6:** This category contains persons who completed the first (ISCED 5) and second (ISCED 6) stages of tertiary education. ISCED 6 programmes lead directly to an advanced research qualification, whereas ISCED 5 contains theoretically based, research preparatory or access to professions with high skills requirements programmes (ISCED 5A) and practical, technical, occupationally specific programmes (ISCED 5B).

58 countries provided their data already coded according to the ISCED classification. For 19 countries, including those in REDATAM, only unharmonized data from the national classifications were available, i.e. number of years, grades by levels, diplomas and degrees obtained as well as information on whether the level was completed or not. In these cases, a special effort was made to harmonize the national classifications and the international classification ISCED.

For the 23 countries in IPUMS a harmonized education variable was already available, which is based on a predefined criterion of years of education required for the corresponding completed level or degree. For example, a person is considered to have completed primary education if he/she has at least six years of primary schooling. Three years are necessary for lower secondary education, another three years for upper-secondary education, and at least four years for tertiary education.

The main advantage of this approach is that each category of the classification has the same meaning for all countries. However, it ignores the specificities of national educational systems, notably at the tertiary level. For example, the IPUMS definition classified all persons with non-university degrees as having only secondary education. Therefore, data from IPUMS were harmonized by the OECD Secretariat to obtain appropriate international comparable education mappings reflecting the specificities of national education systems⁴. The detailed mappings of the national definitions and the international classification ISCED 1997 are presented in the Excel document *education mappings*, which can be downloaded on the website.

³ See UNESCO, 2006, International Standard Classification of Education ISCED 1997

⁴ For the mapping of national classifications and the ISCED 1997 categories the following sources were used: the official UNESCO maps available for seven countries of our sample: Brazil, Colombia, Chile, Jordan, Malaysia, Panama and the Philippines (<http://www.uis.unesco.org>), the OECD/UNESCO “Education Trends in perspective 2005”, the project “Sistemas Educativos Nacionales” from the OEI (<http://www.oei.es/quipu/>), the IBE/UNESCO “World Data on Education database” (www.ibe.unesco.org) and information from the national ministries of education.

► Special cases

- **Mongolia:** For secondary and tertiary education it is not possible to identify whether education levels were completed or not.
- **Norway:** Illiterate people or people with no education are not classified in the ISCED 0 category, but coded “unknown”.
- **Peru:** There is no information to identify whether education levels were completed or not. The share of persons with tertiary education is particularly high (18%) to comparable countries. This may be due to the inclusion of post-secondary non-tertiary programs in this category, but as no information on the number of years is available this issue could not be solved.
- **Belarus, Cuba, Indonesia, Iraq, Malaysia, Romania and Slovenia:** There is no information to identify whether education levels were completed or not.

Age (age_lfs)

Age is recorded in three broad age categories in the database: 15-24, 25-64 and 65+.

► Special cases

- **India:** Age groups are 15-25 and 25+.
- **Singapore:** No information on age is available.
- **South Africa:** Age groups are 15-24, 25-64 and 65. Persons aged 66 and over are therefore missing for this country.
- **Sweden:** Since no information on educational attainment for persons older than 74 is available, the coverage is limited to people aged 16 to 74 years old in File 1, while it includes all people aged 15 and over in File 2 and people aged 16 and over in File 3.
- **Kyrgyz Republic, Spain and the United States:** Age groups are 16-24, 25-64 and 65+. Persons aged 15 are therefore missing for these three countries.

Labour force status (lfs_lfs)

The variable employment status indicates whether or not the person is part of the labour force over a reference period of time. The classification of labour force status in the database comprises three categories according to the ILO definition⁵:

- Employed.
- Unemployed.
- Inactive

The employed population includes paid workers, self-employed and unpaid workers engaged in the production of economic goods and persons who have a job, but were temporarily absent. The unemployed are persons who were out of work, currently available to work and actively seeking a job. The economically inactive population comprises all persons neither “employed” nor “unemployed”.

⁵ http://www.ilo.org/global/What_we_do/Statistics/topics/Employment/lang--en/index.htm

For most countries, for which the data was obtained via IPUMS, the provided harmonized variable of employment status was used. For the data from REDATAM, Ecuador, Peru and Thailand the labour force status variable was built using the ILO definition.

