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Flow and Stock Data on International Migration in Canada: Sources, Measurement Issues, Quality and Compliance with the U.N. Recommendations

Submitted by Statistics Canada[1]

Abstract

The object of the paper is to describe Canada's major sources of flow and stock data on international migration and to assess their adequacy and quality for use in a demographic accounting system and for scientific studies. The administrative data files of Citizenship and Immigration Canada (CIC) provide the most important source of flow data on immigrants, comprising permanent and temporary immigrants. Canadian censuses provide the bulk of the stock data on immigrants. The census stock data on immigrants can be cross-classified by demographic, social and economic characteristics of the population. In the absence of collecting emigration statistics, emigration is estimated. In the last part of the paper, an attempt is also made to assess how far the Canadian data comply with the UN recommendations on statistics of international migration.

Introduction

As a nation built by waves of immigrants over the years, Canada is one of the few countries that are still receiving immigrants in large numbers. In the 1990s it received between 174,000 and 256,000 immigrants annually. With the continuing below replacement fertility level and low natural increase of population, immigration has become the major factor of growth in Canada. In 1999-2000 the contribution of net international migration to Canada's population growth amounted to about 52%. The significant role, which international migration thus plays in the population growth, distribution, and composition in Canada indicates the importance for greater attention to be paid to the coverage and quality of data on immigration and emigration which are collected/compiled and used.

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[1] **Revised** paper prepared by M.V.George, Demography Division, Statistics Canada, for the annual meeting of the Population Association of America in Washington D.C., March 29-31, 2001. The views expressed in this paper are those of the author and do not necessarily represent views of Statistics Canada.

Complementing data on births and deaths, reliable information on the number, sex, and age of immigrants and emigrants, for example, are required for many purposes, such as estimation of size and structure of population, analyses of the dynamics of population growth, and projections of population.

The paper has two main objectives. The first is to describe Canada's major sources of flow and stock data on international migration and to provide a critical assessment of their adequacy and quality for use in a demographic accounting system and for scientific studies. The second is to assess the extent to which the data from various sources are in compliance with the revised 1998 United Nations recommendations.

Statistics on both immigration and emigration form an integral part of Canada's demographic statistics. However, detailed data on the number, characteristics, and geographic distribution are available only for immigrants. They come from the two main sources of flow and stock data, as can be identified by the data collection systems. The stock data refer to the total population of international migrants in any given country at a particular point in time, and flow data refer to the number of people migrating to a country within any given time period.

Flow Data on Immigration

Statistics on immigrants come from administrative data which are captured by Citizenship and Immigration Canada (CIC). They are compiled from papers which every immigrant must present upon arrival in Canada or the documents related to the granting of landed immigrant status if the person is already in Canada as a non-immigrant. The latter includes students, documented visitors, temporary workers, persons on Ministers' permit, refugees, and illegal arrivals.

Immigrants

Canada uses a legal definition for an immigrant and the term used is "landed immigrant". Landed immigrants are persons who have received "lawful permission to come into Canada to establish permanent residence". (Citizenship and Immigration Canada, 1999). They also have the entitlement to citizenship after 3 years. The corresponding statistics, therefore, relate to legal immigrants only. Thus, the immigration statistics do not include persons in Canada under other categories and Canadians (citizens and "permanent residents") who return to Canada, irrespective of their duration of stay abroad. The immigrants thus described belong to the category of long-term immigrants.

Other Categories (Non-permanent Residents)

In addition to the landed-immigrant statistics, information is also captured/compiled on non-permanent residents (NPR). They consist of (1) work authorization holders (foreign workers and their dependents); (2) student authorization holders (foreign students and their dependents); (3) Minister's permit holders (persons who are allowed to stay in Canada on a temporary basis and their dependents); and (4) refugee status claimants and their dependents. Dependents are those born outside Canada and are residing with the permit/authorization holders (PH) and the refugee status. The refugee status claimants are persons who arrive in Canada and seek convention refugee status claimants. The first three groups are permit/authorization holders (PH). A person is considered a permit/authorization holder if he/she has at least one valid document to be admitted as foreign worker, or foreign student, or with Minister's permit for temporary stay in Canada and has not claimed refugee status (Larrivée, 1998).

In estimating the number of permit/authorization holders (PH), two basic rules are applied. First, the number of PHs is equal to the total number of persons covered by the document. Second, if a person has more than one valid permit/authorization, then the total number of persons and province of residence are taken from a permit/authorization with an effective date closest to the reference date. Third, province of residence is taken, in order, from (i) permit/authorization document; (ii) address file; (iii) Canada immigration centres where the applicant applied; and (iv) by proportional allocation when no information on province residence is not available (Larrivée, 1998).

A person is considered a refugee status claimant (RSC), if he/she has deposited a claim at a Canada Immigration Centre. The following rules are applied in estimating refugee status claimants (RSC). First, a person who is RSC is considered non-permanent resident (NPR) until he/she withdraws from the claim, or is deported, or becomes a landed immigrant. Since the claimant may leave the country or die (these events are recorded in the files), a two-year cut-off time is applied from the application for landing date (or the claim date if the claimant does not have an application yet). For refugee status claimants with an application for landing and with no identity papers, a 5-year cut off is applied, based on a recent decision by the Minister. Second, for the claims submitted under Bill C55 (January 1, 1989 to January 31, 1993), the number of RSCs is equal to number of persons covered by the claim; and for claims submitted under Bill C86 (from February 1, 1993) the number of RSCs is equal to number of claims (each claim represents one person). Third, province of residence of RSCs is taken, in order, from (i) address file; (ii) permit/authorization document; (iii) Canada immigration centre (where the claimant applied; and (iv) proportional allocation when no information on province of residence is available.

