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PART TWO

MEASURING INTERNATIONAL MIGRATION

THROUGH POPULATION CENSUSES *

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CHAPTER 1. THE CENSUS AS A VEHICLE FOR MEASURING INTERNATIONAL MIGRATION

A. Aspects of international migration that censuses can measure

1. The most fundamental distinction in measuring international migration is between measures of stocks of international migrants and measures of flows. Bilsborrow et al (1997, 51) distinguishes between these two types of measures as follows:

‘migrant stock is defined as the total number of international migrants present in a given country at a particular point in time. It is a static measure and it represents a count, that is, the number of persons that can be identified as international migrants at a given time. Migration flows also tend to be measured in terms of counts, with the inflow of migrants being the number of international migrants arriving in a given country over the course of a specific period, usually a calendar year, and the outflow being the number of international migrants departing from a given country over the course of the year’.

2. Since the population census represents a snapshot of a population at a single point in time it is best suited to the measurement of stock of international migrants at that point in time. Flows are a dynamic process involving people continuously moving into and out of a country. Accordingly it is best measured through a continuous reporting system that captures all relevant moves into and out of a country.

3. The chapters that follow will therefore focus on the use of population census for collecting information on international migrant stock, as opposed to migrant flow.

B. Advantages and disadvantages of using the census to measure international migration

4. Population censuses are perhaps the most comprehensive source of internationally comparable information on international migration in the world. (Bilsborrow et al., 1997, 52). It has a number of advantages over other data sources in determining the scale and composition of international migration.

5. The most distinctive strength of the population census lies in its universal coverage. Because it includes all persons, it permits generation of summary statistics at a low geographical detail and the production of extensive and detailed cross-tabulations of migrant characteristics. This feature of the census is a very important one where migrants or certain categories of migrants are rare elements of the population.

6. Another advantage of the census is that it collects a substantial amount of information about each individual. Because of this, it has the potential of characterizing international migrants in terms of certain demographic and socio-economic characteristics. Thus, it is possible to cross-tabulate migrant characteristics such as citizenship, duration of stay and place of residence in the receiving country against a combination of demographic and socio-economic variables including age, sex, educational attainment, marital status, labour force participation and occupation, to name a few.

7. Censuses collect geographical information on the place of residence of its population. Where the international migrants live can be determined, so that aspects such as concentration of migrant groups within the country of destination can be established.

8. There is greater uniformity across countries in the type of data that censuses produce on international migration than in those from any other data collection system. Because censuses can accommodate only a small number of questions eliciting straightforward answers, they cannot introduce much variability in the range of questions or concepts used. (Bilsborrow et al., 1997)

9. This peculiarity of census data opens up the possibility of sharing of international migration data among countries to estimate the volume of emigration. Information on emigration is rarely collected in censuses or border control systems, and the completeness of population registers with respect to emigration is acknowledged to be insufficient in most countries. While it will not obtain information on all emigration, the use of the censuses of destination nations to piece together a picture of the emigrant population of an origin country has been used in Latin America and are being tried in certain groups of countries in Europe.

10. Finally, since population censuses are taken at regular time intervals (usually 10 years), there is the possibility of examining long-term trends through comparisons of statistics from two or more censuses to allow governments to establish shifts in migration regime.

11. Against these advantages of using census data to analyse international migration it is necessary to place a number of disadvantages (Bilsborrow et al., 1997). First, because censuses are carried out only every decade (or five years in a few countries), they cannot capture many of the changes that occur in international migration in a timely way. While there is some ability to compare changes over time, this is very limited.

12. Second, because questions in censuses are very limited in number and restricted to factual ones, it is generally not possible to include direct questions relating to causes and consequences of migration, which would require detailed questioning and probing.

13. Third, some countries employ sampling in their population census. In these cases, countries administer long forms on a sample basis (say, one in 10 households) in order to investigate certain topics in greater depth. Thus, the long form is applied to a sample of households, while a short form is applied to the rest. Data collected for a sample in the census have similar limitations as any sample survey data. For the measurement of international migration, the problem relates to the fact that migrants are not randomly spatially distributed throughout the population, so that sampling them accurately becomes difficult. Moreover, where particular migrant groups are a very small proportion of the national population, the use of sampling can result in insufficient numbers of certain groups of migrants detected, limiting the use of the information gathered.

14. Fourth, while censuses seek to cover the whole population, there are inevitably people missed, and migrants tend to be especially prone to not being enumerated in the censuses. This is especially the case if international migrants have a vested interest to avoid being counted or to misreport their migrant status. Moreover, there can be elements in census design which systematically exclude particular types of migrants.

15. Fifth, because of the scale of censuses, all enumerators will not necessarily be aware of the issues surrounding migrant enumeration and are unlikely to detect errors in reporting during

the census taking process. In addition, because the respondent to a census questionnaire is not always the person most knowledgeable about the characteristics of other members of the household, errors in responding to questions that determine migrant status may ensue.

16. Finally, some countries do not include international migration questions in their census, and when they do, they may be given low priority in processing, tabulation and publication, with the result that the data gathered often take several years to become available and only a very limited number of relevant cross-tabulations are published.

17. Nevertheless the census is an important source of international migration data, especially for countries that do not have reliable population or related administrative registers. Indeed, for some countries, the census is the only source of data on international migration. The 2010 round of population censuses presents an important window of opportunity to significantly enhance the understanding of the scale and policy implications of international migration.

C. Aspects of planning and design of population censuses of relevance to the collection of data on international migration

18. Several aspects of census planning and design have a bearing on the coverage and quality of data collected with respect to international migration. These include:

- (a) The decision of who is included in the national census
- (b) The use of sampling in the census
- (c) The rules for enumerating people in unconventional living situations
- (d) The training of interviewers

Other decisions impact the data on international migration more directly, including:

- (e) The selection of topics to be included
- (f) Location and sequence of international migration items on the census form
- (g) Formulating questions on topics related to international migration
- (h) The use of pre-coded response categories
- (i) Processing and dissemination of the data and meta data

(a) Who is included in the national census

19. Censuses may aim at counting the population present or the usual resident population. In the first approach, all persons physically present in the country at the census reference date are enumerated. In the second approach, the count includes only the usual residents of the country in question, some of whom may not be physically present in the country at the reference date. Straightforward as these concepts may seem, strict conformity to either is rare. In particular, there are groups of persons (and potential international migrants) that may be included or excluded from census counts on arbitrary grounds. For example, some censuses claiming to use the population present approach may nevertheless exclude foreign military and naval personnel or diplomatic personnel and their accompanying family members and servants present in the country, while at the same time including merchant seaman or fishermen outside the country at the time of enumeration. Censuses based on the usual residence approach may include groups of persons that do not strictly qualify as residents, such as citizens living abroad and short-term foreign workers in the country (Bilsborrow et al., 1997).

20. In most countries some subgroups of the population are subject to special treatment in the census. Practices differ among countries on the inclusion or exclusion of these subgroups.

The United Nations *Principles and Recommendations for Population and Housing Censuses, Rev. 2* (2008) has identified 15 such groups (see table 1). It will be noted that in most cases there is a dimension of mobility associated with these groups and several are of considerable relevance for measuring international migration. As Bilsborrow et al. (1997, 53) point out some of these groups which move between countries, often in a circular way, may be missed in the enumeration in both origin and destination countries. To enable meaningful use of data on international migration, treatment of these groups in the national census should be clearly documented.

Table 1: Population groups that require special attention in population censuses

(a)	Nomads;
(b)	Persons living in areas to which access is difficult;
(c)	Military, naval and diplomatic personnel and their families located outside the country;
(d)	Merchant seamen and fishermen resident in the country but at sea at the time of the census (including those who have no place of residence other than their quarters aboard ship);
(e)	Civilian residents temporarily in another country as seasonal workers;
(f)	Civilian residents who cross a frontier daily to work in another country;
(g)	Civilian residents other than those in groups (c), (e) or (f) who are working in another country;
(h)	Civilian residents other than those in groups (c), (d), (e) or (f) who are temporarily absent from the country;
(i)	Foreign military, naval and diplomatic personnel and their families located in the country;
(j)	Civilian foreigners temporarily in the country as seasonal workers;
(k)	Civilian foreigners who cross a frontier daily to work in the country;
(l)	Civilian foreigners other than those in groups (i), (j) or (k) who are working in the country;
(m)	Civilian foreigners other than those in groups (i) (j), (k) or (l) who are in the country temporarily;
(n)	Refugees in camps;
(o)	Transients on ships in harbour at the time of the census.

Source: United Nations, *Principles and Recommendations for Population and Housing Censuses, Rev. 2*

21. It should be noted that the approach used for enumerating the population will affect the degree to which international migrants are enumerated. When the *usual resident* approach is used, the enumerated population provides a useful base from which long-term migrants as defined in Part I may be identified, visitors and other persons staying in the country on a short-term basis having been excluded from the enumeration. On the other hand, the *population present* provides a population base that would encompass different types of movers present in the country at the time of enumeration, including visitors, temporary and short-term movers, circular migrants and others, many of whom would not be counted in the former approach. Differentiating between these types of movers in a census and the usual resident population, however, is generally not possible, unless an additional question on usual residence is asked. Distinguishing among the different types of movers is even less likely in a population census as it would entail a set of questions that is not practical in a census.

22. When nations experience significant undocumented migration it is desirable that undocumented migrants be included in the census enumeration to provide the basis for estimating, in combination with other data sources, the magnitude of such migration. In the United States, for example, an estimate of the stock of “unauthorized residents” was constructed using the foreign-born population estimated from the American Community Survey and the legally resident population from the Department of Homeland Security administrative data using a residual method (Hofer, 2006).

23. Migrants with undocumented or ambiguous status within the country of destination may seek to avoid detection in the census. A publicity campaign bringing the message that clearly separates the census enumeration from any linkage with immigration authorities can allay fears that undocumented migrants may have of being detected if they participate in the census. It is crucial to give undocumented migrants the confidence to participate in the census.

(b) The use of sampling in the census

24. Some countries obtain information on certain topics for only a sample of the population enumerated in the census. In general, sampling may be usefully employed in collecting information on topics that need not be tabulated for small areas or small population subgroups. Topics that require some probing are candidates for the long form. The decision on questions relating to international (and internal, as they share some common questions) migration involves deciding which, if any, of the questions should be in the short form, and thus addressed to the whole population, and which in the long form, to be administered to a sample of the population. Such decision rests on many factors including the importance of internal and international migration in the country, and should be made with inputs from experts on internal and international migration and users of migration statistics, not just from the Government but from the research community, non-governmental institutions and special interest groups.

25. Sampling should usually be avoided, however, when the aim is to cover population groups that are small in relation to the country's population. International migrants usually constitute one such group. Nevertheless, in major receiving countries where international migrants constitute a sizeable proportion of the total population (over 5 per cent) and where census samples are also large (covering 10 or 20 per cent of the total population), information on the international migrant stock obtained from a census sample may be adequate to characterize international migrants. In analyzing the results, it is important nevertheless to recognize that the full population has not been covered and that the data are subject to sampling error.

26. Sampling, if used, is usually carried out at the data collection phase and more rarely at the processing stage of census results. Sampling at data collection stage is carried out in three, broadly, different ways: (a) a sample of persons (that is, only one in n persons in the census), (b) a sample of households (that is, all persons in one in m households), or (c) an area sample of some sort (that is, all households and unrelated individuals in one in k enumeration areas or census blocks). Although the latter type of sample is the simplest to administer in the field and may result in the greatest cost saving, it will usually yield estimates with the largest standard errors because of the intensity of clustering. With international migration, the last approach is also the least desirable, especially in situations of unbalanced geographical concentration of migrants.

