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New Brunswick Population and Demographic Counts

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Abbreviations

CA	Census Agglomeration
CMA	Census Metropolitan Area
IRCC	Immigration, Refugees and Citizenship Canada
NB-IRDT	New Brunswick Institute for Research, Data and Training

Summary

This report is the first in a series of semi-annual reports that will be published by the New Brunswick Institute for Research, Data and Training (NB-IRDT) in October and March of every year. These reports provide an overview of the New Brunswick (NB) population and changes that have occurred in the population since the previous reporting period. Timely data on population flows are useful for informing public policy across a range of areas, such as immigrant retention and mobility[1] and the mobility decisions of graduates from post-secondary education[2]. These updates also provide a robustness check on population estimates periodically reported by Statistics Canada.

Highlight of Findings

- Of the **785,780** individuals living in NB as of December 15, 2020, **31,820** (4.05%) were immigrants.
- As of December 15, 2020, 7.48% of the population was aged 18-24, and 22.01% of the population was aged 65 and over.
- The immigrant age group with the largest population was aged 35-44, accounting for 23.21% of the immigrant population.
- 58.08% of the NB population lived in urban areas in Health Regions 1-3 (those containing Moncton, Saint John, and Fredericton) as of December 15, 2020.
- Monthly in-migration and net migration increased substantially from 2017 onward, with a maximum in-migration of 3,575 and net migration of 2,360 in the August-September 2019 migration period.
- Monthly immigrant in-migrations increased from 150 in January-February 2015 to 810 in January-February 2016, reflecting the arrival of a large cohort of Syrian refugees.
- Yearly in-migration increased from 12,320 in the 2015 migration period to 19,700 in the 2019 migration period.
- In-migrations for individuals with an Unknown previous province (mainly international arrivals) increased from 3,095 in the 2015 migration period to 8,220 in the 2019 migration period.
- In-migrations from Ontario increased from 2,740 in the 2015 migration period to 5,465 in the 2020 migration period.
- Out-migration from NB for individuals who had moved to NB previously from another province dropped from 8,875 in the 2013 migration period to 4,770 in the 2020 migration period.

Discussion

Overall, we see several positive trends in the population of NB. The immigrant population in NB is small but growing. The age distribution of the NB immigrant population is younger on average than the age distribution of NB overall. In-migration to NB has increased in recent years, and this includes an increase of international immigration to NB. Residents from other provinces are also becoming increasingly likely in recent years to move to NB and decreasingly likely to subsequently move out of NB. It is also notable that NB continues the trend towards increased urbanization, which also has significant policy implications for regional economic development.

Introduction

NB-IRDT has previously produced reports on immigrant retention[1] and student retention[2], in collaboration with the New Brunswick (NB) department of Post-Secondary, Education, Training, and Labour (PETL). These reports provide information to government about how many immigrants and student graduates are staying in the province, which can then inform policy around immigration and post-secondary education. Underlying both reports are data on the population of NB and how that population shifts over time. A more detailed exploration of population and migration in NB will provide more insight into how further research on retention and population can better inform government policy.

This report is the first in a new series of reports NB-IRDT will be producing on a bi-annual basis on the composition of and changes in the NB population. The analysis uses changes in Medicare status based on a prepared version of the Medicare Registry called the Citizen Database, accessed through NB-IRDT's secure lab facilities.

The objectives of these reports are to measure

- The total population count of New Brunswick by different demographic and geographic characteristics.

- The magnitude of interprovincial inflows and outflows.

Accomplishing these objectives gives us detailed insight on population composition and migration trends in NB, which then informs further research on population dynamics in NB and, in turn, economic growth and development.

In this first report, we provide historical data on the NB population over the last ten years (2010 – 2020) as a benchmark for future updates.

Using the administrative Citizen Database to calculate population counts, inflows, and outflows has several strengths. For one, the database is reliable and valid. It shows actual counts, unlike Statistics Canada monthly estimates, which are imputations. It can also be linked with other databases to assess population trends across different subgroups and regions. Further, it allows for detailed sub-group analysis over time by region or by personal characteristics. In addition, individual-level data from the Citizen Database are available in a timely fashion, with the most recent records being based on registration in Medicare within a few months of receipt of the dataset.

It should be noted that these population reports rely only on Medicare registry data accessed under an Information Manager Agreement, and therefore some limitations should be noted. One is that unlike NB-IRDT's report on immigrant retention[1], which used comprehensive immigration landing records from IRCC to determine immigration status, this report relies on citizen status as recorded in the Medicare system to determine immigration status rather than

IRCC records.[1] Another limitation is that data on the location of residence for people leaving NB are not available, which means province of destination cannot be specified in this report.

In the next section, we briefly describe the data and methodology used. We then present levels and changes in population size over the last ten years overall, and by a range of demographic characteristics. We then indicate reasons for why these estimates differ from what is reported by Statistics Canada in their periodic population updates.

Data and Methodology

The current version of the Citizen Database at NB-IRDT (as of December 2021) contains all NB Medicare records from January 1, 1971, to January 31, 2021.[2] Individuals eligible for Medicare include almost all NB citizens and permanent residents, as well as temporary foreign residents on a one-year work permit or longer, and international students (from 2017 onward). Other NB-IRDT reports on immigrant retention[1] and student retention[2] describe the sample universe of the Citizen Database in more detail.

Eligibility records, included to calculate population counts, contain either an "Active," "Inactive," or "Terminated" status group. Individuals have an "Active" group status for periods when they have NB Medicare. They have a "Terminated" group status when Medicare coverage ends. And they have an "Inactive" group status for other non-active Medicare statuses, such as during the Medicare application process. In addition to status groups, the statuses "Left the Province" and "Left Country" within the "Terminated" status group were used in the calculation of out-migration rates.

For this report, the sample includes individuals with an "Active" Medicare status between December 15, 2010, through December 15, 2020.

Population counts are presented as of December 15, 2020, and all individuals with an "Active" NB Medicare status on that date are included in the population counts.

Demographic information about individuals was taken from the Registry table in the Citizen Database. In cases where an individual had more than one Registry record, the most recent record was used.

The age categories "0-17," "18-24," "25-34," "35-44," "45-54," "55-64," and "65+" were included based on the individual's age as of December 15 of a given year.

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[1] Analysis of linked IRCC-provincial data is the subject of annual immigrant retention reports produced by NB-IRDT. These reports are available at https://www.unb.ca/nbirdt/research/publications/index.html.

[2] Although Medicare registry data are available as recently as two months prior to the current date, we restrict consideration to calendar year 2020. In confirming out-migration status, we need a 'look-forward' period of six months to ensure that apparent out-migration is not in fact simply a failure to renew one's Medicare card.

The genders "Male" and "Female" were included, with "Unknown" gender records removed to protect the confidentiality of certain individuals because of small sample sizes associated with that gender category.

Immigrant status was determined based on an individual's citizen status and previous country as reported in the Citizen Database.[3] Individuals were assigned "Immigrant" status if they had a "Landed Immigrant" citizen status or had both an "Unknown" citizen status and a non-Canadian previous country of residence (this may include some temporary residents). All other individuals,[4] including those with a "Permit" citizen status, were assigned "Non-immigrant" status.[5] Note that immigrants who were Canadian citizens before moving to NB were assigned a "Non-immigrant" status based on this categorization. Future work will consider more disaggregated categories of residents who are neither citizens nor permanent residents.

Geographic information on individuals was determined based on the most recent geographic record for that individual on or before December 15, 2020. Geographic categories include health region and an urban/rural indicator where urban is defined as the urban area within one of the seven health regions of New Brunswick.[6]

Migration counts were calculated based on transitions of Medicare status for each month/year between December 15, 2010, through to December 15, 2020. Each migration count used a time interval that indicated an individual's Medicare status at two points in time – a start date and an end date – and then counted in-migrations or out-migrations based on changes between the start date and end date. For example, the June-July 2011 monthly migration count would indicate an individual's status on June 15, 2011, and July 15, 2011; and it would include in-migrations or out-migrations depending on changes in status that occurred from one time point to the next. We created 120 monthly intervals and ten yearly intervals for the migration counts in this report.