The NPRs can be referred to as the category of short-term immigrants. The available data enable us to estimate both the flows (entries) and stocks of non-permanent residents.

Accessibility of Data

CIC publishes an annual report, entitled, Citizenship and Immigration Statistics, which contains statistics on landed immigrants. The 1996 report, published in 1999 provides data on landed immigrants, and their characteristics. Immigrants are categorized by sources: country of birth, country of citizenship, and country of last permanent residence. The variables included are: age groups and gender and marital status; month/year of landing; official languages; and extended occupation. The data are also given by province/territory of intended destination, and city of intended destination. The one notable omission in this report is the cross-classification of immigrants by educational qualifications. CIC actually compiles data on educational attainment of immigrants. More detailed data are available on both immigrants and non-permanent residents in machine-readable form from the Electronic Information Management of CIC on special request.

Application of Immigration Statistics

The immigration statistics used for population estimates and projections include landed immigrants and non-permanent residents. For the preliminary population estimates, immigration data by the month of compilation rather than the month of arrival of the immigrant are used. Approximately, 8 months after the end of each calendar year the final immigration statistics by month of arrival become available. The difference between the preliminary and the final figures was found to be very small. The final figures are used for producing the final postcensal estimates. Furthermore, and more importantly, the immigration statistics are established by province of intended destination upon their arrival and not by provinces where they actually settle. For a very small number of immigrants, information on the province of destination is lacking. The small number of immigrants for whom the information on the province of destination is lacking is distributed proportionally.

Since 1991, non-permanent residents (NPR) form part of the population estimates. The four groups of NPR are estimated, as described earlier, from the various files relating to permit/ authorization holders, and refugee status claimants from Citizenship and Immigration Canada. Demography Division of Statistics Canada prepares quarterly and annual estimates of NPR which are used for preparing population estimates.

The annual immigration data, and the estimates of non-permanent residents for Canada and provinces are also used for projecting immigration and non-permanent residents by the component method.

Quality of Data

The immigrant data obtained from CIC are considered reliable for purposes of preparing postcensal population estimates and projections in Canada. Since immigration is controlled by the government, and the selection of

immigrants by various categories is carefully monitored, the recorded number of total immigrants by sex and age should be of high quality. However, the estimation of non-permanent residents (NPR) is a complex operation as noted earlier. A comparison of the number of NPRs with the data from the 1991 and 1996 censuses shows that the estimates from CIC files are higher than those from the two censuses. The NPR estimate by Demography Division, Statistics Canada from the CIC files as of July1 in 1991 (395,077) was 26.3% higher than the census figure adjusted for net undercount (312,744). In 1996, however, the NPR estimate from the CIC files (242,309) was only 9.5% higher than that of the census adjusted figure of 221,246(Larrivée,1998). The NPR estimates remained fairly stable since 1996; they varied between 237,000 in 1998 and 260,000 in 2000 (Statistics Canada, 2001).

Census Stock Data on Immigration

Canadian censuses provide the bulk of the stock data on immigration to Canada. The data collected can be classified as (a) lifetime immigration of the foreign born; (b) landed immigrant population by year of arrival; and (c) immigration from abroad during a specified period of time prior to the census date. An attempt is made here to briefly describe the census stock data on immigration.

Immigration of the Foreign Born and Landed Immigrant Population by Year of Immigration

In the 1996 Census, responses to four questions (Questions 13,14, 15, and 16) asked of a 20 percent sample of the population provide the basic data on country of birth, citizenship, and landed immigrant status of the population by year of immigration to Canada. The questions asked were the following:

> Q.13. Where was this person born?
> Q.14. Of what country is this person a citizen?
> Q.15. Is this person now, or has this person ever been, a landed immigrant?
> Q.16. In what year did this person first become a landed immigrant?

Question 13 has been a traditional question in all the decennial censuses from 1871, and in the quinquennial censuses of 1986 and 1996. Questions 14 and 16 have been asked in all the decennial censuses, from 1901, and in the quinquennial censuses of 1986 and 1996. Question 15 was asked for the first time in 1991, and then in 1996.

A landed immigrant is defined as "a person who has been granted the right to live in Canada permanently by immigration authorities" (Statistics Canada, 1999, p.25). Landed immigrants are also entitled to obtain citizenship after 3 years, and they belong to the long-term immigrant-category. Answers to question 13 by persons born outside Canada according to country of birth provide the information on the number of persons who have immigrated to Canada over the years and who still live in Canada on the census date (lifetime immigrants). The data collected on foreign-born population did not include temporary foreign residents until the 1991 Census. The countries of birth reported refer to the boundaries at the time of the census.

Responses to the question on citizenship provide the information on citizenship status of the total target population, including immigrants. The sum of the foreign born non-Canadian citizens (excluding non-permanent residents), and the naturalized Canadian citizens constitutes the immigrant population. Persons born outside Canada who are Canadian citizens by birth are excluded from the immigrant category. They were born outside Canada to Canadian parents who are included in the non-immigrant population, i.e., Canadian citizens by birth.

The landed immigrant status question, in conjunction with the citizenship question provides information on non-immigrant population (Canadian citizens by birth), the immigrant population (landed immigrants), and the non-permanent-residents (NPR). The NPRs consist of refugee claimants and holders of student authorizations, employment authorizations and Ministers' permits, as well as family members born abroad and living with them.