27. Sampling in data processing has been used in the past to produce advance tabulations or to control the costs of the processing operation. With modern processing technology, there is rarely a strong rationale for the use of sampling in processing census data.

(c) Enumerating people in unconventional living situations

28. International migrants may live disproportionately in unconventional living situations, especially in the period immediately after arrival. They may be accommodated in barracks, dormitories or other workplace-related contexts. Other highly mobile individuals may live for short periods with relatives or friends or in boarding houses etc., moving about frequently. In countries with large migrant populations living in contexts such as these, it is crucial that they are reached and enumerated.

(d) The training of interviewers

29. Since censuses cover large populations and a wide range of topics, the likelihood of in-depth training of enumerators is less than for surveys in which the numbers of respondents and enumerators is much smaller. With the limited amount of topic-specific training possible for census enumerators, complex notes or long lectures should be avoided in favour of training focusing on practical and operational issues and the understanding of the questions that have been formulated.

30. For migration related questions, the training emphasis must be on asking the questions, understanding the major skip patterns and recording the answers properly and with the appropriate detail. Training has to be included on how to list all eligible household members, applying prompts and probes as necessary. Where absentee members are part of the enumeration, it is crucial that the enumerators have a full understanding of that concept and the criteria for inclusion of such members. Most of all, enumerators should have a full understanding of the enumeration approach, whether it is population present or usual resident population, and its implication for the enumeration of the population. Enumerators should also have thorough knowledge of how to treat the specific subgroups listed in table 1 above, and any other groups that may be of particular concern in their country.

(e) The selection of topics to be included

31. The United Nations *Principles and Recommendations for Population and Housing Censuses, Rev. 2* presents a list of internal and international migration topics that may be included in a census undertaking. Many of the topics listed under internal migration, for example place of birth or place of previous residence, are relevant for international migration when the place is outside the country of enumeration. Thus, for international migration, the following core topics listed in the UN Recommendations are relevant: (a) place of usual residence, (b) place of birth, (c) duration of residence, (d) place of previous residence, (e) place of residence at a specified date in the past, (f) citizenship, (g) year or period of arrival. Other topics that could provide additional information to statistics of international migration include language, ethnicity, religion and country of birth of parents. The latter are not considered core topics in the Principles and Recommendations.

32. Most population censuses will not cover all of the above-mentioned topics. For many countries the census is the major, if not the only, source of information on several important population characteristics, thus users of statistics and special interest groups often compete to have their topics of interest included in the census. International migration topics are therefore assessed in competition with other topics considered important in the country. In most countries, the topics related to international migration for which information is most frequently collected pertain to country of birth and country of citizenship. Topics for which information is collected mainly for studying internal migration are also useful for international migration. The latter include duration of residence, previous place (country) of residence and place (country) of

residence at a specified date in the past. The last two pieces of information are particularly useful when there is space for writing in the name of the country as opposed to just the entry 'abroad'.

33. A general principle for selecting among the topics for the census is whether other sources of statistics on the topic exist, and the reliability of their estimates. For example, countries with a reliable population register, register of foreigners and/or other administrative sources that can generate statistics on international migrants may limit the corresponding topics covered in their population census. This should be considered with the fact that the census collects a wide range of data on demographic and socio-economic characteristics not collected in other sources. An option when alternative sources are not available would be to leave some of the questions to be investigated on a sample basis, if the short and long forms approach is adopted in the census.

34. Another general consideration for selecting topics is to include only those for which experience and testing have demonstrated that a reasonable degree of accuracy can be assured with the resources available for the census operations. There is more experience and knowledge on topics that have traditionally been included in censuses, such as place of birth and country of citizenship. For new topics on which there is limited experience on the relevant questions to ask in order to ensure a reasonable degree of accuracy and quality of responses in censuses, more testing would be required to know whether it is worthwhile to include them in the basic census questionnaire.

35. In sum, when contemplating topics to be included, planners should be realistic and keep the limitations of the census in perspective. Topics that would require a complex sequence of questions are not suitable for censuses. For example, while the population census can be used effectively to derive the stock of foreign-born population, it can not detect the full range of the types of migrants and movers in a country.

(f) Location and sequence of international migration items on the census form

36. The position of questions within a census questionnaire and on a page should reflect their importance. Other things being equal, the later an item appears in a form or the lower it is on a page, the less attention it will be given and, consequently, the completeness and quality of responses will suffer. In many cases unfavourable positions for individual items cannot be avoided. Some items must appear later in the form than others. However, a variety of actions ranging from the design of the census form (for example, the use of arrows, different type faces, bolding, colour) to training of enumerators can be used to help overcome the potential drawback of an unfavourable location on the census form.

37. The sequence of census questions generally favours the series on usual residence, as questions on place of usual residence and duration of stay are fundamental to establishing whether a respondent is part of the usual resident population. For most countries, these questions as well as those on citizenship and place of birth are typically found early in the individual questionnaire and asked of all persons.

38. A related issue to the sequence of items on the census questionnaire is the use of "skips" in the form. Skips used to direct the flow of the census interview, whether the census is based on interview or self-enumeration approach, should be kept as simple as possible, with clear direction given in the form of arrows, instructions, or both on the correct path to follow.

(g) Formulating questions on topics related to international migration

39. In a census operation, it is not expected that enumerators and respondents know the concepts and definitions underlying the migration topics, especially when there is no agreement on the concepts even among data collectors in the country. Thus emphasis should be on formulating simple and clear questions based on the underlying concepts, without using or explaining the concept itself. Technical, long or complex words should be avoided. Such words as "international migrant" or "immigrant" should not be used in the questions or response categories as respondents are likely to interpret the terms differently. The questions should be put in language that operationalises the technical concepts, using words and terms that make sense to a broad range of respondents. Questions should be kept short.

40. A series of recommended questions on international migration for censuses are presented in the next chapter. The concepts associated with these questions are fairly straightforward but the wording of the questions is very important to minimise misunderstanding among respondents and enumerators. The most difficult concept to interpret is also the most fundamental - place or country of usual residence. This is the point at which the differentiation migrants and non-migrants is made.

(h) The use of pre-coded response categories

41. One approach that facilitates data capture is the provision of pre-coded response categories in the census schedules and questionnaires wherever possible. Pre-coded response categories have many advantages. As well as making processing easier they function as a guide to enumerators (or respondents) as to the type of responses needed or expected.

42. Pre-coding functions best when there are a relatively few relevant answers to a clear, precise question. The longer the list, the more crowded the questionnaire becomes, and the more difficult it is for the respondent to locate his or her answer. Yet many countries pre-code response categories for questions answerable by geographical place, for example place of birth, and as a result end up with a long list of place names that are difficult for a respondent to navigate.

43. A pre-coded list must cover all possible situations and it is usually best to allow for an "other, please specify _____" category which can help capture misunderstandings of the pre-coded alternatives as well as situations that are rare or otherwise not anticipated. A detrimental practice common in many censuses is to list selected regions or subregions at the lower end of the response categories after listing several individual countries, without allowance for writing in a country name. This practice should be avoided as it results in the loss of country detail that is not recoverable once data have been collected. If it is decided that countries of birth (or countries of citizenship) be combined into broad groups due to cost considerations, countries should use the standard regional and subregional classifications identified in *Standard Country or Area Codes for Statistical Use*.¹

(i) Processing and dissemination of the data and meta data

44. An important point to be emphasized is that detailed plans for data processing and tabulation, covering both timing and content, have to be made early in the planning of the

¹ United Nations, Standard Country and Area Codes for Statistical Use, Statistical Papers, No. 49, Rev.3 (ST/ESA/STAT/SER.M/49/Rev.3).

census, so that requirements of the tabulation are taken into account in the design of the questionnaire and the various stages of data processing.

45. A significant amount of information that is collected in the census can be lost in the coding stage, if responses to the question on country of birth and country of citizenship are grouped into broad groups during coding. This practice should be avoided.

46. Countries vary greatly with respect to the definitions, duration thresholds and other criteria they apply in distinguishing groups, such as international migrants, foreigners, refugees and asylum seekers, etc. The rules applied by countries on many aspects of international migration also vary, for example when recording or coding the citizenship of persons with multiple citizenships or of persons who are stateless. To ensure proper interpretation of data, it is important that countries include definitions and any other relevant information in the statistics they publish and disseminate. This is relevant not only regarding rules that are fixed at the data collection stage, but also at the data processing stage. An example of the latter is the use of sampling in data processing, in which case it is desirable to specify at the minimum the sampling fraction in the disseminated data.

CHAPTER 2. COLLECTING DATA ON STOCKS OF POPULATION RELATED TO IMMIGRATION

A. Who is counted in the census?

47. A population census is designed to gather information on all persons that constitute the population of the country. While the objective appears simple, achieving it is by no means simple. Depending on the policy of the country, persons belonging to certain population subgroups may or may not be enumerated in a census.² This has consequences for the total population count and impacts on statistics of international migration, as many of the subgroups that may not be enumerated are precisely those that are mobile or whose residency status in the country is not clearly defined. To properly interpret international migration statistics derived from the census, it is necessary to know the rules employed by the country in its census enumeration.

48. Most countries of the world adopt one of two approaches in the conduct of their census: a *population present* (also referred to as *de facto*) approach or a *usual residence* (also referred to as *de jure*) approach. In reporting population figures from their national censuses to the United Nations, countries indicated whether they adopted a *de jure* or *de facto* approach (United Nations, 2007b). The countries are listed in Annex 1 by the approach used in their census. Their numbers by region are summarised in table 2. It can be seen that almost two thirds of countries (149 out of 233) adopted a *de facto* approach for their censuses. The *de jure* approach is the more commonly used than the *de facto* approach only among countries of Europe.

Table 2: Number of countries or areas adopting a *de jure* or *de facto* approach in their population census enumeration in the 2000 round

Region	<i>De jure</i>	<i>De facto</i>	Sample Survey		Total
			<i>De jure</i>	<i>De facto</i>	
Africa	11	46			57
Central and North America	18	18			36
South America	2	12			14
Asia	15	34		1	50
Europe	31	19	1		51
Oceania	5	20			25
Total	82	149	1	1	233

Source: United Nations, 2007b

49. Strict conformity to either approach, however, is rare and exceptions can and do occur (see para. 19). In particular, the United Nations *Principles and Recommendations for Population and Housing Censuses Rev. 2* point to 15 distinct population subgroups (see table 1 in chapter 1) that are prone to such exception and on which countries differ as far as including or excluding those population groups in their census.

50. In most countries civilian foreigners working in the country are included in censuses, whether the censuses are carried out on a *population present* approach or a *usual residence* basis. Civilian foreigners who are not working and are only temporarily in the country tend to be included

² For a discussion on this, see chapter 1 ‘who is counted in the national census’ (paras. 19-23).

when a *population present* approach is followed and may or may not be included if the census is carried out on a *usual residence* basis. Military, naval or diplomatic personnel stationed outside the country are likely to be excluded except in some censuses using a *usual residence* approach. It is therefore possible that some groups may end up being excluded from the censuses of both countries of origin and destination (Bilsborrow et al., 1997).

