The Potential of the 2010 Population and Housing Census Round for International Migration Analysis

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International migration is of major relevance for the development of countries of origin, transit and destination. While the proportion of the world population who live outside their countries of birth has stayed relatively stable over time (3.4 percent in 2015), the absolute number of international migrants reached 244 million in 2015\(^1\). International migration has been recognized as a driver of development in both countries of origin and destination, and in turn, patterns of global development both strongly impact, and are impacted by, international migration.

With the adoption of the 2030 Agenda for Sustainable Development in September 2015 and the focus within the Agenda of integrating international migration within global development policy, the international community agreed to create a coherent and comprehensive policy framework, “to ensure safe, orderly and regular migration involving full respect for human rights and the humane treatment of migrants regardless of migration status, of refugees and of displaced persons.”\(^2\) The General Assembly agreed on 17 Sustainable Development Goals (SDGs), 169 targets and 230 indicators aimed at reducing poverty and ensuring sustainable development. The declaration includes various indicators that relate directly or indirectly to migration, including 10.7.1 “Recruitment cost borne by employee as a proportion of yearly income earned in country of destination”; 10.7.2 “Number of countries that have implemented well-managed migration policies”; 8.8.1 “Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status”; and 8.8.2 “Increase in national compliance of labour rights (freedom of association and collective bargaining) based on International Labour Organization (ILO) textual sources and national legislation, by sex and migrant status”.

But the SDG indicator that best advances the likelihood that the status, rights and well-being of migrants will be tracked over the coming 15 years is 17.18.1, “Proportion of sustainable development indicators produced at the national level with full disaggregation when relevant to the target, in accordance with the Fundamental Principles of Official Statistics”, because the corresponding target (17.18) includes migratory status within the list of factors for expected disaggregation of all SDG indicators.

7.18 “By 2020, enhance capacity-building support to developing countries, including for least developed countries and small island developing States, to increase significantly the availability of high-quality, timely and reliable data disaggregated by income, gender, age, race, ethnicity, migratory status, disability, geographic location and other characteristics relevant in national contexts.”

The potential impact of including this simple clause cannot be over-estimated for advancing research on the status and trends of migrant health, education, employment, experience of discrimination or violence, access to mobile or other assets, and a wide range of other benefits and/or deprivations.\(^3,4\) Despite increasing research on the link between migration and development; the scope and scale of the phenomenon as well as its relation with development is not yet fully understood, and the emerging SDG indicator data could provide a huge advance in our current knowledge, which is hindered by limited availability of timely, reliable and quality statistics. While numerous data sources exist that could be drawn on for migration research, comprehensive and accurate data on the migrants are not readily available for all countries in the world. Further, in many
instances data sources, such as the population and housing census that could yield valuable information on the phenomenon of international migration, are oftentimes underutilized.

The paucity of quality migration data and analysis has long been recognized and requires major investment. Data sources to inform the issue of international migration include decennial population and housing censuses, population registers, civil registration and other administrative data, residence permits and various household surveys, including labour force surveys. But many household surveys have long lead times which diminished their value, especially in circumstances of rapid migration.

“In countries that have a population register and in those that use residence permit data, stocks and flows of immigrants are most often calculated using the same source. […] Some countries instead use census or labour force survey data to estimate the stock of the immigrant population. […] Many labour force surveys now include questions about nationality and place of birth, thus providing a source of annual stock data. However, some care has to be taken with detailed breakouts of the immigrant population from survey data, as sample sizes can be small. […] To this must be added the difficulty of purging data files regularly to eliminate permits that have expired.”5

The unique benefit of a population and housing census, despite infrequent conduct, is that it “represents the entire statistical universe, down to the smallest geographical unit, of a country or region.”6 Inevitably, census data underestimate the number of migrants or undocumented migrants, in particular when migrants do not register for census purposes.7 Population censuses nonetheless provide a comprehensive source of internationally comparable information because they include questions that can generate information at low levels of resolution relevant to the phenomenon of international migration, including details on country of birth, country of citizenship, country of residence one year or five years prior to the census, and year of arrival in the country.8

While providing a potentially valuable source of data on international migration, censuses are sometimes conducted infrequently or the data from census are not fully released, or remain under-analyzed.