From the question on year of first immigration (the year landed immigrant status was first obtained), the information on the volume of immigration (for surviving immigrants) for specified past periods is obtained. Actual

year of immigration data are available only for the 1981, 1986, 1991 and 1996 Censuses. Due to processing restrictions, the 1971 Census and earlier censuses provided only pre-defined periods of immigration. The question asked since the 1991 Census was the year of landing, that is, the year a person received his/her landed immigrant status. Prior to the 1991 Census, the question asked was the year of immigration, the year in which the respondent first immigrated to Canada. There is a limitation to asking a year of landing question, as it does not capture the time of first arrival, or year or arrival. A growing number of immigrants now reside in Canada as non-permanent residents for several years before obtaining their permanent resident status. An additional variable, viz., age at immigration is derived based on year of immigration, year of birth, and an estimated month of immigration.

Age at immigration data were derived for the 1981, 1986, 1991, and 1996 Censuses. This variable is especially useful to distinguish between persons who immigrated as children and those who immigrated as adults.

There will be a new question on place of birth of parents in the 2001 Census. Although this question is not directly related to immigrants, it will provide information on "Second generation Canadians", i.e., children who were born in Canada whose parents were immigrants. The data that can be generated from this question will be useful to analyze socio-economic adjustment of the immigrant population and the economic situation of their children.

Migration from Abroad During a Specified Period

Data on immigration can also be obtained from the 1996 Census internal migration questions, "Where did this person live 1- year ago, that is, on May 14, 1995?". (Question 22); and "Where did this person live 5- years ago, that is, on May 14, 1991?". Since the one year mobility question was asked only in the 1991 and 1996 censuses, the immigration data for 1-year prior to the census are available only for these two censuses. Immigration data for 5-years prior to the census are available for the censuses, 1961, 1971, 1976, 1981, 1986, 1991 and 1996. Persons 1-year of age and over who were enumerated but lived outside Canada 1- year ago would be classified as immigrants during the 1- year period. Persons 5- years of age and over enumerated but lived outside Canada 5- years ago would be classified as immigrants during the 5- year period. Since the respondents were asked to write the name of the "country" of residence for both questions, the information on immigrants from these questions could be obtained by the country of residence 1- year ago, and 5- years ago.

Table 1. Census variables for Estimation of Immigrants since 1961.

	1961	1971	1976	1981	1986	1991	1996	2001
Country of birth	x	x	-	x	x	x	x	x
C. of resid. 5 years ago	x	x	x	x	x	x	x	x
C. of resid. 1 year ago	-	-	-	-	-	x	x	x
Citizenship	x	x	-	x	x	x	x	x
Landed immigrants	-	-	-	-	-	x	x	x
Period/date of immig.	x	x	x	x	x	x	x	x
Age at immigration	-	-	-	x	x	x	x	x
Place of birth of parents	-	x	-	-	-	-	-	x

Note: Data can be cross-tabulated by demographic, social and economic characteristics of the population.

Appraisal of the Data

The stock data collected from the questions on nativity, citizenship, landed immigrant status, and year/period of immigration provide information on "net lifetime immigration of the foreign born only, i.e., net immigration over the lifetime of the population enumerated". Foreign-born persons who returned to live abroad or who died prior to the census date are excluded. Surviving immigrants are counted only once even though they have moved to the country more than once in a lifetime.

The derivation of the immigrant population was slightly different in 1991 and 1996, compared with the earlier censuses. This was because of the addition of the new direct question on landed immigrant status, which was to identify the immigrant population since the census was expanded to include non-permanent residents. The response to the new question in conjunction with the citizenship question provided the total immigrant population (persons immigrating to Canada at the time of the census, or those who had ever been landed immigrants, including Canadian citizens by naturalization) as of the census date.

The stock of non-permanent residents (NPR), as defined earlier, was derived in the 1991 and 1996 censuses. The number of non-permanent residents was obtained by adding the persons who are not Canadian citizens by birth and those who answered "No" to the landed immigrant status question. According to the UN recommendations, the NPR population belongs to the category of either short-term or long-term immigrants. As shown earlier, the number of NPR from census stock data is generally lower than that of the flow data from CIC due to high undercount of this group in the census.

The possibility of deriving the data on age at immigration from the censuses since 1981 makes the immigration stock data richer for analysis purposes. Further, comparison of census data on immigrant population by year of arrival with the corresponding flow data on immigrants collected at time of arrival, permits an estimation of the number of immigrants who have left the country (return migrants).

The data on the number of migrants from abroad from the 1-year and 5-year migration questions cover only the survivors of immigrants who arrived during the 1-year and 5-year periods prior to the census. Thus, the number of immigrants excludes those who died after immigration and those who returned to the country of origin during 1-year and 5-year periods. Also excluded are the immigrant children who were born during the 1-year and 5-year periods. However, unlike the data from Questions 13, 14, 15 and 16, the data from the 1-year and 5-year migration questions include the Canadian-born persons, foreign-born immigrants, and non-permanent residents.

The data on foreign born by country of birth will be available for almost all the countries in the world. The data were cross-classified by various demographic and socio-economic characteristics of the population which would permit detailed analysis of the characteristics of immigrants and the impact of immigration on the composition of the population.

Comparison With Flow Data

In comparing the stock data on immigrant population from the census, and the flow data on immigrants collected at the time of arrival by Citizenship and Immigration Canada (CIC), the following differences between the two data sources may be noted. Information on where immigrants come from may be obtained from data on "country of birth", "country of last permanent residence", and "country of citizenship". Unlike the stock data from census which identify the source of immigrants by country of birth or country of citizenship, the flow data are based on country of last permanent residence. Many immigrants come to Canada from countries other than their countries of birth or citizenship. Thus, there are difficulties in comparing data on country of origin based on different definitions of origin.