B. Immigrant and related stocks

51. It is widely acknowledged that a census can not differentiate among the various types of movers that concern the State. However, the population census is the best source for collecting data on the immigrant stock and its characteristics. The key advantage of identifying migrant stock in censuses is that it is possible to cross tabulate migrant characteristics against the wide range of social, demographic and economic variables collected in the census enumeration, even for fairly small migrant groups in the country. Such an extent of information about migrants is rarely available from administrative data sources.

52. The collection of data related to immigration will be described in this chapter, and that related to emigration in chapter 3. The focus will be on questions used to identify the different types of population stocks, with examples from countries.

53. There are a number of stocks related to immigrant populations that can be detected in a census enumeration. The extent to which it is possible to measure these stocks will depend on the inclusion of a number of relevant questions in the census schedule. Identification of five of those population stocks in censuses will be considered in detail in the sections that follow.

- (a) Immigrant stock
- (b) The foreign-born population
- (c) The foreign population
- (d) Second generation migrants
- (e) Return migrants

(a) The immigrant stock

54. The stock of international migrants present in a country, (“immigrant stock”) is “the set of persons who have ever changed their country of usual residence, that is, persons who have spent at least one year of their life in a country outside of one in which they live at the time the data are gathered”. (See Part 1, chap. 3)

55. To measure the immigrant stock as defined, the crucial questions in a census are those that would first identify a person as a usual resident of the country, regardless of whether he or she is a citizen or not, and regardless of whether he or she was born inside or outside the country. For most population censuses, a question on place of usual residence is fundamental to identifying who is to be included in the enumeration and therefore the question is asked of all persons (insofar as the country uses the *usual residence* approach or supplements the *population present* approach with questions to capture usual residents). Following the UN recommendations, residence (being the sum of actual and intended residence) of at least a year in the country would have to be established³. Alternatively, a residence of more than six months within the past 12 months would suffice to qualify a person as usual resident in the country of enumeration (alternative recommendation in the UN *Principles and Recommendations*, Rev.2).

³ United Nations, *Principles and Recommendations for Population and Housing Censuses*, Rev.2.

56. Next, a set of questions is necessary to identify, within this group (usual residents), persons who have spent at least one year of their life outside of the country. Based on 159 national census questionnaires (from the 2000 round of censuses) reviewed, only two countries are seen to have included a question, asked of everyone, on whether the person had ever lived abroad *for at least one year*. The question formulations are given below:

Example 1:

9. Have you lived outside of [this country] for a continuous period of one year or more?
(Answer if aged 1 year or over and living in [this country])
1. Yes
 2. No
- If “Yes” write in the year of last taking up residence in [this country]
AND the country of last previous residence.

Example 2:

14. Permanent residence abroad
- (a) Did ever have his/her permanent residence (for more than 12 months) abroad?
1. Yes
 2. No → Question 15
- (b) In which country? _____
- (c) When did come to [this country] for permanent settlement?
Month _____ Year _____

Place of residence at a specified time in the past

57. In both examples, the first question was asked of all respondents. The responses to that question would yield total immigrant stock, although in the second example it appears to refer to a more restricted set of residence abroad. Both sets of questions also include a question on the year of taking up residence (or settling permanently) in the country to ascertain usual residence in the country. More importantly, information on the year of taking up residence allows differentiating recent immigrants from long-time immigrants, or making cross tabulations by number of years lived in the country. This feature is relevant to policymakers, as many of the needs, behaviour and characteristics of recent migrants are different from those of long-standing immigrants.

58. A direct question on ever living abroad for at least a year is not something that countries ask of all persons in a census, with only two countries having asked it. By comparison, many countries (88 out of 158) ask a question on place of residence at a specified time in the past, usually five years ago or one year ago (in some cases, both). Such question is included in the census mainly to study internal migration so that responses are recorded in terms of territorial divisions within the country, but most (81 countries) allow a foreign country to be specified if residence was abroad. Two examples illustrate how the question and response categories may be framed.

Example 1:

- One year ago, that is on 31 March 2001, you lived (choose one)
- at the address entered under question 2.
 - in the same locality, but at a different address.

- in another locality in [this country] (write in): locality _____ municipality _____
- in a foreign country (write in): country _____

Example 2:

Where was your usual place of residence 5 years ago (i.e. in 1995)?

[For children aged less than 5 years (i.e. born after 1995) record mother's usual residence at time of his/her birth]

1. This house as in Question K1
2. Different house (*Give full address*):
 - a. Name of Street / Housing Estate _____
 - b. Name of Town / Village _____
 - c. Mukim / District / Sub-District _____
 - d. Administrative District / Jajahan _____
 - e. State / Country _____

59. If data from the question on place of residence at a specified time in the past are tabulated for those who were living *abroad* at that time, the result would be the population who were living abroad at that time in the past (for example, five years ago). It is not known whether the person had lived there for at least one year. In addition, the question captures only residence abroad at one specified time in the past, not for the entire lifetime of the person. The information is therefore insufficient to determine if the individual fits the UN definition of international migrant.

Duration of residence

60. Some (28) countries collect information on duration of residence in combination with the place of previous residence. Like place of residence at a specified time in the past, this pair of questions is intended for detecting internal migration and has the same limitations as the former. In addition, this set of questions has another serious drawback for detecting lifetime immigrants. If a person who moved into the country of enumeration subsequently made an internal movement, his previous residence would be recorded as being the one within the country. He would not be recorded as an international migrant in the UN definition.

Summary

61. In summary, the stock of international migrants (international migrant stock) as defined in the UN *Recommendations* at all is not widely measured. The questions to be included in the census to identify them are not complex, as shown by the two countries that asked them. The conclusion therefore is that it is of little interest and practical use to countries.

(b) The stock of foreign-born population

62. As recognized in the UN *Recommendations on Statistics of International Migration, Rev. 1*, the need for information often relates not to the totality of international migrants as characterized by the immigrant stock defined above, but rather to other population groups that are of policy concern. The most important of these groups are the foreign-born population the non-citizens in the country.

63. At present, the foreign-born population, or the stock of foreign-born, is one of the most widely-used measures of migrant stock. The question used to identify the foreign-born population is place of birth. The United Nations recommends that a question on place of birth be asked of all persons in a census, first to distinguish between the native-born and the foreign-

born. For the foreign-born, it further recommends that the specific country of birth be recorded so as to permit the classification of the foreign-born population by country of birth.

64. Among all questions related to international migration, place of birth is the question most often used in censuses. As shown in figure 1, most countries of the world included a question on place of birth in the 2000 round of censuses. Table 3 shows that only in Asia where a quarter of countries do not include a birthplace question and Africa (a fifth) are there a large minority of countries with no place of birth question in their censuses.

Figure 1: Countries asking a question on place of birth in the 2000 round of population censuses



Source: United Nations Statistics Division Census database

Table 3: Number of countries by whether or not a question on of place of birth is included in the 2000 round of population censuses, by region

Region	Yes	No	Total
Asia	25	9	34
North and Central America	17	1	18
South America	14	1	15
Africa	20	5	25
Oceania	30	-	30
Europe	31	5	36
Total	137	21	158

Source: United Nations Statistics Division Census database

65. Questions in a census on place of birth take a number of forms, with the following three being typical:

(a) *Open ended, with space for specifying name if other district or other country*

Where is ...'s place of birth?

(Code must be encircled. If the place of birth is other district or other country the name must be specified)

1. Same Dist. →7
2. Other Dist.

(i) V.D.C.
(ii) Municipality

3. Other country

(b) *Simple choice*

Where was _____ born?

1. [This country] (go to Q.58)
2. Overseas
3. NS

(c) *Extended choice*

Where were you born?

1. Here
2. In another place in the country
 - City or locality
 - Province
 - Department

Chuquisaca	1
La Paz	2
Chochobamba	3
Oruro	4
Potosi	5
Tarija	6
Santa Cruz	7
Beni	8
Pando	9
3. Abroad (name of the country)

66. The questions are straightforward and similar: 'Where were you born?' or 'Where is ...'s place of birth?' The differences lie in the way the responses are captured. The preferable way to record the response is as in example (a), writing down the geographical division detail as instructed for within the country and, if born abroad, the name of the country. Giving only a dyad choice as illustrated in (b) above results in limited information and can result in deliberate misreporting (see para. 68 below). Using some pre-coding like (c) saves processing time and works best if the list is short and exhaustive. Otherwise, a category "Other, specify _____" should be added at the end to allow responses that are not on the list.

General data quality issues on country of birth

67. Country of birth is one of the most straightforward pieces of information to collect in a census, as theoretically each person has only one country of birth and it does not change over time. In practice, problems can occur when collecting data on place of birth. Some of the problems (Bilsborrow *et al* ,1997) are:

- Confusion arising from changes in national boundaries of countries
- Deliberate misreporting of country of birth
- High rate of non-response or unknown response

68. When the boundaries of a country change, the question arises as to whether the country of birth recorded should be the country that existed at the time of birth or the current country. For internal consistency and international comparability, the United Nations *Principles and Recommendations for Population and Housing Censuses, Rev. 2* recommends recording place of birth according to national boundaries existing at the time of the census.

69. Another problem that can occur when recording place of birth is deliberate misreporting by the respondent. Some of the foreign-born who have long lived in the country of enumeration may claim that they are native-born. The level of detail requested, the wording of the question used and the instructions given to enumerators may influence the extent of this problem. For example, it is less likely for a foreign-born person to claim that he or she is a native if the information sought is the exact province within the country of enumeration or the country of birth for those born abroad than if it is only the dyad, native vs. foreign-born. The use of specific instructions for enumerators regarding distinctions of particular relevance, such as noting the difference between Ireland and Northern Ireland, or among the succeeding States of the former USSR, have also proven to elicit information of better quality (Bilsborrow *et al*, 1997, 60).

70. In some countries, the level of non-response or the number of responses categorized as 'unknown' to the question on place of birth is large in comparison to the number of persons who declare they are foreign-born. In many cases, it is not differentiated whether persons with place of birth unknown were, in fact, born in the country of enumeration but did not know their province of birth or were persons born abroad who did not know their country of birth or included both types. One way of handling the cases of non-response is to prorate them according to the distribution of those who do provide information. Another is to assume that they are all native-born. In the United States, for example, during the processing of the 1960 census all those with place of birth not stated were assumed to be native-born unless their census report contained some information suggesting otherwise (for example, if the person reported the use of a language other than English at home). (Bilsborrow *et al*, 1997, 60-61)

Date of arrival

71. For data on place of birth to be more useful to policy makers in countries of immigration there needs to be a way of distinguishing between recent migrants and those of longstanding since most of the issues relating to adjustment occur in the early years of migration. To distinguish the more recent migrants from the totality of lifetime migrants, a question on date of arrival is required to determine the number of completed years between the time of arrival and the time of enumeration. This question, however, is not asked in many censuses (Figure 2). Whereas 137 of the 159 countries in the UN database have a birthplace question in their census, only 44 have a question on the year or date of arrival (table 4). It will be noted that most of the major migrant destination countries like the United States, Canada, Australia, New Zealand and Malaysia have included the question on year or date of arrival in their census.

Figure 2: Countries asking a question on year or date of arrival of foreign-born persons in the 2000 round of population censuses



Source: United Nations Statistics Division Census Database

72. The importance of the date of arrival question in censuses is recommended by the United Nations and must be stressed. Without information on date of arrival, it would not be possible to separate the foreign-born persons who have been in the country for many years from those who arrived recently. This limits the use of the resulting data.

