



ABOUT The *Data Bulletin: Informing the implementation of the Global Compact for Migration* series aims to summarize in an accurate and accessible fashion existing evidence on migration to support the discussion and any follow-up activities.

As part of the project “Support to IOM for the Global Compact for Safe, Orderly and Regular Migration,” funded by the European Union, *Data Bulletin* outlines the strengths and limitations of relevant migration data and highlights innovative data practices that are pertinent to the Global Compact for Migration. This publication reflects the collaborative nature of the Global Compact for Migration process by including relevant contributions from different parts of IOM, as well as other agencies and migration experts.

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Disaggregating census data by migratory status

The important role of census data in measuring migrant stocks and flows is widely acknowledged in the international statistical community. Censuses provide an ideal opportunity for the enumeration of international migrants in a society, and most countries already include in their census a question on nativity and/or citizenship status. The value of census data for migration studies extends far beyond published tabulations describing the size of the migrant population. Individual-level census microdata allow researchers and policymakers to investigate the demographic and socioeconomic characteristics of migrants, compare migrants to non-migrants, on a range of metrics, and to disaggregate population-level statistics and indicators by migratory status. For countries without comprehensive administrative data infrastructure, censuses are the only sources of such information.

Data access and international comparability

In contrast to aggregate census tables that provide summary information about a geographic area or population group, census microdata report individual responses to census questionnaires. Census microdata enable the creation of customized tables, support flexible statistical analyses, and can be aggregated across various dimensions. Access to complete, original census microdata files is highly restricted in most countries. Fortunately, many countries make anonymized scientific-use samples of census microdata available to the research community. Scientific-use samples are systematically drawn from the total enumerated population. These large and nationally representative datasets make it possible to study small subpopulations and subnational regions of countries.

Using individual-level census microdata in international comparisons presents its own challenges, however, because the data are collected and managed by individual national statistical offices all with unique census operations and outputs.

To help data users overcome these challenges, Integrated Public Use Microdata Series (IPUMS)-International partners with national statistical offices to compile, integrate and harmonize census microdata from around the world.¹ IPUMS harmonizes variables across census samples so that the microdata can be pooled into a single database from which data users can download customized datasets for academic and policy research. Currently, 365 censuses from 94 countries are available free of charge through an online data dissemination system, making IPUMS the world's largest collection of publicly available census microdata.

Identifying migrants in census data

While efforts have been made to standardize international census-taking practices, national governments retain the autonomy to include in their censuses the topics they consider essential to their planning and monitoring needs.

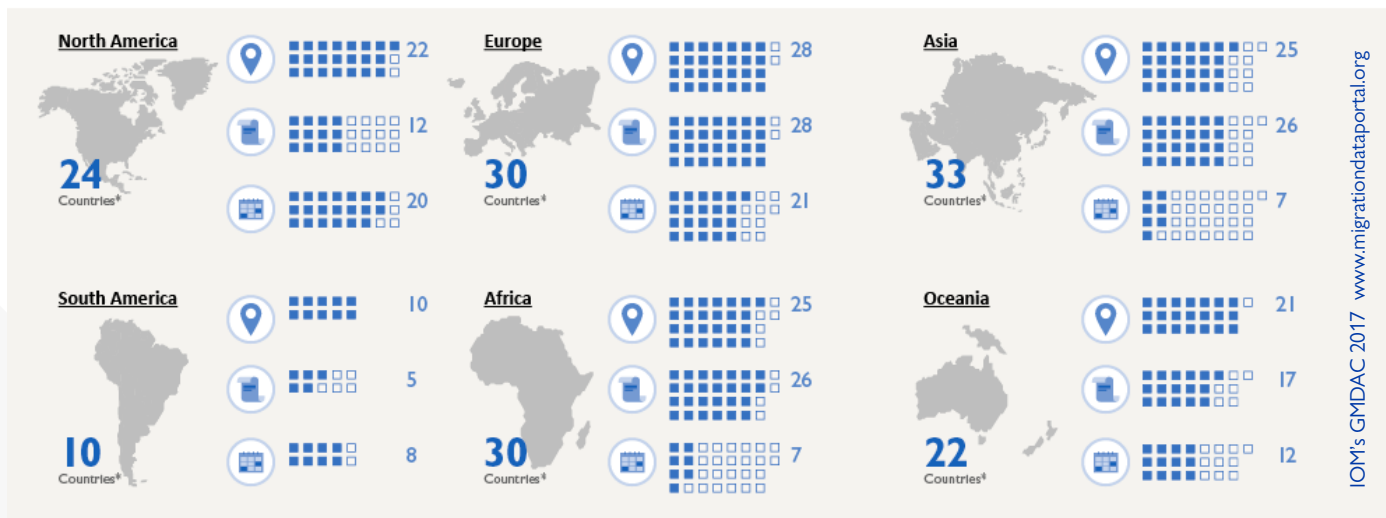
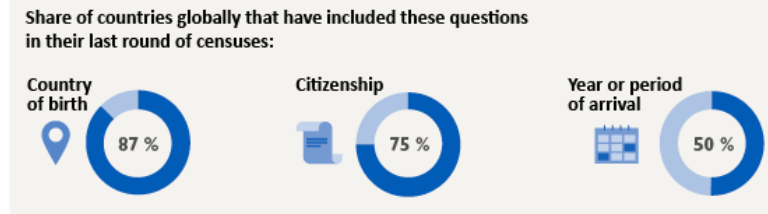
¹ See <https://international.ipums.org/international> (accessed 17 November 2018).