Data on this topic was not available for the following countries: Belarus, Gambia, Georgia, India, Jamaica, Philippines, Russia and Singapore. These countries are therefore not included in Files 2 and 3.

► Special cases

- **Kyrgyz Republic:** The reference population for labour force status is aged 16 and over. Individuals between 15 and 16 are included in the database, but in File 2 their labour status is coded as “unknown” (99).
- **South Africa:** The reference population for labour force status is aged 15 to 65. Individuals above 65 are included in the database but in File 2 their labour force status is coded as “unknown” (99).
- **Ukraine:** File 2 only includes employed and unemployed individuals. Data for inactive population are not available in the 2001 census.

Occupation only for employed persons (occupation)

Occupations are recorded in the database according to the International Standard Classification of Occupations (ISCO-88, cf. ILO 1990) at the major and sub-major group levels of ISCO-88 (two-digit levels, 28 categories of occupation). Most countries were able to provide this data. Some countries do not classify occupations using ISCO-88 but use national classifications instead. Most national classifications are close enough to ISCO-88 to allow a correct mapping at the two-digit level, but this is not always the case. In some cases, it is impossible to reconcile the national and international classifications, even at a one-digit level.

Data on occupation is not available for the following countries: Belarus, Belize, Benin, Burkina Faso, Colombia, Gambia, Georgia, India, Indonesia, Jamaica, Kenya, Laos, Mali, Philippines, Russia, Senegal, Singapore, Sri Lanka, and Trinidad and Tobago.

The list of occupation groups in ISCO-88 (one-digit and two-digit levels) is reproduced in **Table A.4**.

► Special cases

- **Argentina:** The occupations recoded for the National Statistical Institute (INDEC) show a more industrial and skills-based organization and do not map correctly to ISCO-88. The data in File 3 are therefore provided under the national classification (10 categories – see **Table A.5**).
- **Japan:** The available Japan Standard Classification of Occupations (JSOC) is too different from ISCO-88 and not detailed enough to allow the construction of a satisfying correspondence table between the two. In particular, the ISCO-88 major groups 2 (Professionals) and 3 (Technicians and associate professionals) cannot be identified in the Japanese classification, where they belong to a single category “Professional and technical workers”. The Japanese classification was therefore kept as is in the database (File 3). **Table A.6** provides the 10 categories of the JSOC that are available in the database.
- **Turkey:** The occupations were provided according to ISCO-68, which is not compatible with ISCO-88 at the two-digit level. The data in File 3 are therefore provided under ISCO-68 (see **Table A.7**).

- **United States:** The occupations were provided according to the Census Bureau Occupation codes, which do not map correctly to ISCO-88, even at the one-digit level. The data in File 3 are therefore provided under the Census Bureau classification (23 categories – see **Table A.8**).

4. Derivation of selected indicators

Emigration Rates

DIOC-E provides information on persons by country of birth for more than 200 countries of origin, which allows calculation of emigration rates by educational attainment for a large number of countries. The emigration rate of a given origin country i in a given year is defined as the share of the native population of country i residing abroad at this time:

$$m_i = M_i / (M_i + N_i)$$

where M_i is the emigrant population from country i living abroad, and N_i is the native non-migrant population of country i .

Most of the time, however, due to the lack of appropriate data, emigration rates are calculated without separating the native-born and foreign-born populations in origin countries, approximating the native non-migrant population by the total resident population of origin countries P_i , i.e. including immigrants. But with DIOC-E it is possible to distinguish foreign-born and native-born persons for many origin countries (those included as destination countries in DIOC-E).

Our final set of estimates comprises two versions of the emigration rates by skill level: one that includes immigrants in the native-born population of the countries of origin, i.e. uses the approximation with the total resident population ($m'_i = M_i / (M_i + P_i)$, labelled version 1), and one that makes the distinction between native residents and immigrants ($m_i = M_i / (M_i + N_i)$, labelled version 2), which is more accurate but only available for a subset of countries.