Table 4: Number of countries by whether or not a question on of date of arrival of foreign-born persons is included in the 2000 round of population censuses, by region

Region	Yes	No	Total
Asia	5	29	34
North and Central America	12	6	18
South America	5	10	15
Africa	0	26	26
Oceania	10	20	30
Europe	12	24	36
Total	44	115	159

Source: United Nations Statistics Division Census Database

73. Data on date of arrival in the country can be used with the respondent’s date of birth to calculate his or her age at arrival in the country. The information on age at immigration can be used to study the differences in integration and migration outcome of those who entered the country at an early age versus those who entered as adults.

74. When the question on year or date of arrival is asked, serious attention should be paid on the way it is asked in order to elicit the most useful information for policy. There are large variations in the way countries asked the question on year or date of arrival, as seen below. Some countries ask about first arrival; others, the latest arrival; and some, the date that appears to signify the onset of some kind of legal residence. Still others make no explicit mention of first or last arrival, or of legality. The way the question is phrased and to what subgroup within the population of foreign-born it is asked are important considerations as they clearly have very different implications on the resulting data gathered.

(a) *Examples of the use of first arrival:*

- “In what year did the person first arrive in [this country] to live here for one year or more?”
- “Year of first arrival in [this country] (for those born outside of [this country])”

(b) *Examples of the use of last arrival:*

- “When did you come to live for the last time in [this country]?”
- “If you were born outside of [this country], in what year did you settle for the last time in [this country]?”

(c) *Examples of the use of dates that carry legal significance:*

- “In what year did this person first become a landed immigrant?”
- “In what year did you become a resident of [this country]?”

(d) *Examples with no explicit mention of first or last arrival, or of legality:*

- “How many years have you lived in [this country]?”
- “Indicate the year in which you moved to [this country].”
- “When did you come to live in [this country]?”

75. The UN *Principles and Recommendations, Rev. 2*, left the choice of using date of either the first arrival or the most recent arrival to the country, depending on their information needs. The question formulation in the first example in 73 (a) is more specific than most of the others, with a lower possibility of numerous interpretations. In the examples in 73 (c), the question was asked only of certain foreign-born persons, for example it was asked only of ‘landed immigrants’ or residents. The choice depends to a large extent on the policy questions most important to the country. Whichever choice a country makes, the UN recommends that information on both the calendar year and month of arrival be collected to provide the flexibility of classifying foreign-born persons by period of arrival.

76. While information on time since arrival can also be collected in terms of number of years that have elapsed since arrival or duration of stay or residence in the country (first example in 72d), the use of such a question is not recommended because it is likely to yield less accurate information.⁴

(c) The stock of foreigners

77. Another population stock widely used for the study of international migration is the stock of foreigners (or non-citizens). To obtain the stock of foreigners from a census, the relevant question to ask is country of citizenship. It is recommended that country of citizenship

⁴ United Nations, *Principles and Recommendations for Population and Housing Censuses, Rev. 2*

be recorded as such, and not as an adjective, since some of those adjectives are the same as those used for ethnic groups.⁵

78. The majority of countries ask a question on country of citizenship in their census, although not as many as those that ask the question on country of birth. Of the 159 countries in the United Nations database on the 2000 round of censuses, 120 included questions on citizenship or nationality (table 5). Figure 3 shows the countries that include this question in the 2000 round of censuses. In the Americas half of the countries do not have a citizenship question. Two of the world's largest nations, China and India, also do not have a question on citizenship. Most of the main migrant destination countries in Europe, North America and Oceania have a citizenship question, as do most countries in Africa.

Figure 3: Countries which included a citizenship/nationality question in the 2000 round of censuses



Source: United Nations Statistics Division Census Database

Table 5: Number of countries by whether or not a question on citizenship/nationality is included in the 2000 round of population censuses, by region

Region	Yes	No	Total
Asia	26	8	34
North and Central America	9	9	18
South America	7	8	15
Africa	24	2	26

⁵ Ibid.

Oceania	24	6	30
Europe	30	6	36
Total	120	39	159

Source: United Nations Statistics Division Census database

79. There is wide variation among countries in the way in which the question on citizenship is asked and in the degree of response space. Some countries ask for the specific country of citizenship to be written in (unless country of enumeration), while others offer a pre-coded set of countries and regions. Thus there are two general forms:

(a) *Open-ended:*

22. Citizenship

- [This country]

- Other (state) _____

- Without citizenship

(b) *Pre-coded: individual countries, regions and subregions*

B7. What is (name)'s citizenship?

140 Namibian

141 Angola

142 Botswana

143 RSA

144 Zambia

145 Zimbabwe

146 Other SADC countries

147 Other African countries

148 European countries

149 American countries

150 Asian and Oceanic countries

151 Other countries

999 Don't know

80. Example 78 (b) illustrates the case of a pre-coded list with the category "other countries" that does not allow for specification of country name. Such practice should be avoided as it results in the loss of country detail that is not recoverable once data have been collected. (See also paragraph 43.)

Stateless persons

81. Some countries include a category "stateless" or "without citizenship" in the pre-coded responses (see example 78 (a) above) to the question on country of citizenship to ensure that this group of persons is categorized correctly. This is good practice, in view of the increased attention to prevent and reduce statelessness. When data on stateless persons are collected, a category of stateless persons should also be presented in the tabulations.

The issue of naturalization

82. For countries where the population includes a significant proportion of naturalized citizens, it may be useful to collect data on citizenship that would permit classification of the population into (a) citizens by birth, (b) citizens by naturalization and (c) foreigners. It may also be useful to ask additional questions on previous citizenship, method of acquisition of citizenship, and year of naturalization (UN Principles and Recommendations).

83. In the 2000 round of censuses, twenty-four countries included a question or questions to allow distinction between citizens by birth and citizens by naturalization. (Of those 24, eleven are France, the United States and the overseas territories of each.) There are two general ways to obtain the information on naturalization in censuses. The first is to introduce an additional question on the method by which citizenship has been acquired, and the second is to incorporate naturalization as one of the response choices in the citizenship question.

84. With an additional question, it is possible to inquire in more detail about the method of citizenship acquisition. The number and choice of methods of acquisition to include in the response categories depend on the information needs of the country as well as the relative prevalence of the methods of citizenship acquisition. When the information is obtained by incorporating naturalization as a response choice in the question of country of citizenship, it is best to keep it simple, as in (b) below.

(a) Through an additional question:

- If you are a [from this country] citizen, by what method did you acquire citizenship?
1. Born to [from this country] parents
 2. Born in [this country] to non-[from this country] parents
 3. Adopted by [from this country]
 4. Married to [from this country]
 5. Other naturalisation

(If citizenship is [this country])
 Indicate whether the person has [from this country] citizenship
 - From birth.....1
 - Acquired (e.g. by marriage or naturalization) 2

(b) Incorporated in response choices:

- What is your nationality?
1. [from this country] by birth
 2. [from this country] by naturalization
 3. Other (specify) _____

The issue of multiple citizenship

85. As international migration becomes more complex and there is increased circularity in international movement, attachment to multiple countries is becoming more common. With expanding international marriage and other elements of globalisation there has been increased prevalence of multiple citizenship. Annex 2 shows the countries which currently allow or encourage multiple citizenship. There remains, however, some countries which prohibit dual or multiple citizenship (annex 3). It should be noted that annexes 2 and 3 are not comprehensive or definite, as countries are changing their citizenship rules in response to globalisation and the speed of national diaspora.

86. The United Nations recognizes the existence of multiple citizenship and recommends, for countries where there is need for this information, the collection of all citizenships held, including by their own nationals holding multiple citizenship. If the information is published, readers should be made aware of the possibility of counting people with multiple citizenship more than once and how it affects the marginal totals in the table.

87. In some countries, the citizenship question allows the recording of a second country in the case of dual citizenship of its citizens by providing a space for entering the name of the other country of citizenship, as in example (a) below. There is typically no allowance for writing in more than one country of citizenship unless one of the countries is the country of enumeration.

88. In other countries, there is no allowance for the entry of a second citizenship, and a person whose dual citizenship includes that of the country of enumeration is instructed to enter the country of enumeration as his or her country of citizenship (see example (b) below). This practice will not be able to detect dual citizenship holders. Countries should weigh the importance of the information lost against cost savings in deciding whether and how to collect data on dual and multiple citizenships in their census.

(a) Allows recording of a second country

You are a citizen of which country?

(Only one answer is permitted. State the country with its present official name. Case 5 relates to separation, split or unification of countries.)

1. [this country]
2. [this country] and other → state _____
3. Other country → state _____
4. Without citizenship
5. Unspecified citizenship

(b) Does not allow recording of dual citizenship

Indicate the citizenship (Anyone with another citizenship, in addition to [this country], must mark only box 1 “[from this country]”).

- [from this country].....1
- Foreign.....2
- Stateless.....3

General data quality issues on citizenship

89. A data quality issue on citizenship relates to the case of persons whose citizenship has changed recently as a result of territorial changes or of the emergence of newly independent States. The reliability of reported citizenship of the persons in those situations may be doubtful. Where this is the case, notations indicative of these possible causes of misstatements should accompany tabulations on citizenship.

90. Some doubt is also cast on the reliability of reported citizenship in the case of long-term foreign residents of a country, some of whom may declare themselves as citizens. Because censuses rely on self-reporting, the information on citizenship reported by respondents is not verified by legal documents.

91. There can be confusion about the citizenship of people born in other countries, stateless persons, and persons with multiple citizenship when instructions on how to deal with them are not communicated clearly.

(d) The stock of ‘second generation migrants’

92. There is growing interest in the economic, cultural and social experience of the children of immigrants who are born in the destination countries, the so-called ‘second generation migrants’. As with the case of the stock of foreigners, persons in this group are not

international migrants by definition, unless they left their country of birth for a period of at least 12 months (emigrated) and subsequently returned to live in it (or intend to live in it) for at least 12 months.

93. As defined in Part 1 chapter 3, the stock of second generation migrants consists of persons born in the country whose parents were both born abroad. In studying the integration processes and outcomes of immigrants and their descendants, there is often a strong interest in comparing second generation migrants with first generation migrants, as well as with the native-born. The identification of second generation migrants (and first generation migrants) requires that questions be asked on the place of birth of each respondent as well as place of birth of his or her parents. The decision to collect the information on place of birth of parents in a census should take into consideration the suitability and sensitivity of asking such a question among the country's population, in addition to the information needs of the country.

94. In the 2000 round of censuses, the inclusion of the question on place of birth of parents in the census was not common. Of the 159 countries examined, only 12 (half of which are current or former U.S. territories) asked this question. Australia and Canada are among the bigger immigration countries to include this question (figure 4).

Figure 4: Countries asking questions on place of birth of parents in the 2000 round of population censuses



Source: United Nations Statistics Division Census Database

95. Once it is decided to include the question on place of birth of parents in a census, the formulation of the question is straightforward. It is asked for each parent separately. Most countries ask for the name of the country of birth (as in example (a) below), but it is not always the case (example (b) below).

(a) With detail on foreign country of birth:

Where was each of this person's parents born?

[Mark "x" or specify country according to present boundaries.]

(a) Father

- Born in [this country]

- Born outside [this country]

Specify country _____

(b) Mother

- Born in [this country]

- Born outside [this country]

Specify country _____

(b) No detail on foreign country of birth:

Was the person's father born in [this country] or overseas?

- [this country]

- Overseas

Was the person's mother born in [this country] or overseas?

