Emigration Rates and Brain Drain

As migration flows have grown rapidly in recent decades, policy-makers have been paying growing attention to issues related to international migration. Not only have migration policies and integration of immigrants become central topics in the political discussion in many countries but there is also a growing interest in the impact that migration has on countries of origin. With respect to European countries there are two important phenomena: the migration from eastern European countries to Western Europe and the migration of the highly-skilled from Western Europe to destinations outside the continent, mostly to the United States.

Tackling important migration-related questions has, however, been hindered by the lack of high quality data that would allow comparability of migration flows between different countries. The Database on Immigrants in OECD and non-OECD Countries (DIOC-E) is a significant effort to fill this gap. The database provides information on a range of demographic and labour market characteristics of the immigrants originating from 233 countries of origin and living in 100 different countries. The data is freely available on the OECD website.[1]

The database is an extension of the Database on Immigrants in OECD Countries (DIOC) that was compiled by OECD based on population censuses of OECD countries for the 2000 census round, and released in 2008. Since a significant share of international migration takes place between non-OECD countries, focusing only on OECD destination countries distorts the picture of worldwide migration and biases estimated impacts of emigration on origin countries. To extend the database to include immigrants in non-OECD destinations, the OECD launched a project that was carried out in collaboration with the World Bank and the Agence Française de Développement (AFD). The data was compiled using census data and population registers from the year 2000 as the main source. In addition, data on a handful of countries was based on labour force surveys and household surveys. The first release of the resulting new global bilateral international migration database DIOC-E was published in January 2010.

[1] www.oecd.org/migration/dioc/extended

The third and final release (release 3.0) of the database contains information on demographic and labour market characteristics of the populations of migrants aged 15 and over living in 32 OECD and 68 non-OECD destination countries. Migrants in the data are from 233 countries of origin. The demographic characteristics included are country of residence, country of birth, sex and age. The labour market characteristics are education and labour market status. The education variable identifies the level of the highest completed education corresponding to the International Standard Classification of Education (ISCED),[2] and education is aggregated in three categories: *basic, secondary and tertiary education. Labour force status is captured by the variable that comprises the employed, unemployed and inactive* according to the ILO definition.[3] Occupations are recorded at the major and sub-group levels of the International Standard Classification of Occupations (ISCO-88).

The database allows for the description and investigation of various important aspects of international migration. Since the data include information on the educational attainment of migrants, it is possible to distinguish between migration flows of different skill groups. It is also possible to calculate the emigration rates for different skill levels for around 162 countries.

The emigration rate of country i for a given year is defined as the share of the native population of the country living abroad that year:

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

where M_i is the emigrant population from country i living abroad, and N_i is the native non-migrant population of the country. The emigration rate for the tertiary educated is the share of the tertiary-educated native population that is living abroad. Studying emigration rates can be useful, for example, for shedding light on selectivity of migration and to form estimates of brain drain.

The emigration rates of the native and total populations for a selection of countries are presented in the Table. United States is included to provide information on the characteristics that are special for European emigration. For a majority of countries the emigration rate for the tertiary educated is higher than

[2] See UNESCO (2006), International Standard Classification of Education 1997.
[3] www.ilo.org/global/What_we_do/Statistics/topics/Employment/lang--en/index.htm

Table

Emigration rates by country of origin by education level

Country	Emigrant population in 1 000	Emigration rates for the total population (in %)				Emigration rates including only the non-migrant population (in %)			
		Total	Primary-educated	Secondary-educated	Tertiary-educated	Total	Primary-educated	Secondary-educated	Tertiary-educated
Austria	416.1	5.8	3.9	4.9	13.3	6.7	4.8	5.4	15.2
Belgium	369.1	4.2	3.0	4.6	5.6	4.7	3.5	5.1	6.3
Bulgaria	662	8.9	10.5	6.8	8.0	9.0	10.5	6.8	8.0
Croatia	870.2	18.9	19.6	17.3	20.1	21.5	22.5	19.6	23.1
Czech Republic	281.1	3.2	3.1	2.5	7.2	3.4	3.4	2.5	7.7
Denmark	167.1	3.7	2.1	3.4	6.0	4.0	2.2	3.6	6.5
Estonia	115.2	9.3	5.5	10.3	11.7	11.6	6.8	12.6	15.5
Finland	262.7	5.8	4.4	6.8	6.0	6.0	4.6	6.9	6.1
France	1208.6	2.4	1.6	2.1	4.5	2.7	1.8	2.2	5.1
Germany	3458.2	4.7	4.5	3.8	7.0	5.4	5.6	4.2	7.7
Greece	713.1	7.1	7.6	5.6	7.6	7.9	8.2	6.4	8.5
Hungary	391.8	4.4	2.6	4.4	10.6	4.6	2.6	4.5	11.2
Ireland	795.7	21.1	18.0	18.8	19.6	23.1	19.1	20.6	23.0
Italy	2724.4	5.2	4.9	4.7	7.1	5.4	5.1	4.9	7.5
Latvia	196.5	9.1	4.9	8.4	19.0	11.3	6.0	10.4	24.7
Lithuania	286	9.3	8.5	7.8	15.1	9.9	8.9	8.4	16.5
Netherlands	605.5	4.5	2.8	4.2	7.3	5.0	3.2	4.6	8.2
Norway	127.6	3.4	3.7	2.3	4.6	3.7	4.0	2.5	5.1
Portugal	1558.3	15.4	13.7	23.7	12.3	16.3	14.3	26.4	14.2
Romania	1147.6	6.0	4.1	6.3	12.1	6.0	4.1	6.3	12.3
Slovakia	366.2	7.8	10.8	5.9	9.5	8.0	11.1	6.0	9.9
Spain	1074.6	3.0	2.5	4.8	2.8	3.2	2.7	5.1	3.0
Sweden	206.1	2.8	1.9	2.0	4.4	3.2	2.3	2.3	5.1
Switzerland	444.4	6.9	7.8	5.5	8.7	9.0	11.7	6.5	12.2
United Kingdom	3508.8	6.8	3.6	8.9	10.0	7.5	3.9	9.6	11.5
United States	1230.8	0.5	0.5	0.4	0.8	0.6	0.6	0.4	1.0

Source: OECD (2011).

the total emigration rate. When United States is compared to European countries a notable feature is that the total emigration rate is significantly lower than for European countries. Further, although the emigration rate for the tertiary educated is higher than the total rate in the United States, the difference is not as pronounced as in many European countries. This notion suggests that European counties should be concerned of brain drain if the highly skilled emigrate because of higher earnings or better job opportunities.

The data also allows for a comparison of the labour market status of migrants and the native-born, which can be useful in studying integration outcomes for migrants. Emigrants in different destination countries can also be aggregated by country of origin. Distinguishing between foreign-born and native-born migrants makes it possible to investigate how migration patterns are related to earlier migrant background.

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Reference

OECD (2011), *The Database on Immigrants in OECD and non-OECD Countries (DIOC-E)*.