High-density census data, which are part of the existing statistical infrastructure of most countries, allow for disaggregation of the national population by sex, age, disability, and migrant status, among other factors. As such, national census data will be the most important source of data for fulfilling SDG target 17.18, and disaggregating the range of all other SDGs by migration status.9

The United Nations Principles and Recommendations for Population and Housing Censuses provide detailed guidelines to national authorities for the collection of census data relevant to international migration, including recommended questions for the census instruments. Many countries that conducted a census during the 2010 census round (that spanned from 2005 to 2014) included the recommended questions, shedding light on the year/time of arrival, and from which country, and a wide range of socially important data.
about how migrants differ (or not) in their social and economic experience by length of stay, country of origin, or from non-migrants.

However, many countries in the world have limited capacities to “carry out policy-relevant analyses on way and means of reaping the benefits of migration for individuals, communities, and societies.” Given that overall existing data on international migration are limited, investment in better migration data in population and housing censuses, and the promotion of greater use of such data is indispensable to understanding the scope of migratory movements, advancing the understanding of the relationship between migration and development, and ultimately informing policy decisions for the well-being of people. Simply assuring that all censuses included comparable migration questions would enable evidence-based advocacy for needed services, avoid confounding factors in programme design, and advance understanding of the relationship between migration and development.

In addition, in an effort to provide access to national statistics and disseminate widely information on population size and composition, the United Nations Statistics Division undertook efforts during the 2010 census round to collect official demographic statistics, including on migration, from more than 230 countries or areas in the world, published in the Demographic Yearbook. UNSD compiles and disseminates national data on migrant stock and its characteristics electronically through the UN data portal as well as the web-based Demographic Yearbook datasets.

Working from the same source material, this paper reports on the availability of international migration data from all national population and housing censuses by countries that participated in the 2010 census round, and highlights the potential of these data for the generation of baseline migration profiles and in-depth analysis on the multifaceted character of international migration.

**International Migration Data from Population and Housing Censuses**

Ideally every ten years, countries conduct a population and housing census, which is a complex exercise that requires detailed planning of enumeration methods, applied technology, privacy and confidentiality regulations, data collection, data processing and imputation, data analysis and dissemination, archiving, and quality control evaluations of coverage and quality. In many countries, a population and housing census is the principal source of data on the number, distribution and characteristics of a population, including international migrants. Compared to household or population-based surveys or population registers, the unique advantage provided by a population and housing census is the near-universal representation of the population of a country, down to the smallest geographical unit. Depending on the detail of the census questionnaire, this national data collection exercise provides information on the underlying phenomena of social and economic characteristics of the population, and may represent the primary data source for identifying certain social, demographic and economic exclusions and constraints for small geographical areas or sub-populations. While censuses remain the primary source
for internationally comparable information on the number and characteristics of international migrants, delays in the processing and dissemination of census results remain challenging.

In the 2010 census round, 214 countries or areas conducted at least one census, including countries that conducted a traditional census in person, by post or online, or based their detailed population “census” statistics on population registers, administrative records, sample surveys, other sources or a combination of these sources. Twenty-one countries or areas did not conduct a population and housing census during the 2010 round.¹⁵

Figure 1. Number of Countries Conducting a Census in the 2010 Round


The United Nations Principles and Recommendations for Population and Housing Censuses, Revision 2¹⁶ by the United Nations Statistics Division (UNSD) advocates for the inclusion of at least three core questions on 1) country of birth, 2) citizenship and 3) year or period of arrival to inform the topic of international migration.

The question on country of birth in a national population and housing census allows distinguishing the native-born from the foreign-born population in the country of enumeration; which means that the foreign-born population has migrated to the country of enumeration at some point in time.¹⁷

Asking the question on citizenship allows analysts to determine migrants’ rights and responsibilities in the country of destination. Legal nationality is an identifying factor for international migrants and is further important at the national level to determine which people are subject to border control when crossing international borders.