- [this country]

- Overseas

(e) The stock of return migrants

96. In the migration and development literature there is increasing significance placed on return migration as being a factor in enhancing the development of origin countries. Yet, very few countries have included questions in their censuses to detect return migrants (figure 5). Only around a fifth of countries include questions which allow identification of their citizens who had returned from living abroad, in this case by asking if the person has ever lived in another country. Table 6 shows that most of these countries are in Europe or Central America. They are for the most part eastern European and Caribbean countries.

Figure 5: Countries that asked a question on ever lived in another country in the 2000 round of population censuses



Source: United Nations Statistics Division Census Database

Table 6: Number of countries by whether or not a question on ‘ever lived in another country’ is included in the 2000 round of population censuses, by region

Region	Yes	No	Total
Asia	6	28	34
Central and North America	10	8	18
South America	3	12	15
Africa	3	22	25
Oceania	1	29	30
Europe	11	25	36
Total	34	124	158

Source: United Nations Statistics Division Census Database

97. There is considerable variety in the way the questions on return migration are asked as indicated by the examples that follow. In the first example, from the Caribbean region, the question is asked only of native-born persons. This tends to be the case in the region: six out of the eight countries or areas in the Caribbean that asked questions on return migrants asked them of native-born persons only.

- Example 1 (from the Caribbean):*
 [asked of native-born persons only]
 Has ... ever lived in another country?
1. Yes
 2. No (Go to Q. 66)
 3. NS

Which country did ... live in most recently?

1. St. Martin
2. Santo Domingo
3. US Virgin Islands
4. B.V.I.
5. Other Caribbean
6. Asia
7. United States
8. Canada
9. United Kingdom
10. Other – specify _____
11. NS

In what year did ... return to live in [this country]? _____

Why did ... come/return to [this country]?

1. Home
2. Family here
3. Deported
4. Retired
5. Build a house
6. Start a business
7. Completed studies
8. Work
9. Other – specify

Example 2 (from Oceania):

Has the person ever lived overseas for more than 6 months?

- [1] Yes (*Continue with question*)
[2] No → Go to Q12

If Yes – where

- [11] New Zealand
[12] Samoa
[13] Fiji
[14] Other Pacific Islands
[15] Australia
[16] Other

Example 3 (from Europe):

- Is this person a returned migrant? Enter 1 = yes, 2 = no

- If this person is a returned migrant, give the year in which she/he returned permanently to [this country].

- Country from which migrant returned (Provide the information requested in this section by choosing any one of the following alternatives):

- 1 = Australia
- 2 = America (USA)
- 3 = Canada
- 4 = United Kingdom
- 5 = Italy
- 6 = France
- 7 = Germany
- 8 = Other European country

9 = Other country

98. As shown by just the three examples, the type and wording of the questions can vary greatly. There are many possible formulations, but the most important considerations when designing the questions are that they are able to answer the policy questions, and that the definition of return migrant is clear and unambiguous. At the minimum, qualifications such as the length of absence should be included in the question. Countries are known to specify durations as short as 6 months (example 2) or as long as five years. The subset of the population to be asked the question is also to be determined: citizens or native-born or all persons.

99. One question often included in the set of questions identifying return migrants is the one asking the year the person returned to the live in country. This is seen in the first and third examples above. Establishing when migrants returned allows differentiation of recent returnees from those who returned a longer time ago.

100. It is possible to some extent to capture return migrants through one of the questions already in the census for other purposes. The question on the place of residence five years ago (see paras. 58-59) may be combined with the question on either country of citizenship or country of birth to identify recent return migrants. However this would clearly be only a subset of return migrants.

CHAPTER 3 COLLECTING DATA ON STOCKS OF POPULATION RELATED TO EMIGRATION

A. Current practices in collecting information on emigrants through population censuses

101. Thus far the migration data collection considered has been discussed in relation to immigration. There has been a strong focus in migration measurement, research and policy for immigration. Emigration remains neglected for a number of reasons:

- Firstly, from the perspective of census taking measurement of emigration is problematical since by definition emigrants are not going to be in the country at the time of enumeration.
- Secondly, while emigration occurs in all nations it is most significant in less developed nations while immigration is most usually more marked in more developed nations.
- Thirdly, more nations have policies relating to immigration than have emigration policies.

102. By examining the 2000 round of census questionnaires, it is seen that quite a number of countries asked questions that are related to household members staying abroad. Although the information is lacking on whether countries indeed used these questions to compile data on emigration and how they used them, to some extent the types of questions appearing on national census questionnaires can be exploited to compile population stocks related to emigration.

103. The major way in which emigration has been detected in censuses is through questions concerning usual household members who were not at home on the day of the census. Information is collected about them from other household members who were present. It is quite common during a census that the household head is asked to list all household members and categorise them into groups such as: permanent present, temporary present and temporary absent. Although the main purpose for such practice is for the compilation of total population in the country, it is however sometimes possible to identify household members who are emigrants if additional questions are asked about those “temporary absent”, such as the place they are living in and the duration of their absence, as illustrated in the following example:

Example 1:

List of residents of the dwelling by households

- 8. Temporarily absent
- 9. Temporarily present

Duration and cause of temporary departure/arrival of persons

- Temporarily absent/present person's No of order (No. from the list of residents)
- Duration
 - Up to one number of month, months
- Cause of temporary arrival or temporary departure
 - studies
 - conscriptio
 - work

- other
- Abroad/from abroad
- Indicate the country

104. Another way of asking the questions that can be used to identify emigrants is to ask directly whether there is any household member who has been abroad for more than a certain period of time. If for example a one-year criterion is used, the persons identified through this question can provide some insights on the emigrants (abroad for at least 12 months according to our definition). A few countries approached the issue using this method, among them is the following example:

Example 2:

Members of the household that are absent for more than 1 year (abroad)

01. No
02. Name
03. Surname
04. Father's name
05. Date of birth
dd-mm-yyyy
06. Sex
1=M, 2=F
07. Relationship to the reference person
09. Registered in the civil registration office of
District
Town/Village
10. Country

105. There are also countries that ask the number of household members who went abroad in the last X years. When such information is collected, some information on the emigration flow within the last X years can be obtained. More importantly, it is possible to obtain information on more recent emigrants if additional information is collected on how long these emigrants have left the country so temporary absence from the country is excluded. In the following example, year of departure is asked of all household members who went to live abroad permanently in the past ten years. In fact, since the word "permanently" is used here, it already hinted that these people should be someone who went abroad for longer time.

Example 3:

- 3.1 Has anybody from this household gone to live abroad permanently in the past ten (10) years, i.e. between 1990 and May 12 of this year?
- 3.2 How many persons?
- 3.3 Person 1
 - Sex
 1. Male
 2. Female
 - Education level completed at departure
 1. None
 2. Primary
 3. Secondary
 4. Higher than Secondary

- 5. Don't know/Not Stated
- Year of Departure
- Age at Departure
- Occupation at Departure
- Country Migrated to
 1. U.S.A
 2. U.K.
 3. Canada
 4. Mexico
 5. Central America
 6. West Indies
 7. Other
 8. Don't Know
- 9. Not Stated

106. There are several countries that have a separate questionnaire for emigrants and detailed socioeconomic characteristics, such as education attainment, occupation, age at departure from the country and so on, are collected. It is not clear from the questionnaire how emigrants are defined by these countries but it is nevertheless an attempt from countries' perspective to try to capture more information on emigration through population censuses.

107. All of the practices that are described above, however, can only provide some insight on emigration from a country. One has to be aware of the fact that from the perspective of census taking measurement of emigration is problematical since by definition emigrants are not going to be in the country at the time of enumeration. The picture of emigration obtained from asking questions to household members left in the country is not complete or sometimes distorted, for the reasons that will be discussed in the next section.

B. The problem of measuring emigration through population censuses

108. From the perspective of national census taking, emigrants are demographically similar to deaths in that information on the people involved cannot be obtained directly from them because they are not living within national boundaries at the time the census is taken. In the case of both, information can be obtained directly from other household members still residing in the country but this will not obtain information on all emigration or all mortality. Hence there are no questions in a national census which allow us to identify the stock of emigrants who have left that country. The most that can be achieved is a partial picture.

109. First of all for emigrants to be recorded in the census, there must be someone left behind in the country to report them. In cases when the entire household emigrated, which is often the case for long-term or permanent emigration, there is nobody left behind to report the emigration.

110. Even when there is someone staying in the country to report those who left, the persons being reported must be considered as still "belonging" in some ill-defined way to the household enumerated and as being abroad for a period of time. The meaning of "belonging" is rather unclear or at least not stated clearly in the census. For some countries, "household members" who are abroad should be recorded. For some it is the "usual residents of the household" without explaining the meaning of "usual residents". Some used the word "permanent household

members” while at the same time asking whether there is any of those members left the country in the last five years and have not returned.

111. In summary, the attempt to count the number of persons who, though still belonging in some way to the population being enumerated, have been abroad for some time, have important drawbacks and need to be used with caution.

C. Alternative ways to measure emigration through population census

Residence of children

112. There has been a robust methodology for indirectly estimating emigration using census data which has been available for more than two decades (IUSSP 1981). These methods arose out of the substantial literature which has developed in demography an indirect estimation of mortality in countries with poor death registration systems.

113. The first approach is based on asking the adult female population of a country a question about the number of surviving children who currently reside outside of the country. Somoza (1981a, 7) argues that this is a reasonable approach since most recent emigrants are young and their mothers are likely to still be alive to report on them. Moreover there is only one possible informant. The argument is that questions which are often included in censuses to estimate mortality can be modified to estimate emigration as well.

114. The conventional question asks all adult women how many children they had ever borne and also how many survived. For the estimation of emigration the surviving children need to be grouped into three separate categories according to their whereabouts at the time of the census – in the country of census enumeration, abroad and unknown. Each category of children needs to be classified by sex and the question should be asked to all female population age of 15 years and over.

115. Then on the basis of the number of children living abroad classified by sex, and age of mother, it is possible to estimate the total number of persons living abroad by estimating in addition two categories of emigrants: persons who are abroad but whose mother is dead and cannot therefore report their absence from the country, and persons who do not have a mother to report them because the mother herself is an emigrant. The estimation is straightforward if maternal orphanhood information is also available.

116. One of the major advantages of the approach based on the residence of children is that it relies on data that reflect the demographic ties between individuals rather than socio-economic ties (such as “household membership”). The estimation methods used can therefore be based on demographic models that are amenable to testing. Consequently, although the approach proposed still needs to be tried in a wider variety of contexts, it represents a clear advance over the other approaches described in Section A of this Chapter, which are marred by poorly defined concepts unlikely to yield accurate measures of any component of the emigrant stock.

Residence of siblings

117. The second indirect approach relies on data on the place of residence of the siblings of all persons enumerated. Thus, for every enumerated person one needs to record the number of brothers and sisters (reported separately) who live in the country of enumeration and the number

of brothers and sisters who live abroad (again reported separately). The brothers and sisters of interest are those who have the same mother as the enumerated person. Ideally, reports on numbers of siblings should not include the person enumerated. To facilitate data collection, however, enumerators may be instructed to include the person enumerated as a sibling living in the country. Such practice ensures that the reports corresponding to different siblings living in the same household are the same in terms of numbers of brothers and sisters and their distribution by country of residence.