An in-migration was counted if an individual did not have an "Active" status on the start date (or six months prior to the start date) but did have an "Active" status on the end date. NB births were excluded from in-migration counts.[7]

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[3] As this report uses only the Citizen Database, administrative data on immigrant landing records from IRCC are not included. Upcoming reports on immigrant attraction and retention, which will be published annually each spring, make use of the linked dataset.

[4] This includes individuals with a citizen status listed as "Canadian," "Dual Citizen," "Permit," or "Status Indian," as well as "Unknown" Citizen Status with "Canadian" previous country.

[5] Future iterations of this report can consider population counts of individuals on permits separately from other residents.

[6] These seven urban areas are larger in scope than the seven CMA/CAs of New Brunswick since they encompass any areas designated as urban within the health zones.

[7] Counting NB births in the Citizen Database was complicated by two factors. First, there can be a delay of a few months between when someone is born in NB and when their Medicare status becomes "Active." Second, it is difficult to differentiate between cases where someone is born in NB and obtains an "Active" Medicare status a few months later versus cases where someone was born outside NB but moves to NB within the first few months after birth. To resolve this, time intervals were marked as in-migrations, and we then checked if the individual was born within six months of that time interval. In applicable cases, we checked if the primary parent of that individual had an "Active" NB Medicare status on the individual's date of birth. Cases where the parent was "Active" were no longer counted as in-migrations. For cases where the parent's status was unknown, applicable individuals with "New Brunswick" as their previous province were no longer counted as in-migrations.

An out-migration was counted if an individual had an "Active" status on the start date but did not have an "Active" status on the end date (and six months after the end date – or on December 15, 2020, if that came earlier). The six-month period after the end date is important, as Medicare status may be terminated for various reasons other than leaving the province. For example, one could neglect to renew Medicare coverage when one's current Medicare card expires.

Out-migration excludes cases where a date of death occurred between the start date and end date.[8] Out-migrations were counted if an individual did not have either a "Left the Province" or "Left Country" status on the start date but did have one of those two statuses on the end date. These "Left the Province" or "Left Country" out-migrations were counted regardless of other status changes during that time period.

Immigrant status was included in the monthly migration counts based on criteria specified previously.

In this report, "Previous Province" was used for yearly migration counts to show where individuals resided before migrating to NB. Previous province is the most recent province where an individual was registered for Medicare prior to registration for Medicare in NB. The three territories ("Yukon," "Northwest Territories," and "Nunavut") were combined into one "Territories" category due to small sample sizes.

NB Medicare data do not reliably record province of destination for out-migrants with sufficient accuracy for us to report statistics on destination of out-migration.

It is important to note that health insurance regulations in most provinces specify a three-month waiting period before an interprovincial mover can apply for host province health insurance. Thus, the dates of in- and out-migration of interprovincial movers may involve a three-month lag between the actual date of the move and the date of health insurance registration. This is not the case for international arrivals, who are generally eligible to apply for health insurance on arrival in the host province.

For the counts presented in tables, we used a mix of random rounding and controlled random rounding, both of which randomly rounded to base 5 to protect the confidentiality of small sample sizes. Random rounding was used for tables with geographic area type. Controlled random rounding was used for all other tables.

[8] Date of death was based on the effective date an individual obtained the "Death" eligibility status (a sub-category of the "Terminated" status) in the Citizen Database.

Population Profile

The population profile in this report is based on the number of individuals who had an active NB Medicare status on December 15, 2020. These counts were categorized by age, gender, immigrant status, health region, and urban/rural status.

Figures are presented throughout the report, and corresponding tables of counts are in the Appendix. It is important to note that "Immigrant" is defined to include permanent residents only, based on Medicare citizenship status. Thus, non-permanent resident immigrants are included as non-immigrants. The next iteration of this report will consider this group separately.

Table 1 shows the New Brunswick population, based on active Medicare status on December 15, 2020, organized by immigrant status.

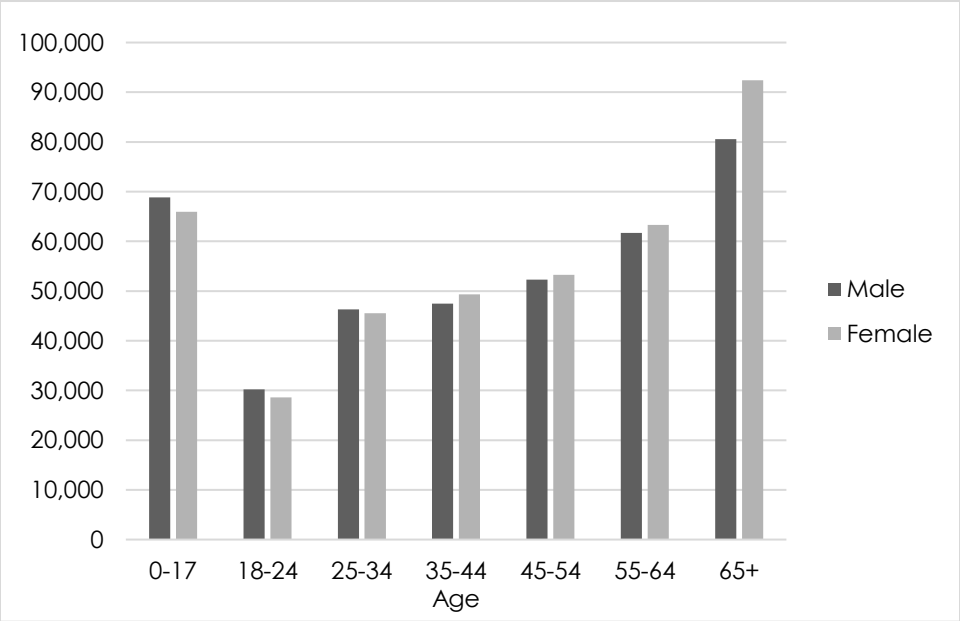
Table 1: Population on December 15, 2020, by Immigrant Status

Status	Population	% of Population
Immigrant	31,820	4.05
Non-Immigrant	753,960	95.95
Total	**785,780**	**100.00**

Population by Age and Gender

Figure 1 shows population counts by age group and gender as of December 15, 2020. Table 2 in the Appendix has the corresponding counts for this figure.

Figure 1: Population on December 15, 2020, by Age and Gender



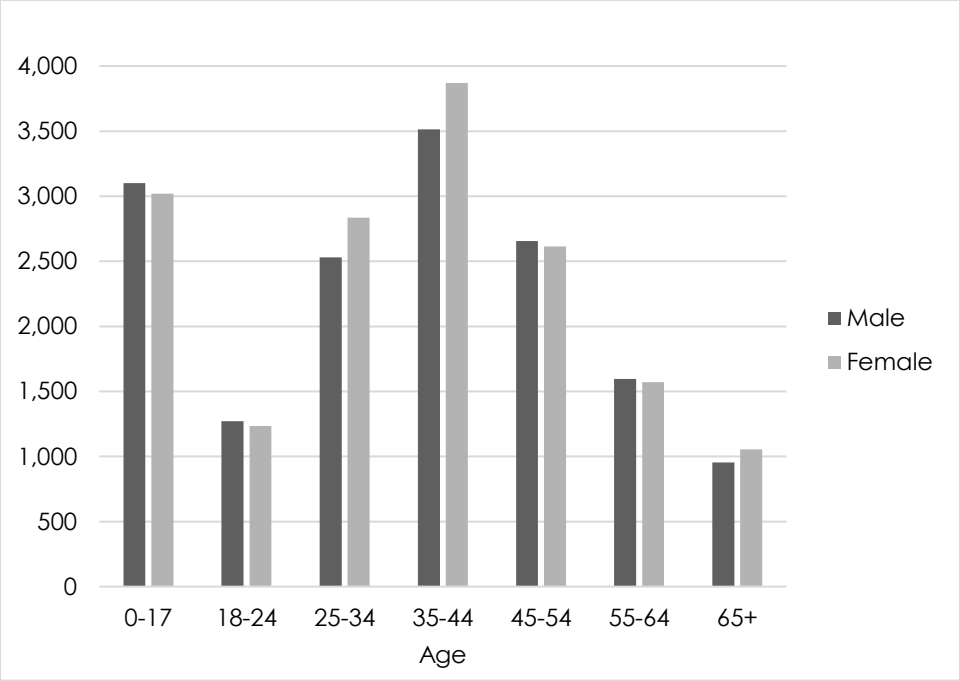
The population in Figure 1 rises as the age increases, from 58,815 individuals aged 18-24 (7.48% of the population) to 172,965 individuals aged 65 and over (22.01% of the population). The gender distribution is generally split evenly, with 387,360 males (49.30% of the population) and 398,420 females (50.70% of the population).