Table A.1 Variables included in the database and detailed sources by country of residence

Country of residence	Main source of data	File 1	File 2	File 3	Definition of variables	
					Foreign-born	Education
Argentina	REDATAM	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping
Armenia	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Australia	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Austria	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Belarus	Country	Census, 2002	-	-	Country of birth	Mapping
Belgium	Country	ESEG, 2001	ESEG, 2001	LFS, 1998-2002	Country of birth	ISCED levels
Belize	REDATAM	Census, 2000	Census, 2000	-	Country of birth	Mapping
Benin	Country	Census, 2002	Census, 2002	-	Country of birth	ISCED levels
Bolivia	IPUMS	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping
Brazil	IPUMS	Census, 2000	Census, 2000	Census, 2000	Country of birth	Mapping
Bulgaria	Country	Census, 2001	Census, 2001	-	Nationality	ISCED levels
Burkina Faso	Country	Census, 2006	Census, 2006	-	Country of birth	ISCED levels
Cambodia	IPUMS	Census, 1998	Census, 1998	Census, 1998	Country of birth	ISCED levels
Cameroon	DIAL	Household survey, 2005	Household survey, 2006	-	Country of birth	ISCED levels
Canada	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Chile	REDATAM	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Colombia	REDATAM	Census, 2005	Census, 2005	-	Country of birth	Mapping
Comoros	Country	Census, 2003	Census, 2003	Census, 2003	Nationality	ISCED levels
Costa Rica	REDATAM	Census, 2000	Census, 2000	Census, 2000	Country of birth	Mapping
Croatia	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Cuba	IPUMS	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Czech Republic	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Denmark	Country	Register, 2002	Register, 2002	Register, 2002	Country of birth	ISCED levels
Dominican Republic	REDATAM	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Ecuador	Public data-INEC	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping
El Salvador	REDATAM	Census, 2007	Census, 2007	Census, 2007	Country of birth	Mapping
Estonia	Country	Census, 2000	Census, 2000	Census, 2000	Country of birth	ISCED levels
Finland	Country	Register, 12/2000	Register, 12/2000	Register, 12/2000	Country of birth	ISCED levels
France	Country	Census, 1999	Census, 1999	Census, 1999	Country of birth	ISCED levels
Gambia	Country	Census, 2003	-	-	Nationality	ISCED levels
Georgia	Country	Census, 2002	-	-	Country of birth	ISCED levels
Germany	Country	LFS, 1998-2002, 2005	LFS, 1998-2002, 2005	LFS, 1998-2002, 2005	Nationality	ISCED levels
Ghana	DIAL	Household survey, 1998	Household survey, 1998	-	Nationality	ISCED levels
Greece	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Guatemala	Country	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Guinea	IPUMS	Census, 1996	Census, 1996	Census, 1996	Country of birth	Mapping
Honduras	REDATAM	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping
Hong Kong, China	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Hungary	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
India	World Bank	NSS/Census, 2000	-	-	Country of birth	ISCED levels
Indonesia	Country	Census, 2000	Census, 2000	-	Nationality	Mapping
Italy	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels

Notes: ESEG: Enquête socio-économique générale; LFS: Labour force survey; IPUMS: Integrated Public Use Microdata Series; REDATAM: Retrieval of DaTa for small Areas by Microcomputer, DIAL: Research Institute "Développement, institutions et mondialisation"

Table A.1 Variables included in the database and detailed sources by country of residence (cont.)