Data on the characteristics of immigrants pose another problem of comparability. With the exception of occupation, the flow data on immigrants refer to the characteristics at the time of migration. The census data, on

the other hand, refer to the characteristics at the time of the census. The data on occupation of immigrants according to the flow data refer to "intended occupation" rather than to "actual" occupation at the time of leaving the country of previous residence.

Comparability of immigration data derived from the mobility question is affected by the difference in the time period used, as these data are available in census years (depending upon the census date) and not in calendar years. However, the landed immigrant data, available in calendar years, are comparable with the flow data. It should be noted that the census data will be lower than the flow data due to several factors: census net undercount; deaths and emigration of immigrants; misreporting, misclassification and processing errors. A more serious limitation is the differences in the reported and actual time of arrival of immigrants. A number of immigrants, especially asylum seekers and non-permanent residents, have obtained landed immigrant status after living in Canada for several months/years. The actual arrival of such people predates the time when they are recorded as immigrants. In the census, these persons were to report the year they received landed immigrant status and not the year they first took up residence in Canada. The integration of these persons begins at the time of arrival in Canada, not at the time they receive their landed immigrant status. Hence, the census does not fully capture the integration process/period of persons who have lived in Canada prior to obtaining resident status.

Other Stock Data Sources on Immigration

In addition to the Canadian census, there are four other potential data sources on the immigrant population in Canada. The first is the Longitudinal Immigration Database, which links immigration and taxation administrative records into a comprehensive source of data on the labour market behaviour of the immigrant population in Canada. The database currently covers the period 1980 to 1985, and will be updated annually. Secondly, a new data initiative is the Longitudinal Survey of Immigrants to Canada, which will be designed to improve understanding of how immigrants adjust to life in Canada. The proposal is to interview recent immigrants three times: six months, two years, and four years after immigrating to Canada, with a sample size of upwards of 20,000 recent immigrants. This design will allow researchers to conduct detailed analyses of the factors influencing how new immigrants adapt to life in Canada during the first few critical years in their new country. Thirdly, questions to identify immigrants are also asked on a number of Statistics Canada surveys: General Social Survey (GSS); Survey of Labour and Income Dynamics and the National Population Health Survey. Finally, the Metropolis Project designed to investigate the integration of immigrants and the effect of immigration and diversity on urban areas. It is a six-year project, 1996-2002. This project was initiated by Citizenship and Immigration Canada and the Social Sciences and Humanities Research Council, and involves nine other federal departments including Statistics Canada. Under the Metropolis Project, four centres of Excellence (Montréal, Toronto, the Prairies and Vancouver) have been established to conduct research at various universities.

Other Data Sources on Outflows and Inflows

Data on outflows from Canada (emigration) are not collected. However, Demography Division of Statistics Canada estimates total emigration from Canada for population estimation purposes. It has three constituents: (i) permanent emigration; (ii) persons temporarily abroad; and (iii) return emigration. A variety of techniques and data sources are used for estimating them. In 1998-1999, there were 54,606 permanent emigrants; 23,179 persons temporarily abroad; and 18,998 returning emigrants which amounted to a total emigration of 58,787 (Statistics Canada, Demography Division).

Emigration

In the absence of collecting emigration statistics, emigration is estimated from two data sources: (i) the Immigration and Naturalization Service (INS) of the U.S. Department of Justice; (ii) administrative data gathered in implementing the federal Child Tax Benefit Program (CTB) in Canada. The former source is used in estimating emigration to the United States, whereas the latter, gathered by the Customs and Revenue Agency (CCRA) is used in estimating emigration to all other countries (for estimation details, see Statistics Canada, 2000, p. 201).

Emigrants estimated are persons leaving Canada who intend to remain abroad permanently (flow data on "long-term emigrants").

Canadians Living Temporarily Abroad

These are persons with no usual place of residence in Canada and are classified as "persons temporarily abroad". An estimate of net change in the number of persons living temporarily abroad is now taken into account in the Canadian population estimates. Data from the Reverse Record Check (RRC), the most important of the Census Coverage Error Studies, are used to estimate the net change in the number of persons living temporarily abroad (for further details, see Statistics Canada, 2000, p. 202). Since the RRC is a sample survey, the statistics on persons temporarily abroad from this source are stock data.

Return Emigration

Return emigration is measured as persons returning to Canada, after having previously been classified as emigrants. The flow data from the Child Tax Benefit files (CTB) are used in estimating returning emigrants (for further details, see Statistics Canada, 2000, p. 202).

The data sources used for estimating emigration, comprising the three elements are subject to various deficiencies, thus causing errors in emigration estimates. Hence, these estimates are of lesser quality.

Compliance of Data with the UN Recommendations

Compared with data on fertility and mortality, compilation of international migration data are problematic for nearly all countries, including Canada. While birth and death occur only once in an individual's life, migration may occur repeatedly, which contributes to the difficulties in measuring it. In addition, because of the barriers limiting free movements of people between countries either in the country of departure, or in that of arrival or in both, several international movers do not actually state their actual intent when they move (Banister, 1994). Two possibilities can be seen in this situation. First, people migrate across international borders without legal documentation. Second, people cross international borders with legal documents but declare they are visiting when in fact they are moving. As a result, international migration poses the most difficult problems of collection and tabulation in terms of coverage and quality. Further, immigrants, emigrants, refugees, temporary residents, etc. are defined differently in different countries. Thus, there is no uniformity among countries in respect of determining who is an international migrant (UN, 1998). Hence, comparability of data is an additional common problem (Banister, 1994).