The largest difference was among individuals aged 65 and over. This group had 80,575 males (46.58% of the age group) and 92,390 female individuals (53.42% of the age group).

Immigrant Population by Age and Gender

Figure 2 shows population counts by age group and gender specifically for individuals with "Immigrant" status as of December 15, 2020, with corresponding numbers in Table 3.

Figure 2: Immigrant Population on December 15, 2020, by Age and Gender



In Figure 2, the immigrant population age group with the highest number of individuals was the 35-44 age group, containing 7,385 individuals (23.21% of the immigrant population).

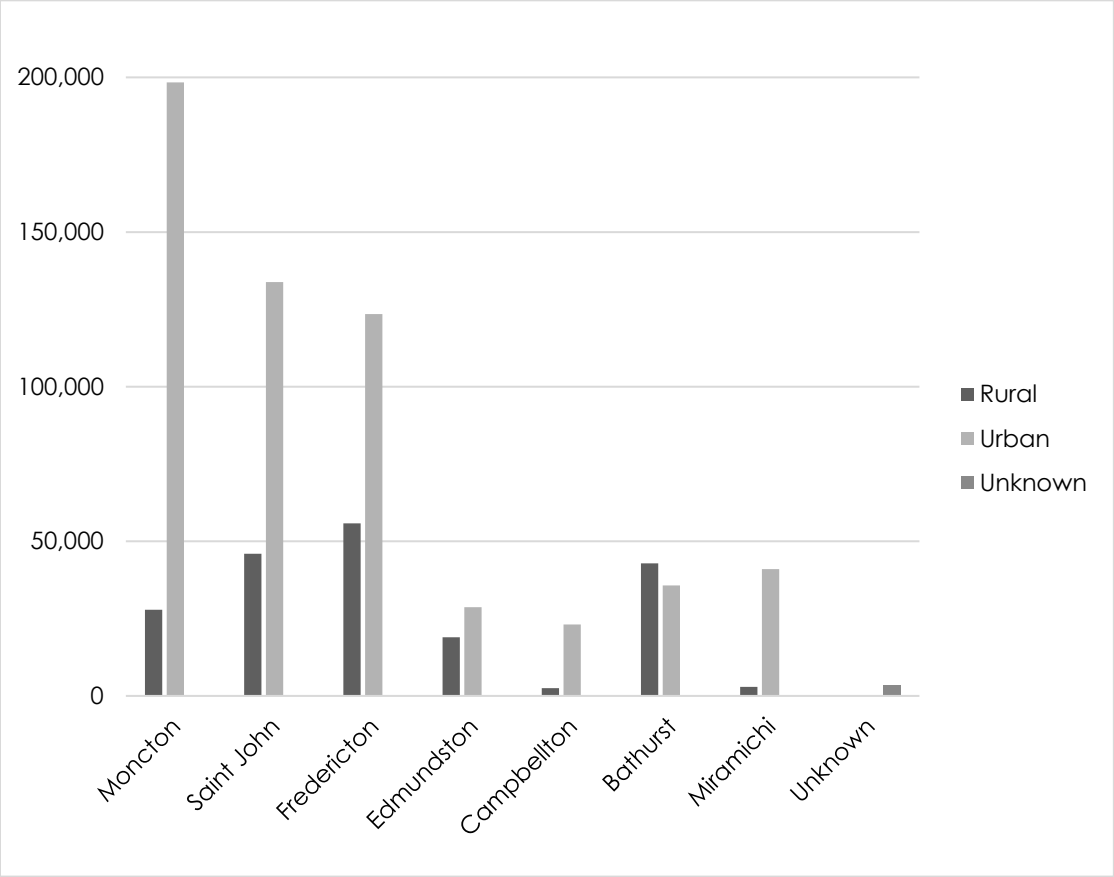
This is different from Figure 1, which shows more individuals in older age categories.

The gender distribution is similar among both the immigrant population and the total population, with the immigrant population made up of 15,620 males (49.09% of the immigrant population) and 16,200 females (50.91% of the immigrant population). The largest difference is for immigrants aged 25-34. This group had 2,530 males (47.16% of immigrants aged 25-34) and 2,835 females (52.84% of immigrants aged 25-34).

Population by Geographic Area

Population counts were also calculated by health region and urban/rural indicator. The urban/rural indicator defines urban as within the urban area of one of the seven health regions of New Brunswick. Counts as of December 15, 2020, are shown in Figure 3, with corresponding numbers in Table 4.

Figure 3: Population on December 15, 2020, by Health Region and Urban/Rural Indicator



*"Urban" is defined as within the urban area of one of the seven health regions in NB. Health regions are labelled based on the largest city or town in that region.

The population in Figure 3 is concentrated in the urban areas of health regions that include the three largest cities in NB: Moncton, Saint John, and Fredericton.

There were198,395 urban individuals in the health region containing Moncton, 133,775 in the region containing Saint John, and 123,425 in the region containing Fredericton, for a total 455,595 individuals, or 58.08% of the wider population.

The Bathurst health region had 42,910 rural individuals, making it the health region with the highest proportion of rural individuals, at 54.59%. Conversely, the Miramichi health region had 2,955 rural individuals (individuals outside the Miramichi urban area), making it the health region with the lowest proportion of rural individuals, at 6.73%.

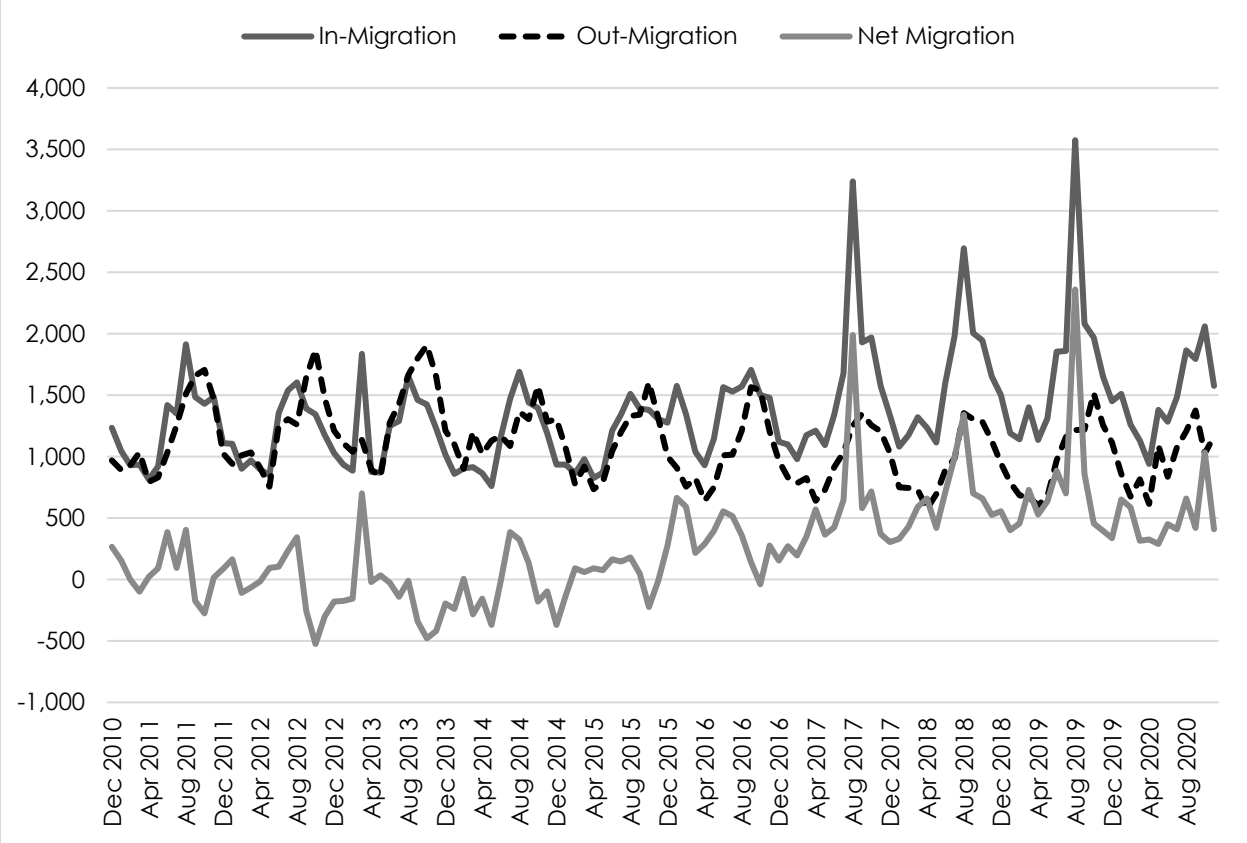
Migration To and From New Brunswick

Migrations to and from NB include all migrations, both domestic and international, that meet the migration criteria specified in the methodology section. The migration counts use monthly migration periods, which are further categorized by immigrant status, as well as yearly migration periods, which are further categorized by previous province.

