

Data Notes

The data on migration, remittances, and other socioeconomic variables presented in *Migration and Remittances Factbook 2011* (*Factbook 2011*) are the latest available as of October 1, 2010. The reader is advised to note the pitfalls of using the data on international migration and remittances, which are often missing, lagging, or lacking in cross-country comparability. Capturing data on irregular movements of migrants and remittances remains a big challenge.

Changes to Country Classification since the 2008 Edition of the *Factbook*

The aggregate data on migration and remittances for different regions and income groups have changed since the publication of *Migration and Remittances Factbook 2008* (*Factbook 2008*) because of changes in country classification (see table 1). These changes, in particular the reclassification of Poland as a high-income country, reduce the total remittances received by developing countries to US\$307 billion, reported in *Factbook 2011*, from US\$316 billion, reported by Ratha, Mohapatra, and Silwal (2010) in April 2010.

The World Bank country classifications (World Bank 2010a) include any territory with population greater than 30,000 for which authorities report separate social and economic statistics. One exception is Palau, which has a population of less than 30,000 but appears in the classifications because it is a World Bank member state. These territories include American Samoa; Aruba; Bermuda; Cayman Islands; Faeroe Islands; French Polynesia; Greenland; Guam; Hong Kong SAR, China; Isle of Man; Macao SAR, China; Mayotte; Netherlands Antilles; New Caledonia; Northern Mariana Islands; Puerto Rico; and Virgin Islands (U.S.). Residents of some of these entities have access to citizenship rights of other entities (e.g., Puerto Ricans are U.S. citizens). However, to maintain consistency with the World Bank's country classification, migrants between these entities are considered international migrants in *Factbook 2011*.

Table 1 Changes to World Bank Income Classification between 2008 and 2011

Country	Income group (July 2007)	Income group (July 2010)
Antigua and Barbuda	. .	Middle
Channel Islands	. .	High
Côte d'Ivoire	Low	Middle
Croatia	Middle	High
Equatorial Guinea	Middle	High
Gibraltar ^a	. .	High
Hungary	Middle	High
India	Low	Middle
Isle of Man	. .	High
Kosovo	. .	Middle
Latvia	Middle	High
Mongolia	Low	Middle
Montenegro	. .	Middle
Nigeria	Low	Middle
Northern Mariana Islands	. .	High
Oman	Middle	High
Pakistan	Low	Middle
Papua New Guinea	Low	Middle
Poland	Middle	High
São Tomé and Príncipe	Low	Middle
Senegal	Low	Middle
Serbia	. .	Middle
Serbia and Montenegro ^b	Middle	. .
Slovak Republic	Middle	High
Sudan	Low	Middle
Timor-Leste	Low	Middle
Turks and Caicos Islands ^a	. .	High
Tuvalu ^a	. .	Middle
Uzbekistan	Low	Middle
Vietnam	Low	Middle
Yemen, Rep.	Low	Middle

Source: World Bank country classifications (World Bank 2010a).

a. These countries were added to the World Bank's country classifications in July 2010 but are not included in *Migration and Remittances Factbook 2011* because very little data are available on them.

b. Serbia and Montenegro are now separate countries.

. . indicates that these countries were not included in the World Bank's country classification.

Data on Migration

According to the "Recommendations on Statistics of International Migration" by the United Nations Statistics Division (1998), *long-term migrants* are persons who move to a country other than that of their usual residence for a period of at least one year, so that the country of destination effectively becomes their new country of usual residence. *Short-term migrants* are persons who move to a country other than that of their usual residence for a period of at least three months but less than one year except in cases where the movement to that country is for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment, or religious pilgrimage (UN Statistics Division 1998).

The duration threshold that identifies migrants varies across countries (Lemaitre, Liebig, and Thoreau 2006). For example, under the United Nations

(UN) definition, international students who study in the receiving country for more than one year would be considered migrants. The *International Migration Outlook* (OECD 2006) made a first attempt to characterize migrants by “reasons for movement” and to harmonize statistics among Organisation for Economic Co-operation and Development (OECD) countries.

The database of the UN Population Division (UNPD) is the most comprehensive source of information on international migrant stocks for the period 1960–2010 for all 210 countries in this *Factbook* (UNPD 2009). The bilateral migrant stock data used here for 193 countries are based on statistics on foreign-born population for 109 countries, foreign nationality data for 75 countries, and migrant stock data that are estimated indirectly using various assumptions for 9 countries. Data on bilateral migration are not available for 17 countries.