Country of residence	Main source of data	File 1	File 2	File 3	Definition of variables	
					Foreign -Born	Education
Iraq	IPUMS	Census, 1997	Census, 1997	Census, 1997	Country of birth	Mapping
Ireland	Country	Census, 2002	Census, 2002	Census, 2002	Country of birth	ISCED levels
Israel	Country	LFS, 2001	LFS, 2001	LFS, 2001	Country of birth	Mapping
Ivory Coast	DIAL	Household survey, 2002	Household survey, 2002	-	Nationality	ISCED levels
Jamaica	Country	Census, 2001	-	-	Country of birth	ISCED levels
Japan	Country	Census, 2000	Census, 2000	Census, 2000	Nationality	ISCED levels
Jordan	IPUMS	Census, 2004	Census, 2004	Census, 2004	Nationality	Mapping
Kenya	IPUMS	Census, 1999	Census, 1999	-	Country of birth	Mapping
Kyrgyz Republic	IPUMS	Census, 1999	Census, 1999	Census, 1999	Country of birth	Mapping
Laos	Country	Census, 1995	Census, 1995	Census, 1995	Country of birth	ISCED levels
Latvia	Country	Census, 2001	Census, 2001	Census, 2000	Country of birth	ISCED levels
Lithuania	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Luxembourg	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Macao, China	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Malawi	IPUMS	Census, 1998	Census, 1998	Census, 1998	Country of birth	ISCED levels
Malaysia	IPUMS	Census, 2000	Census, 2000	Census, 2000	Country of birth	Mapping
Mali	Country	Census, 1998	Census, 1998	-	Country of birth	ISCED levels
Mauritius	Country	Census, 2000	Census, 2000	Census, 2000	Country of birth	ISCED levels
Mexico	Country	Census, 2000	Census, 2000	Census, 2000	Country of birth	ISCED levels
Mongolia	IPUMS	Census, 2000	Census, 2000	Census, 2000	Country of birth	Mapping
Nepal	IPUMS	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping
Netherlands	Country	LFS, 1998-2002	LFS, 1998-2002	LFS, 1998-2002	Country of birth	ISCED levels
New Zealand	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Nicaragua	REDATAM	Census, 2005	Census, 2005	Census, 2005	Country of birth	Mapping
Niger	Country	Census, 2001	-	-	Country of birth	ISCED levels
Norway	Country	Registers, 12/2003	Registers, 12/2003	LFS, 1998-2002	Country of birth	ISCED levels
Panama	REDATAM	Census, 2000	Census, 2000	Census, 2000	Country of birth	Mapping
Paraguay	REDATAM	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Peru	Public data-INE	Census, 2007	Census, 2007	Census, 2007	Country of birth	Mapping
Philippines	IPUMS	Census, 2000	-	-	Country of birth	Mapping
Poland	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Portugal	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Puerto Rico	IPUMS	Census, 2000	Census, 2000	Census, 2000	Country of birth	Mapping
Romania	IPUMS	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Russian Federation	Country	Census, 2002	-	-	Country of birth	ISCED levels
Rwanda	IPUMS	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Senegal	Country	Census, 2002	Census, 2002	-	Nationality	ISCED levels
Serbia	Country	Census, 2001	Census, 2001	Census, 2001	Nationality	ISCED levels
Seychelles	Country	Census, 2000	Census, 2000	Census, 2000	Nationality	ISCED levels

Notes: ESEG: Enquête socio-économique générale; LFS: Labour force survey; IPUMS: Integrated Public Use Microdata Series; REDATAM: Retrieval of DaTa for small Areas by Microcomputer, DIAL: Research Institute "Développement, institutions et mondialisation".

Table A.1 Variables included in the database and detailed sources by country of residence (cont.)

Country of residence	Main source of data	File 1	File 2	File 3	Definition of variables	
					Foreign -Born	Education
Sierra Leone	IPUMS	Census, 2004	Census, 2004	Census, 2004	Country of birth	ISCED levels
Singapore	Public data-SINGSTAT	Census, 2000	-	-	Country of birth	Mapping
Slovak Republic	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Slovenia	Country	Census, 2002	Census, 2002	Census, 2002	Country of birth	ISCED levels
South Africa	IPUMS	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping
Spain	Country	Census, 2000	Census, 2000	Census, 2000	Country of birth	ISCED levels
Sri Lanka	Country	Census, 2001	Census, 2001	-	Country of birth	ISCED levels
Sweden	Country	Registers, 12/2003	Registers, 12/2003	Registers, 12/2003	Country of birth	ISCED levels
Switzerland	Country	Census, 2000	Census, 2000	Census, 2000	Country of birth	ISCED levels
Tanzania	IPUMS	Census, 2002	Census, 2002	Census, 2002	Country of birth	Mapping
Thailand	IPUMS	Census, 2000	Census, 2000	Census, 2000	Country of birth	Mapping
Trinidad and Tobago	REDATAM	Census, 2000	Census, 2000	-	Country of birth	Mapping
Turkey	Country	Census, 2000	Census, 2000	Census, 2000	Country of birth	ISCED levels
Uganda	IPUMS	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping
United Kingdom	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
United States	Country	Census, 2000	Census, 2000	Census, 2000	Country of birth	ISCED levels
Ukraine	Country	Census, 2001	Census, 2001	Census, 2001	Country of birth	ISCED levels
Uruguay	Country	Census, 1996	Census, 1996	Census, 1996	Country of birth	ISCED levels
Venezuela	IPUMS	Census, 2001	Census, 2001	Census, 2001	Country of birth	Mapping