Monthly Migration

Figure 4 shows in-migration and out-migration for each month in the ten-year period between December 15, 2010, and December 15, 2020, with corresponding migration counts in Table 5.

Figure 4: Migration by Month from December 15, 2010, to December 15, 2020



*The data points presented indicate the counts as of the 15th day of each month.

The in-migration and out-migration counts in Figure 4 both show seasonal trends with more migration activity in the second half of each year (July – December) compared to the first half (January – June).

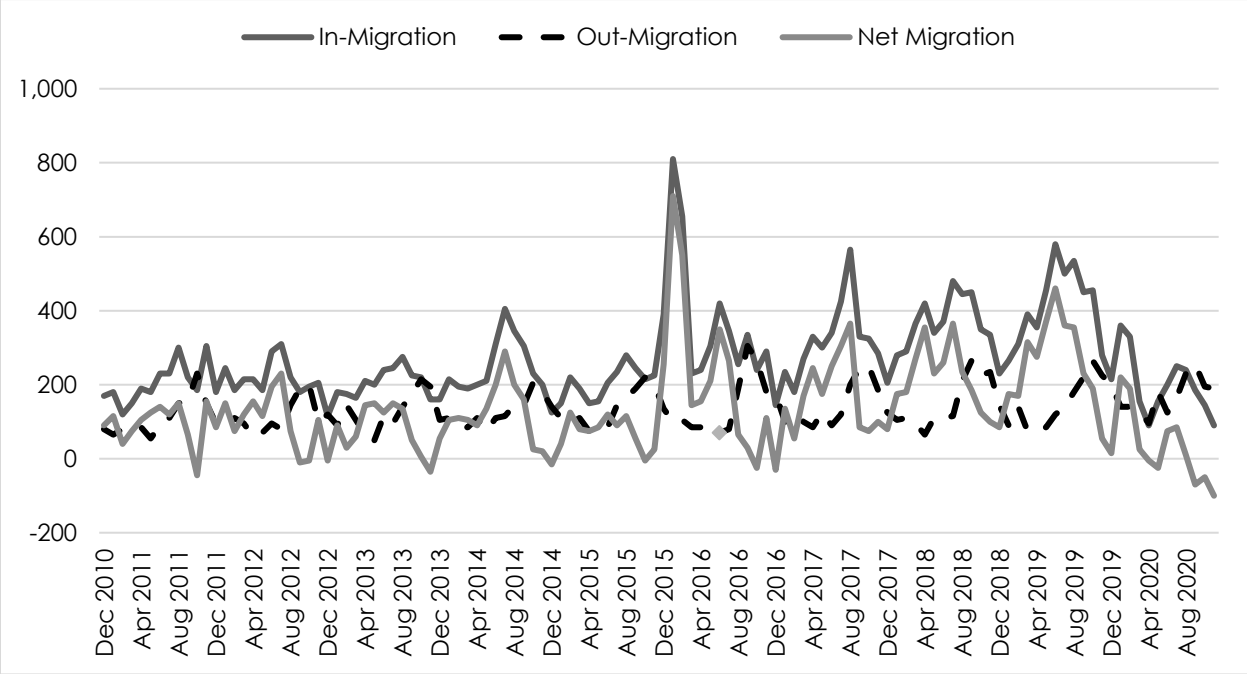
In-migration and out-migration were at similar levels up until early 2017, at which point in-migrations increased above out-migrations. In-migration and net migration increased significantly in the second half of 2017, with spikes in in-migration each year afterward. The

highest level of in-migration was in the August-September 2019 migration period, with 3,575 reported in-migrations and 2,360 net migrations.

Immigrant Monthly Migration

Figure 5 shows in-migration and out-migration counts by month over the last ten years (2010 – 2020), specifically for individuals with "Immigrant" status, with corresponding migration counts in Table 6. Note that "Immigrant" is defined as individuals who were permanent residents on arrival in NB.

Figure 5: Immigrant Migration by Month from December 15, 2010, to December 15, 2020



*The data points presented indicate the counts as of the 15th day of each month.

The trends in Figure 5 are similar to those shown in Figure 4, but with a significant spike of in-migrations in the January-February 2016 migration period. There were 810 in-migrations in the January-February 2016 period, which is a significant increase from 150 in-migrations in January-February a year prior. This was due primarily to the arrival of Syrian refugees in NB in 2016, as mentioned in the NB-IRDT report on immigrant retention.[1]

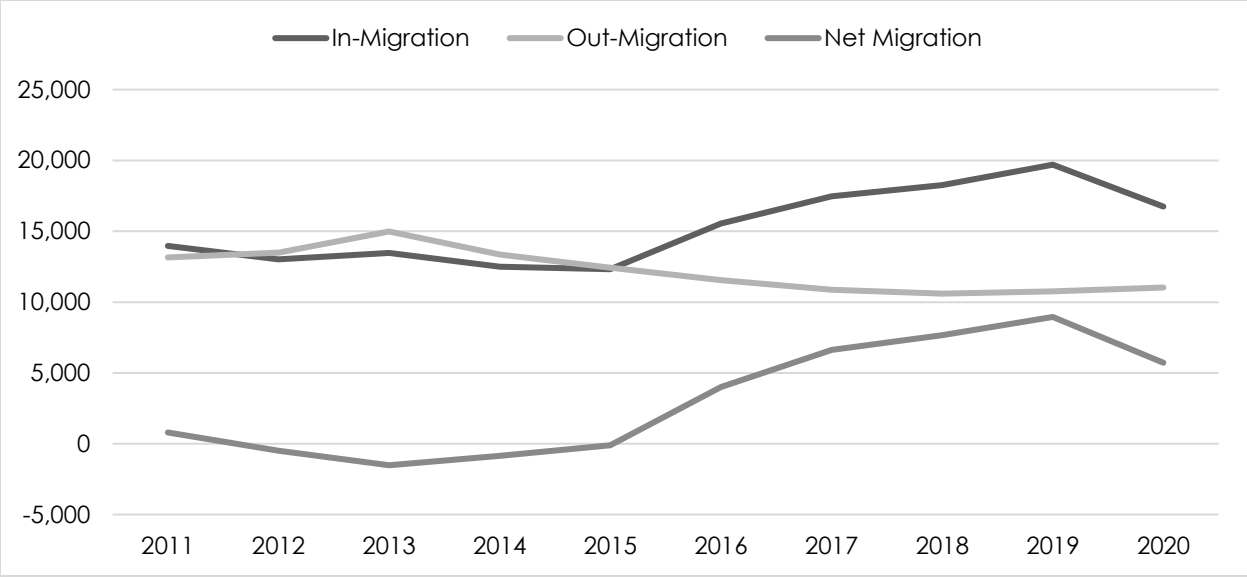
Note that, due to the small immigrant population in NB, the spike of immigrant in-migrations in early 2016 did not produce as much of a spike for the same time period of the overall monthly migration counts in Figure 4.

Yearly Migration

Figure 6 shows in-migration and out-migration counts by year in the ten-year period between December 15, 2010, and December 15, 2020, with corresponding migration counts in Table 7.