Figure 1: Census data

Many countries do not include important migration questions into their census questionnaires.

National population censuses are important sources of data on migration in a country. However, many national censuses lack some of the key migration questions such as on the country of birth and citizenship of the household member(s) as well as the year or period of arrival in the country.



*This represents the number of countries with a census in the United Nations Statistics database.
Source: Migration Data Portal, based on United Nations Department of Economic and Social Affairs (UN DESA).

United Nations Statistics Division

Since 1995, the United Nations Statistics Division has collected several population censuses' data sets from national statistical offices around the world. The data are collected via the Demographic Yearbook census questionnaires. The Division recommends including three core variables in population censuses to identify international migrants: (a) country of birth, (b) country of citizenship, and (c) year or period of arrival in the country for foreign-born persons.

As a result, topical coverage and variable availability varies across census samples (see table below). Still, most censuses include questions that can be used to identify lifetime and/or period migrants:²

- **Lifetime migrants (stock):** Three quarters of the census samples disseminated by IPUMS-International include information on place of birth. Information on place of birth identifies lifetime migrants – individuals who have ever migrated. Place of birth information can be used to identify migrants according to the approach used by the United Nations Department of Economic and Social Affairs, whose international migrant stock estimates mostly refer to individuals who are foreign born.
- **Period migrants (flow):** Half of the census samples disseminated by IPUMS-International ask about place of residence at some point before the census. Most commonly, censuses ask about place of usual residence five years before the census. Some countries ask about usual residence 1 or 10 years before the census. Used with place of birth, previous residence information can identify migrants arriving during specific periods, and can also identify return migrants.

Place of birth and place of previous residence questions typically record internal migration as well as international migration.³ Additional variables available in some censuses – such as country of birth, citizenship status, country of citizenship and year of immigration – allow for the study of specific origin groups, arrival cohorts and other migrant subgroups.

Applications: Beyond stocks and flows

Censuses cover a broad range of topics, including fertility, mortality, household structure, access to basic services, housing characteristics, educational attainment, and labour force participation and composition.

Migration-related variables available in census microdata can be used together with other information collected in censuses to investigate several themes related to the objectives of the Global Compact for Safe, Orderly and Regular Migration and the 2030 Agenda for Sustainable Development:

- Living conditions and arrangements
- Access to basic services
- Education opportunities and attainment
- Labour market integration and skills matching
- Skilled worker migration and brain drain
- Gender and migration
- Migration of children
- Forced migration
- Return migration
- Diaspora studies

² Sobek, M., "Data Prospects: IPUMS-International", in International Handbook of Migration and Population Distribution: 157–174, Springer, Dordrecht, 2016.