Information about the country of residence at one year, five years, or ten years prior to the census provides a reference date to international migration during a specific point in the past. Questions on time or period of arrival for foreign-born persons in the country of destination allow for calculating the duration of stay and classifying migrant populations by time of arrival.¹⁸ To check the internal consistency of those data, calculating the duration of stay is notably valuable if the last place of residence has also been investigated. The duration of residence is expressed in complete years, during which
a person has lived in “(a) the locality that is his or her usual residence at the time of the census and (b) the major or smaller civil division in which that locality is situated.”

The census database maintained by the Demographic Statistics Section of the United Nations Statistics Division (UNSD) contains census questionnaires from the 2010 census round, allowing one to review the questionnaires from 149 countries (as of October 2016).

Based on a report filtering questions in national census questionnaires linked to international migration, a summary of questionnaires was created of the three recommended core topics described above. In addition, a second report was run for all other topics related to international migration. This article’s findings are based solely on the review of census questionnaires contained in the UNSD census database. Detailed information contained in national census documents or analytical reports were not for the purpose of this review.

**Availability of Migration Data in Censuses**

During the 2010 census round, more than 87 percent of the 149 countries for which data are available in the UNSD database integrated a question in their census about country of birth, 75 percent asked for citizenship and 50.3 percent asked for the year or period of arrival (Figure 2).

With respect to country of birth, 129 countries established the total number of foreign-born and native-born people among their population based on the question on “country of birth”. In South America, only ten countries collected this information. Yet, the majority of countries in Oceania (21 our of 22), Europe (28 out of 30), Africa (25 out of 30), and North America (22 out of 24) included the question on country of birth. In Asia only 23 out of 33 countries asked that specific question (Figure 3). For example, Ethiopia, Seychelles, DPR of Korea, Japan, Philippines, Viet Nam and Switzerland are among the countries that did not collect data on country of birth. However, Switzerland includes only census questions in its questionnaire that are not available through its population registers. Other countries intended to collect international migration data between the 2010 and 2000 census round, by adding the question of “residence at last census date” to the 2010 census questionnaire.22

The question on “citizenship” or “nationality” was included in 112 national census questionnaires. While all but two European countries (93.3 %; 28 out of 30) and a large majority of countries in Africa (86.7 %; 25 out of 30) included a question on either topic in their census questionnaire, only fifty percent of all Northern and Southern American countries collected these data. In Asia twenty-four out of thirty-three (72.7 %) and in Oceania 17 out of 22 countries (77.3 %) included this specific question. However alternative questions regarding citizenship by birth and/or naturalization as well as foreigners allow for the calculation of the foreign population.
The question on year or period of arrival was the least likely to have been asked, among the three recommended questions. Overall, 75 countries asked for the year or period of arrival of the foreign-born member of the population to establish the length of stay of their migrant population. The highest inclusion of the question was found in North American (83.3 %) and South American (80 %) census questionnaires. On the other hand, only twenty-three percent of all African census questionnaires and only 21.2 percent of Asian questionnaires included the question on year or period of arrival. Of the 75 countries that asked the question, the majority of countries formulated the question to investigate the specific date or year of arrival.

Figure 2: Summary of the availability of core migration questions in national population and housing censuses


Figure 3. Number of Censuses including Core Questions Related to International Migration in Questionnaires of the 2010 Census Round, by Region
A total of 19 countries collected data on the period of return of the native-born population. Most of the countries that collected this information were European countries (10) followed by North America, however mostly Caribbean Island States (5).