Notes: ESEG: Enquête socio-économique générale; LFS: Labour force survey; IPUMS: Integrated Public Use Microdata Series; REDATAM: Retrieval of DaTa for small Areas by Microcomputer, DIAL: Research Institute "Développement, institutions et mondialisation".

Table A.2 Share of the population with unknown place of birth

Country	Unknown place of birth (%)	Country	Unknown place of birth (%)
Slovak Republic	9.4	Poland	1.7
Germany	7.7	Russia	1.2
Dominican Republic	6.3	Paraguay	1.1
Australia	5.0	Estonia	0.8
Switzerland	4.1	Lithuania	0.8
New Zealand	4.1	Benin	0.6
Rwanda	3.9	Iraq	0.6
Philippines	3.5	Croatia	0.6
Czech Republic	2.0	Denmark	0.5
Chile	1.9	Ukraine	0.4
Colombia	1.9	Total	0.6

Note: Only countries with percentages above 0.05% are reported.

Table A.3 List of countries and regions of birth represented in DIOC-E 2000

Regional groups		Individual countries (cont.)	
AFRI	Africa	DJI	Djibouti
ASIA	Asia	DMA	Dominica
EURO	Europe	DNK	Denmark
NOAM	North America	DOM	Dominican Republic
OCEA	Oceania	DZA	Algeria
SCAC	South and Central America and the Caribbean	ECU	Ecuador
		EGY	Egypt
Individual countries		ERI	Eritrea
ABW	Aruba	ESH	Western Sahara
AFG	Afghanistan	ESP	Spain
AGO	Angola	ETH	Ethiopia
AIA	Anguilla	FIN	Finland
ALB	Albania	FJI	Fiji
AND	Andorra	FLK	Falkland Islands
ANT	Netherlands Antilles	FRA	France
ARE	United Arab Emirates	FSM	Micronesia, Federated states of
ARG	Argentina	FYUG	Former Yugoslavia
ASM	American Samoa	FYUG	Kosovo
ATG	Antigua and Barbuda	FYUG-BIH	Bosnia-Herzegovina
AUS	Australia	FYUG-HRV	Croatia
AUT	Austria	FYUG-MKD	Macedonia
BDI	Burundi	FYUG-SVN	Slovenia
BEL	Belgium	FYUG-YUG	Serbia and Montenegro
BEN	Benin	GAB	Gabon
BFA	Burkina Faso	GBR	United Kingdom
BGD	Bangladesh	GHA	Ghana
BGR	Bulgaria	GIB	Gibraltar
BHR	Bahrain	GIN	Guinea
BHS	Bahamas	GMB	Gambia
BLZ	Belize	GNB	Guinea-Bissau
BMU	Bermuda	GNQ	Equatorial Guinea
BOL	Bolivia	GRC	Greece
BRA	Brazil	GRD	Grenada
BRB	Barbados	GTM	Guatemala
BRN	Brunei Darussalam	GUM	Guam
BTN	Bhutan	GUY	Guyana
BWA	Botswana	HKG	Hong Kong, China
CAF	Central African Republic	HND	Honduras
CAN	Canada	HTI	Haiti
CCK	Cocos (Keeling) Islands	HUN	Hungary
CHE	Switzerland	IDN	Indonesia
CHL	Chile	IND	India
CHN	China	IOT	British Indian Ocean Terr.
CIV	Côte d'Ivoire	IRL	Ireland
CMR	Cameroon	IRN	Iran
COD	Congo, Dem. Rep. Of	IRQ	Iraq
COG	Congo	ISL	Iceland
COK	Cook Islands	ISR	Israel
COL	Colombia	ITA	Italy
COM	Comoros	JAM	Jamaica
CPV	Cape Verde	JOR	Jordan
CRI	Costa Rica	JPN	Japan
CSFR	Former Czechoslovakia	KEN	Kenya
CSFR-CZE	Czech Republic	KHM	Cambodia
CSFR-SVK	Slovak Republic	KIR	Kiribati
CUB	Cuba	KNA	Saint Kitts and Nevis
CYM	Cayman Islands	KOREA-NO	North Korea
CYP	Cyprus	KOREA-NS	North and South Korea
DEU	Germany	KOREA-SO	South Korea