Preliminary efforts to estimate bilateral migration data include data by Harrison (2004), the University of Sussex data originally constructed for the Global Trade Analysis Project trade modeling, and data by the Development Prospects Group of the World Bank used for estimating South–South migration and remittance flows (Ratha and Shaw 2007). Parsons et al. (2007) have created a “composite” matrix that contains estimates of bilateral migrant stocks for 226 x 226 countries. Because these data were constructed for modeling purposes, Parsons et al. use a variety of assumptions to make total immigrant stock add up to total emigrant stock.¹

We have updated the bilateral migration matrix compiled by Ratha and Shaw (2007) using data from various sources. Bilateral migration data for the following 42 countries were updated using national censuses compiled by the UNPD (2010): Angola; Azerbaijan; Benin; Bhutan; Burkina Faso; Burundi; Cameroon; Cape Verde; Colombia; the Comoros; Côte d’Ivoire; Cuba; Djibouti; Dominica; the Arab Republic of Egypt; El Salvador; Faeroe Islands; Gabon; The Gambia; Guinea; Indonesia; Iraq; Jamaica; Jordan; Kenya; the Lao People’s Democratic Republic; Liberia; Macao SAR, China; the former Yugoslav Republic of Macedonia; Malaysia; Mali; Malta; Niger; Puerto Rico; San Marino; Sierra Leone; St. Kitts and Nevis; Suriname; Tajikistan; Timor-Leste; the Republic of Yemen; and Zimbabwe.

The latest immigration data for the following countries belonging to the OECD were obtained from the International Migration Database (OECD 2010): Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, the Republic of Korea, the Netherlands, New Zealand, Norway, Poland, the Slovak Republic, Spain, and Sweden. Data for most countries are for 2005 and 2007. The data collected from national-level labor force and population surveys are the best available data on immigrant stocks since the 2000 round of censuses, even though the coverage of migrants in this database is somewhat heterogeneous across countries.

Available bilateral migration data for the United States from the 2000 census were complemented with the nationally representative American Community Survey for 2008 (U.S. Census Bureau 2008). Census data on immigrants in the United Kingdom was complemented with more recent migration data from the UK Office of National Statistics (UK ONS 2009). Immigration data for the six Gulf Cooperation Council countries (Bahrain, Kuwait, Oman, Qatar, Saudi

¹ The resulting final bilateral migrant stock matrix, according to Parsons et al. (2007), “though the fullest, is arguably the least accurate set of data” (Parsons et al. 2007, 11).

Arabia, and United Arab Emirates) were obtained from Kapiszewski (2006). The quality of data on bilateral migration is as good (or poor) as the quality of the population censuses and other national-level sources in different countries, but in a number of countries, the data are simply missing.

The 2010 round of censuses are currently being conducted, but the data are not available as of October 2010. As discussed above, the census data from the 2000 round of censuses were supplemented with the latest available data from national-level sources to obtain the most recent picture of migrant stocks for 2010. Available data may not accurately reflect some recent trends, such as return of migrants from the United Kingdom to Poland or from the Russian Federation to Tajikistan because of the global financial crisis.

Even in the 2010 census round, a number of countries (including Japan, Mexico, Korea, the Philippines, and Egypt) do not plan to ask about the country of birth (Center for Global Development 2009). However, other important countries are starting to record foreign-born persons. China recently announced that it will ask questions about migrant workers in the 2010 census.² Although the UNPD estimates that there are 0.7 million immigrants in China in 2010 (the figure used in *Factbook 2011*), the Chinese authorities report 2.9 million registered foreign workers in 2007. The actual number, including the unregistered and illegal workers, is likely to be far higher.

Data on Remittances³

Migrant remittances are defined as the sum of workers' remittances, compensation of employees, and migrants' transfers.

Workers' remittances, as defined by the International Monetary Fund (IMF) in the *Balance of Payments Manual*, 6th edition (IMF 2010a), are current private transfers from migrant workers who are considered residents of the host country to recipients in the workers' country of origin.⁴ If the migrants live in the host country for one year or longer, they are considered residents, regardless of their immigration status. If the migrants have lived in the host country for less than one year, their entire income in the host country should be classified as compensation of employees.

Although the residence guideline in the manual is clear, this rule is often not followed for various reasons. Many countries compile data based on the citizenship of the migrant worker rather than on their residency status. Further, data are shown entirely as either compensation of employees or worker remittances, although they should be split between the two categories if the guidelines were correctly followed.⁵ The distinction between these two categories

² Eimer, David. 2010. "Beijing plans curbs on number of foreigners working in China." *Telegraph.co.uk*, May 23. <http://www.telegraph.co.uk/news/worldnews/asia/china/7756638/Beijing-plans-curbs-on-number-of-foreigners-working-in-China.html>.

³ This part is based on *Global Economic Prospects 2006* (World Bank 2006). See also IMF (2009).