118. Once the data are gathered, a distribution of number of persons enumerated according to their own age, the number of same sex siblings present in the country, and the number of same sex siblings abroad can be derived. On the basis of such data and using demographic models, it is possible to estimate not only the total number of emigrants from the country but also their distribution by age and sex. Although the estimation method available has been proved to be fairly robust to deviations from the basic assumptions underlying it, it has not been recommended for use in censuses because of the complications involved in gathering the data that it relies upon. Indeed, experience regarding the gathering of information on residence of siblings in demographic surveys has shown that, unless enumerators are well trained, it is not always easy to ensure adherence to rules regarding the inclusion of the respondent in (or the exclusion from) the sibling count. Consequently, serious biases often affect the basic data. Furthermore, the information on residence of siblings has no other use for demographic estimation, so the added cost of gathering it in censuses cannot be fully justified. (Bilsborrow et al. 1997)

Using data from receiving countries

119. One of the major characteristics of international migration data – both stock and flow data – is that it is strongly biased toward immigration rather than emigration. As a result there is less research and policy relevant data relating to emigration. In the case of flow statistics, although most countries collect detailed information on people entering their country most do not collect details of the numbers and characteristics of those leaving. Hence countries like the United States find it necessary to estimate levels of emigration (Mulder et al., 2002; Gibbs et al., 2001). Only a few countries collect information from all international departures. Australia is one of these countries and many insights have been gained from analyses of those data (Hugo et al., 2001, 2003; Hugo, 2006a). This failure to collect emigration flow data is added to the fact that censuses are limited in their ability to measure stocks of emigrants.

120. Accordingly this chapter proposes an approach of cooperation between countries so that destination countries provide census data on the immigrants in their countries to the origin countries that those immigrants have emigrated from. This is by no means a new approach. It has been used extensively by the Latin American Demographic Centres (CELADE) with its research on International Migration in Latin America (IMILA) project. There are however some limitations of such practice as identified by Somoza (1981a, 3-4):

- Information on emigrants cannot be obtained from all receiving countries, but only from those that have held a census and separately tabulated individuals originating from the country under considerations.
- The information that can be obtained from receiving countries refers to their census years, which do not necessarily correspond as would be desirable, with the census data of the country under consideration.

- Information as required by sex and age is seldom available, since countries usually publish global data on the immigrant population according to country of birth.
- Finally, and this limitation may be the most important, the census information gathered in the receiving countries undoubtedly underestimates the real size of the emigrant population, since it may be assumed that this group includes many individuals whose presence in the receiving country is illegal. It is generally believed that such emigrants often conceal their real origin by declaring in the census that their place of birth is the receiving country.

121. The barriers identified more than two decades ago remain of significance; however with increasing interest in international cooperation, there is a reason to hope that its potential with respect to measuring emigration will improve. However the bringing together of immigration data should not be a substitute for increasing efforts to include emigration questions in censuses as discussed earlier. It should be a supplement to those efforts.

122. The proposed approach here is for countries to provide their data on immigration to the countries from which these immigrants originate. Countries can thus assemble each of the sets of census data from each of the destination countries to which their nationals have emigrated. Thereby they can synthesise a census of emigrants to provide a snapshot picture of their emigrants at around the same time that their own national census provides a picture of their resident national populations.

123. Although such approach may impose some burdens on the receiving countries involved in the data exchange, it brings benefits to both parties – the sending and receiving countries. The data compiled by the receiving countries can be used within to analyse their immigrant population. In addition, even high immigration countries have significant emigration. Hence they will benefit from the information they obtain from the countries of destination of their own emigrants.

124. During the data exchange, data compiled by the receiving countries can be based on the country of birth or citizenship variables. However one has to be aware that when citizenship data are used, dual citizenship could become a complicating factor. A citizen of the sending country might also be citizen of the receiving countries and therefore this person will not be included in the data on foreigners.

125. Receiving countries need to make available separate data sets for each country of origin. It is crucial that the data are available by individual country for censuses of emigrants for separate countries to be compiled. It may be that a minimum size of population needs to be specified for the full data set to be provided. However for the actual numbers these should be provided for all country of birth groups.

126. Breakdown of the data for exchange based on duration of residence in the receiving countries is also important. In addition, certain socio-economic characteristics of migrants are also crucial, such as sex, age, level of qualifications, labour force status, occupation, and household or family structure.

CHAPTER 4. RECOMMENDED QUESTIONS AND TABULATIONS FOR CENSUSES

A. Questions for identifying immigrants

Core questions

127. Citizenship and place of birth questions are important questions in the census for studying international migration. They potentially allow certain components of the immigrant stock in the country at the time of the census to be identified and thus facilitate cross-tabulations by an array of relevant variables – age, sex, occupation, education, etc-- for citizens and foreigners.

128. Equally crucial is a question which indicates the length of time that migrants have been in the country. This is fundamental because the overwhelming evidence from the literature is that the key period regarding the adjustment of migrants to local labour and housing markets and society more generally is during the initial period of settlement. This dimension is best captured by asking a question on date of arrival question to all persons who are foreign-born. Such a question is mandatory for monitoring the adjustment of migrant groups, as it allows a fundamental distinction between recent and longstanding migrant groups.

129. The recommendation is that the following three questions:

- country of birth
- country of citizenship
- year or date of arrival (of foreign-born)

should be regarded as core for inclusion in national censuses to detect immigration. Models are provided later in the chapter.

Other questions

130. A question on place of residence five years ago is often used for collecting data on internal migration and should be included in the census for this reason alone. However this information is also useful for international migration, if foreign countries are coded using the same country classification used for place of birth. This information serves two purposes:

- Firstly it provides an important benchmark to examine immigration over the previous period. Such analysis can be joined with border or other administrative statistics to provide a comprehensive picture of the dynamics of contemporary migration. Moreover it can be used in the estimation of undocumented migration (Hoefer, 2006).
- Secondly it will allow the detection of return migration to some extent, since citizens who were overseas five years ago but are usual residents in their home country at the time of the census are return migrants.

131. There are in addition a number of questions relating to immigration which are of somewhat less general importance than the three recommended above. Nevertheless they will be important for many countries, especially those which are experiencing a significant level of immigration. In particular questions which attempt to identify second and later generation migrants are of particular significance for some nations where there have been longstanding flows of migrants. Two types of questions are of relevance.

132. Firstly, questions on birthplace of parents are of considerable utility in identifying the crucial second generation. Such questions in Canada and Australia have been very effective in identifying this group and demonstrating the success of second generations compared to their respective first generation migrants (Khoo et al., 2002).

133. Secondly, increasing experience is being gained in the application of ancestry and/or ethnicity questions. Of course not all ethnic diversity in a country is attributable to contemporary migration. Some countries have a large number of ethnic groups of longstanding and there is a high degree of ethnic diversity in the national population. Nevertheless such questions can be useful in establishing the dimensions of some significant migrant-origin populations that are not differentiated by the questions discussed so far. These questions will be of particular utility in countries which have adopted multiculturalism models and wish to identify the size and characteristics of particular migrant origin groups in their societies in order to better target and pursue multicultural policies.

134. A range of other questions relating to migrants have been included in population censuses. Some of the most useful of questions relate to language. Language is of crucial significance in migration – it can strongly impact upon ability to interact with the destination society, participate in labour and housing markets as well as being crucially significant in identity and identification with the origin country. Accordingly it is useful for countries with substantial numbers of immigrants to include two types of language questions:

- One which asks the usual language spoken in the home of the immigrant.
- Another which asks about the ability of the migrant to speak the dominant language(s) in the destination.

While these questions are of considerable significance to study of the adjustment of migrants and they are considered important for destination countries, they are secondary priority because they will be less useful in countries with low levels of immigration.

135. A few countries have questions on reasons for migration. Such questions, while important for understanding the dynamics of migration are more appropriate to surveys than censuses. The decision to migrate is invariably a complex and multifaceted one. A census question is unlikely to elicit the type of detail needed to shed light on that process. Answers would undoubtedly be restricted to single responses or even if multiple responses were permitted they will likely be vague categories like employment, education, marriage, etc. It is not recommended that such questions be included in population censuses.

B. Questions for identifying immigrants

136. Thus far the questions recommended relate to the identification of immigrants. However all countries of the world experience emigration as well as immigration and this is especially pronounced in less developed countries. It was demonstrated in chapter 3 that very few countries have attempted to use their censuses to research emigration. Thus few countries have any clear indication of the size, let alone the characteristics, and distribution, of their emigrants.

137. From the perspective of national census taking, emigrants are demographically similar to deaths in that information on the people involved cannot be obtained directly from them because they are not living within national boundaries at the time the census is taken. In the case of both, information can be obtained directly from other family members still residing in

the country but this will not obtain information on all emigration or all mortality. Hence there are no census questions in a national census which allow us to identify the stock of emigrants who have left that country. The most that can be achieved is a partial picture, but as was shown in Chapter 3 there has been a robust methodology for indirectly estimating emigration using census data which has been available for more than two decades (IUSSP 1981).

138. The IUSSP (1981) volume has indicated that questions which have been developed to detect survival of children and siblings can be readily modified so that they are not only able to provide indirect estimates of mortality but also of emigration. For those countries which already include questions on survivorship of children and/or siblings, it entails a modification of those questions to include questions of the current residence of surviving children and/or siblings.

139. Accordingly a question on the whereabouts of surviving children is included in the list of core migration questions. Such questions have their limitations but at present the absence of any data at all on emigration means that it is important to include it. It is suggested that countries should include only one of the location of children/location of siblings questions. The location of surviving siblings is a secondary recommendation. Models of both questions are provided below.

C. Recommended core questions

Country of citizenship

What is your country of citizenship?
 This country by birth
 This country by naturalization
 Another country _____

Place of birth

Where was this person born?
 Locality, region, city, state _____
 Locality, region, city, state unknown [mark box]
 Born in another country, give name of country: _____
 Name of country unknown [mark box]
 Don't know place of birth [mark box]

Year or period of arrival

[For persons who were born in another country:] On which date (or In which year) did this person first arrive in this country to live for one year or more?

Location of surviving children

[For all women aged 15 and above:]

Can you please supply the following information for all children you have borne?

No	Child	Sex	Date of birth	Date of death (if applicable)	Present location (including overseas)
1					
2					
3					

Or

Residence of Surviving Siblings

- (i) How many brothers, born of the same mother, do you have who are still alive? (Do not include yourself.)
Of these, a) how many live in this country?
b) how many live in some other country?
c) for how many do you not know present country of residence?
- (ii) How many sisters, born of the same mother, do you have who are still alive? (Do not include yourself.)
Of these, a) how many live in this country?
b) how many live in some other country?
c) for how many do you not know present country of residence?

D. Degree of sub-national spatial detail

140. One of the most universal of migrant characteristics is that they are not randomly selected from the total population at either their origin or destination. Moreover, they are not drawn randomly from across their country of origin and tend to come from particular sub areas within the country. In addition they are not distributed at the destination in the same way as the national population or the native population. Accordingly their impact both in origin and destination country is spatially concentrated. From a policy perspective, therefore, it is of importance to have an understanding of where migrants have settled. Hence in the production of census statistics for immigrants it is important to provide data for sub-national spatial units. While the extent to which this can be achieved will vary between countries there are a few general principles:

- Basic numbers by gender need to be available down to the smallest areas.
- The detailed tabulations provided above should be made available for major metropolitan cities, especially the very large global cities and megacities that immigrant populations have come to play a significant role in.