Each of the yearly periods presented go from December 15 of one year to December 15 of the following year. This report uses the end year to report on the migration period. For example, the 2011 migration period goes from December 15, 2010, to December 15, 2011.

Figure 6: Migration by Year from December 15, 2010, to December 15, 2020



The yearly migration trend in Figure 6 matches the monthly migration trend shown in Figure 4, but with less granularity. In-migrations increased from 12,320 in the 2015 migration period to 19,700 in the 2019 migration period. In-migrations then decreased to 16,750 in the 2020 migration period, likely due to COVID-related reasons.

Out-migrations steadily decreased from 14,985 in the 2013 migration period to 11,020 in the 2020 migration period.

Yearly Migration by Previous Province

The yearly migration counts presented above are further categorized by previous province in the next two figures. Figure 7 shows in-migrations by previous province, and Figure 8 shows out-migrations by previous province. These migration counts are also listed in Table 7.

As previously mentioned in the methodology, NB Medicare data do not reliably show province of destination after leaving NB. This means yearly out-migration counts in this report do not show province of destination after leaving NB but do identify the previous province the individual came from before arriving in NB.

For example, if an individual were to come from Alberta to NB and then leave for Ontario, they would be counted as both an in-migration and out-migration with a previous province of Alberta, but the report would not show Ontario as a province of destination.

Figure 7: In-Migration by Year from December 15, 2010, to December 15, 2020, by Previous Province

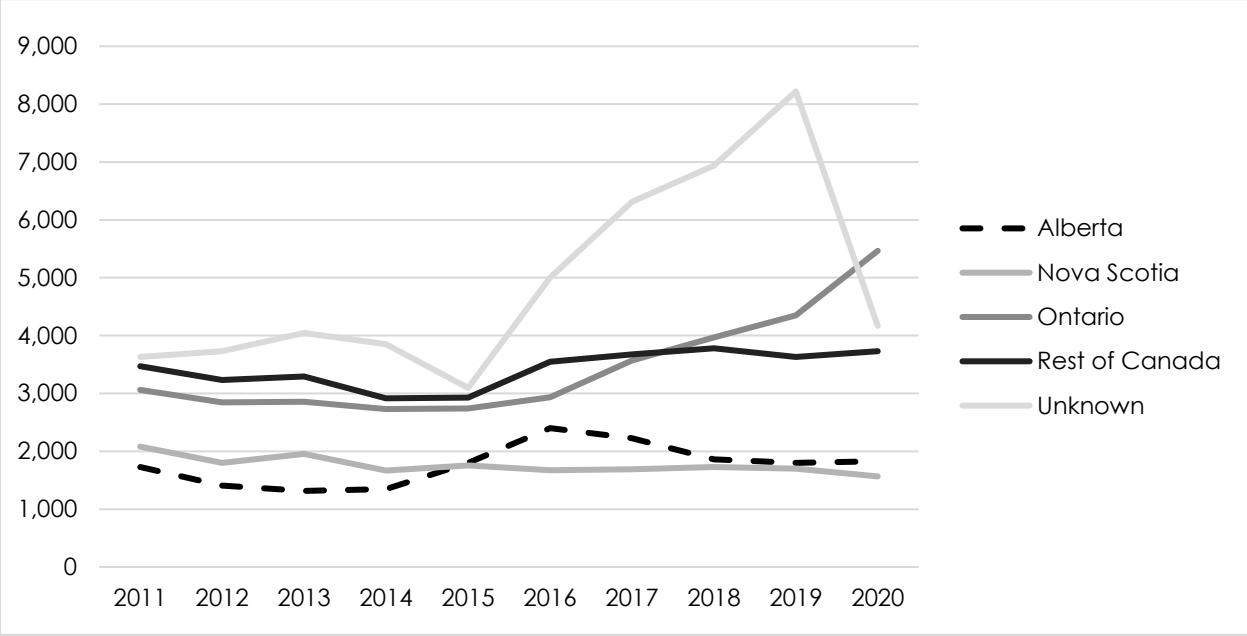


Figure 7 shows a large increase of in-migrations for individuals whose previous province was Unknown – from 3,095 in-migrations in the 2015 migration period to 8,220 in-migrations in the 2019 migration period. The Unknown previous province category primarily includes immigrants arriving from other countries, but it also includes individuals with Unknown previous province due to other reasons, such as gaps in Medicare coverage.[9]

In-migrations from Ontario also increased significantly from 2,740 in-migrations in the 2015 migration period to 5,465 in-migrations in the 2020 migration period.

Figure 8 shows yearly out-migrations by three previous province categories: First Time Leaver, Province Outside NB, and Unknown.

First Time Leavers are out-migrants with NB as their previous province. These are individuals from NB who had not moved out of the province prior to that out-migration.

Out-migrations with any previous province outside NB make up the Province Outside NB category and include individuals who previously moved to NB from another province.

Out-migrations with Unknown previous province make up the Unknown category and are primarily immigrants who previously moved to NB from another country.

[9] Specifically, in-migrations with NB as previous province are included in the Unknown category since these in-migrations are generally a result of gaps in Medicare coverage. For example, if someone from NB moved to Ontario and then back to NB, but didn't register for Ontario Medicare during their time there, their previous province would say NB, rather than Ontario. Other cases like these leave no information about where the individual was during their time outside NB, making their previous province "Unknown."

Figure 8: Out-Migration by Year from December 15, 2010, to December 15, 2020, by Previous Province

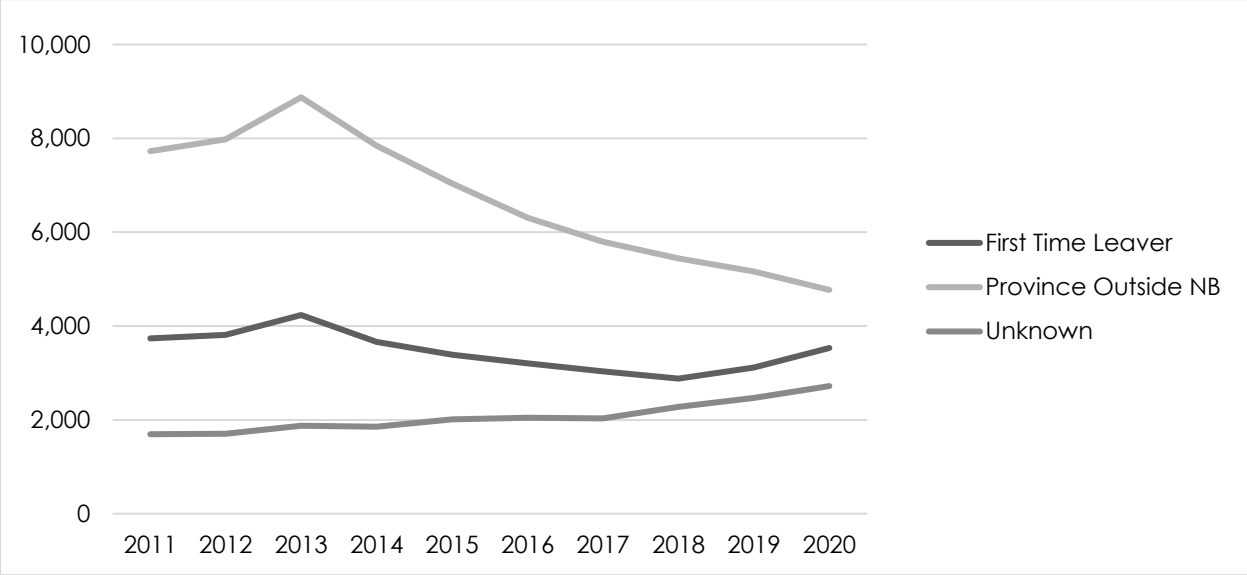


Figure 8 shows a 46.25% drop in out-migrations for individuals previously from a province outside NB over a seven-year period – from 8,875 in the 2013 migration period to 4,770 in the 2020 migration period.

Out-migrations from individuals with an Unknown previous province increased throughout the ten-year period but did not match the increase of in-migrations of individuals with an Unknown previous province in Figure 7. This had the effect of a net migration gain over time in this group, which is largely comprised of international immigrants.

Conclusion

This report used NB Medicare information from the Citizen Database to give a population snapshot as of December 15, 2020, including both monthly and yearly migration counts from December 15, 2010, to December 15, 2020.