Additional questions within the thematic area of international migration that were included in census questionnaires of the 2010 census round refer to: previous country of residence; duration of intended stay; and reason for arrival/return. Fifty-three countries included a question on the emigration of household members, and thirty-four countries asked their respondents if they had ever lived abroad. A question relating to the reason for immigration appeared in twenty census questionnaires; eighteen countries included a question on the country where parents were born, and the census of the Isle of Man asked the birthplace of grandparents. Fifteen countries asked about the country of previous residence, seven asked about receipt of remittances by the household, and five countries asked for the primary reason for emigration and the (intended) duration of stay/visit. Individual countries included unique questions, e.g. regarding the emigration of a neighboring household; or the country of permanent residence of self and parents. Figure 4 displays the frequency distribution of questions (number of censuses), and Table 1 provides information on the specific countries that included select questions in their census questionnaires.

While most migration related questions formed part of the individual or household questionnaires, the countries of Djibouti, Namibia, Bermuda and Romania designed a specific questionnaire to collect information on their emigrant population.
Figure 4. Frequency of Additional Questions Related to International Migration in Questionnaires of the 2010 Census Round


### Table 1. Countries that Included Specific Questions Related to International Migration in the 2010 Census Round

<table>
<thead>
<tr>
<th>Topic of Question</th>
<th>Countries</th>
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<tbody>
<tr>
<td>Emigration of Household Members</td>
<td>Albania, Algeria, Bahamas, Bangladesh, Barbados, Belize, Bermuda, Bolivia, Botswana, Brazil, Burkina Faso, Burundi, Cameroon, Cayman Island, Colombia, Costa Rica, Croatia, Czech Republic, Djibouti, Ecuador, Egypt, El Salvador, Estonia, Faeroe Islands, Ghana, Guinea-Bissau, Hungary, Jamaica, Kenya, Lesotho, Lithuania, Macao SAR of China, Malawi, Mali, Mexico, Micronesia (Federated States of), Mongolia, Montenegro, Namibia, Nepal, Nicaragua, Panama, Peru, Philippines, Romania, Saint Helena, Saint Lucia, Serbia, Singapore, Swaziland, Trinidad and Tobago</td>
</tr>
<tr>
<td>Ever Lived Abroad</td>
<td>Albania, Bahamas, Bangladesh, Barbados, Belarus, Belize, Bermuda, Bosnia and Herzegovina, Bulgaria, Burkina Faso, Burundi, Croatia, Curacao, Cyprus, Estonia, Faeroe Islands, Greece, Hungary, Iran, Ireland, Israel, Italy, Jamaica, Liechtenstein, Lithuania, Malta, Montenegro, Romania, Serbia, Saint Lucia, Suriname, Switzerland, Tokelau, Trinidad and Tobago</td>
</tr>
<tr>
<td>Reason for Immigration</td>
<td>American Samoa, Belarus, Belize, Bhutan, Burkina Faso, Croatia, Egypt, Guam, India, Niue, Northern Mariana Islands, Mauritius, Palau, Russian Federation, Saint Lucia, Thailand, Timor Leste, Suriname, Zambia</td>
</tr>
<tr>
<td><strong>Country/Place of Birth of Parents</strong></td>
<td>American Samoa, Aruba, Australia, Cyprus, Estonia, Faeroe Island, Guam, Italy, Israel, Liechtenstein, Luxembourg, Norfolk Island, Northern Mariana Islands, Palau, Sint Maarten (Dutch Part), Switzerland, United States Virgin Islands</td>
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<tr>
<td><strong>Country of Previous Residence</strong></td>
<td>Afghanistan, Aruba, Bahamas, Bangladesh, Curacao, Estonia, Germany, Italy, Latvia, Luxembourg, Sint Maarten (Dutch Part), Timor-Leste, Trinidad and Tobago</td>
</tr>
<tr>
<td><strong>Receipt of Remittances</strong></td>
<td>Armenia, Costa Rica, Ecuador, Malawi, Namibia, Romania, Tonga</td>
</tr>
<tr>
<td><strong>Reason for Emigration</strong></td>
<td>Djibouti, Lithuania, Mauritius, Norfolk Island, Romania</td>
</tr>
<tr>
<td><strong>Duration of Visit</strong></td>
<td>Croatia, Curacao, Kazakhstan, Sint Maarten (Dutch part), United Kingdom</td>
</tr>
<tr>
<td><strong>Legal Status of Residency</strong></td>
<td>Canada, Cayman Islands, Cook Islands, Hong Kong SAR of China</td>
</tr>
<tr>
<td><strong>Country of Residence at a Specified Date in the Past</strong></td>
<td>Dominican Republic, Estonia, Saint Lucia</td>
</tr>
<tr>
<td><strong>Country of Residence</strong></td>
<td>Djibouti, Kazakhstan, Estonia</td>
</tr>
<tr>
<td><strong>Reason for Return Migration</strong></td>
<td>Bangladesh, Lithuania, Montenegro</td>
</tr>
<tr>
<td><strong>Refugee Status</strong></td>
<td>Kazakhstan, Bosnia and Herzegovina</td>
</tr>
<tr>
<td><strong>Purpose of Visit</strong></td>
<td>Kazakhstan, Croatia</td>
</tr>
<tr>
<td><strong>Duration Having Been Living Abroad</strong></td>
<td>Malta, Trinidad and Tobago</td>
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<tr>
<td><strong>Year or Period of Return</strong></td>
<td>Burkina Faso, Jamaica</td>
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<tr>
<td><strong>Immigration of Mother / Father</strong></td>
<td>Germany</td>
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<tr>
<td><strong>Intention to Live in Country Continuously for at least 12 Months</strong></td>
<td>Mauritius</td>
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<tr>
<td><strong>Place of Birth of Parents and Grandparents</strong></td>
<td>Isle of Man</td>
</tr>
<tr>
<td><strong>Number of Foreigners in the Household</strong></td>
<td>Qatar</td>
</tr>
<tr>
<td><strong>Place of Residence of Absent Household Members</strong></td>
<td>Bhutan</td>
</tr>
<tr>
<td><strong>Place of Usual Residence in the past 6 Months</strong></td>
<td>Macao SAR of China</td>
</tr>
<tr>
<td><strong>Country of Residence of Parents</strong></td>
<td>Colombia</td>
</tr>
<tr>
<td><strong>Country of Permanent Residence</strong></td>
<td>Russian Federation</td>
</tr>
<tr>
<td><strong>Displacement / Resettlement due to War</strong></td>
<td>Liberia</td>
</tr>
<tr>
<td><strong>Emigration of Neighboring Household</strong></td>
<td>Egypt</td>
</tr>
<tr>
<td><strong>Oversea Worker</strong></td>
<td>Philippines</td>
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Conclusion
As migration, migrants and mobility are increasingly being considered in the context of global development and in national planning strategies, the demand for timely, accurate, nationally relevant and internationally comparable migration data and indicators is expected to rise.