E. Recommended tabulations

141. The 22 tabulations listed below are relevant to international migration. Five of them, shown in bold face, are among the core tabulations recommended in the United Nations Principles and Recommendations for Population and Housing Censuses, Rev. 2.

Recommended tabulations for international migration

Bold face indicates core tabulation.

Place of birth in the table has two categories only: native-born and foreign-born.

Citizenship has three categories: citizens by birth, citizens by naturalization and foreigners.

Tabulations using information on both place of birth and citizenship

- (1). **Population by sex, age group, country of birth and *citizenship***
- (2). Population by sex, country of birth and country of citizenship
- (3). Population by sex, *place of birth* and *citizenship*

Tabulations using information on place of birth

- (4). Population by sex and country of birth
- (5). **Population by sex, age group and country of birth**
- (6). **Population by sex, age group, *place of birth* and geographical division**
- (7). **Foreign-born population by sex, age group, country of birth and period of arrival**
- (8). Foreign-born population by sex and geographical division
- (9). Foreign-born population by sex and single year of age
- (10). Population by sex, educational attainment and country of birth
- (11). Economically active foreign-born population by sex, age group and occupation
- (12). Economically active foreign-born population by sex, age group and industry
- (13). Economically active foreign-born population by sex, age group and status in employment
- (14). Economically active foreign-born population by sex, occupation and country of birth
- (15). **Economically active foreign-born population by sex, period of arrival and occupation**

Tabulations using information on country of citizenship

- (16). Population by sex and country of citizenship
- (17). Population by sex, age group and *citizenship*
- (18). Population by sex, age group and country of citizenship
- (19). Population by sex, educational attainment and country of citizenship
- (20). Population by sex, age group, educational attainment and citizenship
- (21). Foreign population by sex and geographical division
- (22). Foreign population by sex and single year of age
- (23). Economically active foreign population by sex, age group and occupation
- (24). Economically active foreign population by sex, age group and industry
- (25). Economically active foreign population by sex, age group and status in employment
- (26). Economically active foreign population by sex, occupation and country of citizenship

CHAPTER 6. USING CENSUS INTERNATIONAL MIGRATION DATA WITH MIGRATION DATA FROM OTHER SOURCES

A. Introduction

142. The focus in this report has been totally on national population censuses as a source of international migration information. However censuses are only one of the sources available for measuring international migration and identifying the characteristics of migrants. There are several studies which detail the nature, strengths and limitations of these sources most notably the United Nations (1998) and Bilsborrow, *et al.* (1997). They include population registers, registers of foreigners, administrative sources, border statistics, special collections and refugees and asylum seekers and surveys. The usual situation is that each source provides a partial picture of the international migration system influencing an individual country. Hence it is often possible to gain a more comprehensive picture of a nation's international migration by putting together data from a number of these sources. This can serve two purposes, firstly to expand the overall coverage by including more types of international migration as well as including additional migrants missed in other sources. Secondly, however, the use of several sources can fill a triangulation function which provides a check on the overall accuracy of estimates of migration. In this chapter some of the opportunities for aligning international migration data derived from censuses with that from other sources are explained. At the outset it is necessary to make a few preliminary comments.

B. Aligning Concepts and Definitions

143. In order to facilitate the comparability of international migration information from different sources it is important for the concepts and definitions of international migration which are employed in the various sources to be the same. The adoption of uniform standards in the definition of migrants is often complicated by the fact that different government agencies are responsible for the various collections on international migrants – national statistical agencies for censuses, immigration officials for border statistics, labour departments for immigrant workers statistics, department of interior for population registers, etc. Hence, there is an initial need to harmonise the definitions and concepts employed in each national collection, preferably within the structure provided by the United Nations Recommendations (United Nations 1998).

144. The harmonisation of concepts relating to defining and conceptualising migrants is however only part of the story. It is also advisable to ensure that common classifications of the characteristics of migrants are employed across the different sources. This is especially crucial in labour force, industry, occupational, educational and qualification classifications since much migration is related to work. Nevertheless, the adoption of common classification of countries of origin, language, etc. facilitates the bringing together of different data sources on international migration. Similarly the same regional classification of areas within the country needs to be adopted with respect to where the migrants are living within a country.

C. Census and Border Control Data on International Migration

145. Most countries have at least some data on international migration from their national censuses and from the control exercised at the borders although there is considerable variation in the degree of coverage of international migration in both sources. Potentially the bringing together of these sources however provide a powerful tool to investigate the scale, patterns and impact of migration. This is because, potentially at least, censuses can provide a comprehensive

detailed snapshot of the *stock* of immigrants in a country (and emigrants in other countries) at a particular point in time. The border statistics data on the other hand provide, potentially at least, a total picture of the inflow and outflow of international migrants for a particular country. Both types of data have utility in policy making and planning and have their own particular strengths.

- Border flow data can provide a total picture of the documented movements into, or out of, a country over a specified period of time – one year, five years, etc.? It also can supply details of the type and nature of migration, especially the visa category and details of nationality are verified by checking of documents.
- Census data on the other hand cannot show the amount of movement over a particular period of time because people who have moved in and then out are not counted, it is also very difficult for it to capture people who have moved out. In addition people who have moved in during the period and subsequently died are missed. However the census *can* show the cumulative impact of migration. It also has other advantages in that because the census collects data on a wide range of topics it can often provide greater detail on the characteristics of migrants than is possible in border statistics. Moreover because the census is taken after the migrants have lived for a period in the destination it allows some analysis to be made of the adjustment of migrants to life in the destination country to be made.

146. Hence the two sources have particular strengths which when they are taken together can assist in building up a more comprehensive picture of international migration in a country than is possible by examining them separately. However there are additional benefits in international migration analyses if the two data sources can be linked in some way.

147. The first use which can be made of combining census and border control migration statistics relates to the estimation of the scale of undocumented migration. Provided undocumented migrants are enumerated in censuses it is possible to compare arrivals of particular birthplace groups between two censuses with stocks of those birthplace groups at the two censuses with the residual being an estimate of net international migration. As undocumented migration increases in significance globally this is becoming one of the most effective ways of estimating its scale.

148. A second use of combined census and border statistics is where the data for individuals is formally linked allowing a combination of that collected by the border control and that collected in the census enumeration. This for example is occurring in Australia where the 2006 census results for all overseas-born persons who had arrived in Australia between 2001 and 2006 are being combined with the Department of Immigration and Citizenship records. This will allow an array of information on the immigration process to be matched with the characteristics of migrants after a period of residence in Australia. This is especially relevant to policy makers since the immigration policy category by which a migrant has been given permanent residence in Australia can be identified – skilled migrant, business migrant, family migration, refugee, special category, etc. This will allow an assessment to be made of the differences between visa categories in their adjustment to the labour market, housing market, etc. to be made. This will feed back into the migration selection process. Data-linking capabilities have increased substantially in recent years making exercises like this more possible.

D. Aligning Census and Survey International Migration Data

149. One of the advantages of national censuses as a source of international migration data is that they cover the entire population, except where international migration questions are

applied in the long form questionnaires of censuses which apply a two stage process with a short form applied to the entire population and the long form to a sample. The use of a sample to collect migration data and especially to estimate the stock or flow of migrants can be problematical. This is due to the fact that migrants can be over or under represented in samples because...

- Migrants often concentrate in particular areas compared with the entire population so that block sampling or other area based sampling techniques can significantly over or under represent them.
- The numbers of migrants are often relatively small in relation to the total population so that they are missed in surveys. This is particularly the case with some subgroups of migrants.

150. As a result long form sample censuses and national household sample surveys tend to have serious limitations for determining the size of migration streams and stocks. Only in a few countries are national surveys large enough and the stocks of international migrants large enough for the surveys to provide representative data on migrants (Bilsborrow, *et al.* 197, 238-41).

151. In general, however, the main way in which sample surveys are of value in understanding international migration is through specialised surveys which target international migrants. As Bilsborrow, *et al.* (1991, 237) point out...

“Specialised surveys constitute the best data collection system to gather information needed to carry out a proper examination of the determinants and consequences of international migration.”

152. Specialised surveys of migrants can provide more detailed information not only on the characteristics of migrants but also on their motivations, attitudes, identity, behaviour, perceptions, experience and culture than is possible from censuses and most other standard national data collections on migration. Moreover it allows the context of migration decisions to be explored. Surveys are necessary if the causes and consequences of migrants are to be explored in greater depth.

153. The potential is there for migrant surveys to be linked with other data sources regarding migrants – censuses, income tax records, immigration records, population registers, etc. – although confidentiality concerns may be a significant barrier to such data linkage. In this context the developments in protecting the privacy and confidentiality of individuals while linking data sets need to be noted.

154. One of the most important roles that census migration data can play in relation to migrant surveys is in providing comprehensive and accurate sampling frames for such surveys. A major barrier to the carrying out of representative surveys of migrants is the absence of comprehensive and accurate listings of migrants or subgroups of migrants. Only in countries which have complete population registers do such listings exist but in most nations extant listings are partial and surveyors are forced to use incomplete sampling frames, expensive screening procedures or snowballing techniques. The census as a comprehensive coverage of migrant populations provides some opportunities to assist in deriving samples of migrants for surveying.

155. There are two ways in which censuses can be the basis for a sampling frame for a survey of migrants. Firstly if it is possible to access census household listings as a sampling

frame a comprehensive listing of migrant households could be assembled as the basis for a representative survey at national, regional or local levels. However where such access is not possible, small area data can indicate areas of concentration of migrants of particular backgrounds. In these cases areas can be sampled in a stratified, systematic way to ensure that migrants are well represented in the sample. Either a screening strategy could then be employed or all households sampled can be interviewed regardless of migrant status and the non-migrant households can be used as comparator group against which to analyse the characteristics, perceptions, etc, of the migrant groups. In analysing the characteristics of migrants it is valuable to be able to compare them with non-migrants to establish degrees of difference. This can be done either by including non-migrants in the sample or by selecting a set of key variables derived from the survey for migrants and comparing them to non-migrant's scores on the same variables derived from a census.

156. Census data on migrants can also be used to assess the representativeness of a survey on migrants in a particular group. As is discussed above, often it is not possible to use a representative sampling frame for selecting respondents in a survey of migrants. In such cases the extent of representativeness of the survey can be assessed to some degree by comparing the results of the survey with respect to key characteristics such as age, sex, occupation, education, etc. to the equivalent data for the relevant birthplace group in census data. This will allow an estimate to be made of the extent and direction of bias in the sample compared to the total population of that migrant group.

E. Census Data on International Migration and Refugee and Asylum Seeker Data

157. Refugees and asylum seekers are a highly specific group of international migrants who fulfil particular qualifications. An extensive review of data collection systems providing information on asylum seekers and refugees (Bilsborrow, *et al.* 1997, Chapter 5) makes little reference to censuses as a significant source. The main types of sources are registers associated with the provision of assistance and the UNHCR's collection of statistics on refugees which is part of its mandate. In the case of asylum seekers the main sources are individual countries' records of the applications for asylum pending. Similar the censuses of individual countries do not ask whether respondents are a refugee or asylum seekers, the census is not a direct source of information on their numbers. However the census can be a useful adjunct source of information on refugees since they will usually be able to be identified by virtue of the fact that their birthplace and citizenship will identify them as being of a particular origin and in many cases most of the immigrants from particular origins have their origin as refugees or asylum seekers. This, for example, would apply to many of the Afghans in Iran and Pakistan. In such cases censuses can be an adjunct to register data to estimate the stock of refugees. This will become less true over time as initial refugee settlers are joined by family members and other migration streams are set up. Of course once refugees are settled at a destination they may lose their designation as refugees by taking out citizenship as a permanent residence at the destination.