The United Nations has been active in its efforts to improve the quality and comparability of international migration statistics. In this attempt for integrating and improving international migration flows, the United Nations has so far issued three sets of successive recommendations over the years with significant revisions each time (United Nations, 1953, 1976, and 1998). These sets of recommendations and data collection efforts by the UN are part of an evolving process with new directions and changes each time.

The 1976 recommendations defined migrants in terms of actual and intended periods of presence in, or absence from a country. Thus, a "long-term immigrant was characterized as a person who has entered a country with the intention of remaining for more than one year _ _ _ _ " (United Nations (1998, p. 5). This definition has several drawbacks. First, it required collection of information about the likely future presence of a person in the receiving country but also about previous periods of presence or absence from the country. Second, by demanding that the presence or absence be continuous, it has the potential to result in biased data. Lastly, by setting the key time limit as "more than one year" instead of "one year or more", those who move for only one year and who stay exactly one year would not be considered "long-term immigrants" (United Nations, 1998).

In an effort to improve the 1976 recommendations with a detailed taxonomy to include all possible kinds of travellers, a simplified set of recommendations was presented in 1998. Thus, "an international migrant is defined as any person who changes his or her country of usual residence" (United Nations, 1998). According to this definition, temporary travel abroad for the purposes of recreation, holiday, business, medical treatment or religious pilgrimage does not entail a change in the country of usual residence. Further, the use of "country of usual residence" to define international migrants needs to take into account a time element in order to distinguish between long-term migrant and short-term migrant.

A "long-term migrant" is defined as a person who moves to a country other than that of his or her usual residence for a period of at least a year (12 months). Thus, from the perspective of the country of departure, the person will be a long-term emigrant and from that of the country of arrival, the person will be a long-term immigrant. A "short-term migrant" is defined as "a person who moves to a country other than that of his her usual residence for a period of at least 3 months but less than a year (12 months) except in cases where the movement to that country is for purposes of recreation, holiday, visits to friends and relatives, business, medical treatment or religious pilgrimage". (United Nations, 1998). The country of usual residence in this case is the country of destination.

The 1998 recommendations assume that all flows start with the departure of citizens from their own country and end with their return to that country. The revised taxonomy of international inflows and outflows in Table 1 (United Nations, 1998, p. 11-12, presented as Table A1) are depicted from the perspective of foreign travellers and the categories are based on four different points in time as follows: (a) when they depart from their own country (column 1); (b) when they arrive in the country of destination (column 2); (c) when they depart from the country of destination (column 3); and (d) when they arrive back in the country of origin (column 4). There are three underlying assumptions. First, all persons travel directly from their country of citizenship to the country of destination and they are recorded according to the time they enter the country of destination. Second, no person changes category during the stay in the country of destination so that, upon departure, all persons belong to the same category assigned to them when they entered. Third, all persons leaving the country of destination return immediately to their country of citizenship.

As may be seen from Table 1 of the United Nations document (reproduced as Table A1), the inflows and outflows are shown under citizens and foreigners and are classified into eighteen different categories. However, not all inflows and outflows, as shown in the table are international migrants. Items (1) and (2) are categories of transients not relevant for international migration; items (3) to (5) are categories relevant for international tourism; items (6) to (8) are traditionally excluded categories; and items 17 and 18 are categories of persons departing to seek asylum and those who depart or arrive without required documents whose duration of stay in the receiving country is uncertain. Thus, there are only eight categories (items 9 to 16) relevant for compilation of international migration statistics (see Table A2).

Compliance of Canadian Flow Data with UN Recommendations

As stated earlier, the definitions used by CIC with regard to flow data on permanent and temporary immigrants do not correspond to those proposed by the UN taxonomy. In the case of Canada, only six categories provided in the UN taxonomy, are applicable for compilation of immigration statistics (items (9), (10), (11), (14), (15), and (16) of the UN taxonomy).

They are:

(1) Foreigners admitted under special permits or visas for education and training (items (9) and (10) of the UN taxonomy). The data from this category, including dependants, pertain to temporary immigrants.

(2) Foreign migrant workers or persons in Canada primarily to work, and their dependants (item (11) of the UN taxonomy).

(3) Foreigners admitted for settlement, or foreigners having the right of free establishment and their dependants (items (13) and (14) of UN taxonomy). These are permanent immigrants and include landed economic immigrants, skilled workers (including assisted relatives), entrepreneurs, investors and self-employed persons.

(4) Foreigners admitted for family formation or reunification (item (15) of the UN taxonomy). They are permanent immigrants who are sponsored by close family members already living in Canada.

(5) Foreign persons granted refugee status either at the time of admission or before admission (item (16) of the UN taxonomy). These are temporary immigrants consisting of refugee claimants, i.e., persons who arrive in Canada and seek Convention refugee status, and their dependents.

As described earlier, Canada's flow data on immigrants are compiled on the basis of the legal definition of "landed immigrant". A comparison of this definition with the UN definition for different categories of immigrants reveals that landed immigrants are a special type of long-term immigrants (Kelly, 1982). Canada's flow data on permanent immigrants exclude the foreigners who have been granted temporary admission to Canada on visas other than landed immigrant visas and who, through visa renewals, are permitted to remain in the country for one year or more (e.g., persons admitted as non-permanent residents such as students, temporary workers, Minister's permit holders and asylum seekers). However, as a step to make the data comply with the UN definition of permanent immigration, it would be useful to make available data on persons other than landed immigrants (non-permanent residents) who have been admitted to the country for one year or more. Such persons are considered to be long-term immigrants according to the UN recommendations, even though they are not considered to be immigrants according to the Canadian official definition of permanent immigrants. If the suggested tabulation of data on non-permanent residents by duration of stay becomes available, it would be an illustration of how the data on immigration based on official definition can be made consistent with the UN recommendations without necessarily changing the country definition of an immigrant.