Within the context of the call to disaggregate all relevant Sustainable Development Goal indicators by migration status (SDG indicator 17.18.1), the current review was undertaken to assess the number of population and housing censuses that collected core question on migration status in the 2010 census round, thereby enabling such disaggregation. The finding that 87 percent of the 149 countries for which census questionnaire information are available included a question about country of birth, suggests that disaggregation of SDG data by migration status should be possible for a majority of countries. The finding that only 50.3 percent asked for the year or period of arrival will limit opportunities to disaggregate by length of migration. All future population and housing censuses should be encouraged to include these core questions.

The variety of migration-related questions being asked within different national censuses offers a range of future options for standardization, and we encourage consideration of an expanded set of questions that may differentiate important vulnerabilities and shortfalls among migrants; empirical analysis is warranted to identify such potential questions.

Finally, collection of census data does not consistently translate into the widespread availability of such data, even to government researchers, let alone to interested citizens of the countries concerned. It is important to advocate for the greater release of population and census data, and to exploit migration data to their fullest use. This appeal is consistent with the report of the Secretary-General on international migration statistics, presented to the United Nations Statistical Commission at its 45th session in 2016, which emphasized that more needs to be done to encourage the tabulation and dissemination of international migration data from population and housing censuses in order to enhance the exchange of statistical information between countries, the identification of factors contributing to human vulnerability, and to inform public policies that will “serve first those furthest behind”.26

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