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**Immigration and the Future
of Canada's Population**

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Abstract

This paper considers the effect of immigration on the size and demographic structure of Canada. Following a brief overview of the history of immigration in this country, we evaluate the effects of migration on population growth, age composition and geographic distribution. Immigration has a very limited impact on the age structure, and thus has very limited value as a tool to decrease the dependency ratio. However, given that fertility has stabilized well below the replacement rate for the past twenty years, immigration will play an increasingly important role in population growth and can be an effective tool to avoid population decline. However, because the vast majority of immigrants move to the largest cities, and below-replacement fertility rates are a country-wide phenomenon, immigration will do little to ameliorate population decline in all but the very largest metropolitan areas.

Demographic arguments alone cannot be used to justify the level of Canadian immigration and there is nothing magical about the orientation to maintain population growth or avoid population decline. While one can argue that significant declines or particularly high growth may be problematic, it is not clear where the optimum may lie and this probably changes over time.

In the fall of each year, in accordance with the Immigration Act, the Minister of Citizenship and Immigration Canada must present to the House of Commons the planned immigration levels for the coming year. This exercise follows, in part, on the objective stated in the Immigration Act "to support the attainment of such demographic goals as may be established

by the Government of Canada from time to time in respect of the size, rate of growth, structure and geographic distribution of the Canadian population.” However, the Immigration Legislative Review (1997: 2) observes that:

Canada has no demographic policy for us to consider. Levels of immigration – on which the Minister is bound by law to seek advice – are found by some to be an intriguing topic. It seems to us, however, that the real question that needs to be asked in this regard is what, if any, relation immigration levels have to the resources available for integration and effective program management.

Thus, it appears that immigration levels are set in the absence of official demographic goals, and, perhaps, without regard to the resources required to successfully integrate immigrants into Canadian society. This notion seems to be borne out in the announcement of immigration targets for the year 2000, in which the only reference made by the Minister to demographic goals was a passing reference to declining natural growth.

Nonetheless, given the fundamental nature of the demographic processes to societies and their regeneration, there is an interest in ensuring that immigration not be detrimental to Canadian society. This is not just a question of numbers, but numbers are a significant part of the consideration. In other words, the well-being of individuals in society is partly a function of macro questions including the size and demographic structure of the communities and societies in which we live. While humanitarian concerns should and do play an important role in immigration policy, it is important that the processes of immigration support and enhance the well-being of Canada and Canadians.

This paper considers the effect of immigration on the evolution of the demographics of Canada. Following a brief overview of the history of immigration, we evaluate the effects of migration on population size, age composition and geographic distribution.

A Brief History of Immigration Levels in Canada

While the trends in immigration show considerable annual variation, **five phases of immigration since 1850**, when annual data became available, can be considered. The first phase, 1850-1896, was a period of net out-migration. Although large numbers of people immigrated to Canada, even larger numbers emigrated to the more industrialized New England states (Beaujot, 1991: 104-107). The second phase is marked by the first wave of post-Confederation immigration which built from a low point of 17,000 immigrants in 1896 to reach 400,000 in 1913. The numbers of immigrants in the years 1910-1913 have never since been surpassed. There followed the third phase, one of relatively low immigration, in the years that included two world wars and the depression period of the 1930s. Indeed, from the onset of the Depression, through to the end of WW II, there was a net emigration from Canada, whereas the 1920s experienced higher migration than the remaining part of this period. The fourth phase brought a second wave of post-Confederation immigration after 1945. While there have been various fluctuations in the post-war period, the 1990s may be considered to be a fifth phase with higher sustained levels of migration and a larger contribution of migration to population growth. While in the period 1951-1991, net migration accounted for about a quarter of population growth, it accounted for 54 percent of growth in the period 1991-1998.

While in some regards the period before the first world war remains unique, it is interesting to observe that only the six consecutive years 1909-1914 had levels above 150,000 while there have now been twelve consecutive years with such levels (1987-98). Using the symbolic figure of 200,000, there were four consecutive years in the earlier period (1910-1913) and more recently eight years (1990-1997) with these levels. These levels above 200,000 were not reached in the last two years of the decade, with figures of some 175,000 in each of 1998 and

1999. This means that the 1996 census shows a large number of recent immigrants. This census enumerated 1,038,990 immigrants who had arrived in the five year period 1991-1996, which is almost as many as the 1,092,400 who had arrived in the ten year period 1981-1990.