The United Nations recommendations present detailed framework for compilation of inflows and outflows of international migrants from different sources. The framework includes all major categories of inflows and outflows shown in the UN taxonomy. Tables 3 and 4 of the UN report present the organization of data on inflows and outflows of migrants with detailed classification of migrant categories. In all cases, international migrant foreigners are to be classified according to the reason for their admission as established by the receiving state. In order to identify long-term and short-term migrants, Table 3 is designed to capture information on the duration stay of the persons as follows: (a) at least 3 months but less than a year; (b) a year or more, but a limited duration; (c) an unlimited duration; and (d) an uncertain or unknown duration. When the expected duration of stay is established on a dejure basis, i.e., intended duration of stay in the receiving country, the data can be classified according to the above four categories. In other cases, the duration stay has to be estimated based on information based on the original visa and subsequent renewal of visas, or from other indirect information sources listed as footnote (b) of Table 3, namely, "renting or buying a dwelling" or "establishing residence". In compiling the data produced by any given country, certain cells will remain empty, either because the data are not available or the category is not applicable. Table 4 of the UN document is for compilation of statistics on changes of status of international migrant foreigners. The data from this table can be used to identify the number of persons making the transition from a short-term, non-migrant status to a long-term status. Such persons who become long-term migrants may be added to the number of long-term migrants recorded in previous years based on their year of arrival.

Canadian flow data on immigration, as described earlier, distinguish between temporary and permanent status and between reason for coming to Canada as expressed in the Immigration Act. Hence, only data by reason for admission can be readily compiled according to the UN recommendations. The recommended information on the duration of stay, which is crucial for classifying temporary residents into short-term and long-term immigrants, is not readily available. However, this information could be derived or estimated by merging individual records based on client ID number or original serial number which are available in machine-readable form.

Chapter IV of the UN recommendations illustrates the type of information to be gathered regarding international migrants for analytical purposes. The information needed on inflows of international migrants is presented in Table 8 of the U.N. document. Ten items of information are recorded in this table as follows: (1) country of citizenship; (2) sex; (3) date of birth; (4) date of arrival; (5) intended duration of stay; (6) previous country of usual residence; (7) country of birth; (8) marital status; (9) expected location of place of usual residence in receiving country (address); and (10) educational attainment (number of years of schooling completed). The first nine items are considered core information relevant for all migrants. Item 10 is suggested on an optional basis. In addition, for international migrants who work, it is suggested that information regarding their occupation in the previous country of usual residence and industry of their employer in previous country of usual residence be gathered. This chapter also lists a set of tabulations that would be useful for the analysis of the dynamics of international migration. Forty tabulations are listed for international migrant inflows. These are basically cross-tabulations of the nine core items, the optional item on education, and the two additional items relating to occupation and industry. The flow data on immigrants compiled by Citizenship and Immigration Canada contain information on all the nine core items recommended by the United Nations. They also contain information on educational attainment, the intended occupation of the immigrant population, and industry of employer in previous country of usual residence.

Emigration Statistics

As stated earlier, Canada does not collect emigration statistics. Hence, there is little information available on international outflows of citizens and foreigners as presented in the United Nations taxonomy. Official quarterly and annual estimates of the total emigration outflow are published by Statistics Canada as part of its postcensal population estimates program. These estimates by age and sex and province of origin are the only source of data available on the total number of emigrants from Canada. Since these estimates are made up of three constituents, namely, permanent emigration; Canadians temporarily abroad; and return emigration, they provide the total estimated numbers of outflows of foreigners, inflows of citizens returning, and outflows of citizens and foreigners who are temporarily away as presented in the UN taxonomy.

Stock Data of International Migration

According to the United Nations recommendations, the "stock of international migrants present in a country" is defined as the set of persons who have ever changed their country of usual residence, that is to say, persons who have spent at least one year of their lives in a country other than the one in which they live at the time the data are gathered (United Nations, 1998, p. 83). Two subpopulations are the focus of interest: (a) that of foreigners living in a country; and (b) that of persons born in a country other than the one in which they live (the foreign-born). The distinction between the two subpopulations is that "foreigners" are those likely to have lived in their country of citizenship, the "foreign-born" in their country of birth. There are however, exceptions. For example, in some countries, children born to foreign parents are foreigners even if they were born and have lived in the receiving country. These foreigners do not qualify as long-term migrants under the general definition. Likewise, children born abroad of parents of diplomatic and military personal are to be excluded from the foreign-born population. Because of these exceptions, neither foreign nor the foreign-born population can be equated with the stock of international migrants. As stated in the UN document, "the foreign population of a country includes all persons who have that country as a country of usual residence and who are citizens of another country" and "the foreign-born population of a country includes all persons who have that country as country of usual residence and whose place of birth is located in another country" (United Nations, 1998, p. 83).

The major sources of information on the foreign-born population, as identified, are censuses, household surveys, and population registers. However, it has been noted that censuses "provide the most comprehensive source of data on the types of population stock that are most relevant for both the measurement and the study of international migration" (United Nations, 1998, p. 87). Along with the information on "foreign" and "foreign-born population", other supplementary essential information suggested for collection in the censuses includes citizenship, and the year of arrival.

Altogether, 57 tabulations are recommended by the United National under three groups as follows: (1) recommended tabulations using both place of birth and citizenship (3 tables);   (2) recommended tabulations using information on place of birth (26 tables); and (3) recommended tabulations using information on citizenship (28 tables).

The data collected in the 1996 Census, based on the four questions as discussed, provide the stock of the long-term immigrant population by year of immigration, as defined by the United Nations. The data on non-permanent residents (NPR) can also be derived.