Table A.3 List of countries and regions of birth represented in DIOC-E 2000 (cont.)

Individual countries (cont.)		Individual countries (cont.)	
KWT	Kuwait	SHN	Saint Helena
LAO	Laos	SLB	Solomon Islands
LBN	Lebanon	SLE	Sierra Leone
LBR	Liberia	SLV	El Salvador
LBY	Libya	SMR	San Marino
LCA	Saint Lucia	SOM	Somalia
LIE	Liechtenstein	STP	Sao Tome and Principe
LKA	Sri Lanka	SUR	Suriname
LSO	Lesotho	SWE	Sweden
LUX	Luxembourg	SWZ	Swaziland
MAC	Macao, China	SYC	Seychelles
MAR	Morocco	SYR	Syria
MCO	Monaco	TCA	Turks and Caicos Islands
MDG	Madagascar	TCD	Chad
MDV	Maldives	TGO	Togo
MEX	Mexico	THA	Thailand
MHL	Marshall Islands	TKL	Tokelau
MLI	Mali	TLS	Timor-Leste
MLT	Malta	TON	Tonga
MMR	Myanmar	TTO	Trinidad and Tobago
MNG	Mongolia	TUN	Tunisia
MNP	Northern Mariana Islands	TUR	Turkey
MOZ	Mozambique	TUV	Tuvalu
MRT	Mauritania	TWN	Chinese Taipei
MSR	Montserrat	TZA	United Rep. of Tanzania
MUS	Mauritius	UGA	Uganda
MWI	Malawi	URY	Uruguay
MYS	Malaysia	USA	United States
NAM	Namibia	USSR	Former USSR
NER	Niger	USSR-ARM	Armenia
NFK	Norfolk Islands	USSR-AZE	Azerbaijan
NGA	Nigeria	USSR-BLR	Belarus
NIC	Nicaragua	USSR-EST	Estonia
NIU	Niue	USSR-GEO	Georgia
NLD	Netherlands	USSR-KAZ	Kazakhstan
NOR	Norway	USSR-KGZ	Kirghizistan
NPL	Nepal	USSR-LTU	Lithuania
NRU	Nauru	USSR-LVA	Latvia
NZL	New Zealand	USSR-MDA	Moldova
OMN	Oman	USSR-RUS	Russia
PAK	Pakistan	USSR-TJK	Tadjikistan
PAN	Panama	USSR-TKM	Turkmenistan
PCN	Pitcairn	USSR-UKR	Ukraine
PER	Peru	USSR-UZB	Uzbekistan
PHL	Philippines	VAT	Holy See
PLW	Pacific Islands (Palau)	VCT	Saint Vincent and the Grenadines
PNG	Papua New Guinea	VEN	Venezuela
POL	Poland	VGB	British Virgin Islands
PRI	Puerto Rico	VNM	Vietnam
PRT	Portugal	VUT	Vanuatu
PRY	Paraguay	WSM	Samoa
PSE	Occupied Palestinian Territory	YEM	Yemen
QAT	Qatar	ZAF	South Africa
ROU	Romania	ZMB	Zambia
RWA	Rwanda	ZWE	Zimbabwe
SAU	Saudi Arabia	Other and unknown places of birth	
SDN	Sudan	OTH	Other
SEN	Senegal	UNK	Unknown
SGP	Singapore		