⁴ Official statistics on remittances tend to underestimate the size of remittance flows. Following a request from the G7 nations in June 2004, the World Bank together with the IMF and the UN led an international working group to improve remittance statistics. Based on the recommendation of the Luxembourg Group, the new *Balance of Payments Manual*, 6th edition, includes three new items: personal remittances, total remittances, and total remittances and transfers to nonprofit institutions serving households.

⁵ For example, India shows very little compensation of employees, but large workers' remittances, although it is well known that India supplies a large number of temporary information technology workers to the United States and to European countries. On the other hand, the Philippines shows large compensation of employees and very few migrants' transfers.

appears to be entirely arbitrary, depending on country preference, convenience, and tax laws or data availability.⁶

Migrants' transfers are the net worth of migrants' assets that are transferred from one country to another at the time of migration (for a period of at least one year). As the number of temporary workers increases, the importance of migrants' transfers may increase. Therefore, to gain a complete picture of the resource flow, one has to consider these three items together.

Some countries do not report data on remittances in the IMF Balance of Payments statistics. Several developing countries (for example, Afghanistan, Cuba, Turkmenistan, Uzbekistan, and Zimbabwe) do not report remittance inflows data to the IMF, even though it is known that emigration from those countries took place. Some high-income countries (notably Canada, Qatar, Singapore, and the United Arab Emirates) do not report data on remittance outflows, even though they are important destinations for migrants. A global survey of central banks reveals significant heterogeneity in the quality of remittance data compilation across countries (Irving, Mohapatra, and Ratha 2010). Some central banks use remittance data reported by commercial banks, but do not adequately capture flows through money transfer operators, post offices, and emerging channels such as mobile money transfers. Even when data are available and properly classified, in some cases, these data are out of date. The methodologies used by countries for remittance data compilation are not always publicly available. It is hoped that the increased awareness about the importance of remittances and the shortcomings in the data on both remittances and migrant workers will result in efforts to improve data collection. In some cases, such as China, Malaysia, and Nigeria, the sources for total remittances are different from data on workers' remittances, compensation of employees, and migrants' transfer. As a result, the total remittances figure does not match the sum of the components.

Perhaps the most difficult aspect of remittance data is estimating informal flows. One way to estimate the true size of remittances is to undertake surveys of remittance senders and recipients. Without new, adequately randomized and representative surveys of recipients and senders, evidence from existing household surveys will only be indicative rather than comprehensive.

Caveats on the Quality of Data

As discussed above, the authors have built on *Factbook 2008* by updating the latest migration data from the UN Population Division, national censuses, labor force surveys, population registers, and other national sources for 210 countries. The remittance data were obtained from Ratha, Mohapatra, and Silwal (2010), whose data were based on the IMF Balance of Payments database as well as data from central banks, national statistical agencies, and World Bank country desks. *Factbook 2011* has arguably the most comprehensive collection of data and facts on migration and remittances that is available.

However, the reader is advised to note the pitfalls of using currently available migration and remittance data. Remittance flows and the stock of migrants may

⁶ Because of the difficulty in classifications, countries have often classified workers' remittances as either other current transfers or transfers from other sectors. In some countries, notably China, remittances may have been misclassified as foreign direct investment. In the case of India and many other countries, remittances may have been classified as nonresident deposits, especially those in local currency terms.

be underestimated due to the use of informal remittance channels, irregular migration, and ambiguity in the definition of migrants (foreign born versus foreigner, seasonal versus permanent). Considerably more effort is needed to improve the quality of data. The recommendations of a commission on improving migration data led by the Center for Global Development appear to be a step in the right direction (Center for Global Development 2009).

Sources of Data

Data on immigration and emigration are from UNPD (2009) and Ratha and Shaw (2007). Data on the emigration rate of the tertiary-educated population are from Docquier and Marfouk (2006). Data on emigration of physicians are from Bhargava, Docquier, and Moullan (2010), while supplementary data on physicians and data on nurses are from Clemens and Pettersson (2006) and are used for Sub-Saharan African countries. Data on remittances are from Ratha, Mohapatra, and Silwal (2010), and data on the components of remittances are from IMF (2010b). Bhargava, Docquier, and Moullan (2010) update the information in Docquier and Bhargava (2006) with additional destination countries and a harmonized definition of migrant physicians across countries.

Data on the following variables are from World Bank (2010b): Population, Population growth, Population density, Labor force, Unemployment rate, Urban population, Surface area, GNI (gross national income), GNI per capita, GDP (gross domestic product) growth, Poverty headcount ratio at national poverty line, and Age dependency ratio.

In the tables, “—” indicates the data are not available and “2010e” indicates 2010 estimate.