The immigrant stock data, as recommended by the United Nations (1998), cover the following topics: country of birth, country of citizenship, period/year of arrival, sex, age, marital status, educational attainment, economic activity status, employment status, industry, and ability to speak official language(s). Data are collected on all these recommended topics in the 1991 and 1996 Censuses of Canada. Hence, census stock data on immigration cross-tabulated by these topics can be made available, as recommended by the United Nations (1998, pp. 89-90), which will permit in-depth analysis of immigration. As mentioned earlier, the census data on these variables refer to the census date and not the time of migration.

Further, from the CIC flow data on non-permanent residents (NPR), it is possible to derive estimates of stock data on NPR by duration of residence in Canada. The stock of NPR changes due to three factors: (i) out-flows abroad; (ii) out flows to landed immigrant population; and (iii) deaths among NPR. Therefore, NPR in year t_{+1} = NPR + net change in NPR, including new inflows of NPR, during t to t_{+1}. Based on the information on duration of residence of the NPR, including new in-flows of NPR, it is possible to derive estimates of NPR according to the U.N. recommendations of long-term and short-term immigrants.

Since the immigrant stock data are available for several censuses, they permit analysis of immigrants who came to Canada at various periods and at different stages in their life-cycle.

Concluding Remarks

Canada has been and continues to be one of the three leading countries (United States, Canada and Australia) of "permanent immigration". In recent years, the number of immigrants and rates of immigration have increased in Canada. Given the fact that international migration is an important factor of population growth, the need for accurate, timely statistics on immigration and emigration has always been high and is expected to grow in the years ahead. Data on the number and characteristics of migrants are required for postcensal population estimates, population projections and for analytical research on demographic and socio-economic aspects of migration. However, in general, international migration data are problematic for nearly all countries, and the statistics needed are very often lacking.

The assessment of Canada's major sources of flow and stock data on international migration reveals the following:

(1) First, flow data on permanent immigration compiled by CIC are quite detailed and are reliable for preparing population estimates, projections, and migration analyses. Second, since Canada uses the concept of legal right to permanent residence, the Canadian definition of international migration does not always comply with the United Nations recommendations. The landed immigrants, irrespective of the duration of stay, fall into the category of long-term immigrants. The data, however, need to be adjusted further to include non-permanent residents who stay in the country for one year or more. Third, the flow data on immigrants compiled by CIC contain information on all the UN recommended items for tabulation of data. Fourth, the most notable gap is the absence of data on characteristics of emigrants and their destination. However, annual estimates of total emigration by age and sex are available for permanent emigration, Canadians temporarily abroad, and return migration of emigrants. Hence, estimated numbers of total outflows of citizens and foreigners, inflows of citizens returning, and citizens and foreigners who are temporarily away can be made available to fit partially with the UN recommendations. Finally, the census stock data provide a rich time series on immigrants which are quite detailed and of high quality. Data on

immigrants, foreign-born populations and naturalized citizens are available based on several questions relating to immigrant population. The cross-tabulations of these data with the demographic and socio-economic characteristics can provide data according to the UN recommendations. One notable limitation of the stock data, however, is that the information on "year of landing" is obtained instead of "year of arrival", and the variables refer to census date and not the time of migration.

The collection of data on non-permanent residents in the censuses since 1991 is a notable improvement and has helped to identify the short-term and long-term immigrants, as required in the UN recommendations. A major task ahead to improve the international comparability of the flow data in line with the UN recommendations will be the tabulation and adjustment of data on non-permanent residents using the information on period of stay in the country.

Table A1: Revised taxonomy of international inflows and outflows according to entry status established by receiving state

	CITIZENS	FOREIGNERS		CITIZENS
	OUTFLOWS	INFLOWS	OUTFLOWS	INFLOWS
1.	Border workers departing daily or weekly to work in a neighbouring country	Foreign border workers entering daily or weekly to work	Foreign border workers departing daily or weekly to go home	Border workers returning daily or weekly to their home
2.	Departing citizens in transit	Arriving foreigners in transit	Departing foreigners in transit	Arriving citizens in transit
3.	Departing excursionists	Arriving foreign excursionists	Departing foreign excursionists	Returning excursionists
4.	Departing tourists	Arriving foreign tourists	Departing foreign tourists	Returning tourists
5.	Departing business travellers	Arriving foreign business travellers	Departing foreign business travellers	Returning business travellers
6.	Departing diplomatic and consular personnel (plus their dependants and household employees)	Arriving foreign diplomatic and consular personnel (plus their dependants and household employees)	Departing foreign diplomatic and consular personnel (plus their dependants and household employees)	Returning diplomatic and consular personnel (plus their dependants and household employees)
7.	Departing military personnel (plus their dependants)	Arriving foreign military personnel (plus their dependants)	Departing foreign military personnel (plus their dependants)	Returning military personnel (plus their dependants)
8.	Nomads	Nomads	Nomads	Nomads
9.	Citizens departing to study abroad (plus their dependants)	Arriving foreigners admitted as students (plus their dependants, if allowed)	Departing foreign students (plus their dependants)	Citizens returning from studying abroad (plus their dependants)

Table A1: Revised taxonomy of international inflows and outflows according to entry status established by receiving state - concluded