This population snapshot shows that while the population of NB is aging, the immigrant population within NB has an age distribution more centered around the 35-44 age category. As well, more than half the NB population live in urban areas within the three largest health regions containing Moncton, Saint John, and Fredericton, respectively.

The migration counts show increasing in-migration and net migration from 2017 onward, as well as a spike in immigrant in-migrations in early 2016. The monthly migration counts show a seasonal pattern where in-migrations and out-migrations both increased in the second half of each year. In-migrations from Ontario and outside Canada have increased since 2015. Out-migrations have decreased since 2013, particularly from individuals who were residents of another province prior to moving to NB.

Statistics Canada also reports on population and migration estimates using their own data and methodology. The population and migration counts in this report were compared to corresponding counts from Statistics Canada to ensure the validity of the results. The population counts in this report closely matched corresponding Statistics Canada population counts,[10] with a difference of less than 1%. This indicates the Citizen Database contains roughly the same population as Statistics Canada data, suggesting the robustness of each.

The yearly migration counts and trends were also broadly comparable to the ones reported by Statistics Canada,[11] though with more variation (but still less than 10% difference on average). These differences in migration counts can be explained by differences in methodology between how Statistics Canada measures migration[12] and how migration was measured in this report. Statistics Canada is able to provide province of destination, unlike the migration counts in this report, which only show previous province. Conversely, Statistics Canada is not able to provide actual monthly migration counts like this report did, but instead Statistics Canada provides monthly estimates through imputation.

This report was the first in a continuing series of semi-annual reports providing an overview of the NB population and changes to that population. Subsequent reports will use updates to the Citizen Database to update results on changes in the population.

[10] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710000501
[11] https://www150.statcan.gc.ca/t1/tbl1/en/tv.action?pid=1710002201
[12] https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3601#a2

References

1. McDonald, T., & Miah, P. (2021). Immigrant retention in New Brunswick: An analysis using linked federal-provincial administrative data. Fredericton, NB: New Brunswick Institute for Research, Data and Training. https://www.unb.ca/nbirdt/research/publications/immigrant-retention-in-new-brunswick.html

2. Bhuiyan, E.M., Daigle, B., McDonald, T., & Miah, P (2020). College & university graduate retention in New Brunswick: 2010 - 2018. Fredericton, NB: New Brunswick Institute for Research, Data and Training. https://www.unb.ca/nbirdt/research/publications/college-and-university-graduate-retention-in-new-brunswick-2010--2018.html

Appendix – Additional Tables

Table 2: Population on December 15, 2020, by Age and Gender

Age Group	Male	Female	Total
0-17	68,870	65,960	134,830
18-24	30,210	28,605	58,815
25-34	46,275	45,565	91,840
35-44	47,450	49,335	96,785
45-54	52,290	53,230	105,520
55-64	61,690	63,335	125,025
65+	80,575	92,390	172,965
Total	**387,360**	**398,420**	**785,780**

Table 3: Immigrant Population on December 15, 2020, by Age and Gender

Age Group	Male	Female	Total
0-17	3,100	3,020	6,120
18-24	1,270	1,235	2,505
25-34	2,530	2,835	5,365
35-44	3,515	3,870	7,385
45-54	2,655	2,615	5,270
55-64	1,595	1,570	3,165
65+	955	1,055	2,010
Total	**15,620**	**16,200**	**31,820**

Table 4: Population on December 15, 2020, by Health Region and Urban/Rural Indicator

Health Region	Rural	Urban	Unknown	Total
Moncton	27,830	198,395		226,225
Saint John	45,950	133,775		179,725
Fredericton	55,760	123,425		179,185
Edmundston	18,965	28,715		47,680
Campbellton	2,490	23,150		25,640
Bathurst	42,910	35,690		78,600
Miramichi	2,955	40,975		43,930
Unknown			3,405	3,405
Total	**196,860**	**584,125**	**3,405**	**784,390**

*Urban is defined as within the urban area of one of the seven health regions in NB.

Table 5: Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2010-12-15	**2011-01-15**	1,235	970	265
2011-01-15	**2011-02-15**	1,045	890	155
2011-02-15	**2011-03-15**	930	930	0
2011-03-15	**2011-04-15**	935	1,035	-100
2011-04-15	**2011-05-15**	815	795	20
2011-05-15	**2011-06-15**	920	830	90
2011-06-15	**2011-07-15**	1,420	1,035	385
2011-07-15	**2011-08-15**	1,350	1,255	95
2011-08-15	**2011-09-15**	1,915	1,510	405
2011-09-15	**2011-10-15**	1,485	1,660	-175
2011-10-15	**2011-11-15**	1,430	1,705	-275
2011-11-15	**2011-12-15**	1,485	1,470	15
2011-12-15	**2012-01-15**	1,110	1,025	85
2012-01-15	**2012-02-15**	1,105	940	165
2012-02-15	**2012-03-15**	900	1,010	-110
2012-03-15	**2012-04-15**	970	1,035	-65
2012-04-15	**2012-05-15**	895	910	-15
2012-05-15	**2012-06-15**	850	755	95
2012-06-15	**2012-07-15**	1,355	1,250	105
2012-07-15	**2012-08-15**	1,540	1,305	235
2012-08-15	**2012-09-15**	1,605	1,260	345
2012-09-15	**2012-10-15**	1,390	1,645	-255
2012-10-15	**2012-11-15**	1,345	1,870	-525
2012-11-15	**2012-12-15**	1,175	1,475	-300
2012-12-15	**2013-01-15**	1,030	1,210	-180
2013-01-15	**2013-02-15**	935	1,110	-175
2013-02-15	**2013-03-15**	885	1,040	-155
2013-03-15	**2013-04-15**	1,835	1,135	700
2013-04-15	**2013-05-15**	875	895	-20
2013-05-15	**2013-06-15**	870	835	35
2013-06-15	**2013-07-15**	1,250	1,275	-25
2013-07-15	**2013-08-15**	1,290	1,430	-140
2013-08-15	**2013-09-15**	1,655	1,665	-10
2013-09-15	**2013-10-15**	1,460	1,800	-340
2013-10-15	**2013-11-15**	1,425	1,905	-480
2013-11-15	**2013-12-15**	1,230	1,650	-420
2013-12-15	**2014-01-15**	1,015	1,210	-195
2014-01-15	**2014-02-15**	860	1,100	-240
2014-02-15	**2014-03-15**	905	900	5

Table 5 Continued: Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2014-03-15	**2014-04-15**	915	1,200	-285
2014-04-15	**2014-05-15**	865	1,020	-155
2014-05-15	**2014-06-15**	760	1,130	-370
2014-06-15	**2014-07-15**	1,160	1,170	-10
2014-07-15	**2014-08-15**	1,470	1,085	385
2014-08-15	**2014-09-15**	1,690	1,365	325
2014-09-15	**2014-10-15**	1,440	1,305	135
2014-10-15	**2014-11-15**	1,395	1,575	-180
2014-11-15	**2014-12-15**	1,190	1,285	-95
2014-12-15	**2015-01-15**	935	1,305	-370
2015-01-15	**2015-02-15**	935	1,065	-130
2015-02-15	**2015-03-15**	865	775	90
2015-03-15	**2015-04-15**	980	920	60
2015-04-15	**2015-05-15**	825	735	90
2015-05-15	**2015-06-15**	870	795	75
2015-06-15	**2015-07-15**	1,210	1,045	165
2015-07-15	**2015-08-15**	1,345	1,200	145
2015-08-15	**2015-09-15**	1,510	1,330	180
2015-09-15	**2015-10-15**	1,390	1,340	50
2015-10-15	**2015-11-15**	1,380	1,605	-225
2015-11-15	**2015-12-15**	1,305	1,315	-10
2015-12-15	**2016-01-15**	1,275	1,000	275
2016-01-15	**2016-02-15**	1,575	910	665
2016-02-15	**2016-03-15**	1,345	755	590
2016-03-15	**2016-04-15**	1,040	825	215
2016-04-15	**2016-05-15**	930	640	290
2016-05-15	**2016-06-15**	1,145	750	395
2016-06-15	**2016-07-15**	1,565	1,010	555
2016-07-15	**2016-08-15**	1,530	1,015	515
2016-08-15	**2016-09-15**	1,570	1,210	360
2016-09-15	**2016-10-15**	1,705	1,565	140
2016-10-15	**2016-11-15**	1,500	1,540	-40
2016-11-15	**2016-12-15**	1,480	1,205	275
2016-12-15	**2017-01-15**	1,120	965	155
2017-01-15	**2017-02-15**	1,100	830	270
2017-02-15	**2017-03-15**	980	785	195
2017-03-15	**2017-04-15**	1,175	825	350
2017-04-15	**2017-05-15**	1,210	640	570