However, when expressed as a percentage of the population, recent immigration levels are not as historically high as when stated as numbers of immigrants. As seen in Table 1, the percentages in the period 1971-1998 are lower than other historical periods, except during the depressions in the 1890s and the 1930s and the decade including WWII.

Immigration and Population Growth

The impact of immigration on **population growth** in Canada can be examined from four different perspectives: the direct impact of migration on population growth; the impact of children born to immigrants; the proportion of people in Canada who are foreign born; and the implications as seen in population projections.

Annual population estimates provide a summary measure of the **direct impact** of immigration on population growth. This measure includes only arrivals and departures, that is it considers the first generation of immigrants. Over the century 1901 to 2001, the total immigration of some 12.5 million persons and emigration of some 6.2 million produced a net gain of over 6 million, representing a quarter of the population growth over the period (Table 1). The contribution of net international migration to population growth varies considerably over history, reaching a peak in the 1901-11 decade. However, the 1991-2001 period shows that close to half of population growth is due to net migration.

The second approach takes into account the impact of **births to immigrants** on population growth. Using past vital rates to determine the population size without international migration, Duchesne (1993) reports the surprising finding that over the period 1871-1991 there is

very little difference in ultimate population size with or without migration. This is because it took a long time to compensate for the departures toward the United States of the period 1871-1895. However, over the period 1966-1991, the direct plus indirect contribution of international migration amounted to 41 percent of the total growth.

With the persistence of below replacement fertility and current levels of immigration, the impact of migration can only increase. For instance, over the period 1986-2036, the Statistics Canada (1990) projections imply that, with a fertility of 1.7 births per woman and an immigration of 200,000 per year, over 90 percent of the change in population size over the period 1986-2036 would be due to migration¹.

The third approach to studying the impact of immigration on the population is to consider the **proportion foreign born** in the census data (e.g. Badets and Chui, 1994). This figure has increased slowly from 15 to 17 percent over the censuses from 1951 to 1996. The **second generation**, that is persons whose parents are foreign born, have not been captured in the censuses since 1971. That census found that 33.8 percent of persons were either foreign born or had at least one foreign born parent (Kalbach and McVey, 1979: 179). Using data on births and deaths, Edmonston (1996) calculates that over the period 1951-91 about 35 percent of the Canadian population has been first or second generation, while about half have been in the first three generations. It is unfortunate that recent censuses have not included this "birthplace of parents" question. The resulting data would permit some rather straightforward analyses on the integration and adaptation of the second generation. Given the difficulty of measuring the economic performance of the first generation, which is a function of the diversity of circumstances that need to be taken into consideration, it is useful to analyse the second generation (see Boyd

¹New projections will be added here.

and Norris, 1994; Boyd and Grieco, 1998).

The final approach considers the impact of immigration on **future population growth**. It is useful to review the series of assumptions that have been adopted in the six generations of Statistics Canada projections following the censuses since 1971. The national level assumptions for fertility and immigration are as follows:

<u>Projection following</u>	<u>Total fertility rate</u>	<u>Immigration</u>
1971 census	1.8, 2.2, 2.6	120,000 and 160,000
1976 census	1.7, 2.1	125,000, 150,000 and 175,000
1981 census	1.4, 1.7, 2.2	100,000 and 150,000
1986 census	1.2, 1.7, 2.1	140,000 and 200,000
1991 census	1.5, 1.7, 1.9	150,000, 250,000 and 330,000
1996 census	1.3, 1.5, 1.8	150,000, 210,000 and 270,000

Except following the 1991 and 1996 censuses, the range of immigration assumptions have been fairly narrow. The projections from the 1986 census had indicated that, with a fertility constant at 1.7 births per women, the natural increase would become negative around 2020 and population would start to decline after 2026 with an immigration of 140,000, or after 2035 with an immigration of 200,000. These results and subsequent analyses on questions like labour force growth may have been part of the reason for moving to higher immigration levels by the late 1980s. The projections based on the 1991 census indicate that a total fertility rate of 1.5 and immigration of 150,000 would show population decline only after 2033. Combinations of fertility at 1.7 and immigration at 250,000 show continued growth to the end of the projection period, that is 2041.²

To be useful, population projections should use assumptions that are plausible at the time that they are developed and should reflect the range of potential realistic future scenarios as envisaged by the analyses available at a given time. George, Loh and Verma (1997) examine the

²Update and edit with new figures from projections

impact on projected population of various assumption ranges and conclude that the range of the assumptions has significant effect on the variation of projected total populations. The authors would argue that the fertility assumptions of 1.2 and 2.1 births per woman in the projections based on the 1986 census were both unrealistic. Most analysts would say that below replacement fertility is here to stay, and fertility of 1.2 for a long period of time seems unlikely. The wide range of fertility assumptions used in 1986, combined with a relatively narrow range of immigration assumptions (140,000 and 200,000) exaggerates the relative role of fertility alternatives in Canada's demographic future.