Table A.4 Standard classification of occupations (ISCO-88)

Description	Code
Armed forces	1
Legislators, senior officials and managers	10
Legislators and senior officials	11
Corporate managers 1	12
General managers 2	13
Professionals	20
Physical, mathematical and engineering science professionals	21
Life science and health professional	22
Teaching professionals	23
Other professionals	24
Technicians and associate professionals	30
Physical and engineering science associate professionals	31
Life science and health associate professionals	32
Teaching associate professionals	33
Other associate professionals	34
Clerks	40
Office clerks	41
Customer service clerks	42
Service workers and shop and market sales	50
Personal and protective services workers	51
Models, salespersons and demonstrators	52
Skilled agricultural and fishery workers	60
Market-oriented skilled agricultural and fishery workers	61
Subsistence agricultural and fishery workers	62
Crafts and related trades workers	70
Extraction and building trade workers	71
Metal, machinery and related trades workers	72
Precision, handicraft, printing and related trades workers	73
Other craft and related trades workers	74
Plant and machine operators and assemblers	80
Stationary plant and related operators	81
Machine operators and assemblers	82
Drivers and mobile plant operators	83
Elementary occupations	90
Sales and services elementary occupations	91
Agricultural, fishery and related labourers	92
Labourers in mining, construction, manufacturing and transport	93
Unknown	99

Table A.5 Categories of the Argentinean classification of occupations

Description	Code
Directives of the State powers	ARG_01
Directives of the State institutions and Social organizations	ARG_02
Directives and managers of big private enterprises	ARG_03
Directives and managers of small and medium private enterprises	ARG_04
Administrative, legal, accounting and financial	ARG_05
Marketing	ARG_06
Telecommunications	ARG_07
Transport and storage	ARG_08
Health and sanitation	ARG_09
Education	ARG_10
State and private security services and from the military forces	ARG_11
Scientific research	ARG_12
Other basic social services	ARG_13
Gastronomy and tourism	ARG_14
Household and non-domestic cleaning	ARG_15
Other miscellaneous services	ARG_16
Agricultural production	ARG_17
Fish production	ARG_18
Livestock production, apiculture, poultry, forestry and hunting	ARG_19
Extractive production	ARG_20
Energy , water and gas production	ARG_21
Construction and infrastructure	ARG_22
Industrial and handicraft production	ARG_23
Software production	ARG_24
Repair of consumer goods	ARG_25
Installation and maintenance of machinery, equipment and systems	ARG_26
Technological development	ARG_27

Table A.6 Categories of the Japan Standard Classification of Occupations

Description	Code
Agricultural, forestry and fisheries workers	JPN_1
Clerical and related workers	JPN_2
Managers and officials	JPN_3
Production process workers and labourers	JPN_4
Professional and technical workers	JPN_5
Protective service workers	JPN_6
Sales workers	JPN_7
Service workers	JPN_8
Workers in transport and communications	JPN_9
Workers not classifiable by occupation	JPN_10

Table A.7 Turkey Standard classification of occupations (ISCO-68)