³ Ibid.

Census microdata support comparative analyses of these topics. Migrant groups can be compared with one another or to non-migrant peers in places of destination or origin, or across subnational geographic units. IPUMS variable harmonization and data integration facilitate analyses across time and space (see Figure 2). The large sample sizes in IPUMS typically support multidimensional disaggregation by sex, age and other relevant characteristics, in addition to migratory status. Census samples are highly representative of national populations, including individuals living in group quarters or precarious housing arrangements, thus providing information on groups that may be missing from administrative data sources. Microdata allow for targeted analyses related to migrants in vulnerable situations or specific subgroups, such as domestic workers, highly skilled migrants, female migrants or children of migrants.

Census data can also be used to calibrate estimates and statistics derived from “big data” and other non-traditional data sources that are not nationally representative. While targeted household surveys often provide more detail than population censuses, they rarely produce sample sizes large enough to support multidimensional disaggregation.

When empirical disaggregation is not available, census data can be used to model indicator estimates for population subgroups and subnational geographic units.⁴

⁴ See Zhang, S., “Small Area Estimates: an Illustration for Family Planning using Nepal as a Case Study”, paper presented at World Data Forum, Cape Town, 15–18 January 2017.

Table 1: Availability of international migration variables in IPUMS-International

VARIABLE	NUMBER OF SAMPLES
Nativity status	261
Country of birth	205
Citizenship status	167
Country of citizenship	122
Migration status 1 year ago	51
Migration status 5 years ago	110
Migration status previous residence	88
Country of residence 1 year ago	37
Country of residence 5 years ago	62
Country of previous residence	59
Urban status 1 or 5 years ago	15
Urban status, previous residence	24
Years residing in current locality	102
Year of immigration	54
Reason for migration	27
International migrant from household	22

Limitations and the way forward

Census-taking remains a primary function of national statistical offices in most countries. To make good use of this important resource, while upholding the right to privacy and ensuring the protection of personal data, in line with national and supranational legislation, the international statistical community should consider the following actions to address certain limitations that restrict the usefulness of census microdata in a migration context.

Improve data access: For countries that do not participate in IPUMS-International, accessing anonymized census microdata is challenging. Large sample sizes are required to study migrants. More countries should share high-precision census microdata samples that support disaggregation and comparison across population groups. Countries should disseminate public-use microdata samples that represent 10 per cent of the enumerated population, where possible. For small countries or countries with small migrant populations, restricted access to full-count microdata should be made available for policy and academic researchers. Likewise, census microdata should be made available in a timelier manner. Censuses are conducted every 5 to 10 years, and several years can pass before individual-level microdata files are produced and made publicly available. The international statistical community should support census-taking activities, including timely data processing, particularly in countries where resources are limited.

Include migration-related questions in censuses: In addition to country of birth, censuses should collect information on place of previous residence and nationality. Information on both country of birth and nationality is necessary to distinguish migrants from other foreign-born persons and to understand how access to citizenship relates to migrant outcomes. Year of immigration, reason for migration and parental country of birth are important for many analytical purposes as well. Countries implementing register-based censuses should use methods that promote inclusion of non-citizens and persons with irregular statuses in databases and/or make supplemental data about non-citizens available for research.

Use census data with other data sources: Censuses are a key source of data on international migration, but they do not cover all migration-relevant topics. Furthermore, censuses may not fully reach certain migrant populations. Census data should be complemented with other sources, such as surveys and administrative data, to capture information on specific subgroups of migrants. Using household surveys in combination with census data improves the applicability and accuracy of both sources.

Figure 2: Social protection coverage of migrants by place of origin and place of destination



Source: Jeffers, K., J. Tjaden and F. Laczko, "A pilot study of measuring SDG indicators by migratory status" (Geneva, International Organization for Migration, 2018).

IOM's GMDAC

In response to growing calls for better data on migration, and for better use and presentation of migration data, IOM has created the Global Migration Data Analysis Centre (GMDAC).

Located in Berlin, Germany, the Centre aims to provide authoritative and timely analyses of data on global migration issues as a global hub for data and statistics on migration.

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