The projections based in 1991 may have presented the opposite problem. Especially given the slight variations in fertility over the past 20 years, and the average of 1.64 for the fifteen year period 1982-96, the fertility assumptions of 1.5, 1.7 and 1.9 used after the 1991 census seem like plausible alternatives. The immigration assumptions in the 1991 projections take the wide range of 150,000 to 330,000. The average over the period 1982-96 is 159,000 immigrants per year. While 330,000 is not far from the one percent of population that is used in various discussions, and reflects the *long run* immigration targets promised in the 1993 Liberal Party Red Book and reiterated by Elinor Caplan, Minister of Citizenship and Immigration in her November 1999 statement regarding immigration targets, persistent figures of this magnitude may be unrealistic. The immigration assumptions of 150,000, 210,000 and 270,000, used in the 1996 projections may be more plausible scenarios over the medium to long term. The figure of 150,000 is close to the post-war average and it seemed to be preferred by the MacDonald Commission (Royal Commission on the Economic Union and Development Prospects for Canada, 1986: 668). The figure of 210,000 might be taken as an intermediate assumption, slightly above the average of the period 1986-96. In its extensive review of the Economic and Social Impacts of Immigration the

Economic Council of Canada (1991: 135) suggested moving slowly from 168,000 in 1991 to 340,000 (or one percent of the population) in 2015. According to this trajectory, the levels would have only reached 200,000 in 1997 and 220,000 in the year 2000. The figure of 250,000 would be a high figure in the context that only the individual years 1957, 1992 and 1993 have exceeded this figure in the post-war period. The proposal of the Economic Council of Canada would have reached 250,000 only in the year 2004. They also recommend that “these levels should be reviewed every five years, to verify that the integration of immigrants is being successfully managed” (p. 133).

Since the Statistics Canada projections are used extensively as a base for thinking of the demographic future, the results are worth further discussion. Even a fertility of 1.5 births per woman and immigration of 150,000 persons per year involves population decline only after 2033. Combinations of fertility at 1.7 and immigration at 250,000 show continued growth to the end of the projection period, that is 2041 (Statistics Canada, 1994).³

Other projections use a variety of assumptions in order to **measure the impact of immigration**. For instance, Denton et al. (1997) use immigration levels of 100,000 increments ranging from zero to 500,000, showing projection results every five years. The zero and 100,000 immigration assumptions involve population decline after 2016, while all others show continuous growth to the end of the projection period in 2036. In the zero assumption, the 2036 population is 0.7 percent smaller than that of 1996, in the 100,000 assumption the overall growth is 15.5 percent to 2036, and these figures become 31.7 percent with 200,000 immigrants, 47.8 with 300,000, 64.0 with 400,000 and 80.2 with 500,000. This might be compared to the 86.3 percent growth that Canada experienced in the previous forty years, 1956-1996. However, growth over

³Update with new projections

the period 1956-1996 occurred with a very different combination of fertility and immigration experiences, since the average immigration in that period was 155,000 per year.

Ryder (1997) uses three alternative assumptions to project the population to the **point of stability**. In the sub-replacement model, fertility is fixed at its current level and there is no migration. This yields a population that grows over the next twenty years, but then declines to 18.0 million or 60 percent of its current size after 100 years. In the replacement fertility model, fertility is immediately raised to replacement, with no immigration; the population in 100 years is 33.2 million or 12.3 percent larger than at the outset. In the model called replacement migration, fertility stays at current levels but there is a level of immigration sufficient to yield the same ultimate population size as in the replacement fertility model. Of interest here is that the net immigration in this third model is 167,225 persons per year, that is about 10 percent lower than that of the 1991-96 period. This is an important result, implying that an immigration of slightly above 200,000 is sufficient to avoid population decline. Using the average emigration of the 1991-96 period, the immigration would need to be 213,000. Using the average emigration of the 1971-96 period, the immigration would need to be 220,000 per year. This is similar to results from Avery and Edmonston (1988) showing that a net migration of 163,000 (or immigration of 212,000) prevents population decline under a fertility assumption of 1.7 births per woman.