Bibliography

- Bilsborrow, Richard E., Graeme Hugo, Amarjit S. Oberai, Hania Zlotnik. 1997. *International Migration Statistics, Guidelines for Improving Data Collection Systems*. Geneva: International Labour Office.
- Bhargava, Alok, Frédéric Docquier, and Yasser Moullan. 2010. “Modeling the Effect of Physician Emigration on Human Development.” Manuscript. <http://ssrn.com/abstract=1555775>.
- Center for Global Development. 2009. *Migrants Count: Five Steps Toward Better Migration Data*. Report of the Commission on International Migration Data for Development Research and Policy, Washington, DC: Center for Global Development.
- Clemens, Michael A., and Gunilla Pettersson. 2006. “New Data on African Health Professionals Abroad.” Working Paper 95, Center for Global Development, Washington, DC.
- Docquier, Frédéric, and Alok Bhargava. 2006. “The Medical Brain Drain: A New Panel Dataset on Physicians’ Emigration Rates (1991–2004).” World Bank, Washington, DC.
- Docquier, Frédéric, and Abdeslam Marfouk. 2006. “International Migration by Education Attainment 1990–2000.” In *International Migration, Remittances, and the Brain Drain*, ed. Caglar Özden and Maurice Schiff, 151–99. Palgrave Macmillan: New York; and the World Bank: Washington, DC.
- Harrison, Anne, assisted by Tolani Britton and Annika Swanson. 2004. “Working Abroad—The Benefits Flowing from Nationals Working in Other Countries.” Paper prepared for the Organisation for Economic Co-operation and Development Round Table on Sustainable Development, Paris.
- IMF (International Monetary Fund). 2009. *International Transactions in Remittances: Guide for Compilers and Users*. Washington, DC: IMF.

- _____. 2010a. *Balance of Payments Manual*. 6th ed. Washington, DC: IMF.
- _____. 2010b. Balance of Payments Statistics Database. Washington, DC. <http://www2.imfstatistics.org/BOP/>.
- Irving, Jacqueline, Sanket Mohapatra, and Dilip Ratha. 2010. "Migrant Remittance Flows: Findings from a Global Survey of Central Banks." Working Paper 94, World Bank, Washington, DC.
- Kapiszewski, Andrzej. 2006. "Arab Versus Asian Migrant Workers in the GCC Countries." Paper presented at the United Nations Expert Group Meeting on International Migration and Development in the Arab Region, Beirut, May 15–17. UN/POP/EGM/2006/02.
- Lemaitre, George, Thomas Liebig, and Cécile Thoreau. 2006. "Harmonized Statistics on Immigrant Inflows—Preliminary Results, Sources and Methods." Report, Organisation for Economic Co-operation and Development, Paris.
- OECD (Organisation for Economic Co-operation and Development). 2006. *International Migration Outlook*. Paris: OECD.
- _____. 2010. International Migration Database. Paris. <http://stats.oecd.org/Index.aspx?DataSetCode=MIG>.
- Parsons, Christopher R., Ronald Skeldon, Terrie L. Walmsley, and L. Alan Winters. 2007. "Quantifying International Migration: A Database of Bilateral Migrant Stocks." Policy Research Working Paper 4165, World Bank, Washington, DC.
- Ratha, Dilip. 2003. "Worker's Remittances: An Important and Stable Source of External Development Finance." In *Global Development Finance: Striving for Stability in Development Finance*, 157–75. Washington, DC: World Bank.
- Ratha, Dilip, Sanket Mohapatra, and Ani Silwal. 2010. Migration and Development Brief 12, World Bank, Washington, DC, April.
- Ratha, Dilip, and William Shaw. 2007. "South–South Migration and Remittances." Working Paper 102, World Bank, Washington, DC.
- Taylor, J. Edward. 2000. "Do Government Programs 'Crowd-in' Remittances?" Tomás Rivera Policy Institute, University of Southern California, and Inter-American Dialogue, Washington, DC.
- UK ONS (United Kingdom Office of National Statistics). 2009.
- UN (United Nations) Statistics Division. 1998. "Recommendations on Statistics of International Migration, Revision 1." Statistical Papers Series M, No. 58, United Nations, New York.
- UNPD (United Nations Population Division). 2009. *Trends in Total Migrant Stock: The 2008 Revision*. New York: UN Department of Economic and Social Affairs.
- _____. 2010. United Nations Global Migration Database v.0.3.6. New York. <http://esa.un.org/unmigration/>.
- U.S. (United States) Census Bureau. 2008. American Community Survey.
- World Bank. 1990. *World Development Report 1990*. Washington, DC: World Bank.
- _____. 2006. *Global Economic Prospects 2006: Economic Implications of Remittances and Migration*. Washington, DC: World Bank.
- _____. 2010a. World Bank Country Classifications database. Washington, DC: World Bank. <http://data.worldbank.org/about/country-classifications>.
- _____. 2010b. *World Development Indicators*. Washington, DC: World Bank.