Table 5 Continued: Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2017-05-15	**2017-06-15**	1,095	730	365
2017-06-15	**2017-07-15**	1,340	915	425
2017-07-15	**2017-08-15**	1,680	1,035	645
2017-08-15	**2017-09-15**	3,240	1,250	1,990
2017-09-15	**2017-10-15**	1,930	1,350	580
2017-10-15	**2017-11-15**	1,970	1,255	715
2017-11-15	**2017-12-15**	1,575	1,205	370
2017-12-15	**2018-01-15**	1,335	1,030	305
2018-01-15	**2018-02-15**	1,080	750	330
2018-02-15	**2018-03-15**	1,175	745	430
2018-03-15	**2018-04-15**	1,320	730	590
2018-04-15	**2018-05-15**	1,235	575	660
2018-05-15	**2018-06-15**	1,115	695	420
2018-06-15	**2018-07-15**	1,600	890	710
2018-07-15	**2018-08-15**	1,980	985	995
2018-08-15	**2018-09-15**	2,695	1,355	1,340
2018-09-15	**2018-10-15**	2,005	1,305	700
2018-10-15	**2018-11-15**	1,945	1,285	660
2018-11-15	**2018-12-15**	1,655	1,130	525
2018-12-15	**2019-01-15**	1,500	945	555
2019-01-15	**2019-02-15**	1,190	790	400
2019-02-15	**2019-03-15**	1,140	685	455
2019-03-15	**2019-04-15**	1,400	670	730
2019-04-15	**2019-05-15**	1,135	605	530
2019-05-15	**2019-06-15**	1,310	675	635
2019-06-15	**2019-07-15**	1,855	970	885
2019-07-15	**2019-08-15**	1,860	1,160	700
2019-08-15	**2019-09-15**	3,575	1,215	2,360
2019-09-15	**2019-10-15**	2,080	1,220	860
2019-10-15	**2019-11-15**	1,970	1,515	455
2019-11-15	**2019-12-15**	1,650	1,255	395
2019-12-15	**2020-01-15**	1,450	1,115	335
2020-01-15	**2020-02-15**	1,510	860	650
2020-02-15	**2020-03-15**	1,260	675	585
2020-03-15	**2020-04-15**	1,130	815	315
2020-04-15	**2020-05-15**	940	615	325
2020-05-15	**2020-06-15**	1,380	1,090	290

Table 5 Continued: Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2020-06-15	**2020-07-15**	1,285	835	450
2020-07-15	**2020-08-15**	1,485	1,075	410
2020-08-15	**2020-09-15**	1,865	1,205	660
2020-09-15	**2020-10-15**	1,795	1,375	420
2020-10-15	**2020-11-15**	2,060	1,025	1,035
2020-11-15	**2020-12-15**	1,575	1,165	410
Total		**163,775**	**131,530**	**32,245**

Table 6: Immigrant Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2010-12-15	**2011-01-15**	170	80	90
2011-01-15	**2011-02-15**	180	65	115
2011-02-15	**2011-03-15**	120	80	40
2011-03-15	**2011-04-15**	150	75	75
2011-04-15	**2011-05-15**	190	85	105
2011-05-15	**2011-06-15**	180	55	125
2011-06-15	**2011-07-15**	230	90	140
2011-07-15	**2011-08-15**	230	110	120
2011-08-15	**2011-09-15**	300	150	150
2011-09-15	**2011-10-15**	220	155	65
2011-10-15	**2011-11-15**	185	230	-45
2011-11-15	**2011-12-15**	305	150	155
2011-12-15	**2012-01-15**	180	95	85
2012-01-15	**2012-02-15**	245	95	150
2012-02-15	**2012-03-15**	185	110	75
2012-03-15	**2012-04-15**	215	95	120
2012-04-15	**2012-05-15**	215	60	155
2012-05-15	**2012-06-15**	185	70	115
2012-06-15	**2012-07-15**	290	95	195
2012-07-15	**2012-08-15**	310	80	230
2012-08-15	**2012-09-15**	220	145	75
2012-09-15	**2012-10-15**	180	190	-10
2012-10-15	**2012-11-15**	195	200	-5
2012-11-15	**2012-12-15**	205	100	105
2012-12-15	**2013-01-15**	115	120	-5
2013-01-15	**2013-02-15**	180	90	90

Table 6 Continued: Immigrant Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2013-02-15	**2013-03-15**	175	145	30
2013-03-15	**2013-04-15**	165	105	60
2013-04-15	**2013-05-15**	210	65	145
2013-05-15	**2013-06-15**	200	50	150
2013-06-15	**2013-07-15**	240	115	125
2013-07-15	**2013-08-15**	245	95	150
2013-08-15	**2013-09-15**	275	140	135
2013-09-15	**2013-10-15**	225	175	50
2013-10-15	**2013-11-15**	220	215	5
2013-11-15	**2013-12-15**	160	195	-35
2013-12-15	**2014-01-15**	160	105	55
2014-01-15	**2014-02-15**	215	110	105
2014-02-15	**2014-03-15**	195	85	110
2014-03-15	**2014-04-15**	190	85	105
2014-04-15	**2014-05-15**	200	110	90
2014-05-15	**2014-06-15**	210	75	135
2014-06-15	**2014-07-15**	310	110	200
2014-07-15	**2014-08-15**	405	115	290
2014-08-15	**2014-09-15**	345	145	200
2014-09-15	**2014-10-15**	305	145	160
2014-10-15	**2014-11-15**	230	205	25
2014-11-15	**2014-12-15**	200	180	20
2014-12-15	**2015-01-15**	125	140	-15
2015-01-15	**2015-02-15**	150	110	40
2015-02-15	**2015-03-15**	220	95	125
2015-03-15	**2015-04-15**	190	110	80
2015-04-15	**2015-05-15**	150	75	75
2015-05-15	**2015-06-15**	155	70	85
2015-06-15	**2015-07-15**	205	85	120
2015-07-15	**2015-08-15**	235	145	90
2015-08-15	**2015-09-15**	280	165	115
2015-09-15	**2015-10-15**	245	190	55
2015-10-15	**2015-11-15**	215	220	-5
2015-11-15	**2015-12-15**	225	200	25
2015-12-15	**2016-01-15**	390	135	255
2016-01-15	**2016-02-15**	810	100	710
2016-02-15	**2016-03-15**	655	105	550
2016-03-15	**2016-04-15**	230	85	145

Table 6 Continued: Immigrant Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2016-04-15	**2016-05-15**	240	85	155
2016-05-15	**2016-06-15**	305	95	210
2016-06-15	**2016-07-15**	420	70	350
2016-07-15	**2016-08-15**	345	80	265
2016-08-15	**2016-09-15**	255	190	65
2016-09-15	**2016-10-15**	335	305	30
2016-10-15	**2016-11-15**	240	265	-25
2016-11-15	**2016-12-15**	290	180	110
2016-12-15	**2017-01-15**	145	175	-30
2017-01-15	**2017-02-15**	235	100	135
2017-02-15	**2017-03-15**	180	125	55
2017-03-15	**2017-04-15**	270	100	170
2017-04-15	**2017-05-15**	330	85	245
2017-05-15	**2017-06-15**	300	125	175
2017-06-15	**2017-07-15**	340	90	250
2017-07-15	**2017-08-15**	425	120	305
2017-08-15	**2017-09-15**	565	200	365
2017-09-15	**2017-10-15**	330	245	85
2017-10-15	**2017-11-15**	325	250	75
2017-11-15	**2017-12-15**	285	185	100
2017-12-15	**2018-01-15**	205	125	80
2018-01-15	**2018-02-15**	280	105	175
2018-02-15	**2018-03-15**	290	110	180
2018-03-15	**2018-04-15**	365	95	270
2018-04-15	**2018-05-15**	420	65	355
2018-05-15	**2018-06-15**	340	110	230
2018-06-15	**2018-07-15**	370	110	260
2018-07-15	**2018-08-15**	480	115	365
2018-08-15	**2018-09-15**	445	210	235
2018-09-15	**2018-10-15**	450	265	185
2018-10-15	**2018-11-15**	350	225	125
2018-11-15	**2018-12-15**	335	235	100
2018-12-15	**2019-01-15**	230	145	85
2019-01-15	**2019-02-15**	265	90	175
2019-02-15	**2019-03-15**	310	140	170
2019-03-15	**2019-04-15**	390	75	315
2019-04-15	**2019-05-15**	355	80	275
2019-05-15	**2019-06-15**	455	85	370