CITIZENS	FOREIGNERS		CITIZENS
OUTFLOWS	INFLOWS	OUTFLOWS	INFLOWS
10. Citizens departing to be trained abroad (plus their dependants)	Arriving foreigners admitted as trainees (plus their dependants, if allowed)	Departing foreign trainees (plus their dependants)	Citizens returning from being trained abroad (plus their dependants)
11. Citizens departing to work abroad (plus their dependants)	Arriving foreigners admitted as migrant workers (plus their dependants, if allowed)	Departing foreign migrant workers (plus their dependants)	Citizens returning from working abroad (plus their dependants)
12. Citizens departing to work in an international organization abroad (plus their dependants and employees)	Arriving foreigners admitted as international civil servants (plus their dependants and employees)	Departing foreign international civil servants (plus their dependants)	Citizens returning after having worked in an international organization abroad (plus their dependants)
13. Citizens departing to establish themselves in a country where they have the right to free establishment	Arriving foreigners having the right to free establishment	Foreigners departing after having exercised their right to free establishment	Citizens returning from a country where they exercised their right to free establishment
14. Citizens departing to settle abroad	Arriving foreigners admitted for settlement without limits on duration of stay	Foreign settlers departing	Citizens returning after having settled abroad
15. Citizens departing to form a family or join their immediate relatives abroad	Arriving foreigners admitted for family formation or reunification	Departing foreigners originally admitted for family formation or reunification	Citizens returning after having migrated for family formation or reunification
16. Citizens departing to seek asylum	Foreigners admitted as refugees	Departing refugees	Repatriating refugees
17. Citizens departing to seek asylum	Foreigners seeking asylum	Departing former asylum-seekers (not granted refugee status)	Returning former asylum-seekers
18. Citizens departing without the necessary admission permits	Foreigners whose entry is not sanctioned	Deported foreigners	Citizens being deported from abroad

Note: The categories presented in the present table should in no way be construed as providing a definition of international migrants. The taxonomy presented in this table is to serve as an analytical tool for the discussion of different data-collection systems yielding information on international migration flows. The relevant definitions of long-term and short-term international migrants are presented in box 1.

Table A2: Brief Definitions of the categories included in the taxonomy

A. Categories of transients not relevant for international migration

  1. *Citizens departing as border workers* ? *Foreign border workers*: Foreign persons granted the permission to be employed on a continuous basis in the receiving country provided they depart at regular and short intervals (daily or weekly) from that country.

  2. (a) *Citizens in transit*: Persons who arrive in their own country but do not enter it formally because they are on their way to another destination.

     (b) *Foreigner in transit*: Foreign persons who arrive in the receiving country but do not enter it formally because they are on their way to another destination.

B. Categories relevant for international tourism

  3. *Citizens departing as excursionists*? Foreign excursionists (also called "same-day visitors").

  4. *Citizens departing as tourists* ? Foreign tourists: Foreign persons admitted under tourist visas (if required) for purposes of leisure, recreation, holiday, visits to friends and relatives, health or medical treatment, or religious pilgrimage. They must spend at least a night in a collective or private accommodation in the receiving country and their duration of stay must not surpass 12 months.

  5. *Citizens departing as business travellers* ? Foreign business travellers: Foreign persons granted the permission to engage in business or professional activities that are not remunerated from within the country or arrival. Their length of stay is restricted and cannot surpass 12 months.

C. Categories traditionally excluded from international migration statistics

  6. *Citizens departing with the status of diplomatic or consular personnel or as dependants and employees of that personnel.*

  7. *Citizens departing with the status of military personnel or as dependants or employees of that personnel* ? Foreign military personnel plus their dependants and employees.

  8. *Nomads*: Persons without a fixed place of residence who move from one site to another, generally according to well-established patterns of territorial mobility.

D. Categories relevant for the compilation of international migration statistics

  9. *Citizens departing to study abroad* ? Foreign students: and a specific course their dependants if admitted.

  10. Citizens departing to be trained abroad ? *Foreign trainees* and their dependants, if admitted. Foreigners admitted under special permits or visas allowing them to undertake training that is remunerated from within the receiving country.

Table A2: Brief Definitions of the categories included in the taxonomy - concluded

> 11. *Citizens departing to work for an international organization abroad* ? *Foreigners admitted as international civil servant.*
>
> 12. *Citizens* departing to work abroad ? *Foreign migrant workers*, and their dependants, if admitted. Their length of stay is usually restricted as is the type of employment they can hold. Their dependants, if admitted, are also included in this category.
>
> 13. *Citizens departing to exercise their right to free establishment* ? *Foreigners having the right of free establishment* and their dependants, if admitted. Foreign persons who have the right to establish residence in the receiving country because of special treaties or agreements between their country of citizenship and the receiving country.
>
> 14. *Citizens departing to settle abroad* ? *Foreigners admitted for settlement* and their dependants, if admitted.
>
> 15. *Citizens departing to form a family or join immediate relatives// abroad ? Foreigners admitted for family formation or reunification.*
>
> 16. *Citizens departing to seek asylum* ? *Refugees*: Foreign persons granted refugee status either at the time of admission or before admission.
>
> **E. Other categories relevant for the measurement of international migration but encompassing persons whose duration of stay in the receiving country is uncertain**
>
> 17. *Citizens departing to seek asylum* ? *Foreigners seeking asylum*: A category that encompasses both persons who are eventually allowed to file an application for asylum (asylum-seekers proper) and those who do not enter the asylum adjudication system formally but are nevertheless granted the permission to stay until they can return safely to their countries of origin (in other words, foreigners granted temporary protected status).
>
> 18. *Citizens departing without that admission documents required by the country of destination* ? *Foreigners whose entry or stay is not sanctioned*: This category includes foreigners who violate the rules of admission of the receiving country and are deportable, as well as foreign persons attempting to seek asylum but who are not allowed to file an application and are not permitted to stay in the receiving country on any other grounds.

Note: For details, see United Nations, 1998, p. 13-15

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