Description	Code
Physical scientists and related technicians	TUR_01
Architects, engineers and related technicians	TUR_02_03
Aircraft and ships' officers	TUR_04
Life scientists and related technicians	TUR_05
Medical, dental, veterinary and related workers	TUR_06_07
Statisticians, mathematicians, systems analysts and related technicians	TUR_08
Economists	TUR_09
Accountants	TUR_11
Jurists	TUR_12
Teachers	TUR_13
Workers in religion	TUR_14
Authors, journalists and related writers	TUR_15
Sculptors, painters, photographers and related creative artists	TUR_16
Composers and performing artists	TUR_17
Athletes, sportsmen and related workers	TUR_18
Professional, technical and related workers not elsewhere classified	TUR_19
Legislative officials and government administrators	TUR_20
Managers	TUR_21
Clerical supervisors	TUR_30
Government executive officials	TUR_31
Stenographers, typists and card- and tape-punching machine operators	TUR_32
Bookkeepers, cashiers and related workers	TUR_33
Computing machine operators	TUR_34
Transport and communications supervisors	TUR_35
Transport conductors	TUR_36
Mail distribution clerks	TUR_37
Telephone and telegraph operators	TUR_38
Clerical related workers not elsewhere classified	TUR_39
Managers (wholesale and retail trade)	TUR_40
Working proprietors (wholesale and retail trade)	TUR_41
Sales supervisors and buyers	TUR_42
Technical salesmen, commercial travellers and manufacturers' agents	TUR_43
Insurance, real estate, securities and business services salesmen and auctioneers	TUR_44
Salesmen, shop assistants and related workers	TUR_45
Sales workers not elsewhere classified	TUR_49
Managers (catering and lodging services)	TUR_50
Working proprietors (catering and lodging services)	TUR_51
Housekeeping and related service supervisors	TUR_52
Cooks, waiters, bartenders and related workers	TUR_53
Maids and related housekeeping service workers not elsewhere classified	TUR_54
Building caretakers, charworkers, cleaners and related workers	TUR_55
Launderers, dry-cleaners and pressers	TUR_56
Hairdressers, barbers, beauticians and related workers	TUR_57
Protective service workers	TUR_58
Service workers not elsewhere classified	TUR_59
Farm managers and supervisors	TUR_60
Farmers	TUR_61
Agriculture and animal husbandry workers	TUR_62
Forestry workers	TUR_63
Fishermen, hunters and related workers	TUR_64
Production supervisors and general foremen	TUR_70
Miners, quarrymen, well drillers and related workers	TUR_71

Table A.7 Turkey Standard classification of occupations (ISCO-68) (cont.)

Description	Code
Metal processers	TUR_72
Wood preparation workers and paper makers	TUR_73
Chemical processers and related workers	TUR_74
Spinners, weavers, knitters, dyers and related workers	TUR_75
Tanners, fellmongers and pelt dressers	TUR_76
Food and beverage processers	TUR_77
Tobacco preparers and tobacco product makers	TUR_78
Tailors, dressmakers, sewers, upholsterers and related workers	TUR_79
Shoemakers and leather goods makers	TUR_80
Cabinetmakers and related woodworkers	TUR_81
Stone cutters and carvers	TUR_82
Blacksmiths, toolmakers and machine-tool operators	TUR_83
Machinery fitters, machine assemblers and precision instrument makers (except electrical)	TUR_84
Electrical fitters and related electrical and electronics workers	TUR_85
Broadcasting station and sound equipment operators and cinema projectionists	TUR_86
Plumbers, welders, sheet metal and structural metal preparers and erectors	TUR_87
Jewellery and precious metal workers	TUR_88
Glass formers, potters and related workers	TUR_89
Rubber and plastics product makers	TUR_90
Paper and paper board products makers	TUR_91
Printers and related workers	TUR_92
Painters	TUR_93
Production and related workers not elsewhere classified	TUR_94
Bricklayers, carpenters and other construction workers	TUR_95
Stationary engine and related equipment operators	TUR_96
Material-handling and related equipment operators, dockers and freight handlers	TUR_97
Transport equipment operators	TUR_98
Labourers not elsewhere classified	TUR_99

Table A.8 US Census Bureau Occupation codes

Description	Code
Management occupations	USA_1
Business and financial operations occupations	USA_2
Computer and mathematical science occupations	USA_3
Architecture and engineering occupations	USA_4
Life, physical, and social science occupations	USA_5
Community and social services occupations	USA_6
Legal occupations	USA_7
Education, training, and library occupations	USA_8
Arts, design, entertainment, sports, and media occupations	USA_9
Healthcare practitioner and technical occupations	USA_10
Healthcare support occupations	USA_11
Protective service occupations	USA_12
Food preparation and servicing related occupations	USA_13
Building and grounds cleaning and maintenance occupations	USA_14
Personal care and service occupations	USA_15
Sales and related occupations	USA_16
Office and administrative support occupations	USA_17
Farming, fishing, and forestry occupations	USA_18
Construction and extraction occupations	USA_19
Installation, maintenance, and repair occupations	USA_20
Production occupations	USA_21
Transportation and material moving occupations	USA_22
Military specific	USA_23