158. One of the uses that census migration data can have in studies of refugee settlement is as a source of information on the adjustment of the refugees to life in the destination country. Since many former refugees can be identified by their birthplace and date of arrival in the destination country, it is possible to examine their economic, social and demographic characteristics. Intercensal comparison provides an opportunity to assess their adjustment to

labour and housing markets and other aspects of the host society over time. It also allows comparison with other types of migrants and host population.

F. Census International Migration Data and Labour Migration Data

159. One of the main elements in the global increase in international migration has been the increase in the extent to which countries have sought to make up deficits in their labour markets with migrants, both temporary and longer-term. This applied to both skilled and unskilled labour. Such countries usually have a labour migration regime involving registration or the issuing of work permits which results in data on labour movements. However this is a sector in which there is often a significant amount of undocumented migration by workers either arriving in the destination clandestinely without passing through border control systems or, when they enter through those systems, they do not indicate that they intend to work at the destination. Hence, the labour migration data is often partial.

160. Censuses have been of limited utility in providing insights into labour migration for two reasons:

- In some countries they are systematically excluded from census enumerations on the basis of their non-permanent residence in the destination.
- Where countries include them in the census enumeration they are not identified as labour migrants and so are thrown together with the other migrants who have settled more or less permanently at the destination.

161. In both cases it is difficult to arrive at estimates of the stock of labour migrants within countries. While some countries deliberately seek to disguise their level of dependence on foreign labour it would seem crucial to be able to assess the size and characteristics of the stock of foreign workers in nations and compare them to the native workforce. Such data would seem crucial to workforce planning as well as development of migration policy. As demographic differentials widen between nations and ageing and low fertility lead to stabilise or decline in the workforce of developing countries, the dependence on foreign labour will increase. Moreover globalising of labour markets and the “talent wars” associated with the increasing competition for skilled workers makes it imperative to nations to be able to assess the extent to which they are gaining and losing skilled people through international population movement.

162. If censuses can be developed as sources of information on the stock of labour migrants it can be a useful adjunct to registration statistics for the following reasons...

- It theoretically allows an assessment of the size and characteristics of undocumented labour migration to be made by making comparisons with the flow data.
- It can provide a better estimate of the stock of foreign workers than registration data in the sense that registers in some countries are not fully maintained especially for things like change of status of workers, workers leaving the country prematurely, death of workers, etc.

These benefits however can only occur if labour migrants are included in national censuses and if they are identified so that they can be separated from other migrants.

G. Census International Migration Data and Population Registers and Administrative Sources

163. Several nations maintain population registers which include the total resident population while some others have registers of foreigners. Censuses are clearly an important check against such registration data to verify the scale of the foreign population. Frequently, registers overstate the size of the foreign population (Bilsborrow, *et al.* 1997, 110) because they fail to take account of the emigration of foreigners. In such cases it is important to use the census to periodically check on the accuracy and degree of coverage of the registers of foreigners. Moreover in some countries some types of foreigners are not captured in registers. Obviously this applies to undocumented migrants but others who are documented may also not have to register under particular conditions.

164. There are an array of practices in different countries which require foreigners to have residence permits (Bilsborrow, *et al.* 1997, 114-134). The statistics derived from these vary greatly in their accuracy and coverage. As Bilsborrow, *et al.* (1997, 128-9) point out...

“Ideally, the number of valid residence permits at a given time can be equated with the number of foreigners residing legally in a country at that time. In practice, however, problems in capturing the change in status of foreigners over time prevent residence permit statistics from reflecting accurately the size of the legally resident foreign population in a country.”

Clearly these data cannot generally be used to estimate the size of stocks of migrants at a particular point in time. They need to be periodically checked against census data to validate their coverage and accuracy.

H. Conclusion

165. The particular characteristic of national censuses which is of note in relation to aligning it with other sources of international migration information is its universal coverage of the national population at a specific point in time. This provides the potential for the census to act as a benchmark against which other international migration data, which are predominantly derived from continuous registers, can be checked at that specific point in time in a completely independent way. Migration registers have the advantage that they can provide information in a timely way at any point in time while the census can only provide it once every ten or five years. However the continuous registers suffer from a number of shortcomings which over time can reduce their accuracy and coverage. These include...

- The growing volume of undocumented migration where migrants deliberately avoid being recorded on those registers.
- The fact that in the globalizing world there is a great deal of coming and going among migrants. There has been a shift in global international migration systems away from the dominance of on-off permanent migrations toward movements which are often temporary or circular. This has greatly challenged registration systems so that some of these movers can be misclassified or missed altogether.
- There is increased blurring of permanent and temporary migration so that many intendedly (or at least designated) temporary migrants end up becoming permanent residents at their destination (Hugo 2007). Equally there is a high rate of settlers

deciding to leave their destination countries despite being designated permanent migrants (Hugo, Rudd and Harris 2003).

166. Accordingly it is crucial that there is a set of benchmark international migration data which is made available periodically to check the accuracy and coverage of register data. Moreover this can be used to calibrate future data derived from registers to indicate the margin of error in such data.

167. This basic function of the census in relation to international migration data however is only possible if the national census...

- (a) includes all international migrants.
- (b) differentiates between the key types of international migrants.
- (c) is a complete coverage of the population in the country on the night of the census.

Annex 1: Countries or areas according to whether they adopt a *de jure* or *de facto* approach in their population census

Region	De jure	De facto	Sample survey de jure	Sample survey de facto
AFRICA	Algeria	Angola		
	Benin	Botswana		
	Lesotho	Burkina Faso		
	Mali	Burundi		
	Mauritius	Cameroon		
	Reunion	Cape Verde		
	Rwanda	Central African Republic		
	Saint Helena:Ascension	Chad		
	Sao Tome and Principe	Comoros		
	Senegal	Congo		
	Seychelles	Cote d'Ivoire		
		Dem Rep of the Congo		
		Djibouti		
		Egypt		
		Equatorial Guinea		
		Eritrea		
		Ethiopia		
		Gabon		
		Gambia		
		Ghana		
		Guinea		
		Guinea-Bissau		
		Kenya		
		Libyan Arab Jamahiriya		
		Madagascar		
		Malawi		
		Mauritania		
		Morocco		
		Mozambique		
		Namibia		
		Niger		
		Nigeria		
		Saint Helena ex. dep.		
	Saint Helena:Tristan da Cunha			
	Sierra Leone			
	Somalia			
	South Africa			
	Sudan			
	Swaziland			
	Togo			
	Tunisia			
	Uganda			
	United Republic of Tanzania			
	Western Sahara			
	Zambia			
	Zimbabwe			
AMERICA, NORTH	Aruba	Anguilla		
	Bermuda	Antigua and Barbuda		
	Canada	Bahamas		
	Costa Rica	Barbados		
	Cuba	Belize		
	Dominican Republic	British Virgin Islands		
	Greenland	Cayman Islands		
	Guadeloupe	Dominica		
	Guatemala	El Salvador		
	Haiti	Grenada		
	Jamaica	Honduras		

	Marinique Mexico Netherlands Antilles Nicaragua Puerto Rico United States United States Virgin Islands	Panama Saint Kitts and Nevis Saint Lucia Saint Pierre and Miquelon Saint Vincent and the Grenadines Trinidad and Tobago Turks Caicos Islands	
AMERICA, SOUTH	Brazil French Guiana	Argentina Bolivia Chile Colombia Ecuador Falkland Islands(Malvinas) Guyana Paraguay Peru Suriname Uruguay Venezuela(Bolivarian Republic of)	
ASIA	Azerbaijan China Hong Kong SAR Macao SAR Cyprus Georgia Iran Israel Kazakhstan Kyrgyzstan Malaysia Nepal Philippines Thailand Uzbekistan	Afghanistan Armenia Bahrain Bangladesh Bhutan Brunei Darussalam Cambodia India Indonesia Iraq Japan Jordan Korea (Dem People's Republic of) Korea (Republic of) Lao People's Democratic Republic Maldives Mongolia Myanmar Occupied Palestinian Territory Oman Pakistan Qatar Saudi Arabia Singapore Sri Lanka Singapore Syrian Arab Republic Tajikistan Timor-Leste Turkey Turkmenistan United Arab Emirates Viet Nam Yemen	Lebanon
EUROPE	Austria Balarus Belgium Bosnia and Herzegovina Channel Islands:Guernsey Channel Islands:Jersey Croatia Czech Republic Denmark Estonia	Albania Andorra Bulgaria Gibraltar Greece Holy See Hungary Ireland Italy Liechtenstein	Germany

	Faeroe Islands	Poland
	Finland	Portugal
	France	Republic of Modova
	Iceland	Russian Federation
	Isle of Man	San Marino
	Latvia	Spain
	Lithuania	Svalbard and Jan Mayen Islands
	Luxembourg	The Former Yugoslav Rep of
	Malta	United Kingdom
	Monaco	
	Montenegro	
	Netherlands	
	Norway	
	Romania	
	Serbia	
	Slovakia	
	Slovenia	
	Sweden	
	Switzerland	
	Macedonia	
	Ukraine	
OCEANIA	American Samoa	Australia
	Guam	Cook Islands
	Micronesia, Federated States of	Fiji
	New Zealand	French Polynesia
	Vanuatu	Kiribati
		Marshall Islands
		Nauru
		New Caledonia
		Niue
		Norfolk Island
		Northern Mariana Islands
		Palau
		Papua New Guinea
		Pitcairn
		Samoa
		Solomon Islands
		Tokelau
		Tonga
		Tuvalu
		Wallis and Futuna Islands

Source: United Nations, 2007b

Annex 2: List of countries allowing or encouraging multiple citizenship

Albania	India	Saint Kitts and Nevis
Antigua and Barbuda	Iran	Saint Lucia
Argentina	Ireland	Saint Vincent
Australia	Israel	Serbia
Bahamas	Italy	Slovenia
Bangladesh	Jamaica	South Africa
Barbados	Jordan	Sri Lanka
Belize	Latvia	Sweden
Benin	Lesotho	Switzerland
Bolivia	Liechtenstein	Taiwan
Brazil	Lithuania	Trinidad
		Tobago
Bulgaria	Macao (with Portugal)	Thailand
Burkina Faso	Macedonia	Tibet
Cambodia	Madagascar	Turkey
Canada	Malta	United Kingdom
Cape Verde	Mexico	Unites States
Chile	Montenegro	Ukraine
Colombia	Mongolia	Uruguay
Costa Rica	Morocco	Vietnam
Croatia	Netherlands	
Cyprus	New Zealand	
Dominican Republic	Nicaragua	
Ecuador	Nigeria	
Egypt	N. Ireland	
El Salvador	Panama	
Fiji	Paraguay	
France	Peru	
Germany	Pitcairn Islands	
Ghana	Philippines	
Greece	Poland	
Grenada	Romania	
Guatemala	Russia	
Haiti		
Hungary		

Source: Brummet, 2002

Annex 3: Countries that prohibit dual citizenship

Austria	Mauritius
Belgium	Nepal
Brunei	Norway
Burma	Pakistan
China	Papua New Guinea
Denmark	Singapore
Finland	Solomon Islands
Iceland	South Korea
Indonesia	Venezuela
Iran	Zimbabwe
Japan	
Kenya	
Kiribati	

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