Table 6 Continued: Immigrant Migration by Month from December 15, 2010, to December 15, 2020

Start Date	End Date	In-Migration	Out-Migration	Net Migration
2019-06-15	**2019-07-15**	580	120	460
2019-07-15	**2019-08-15**	500	140	360
2019-08-15	**2019-09-15**	535	180	355
2019-09-15	**2019-10-15**	450	220	230
2019-10-15	**2019-11-15**	455	265	190
2019-11-15	**2019-12-15**	280	225	55
2019-12-15	**2020-01-15**	215	200	15
2020-01-15	**2020-02-15**	360	140	220
2020-02-15	**2020-03-15**	330	140	190
2020-03-15	**2020-04-15**	155	130	25
2020-04-15	**2020-05-15**	90	95	-5
2020-05-15	**2020-06-15**	155	180	-25
2020-06-15	**2020-07-15**	200	125	75
2020-07-15	**2020-08-15**	250	165	85
2020-08-15	**2020-09-15**	240	230	10
2020-09-15	**2020-10-15**	185	255	-70
2020-10-15	**2020-11-15**	145	195	-50
2020-11-15	**2020-12-15**	90	190	-100
Total		**32,650**	**16,320**	**16,330**

Table 7: Migration by Year from December 15, 2010, to December 15, 2020, by Previous Province

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2010-12-15	**2011-12-15**	Alberta	1,725	1,460	265
		British Columbia	670	465	205
		Manitoba	205	160	45
		New Brunswick	800	3,740	-2,940
		Newfoundland	395	380	15
		Nova Scotia	2,080	1,490	590
		Ontario	3,060	2,095	965
		Prince Edward Island	315	280	35
		Quebec	1,635	1,195	440
		Saskatchewan	145	125	20
		Territories	105	75	30
		Unknown	2,830	1,695	1,135
2010-12-15 to 2011-12-15 Total			**13,965**	**13,160**	**805**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2011-12-15	2012-12-15	Alberta	1,405	1,785	-380
		British Columbia	560	450	110
		Manitoba	215	190	25
		New Brunswick	690	3,815	-3,125
		Newfoundland	375	410	-35
		Nova Scotia	1,800	1,465	335
		Ontario	2,845	2,075	770
		Prince Edward Island	310	255	55
		Quebec	1,510	1,070	440
		Saskatchewan	145	190	-45
		Territories	115	90	25
		Unknown	3,040	1,705	1,335
2011-12-15 to 2012-12-15 Total			**13,010**	**13,500**	**-490**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2012-12-15	2013-12-15	Alberta	1,315	2,160	-845
		British Columbia	530	510	20
		Manitoba	180	180	0
		New Brunswick	1,135	4,235	-3,100
		Newfoundland	405	385	20
		Nova Scotia	1,955	1,660	295
		Ontario	2,855	2,320	535
		Prince Edward Island	335	290	45
		Quebec	1,555	1,095	460
		Saskatchewan	170	165	5
		Territories	120	110	10
		Unknown	2,910	1,875	1,035
2012-12-15 to 2013-12-15 Total			**13,465**	**14,985**	**-1,520**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2013-12-15	2014-12-15	Alberta	1,345	1,930	-585
		British Columbia	395	430	-35
		Manitoba	165	125	40
		New Brunswick	475	3,665	-3,190
		Newfoundland	365	335	30
		Nova Scotia	1,665	1,510	155

		Ontario	2,730	2,025	705
		Prince Edward Island	325	255	70
		Quebec	1,455	980	475
		Saskatchewan	135	160	-25
		Territories	75	90	-15
		Unknown	3,375	1,855	1,520
2013-12-15 to 2014-12-15 Total			**12,505**	**13,360**	**-855**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2014-12-15	**2015-12-15**	Alberta	1,800	1,370	430
		British Columbia	490	360	130
		Manitoba	190	145	45
		New Brunswick	395	3,390	-2,995
		Newfoundland	340	260	80
		Nova Scotia	1,755	1,475	280
		Ontario	2,740	1,945	795
		Prince Edward Island	315	245	70
		Quebec	1,340	1,005	335
		Saskatchewan	155	155	0
		Territories	100	75	25
		Unknown	2,700	2,010	690
2014-12-15 to 2015-12-15 Total			**12,320**	**12,435**	**-115**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2015-12-15	**2016-12-15**	Alberta	2,400	925	1,475
		British Columbia	605	400	205
		Manitoba	220	125	95
		New Brunswick	595	3,205	-2,610
		Newfoundland	395	260	135
		Nova Scotia	1,670	1,355	315
		Ontario	2,935	1,835	1,100
		Prince Edward Island	335	220	115
		Quebec	1,680	990	690
		Saskatchewan	165	130	35
		Territories	145	65	80
		Unknown	4,405	2,045	2,360
2015-12-15 to 2016-12-15 Total			**15,550**	**11,555**	**3,995**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2016-12-15	2017-12-15	Alberta	2,225	740	1,485
		British Columbia	780	335	445
		Manitoba	230	70	160
		New Brunswick	680	3,035	-2,355
		Newfoundland	465	270	195
		Nova Scotia	1,690	1,305	385
		Ontario	3,570	1,750	1,820
		Prince Edward Island	370	220	150
		Quebec	1,475	965	510
		Saskatchewan	255	80	175
		Territories	100	60	40
		Unknown	5,635	2,030	3,605
2016-12-15 to 2017-12-15 Total			**17,475**	**10,860**	**6,615**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2017-12-15	2018-12-15	Alberta	1,860	650	1,210
		British Columbia	935	305	630
		Manitoba	230	105	125
		New Brunswick	730	2,880	-2,150
		Newfoundland	495	270	225
		Nova Scotia	1,725	1,245	480
		Ontario	3,965	1,650	2,315
		Prince Edward Island	320	200	120
		Quebec	1,460	865	595
		Saskatchewan	220	95	125
		Territories	120	55	65
		Unknown	6,205	2,275	3,930
2017-12-15 to 2018-12-15 Total			**18,265**	**10,595**	**7,670**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
		Alberta	1,800	625	1,175
		British Columbia	950	285	665
		Manitoba	185	90	95
		New Brunswick	975	3,115	-2,140
		Newfoundland	410	270	140

2018-12-15	**2019-12-15**	Nova Scotia	1,700	1,110	590
		Ontario	4,350	1,640	2,710
		Prince Edward Island	340	175	165
		Quebec	1,360	880	480
		Saskatchewan	260	45	215
		Territories	125	45	80
		Unknown	7,245	2,470	4,775
2018-12-15 to 2019-12-15 Total			**19,700**	**10,750**	**8,950**

Start Date	End Date	Previous Province	In-Migration	Out-Migration	Net Migration
2019-12-15	**2020-12-15**	Alberta	1,825	555	1,270
		British Columbia	890	270	620
		Manitoba	220	90	130
		New Brunswick	600	3,530	-2,930
		Newfoundland	320	250	70
		Nova Scotia	1,565	935	630
		Ontario	5,465	1,540	3,925
		Prince Edward Island	380	190	190
		Quebec	1,580	805	775
		Saskatchewan	215	80	135
		Territories	125	55	70
		Unknown	3,565	2,720	845
2019-12-15 to 2020-12-15 Total			**16,750**	**11,020**	**5,730**

10-Year Total	**In-Migration**	**Out-Migration**	**Net Migration**
(2010-12-15 to 2020-12-15)	**153,005**	**122,220**	**30,785**