For Quebec, Ledent (1992) considers various scenarios that produce stationary populations. These vary between an immigration of 15,000 paired with a fertility of 2.1 births per woman, and an immigration of 75,000 paired with a fertility of 1.5. An intermediate result indicates that an immigration of 45,000 with a fertility of 1.8 births per woman produces, after a hundred years or so, a stationary population where 19 percent are foreign born. This compares to the 1991 population of Quebec where 9.2 percent are foreign born.

All of these projections assume that the foreign born and subsequent generations have the same **vital rates** as the native born population. For the most part, this is a reasonable assumption. Various analyses conclude that the foreign born have a slight advantage in health and mortality (e.g. Chen et al., 1996; Trovato, 1996; Choinière, 1993). Immigrant fertility was lower than the Canadian average in the past, but above that average in the 1991 census (Maxim, 1996; Beaujot, 1997; Dumas and Bélanger, 1998). At the 1961 and 1971 censuses, in each age group, the foreign born had a lower number of children ever born than the Canadian born population (Ram and George, 1990). In 1981, this pattern applied to age groups 30 and over. In 1991 the foreign born at age groups 30-44 had higher fertility but the differences remain minor.

Available research would therefore suggest that an immigration of some 220,000 persons per year would be sufficient to **prevent population decline**. This assumes that medium level assumptions for fertility and mortality are reasonable. Alternative mortality assumptions will not have a large impact on the size of the whole population, though they play a more significant role on given older age groups. While there are clearly uncertainties with regard to fertility, the period 1976-1996 has involved remarkable stability around 1.6 to 1.7 births per woman on average (although the 1997 total fertility rate was on the low end of that average, at 1.55). While some countries have lower fertility, such as 1.4 for the European average and 1.2 in Italy, the average for the whole of the more developed countries is also 1.6. That is, it would be our view that these projections are based on reasonable assumptions concerning the components of population growth besides immigration.

Age composition

There are two erroneous conclusions regarding the impact of immigration on aging. One is that immigration would be a solution to population aging. Clearly, aging will continue

regardless of the level of immigration. It is equally erroneous to look at the age composition of the foreign born compared to the Canadian-born, and to conclude that immigration ages the population.

The impact of immigration on the age structure can best be appreciated by comparing the **median age of immigrants at arrival** to that of the Canadian population. The median age of immigrants was relatively stable, averaging 25 years for each year between 1956 and 1976, then increasing to 27 years in 1981-86, 28 years in 1986-90 and 30 years in 1994 and 1996 (Beaujot et al., 1989; Beaujot and Hou, 1993; Citizenship and Immigration, 1997b: 40; Citizenship and Immigration, 1999: 40). The median age of the entire Canadian population has changed much more, increasing from 26.3 in 1961 to 35.3 in 1996. In effect, the median age of arriving immigrants was about a year younger than that of the receiving population over the period 1945-71, changing to two years younger by 1981 and close to five years younger in 1991-96. Both immigrant arrivals and the receiving population have been aging, but arrivals remain younger on average. However, the overall impact is rather small given that immigrant arrivals represent a small part of the total population. Clearly, other demographic phenomenon, including the movement of the baby boom through the age structure, lower fertility, and mortality reductions at older ages, have a larger impact on the age structure than the arrival of immigrants. While slightly younger on average, immigrant arrivals are in fact spread out over ages.

Simulations and projections enable a more precise estimate of the impact of immigration on the age structure. For instance, **simulating population change** as a function of only births and deaths since 1951, Le Bras (1988: 12) finds that the average age of the 1981 population is 0.5 years older than the actual average observed in that year. That is, the international migration of the period 1951-81 reduced the average age in Canada by a half year.

Similar results are obtained with **projections** into the future.⁴ The Statistics Canada (1990) population projections based on the 1986 census produce a median age in 2036 that is almost two years younger under high immigration than under zero immigration. The population aged 65 and over in 2036 is 24.5 percent, 25.6 and 27.0 percent under high, low, and zero migration assumptions. Clearly, the immigration assumptions have a rather small impact on the age structure. Nonetheless, the impact is to reduce the aging of the population. For instance, an immigration of 140,000 per year yields a median age of 40.5 in 2009 while this median age is reached in 2011 with an immigration of 200,000 per year.

In the projections based on the 1991 census, an immigration level of 330,000 per year with a fertility of 1.9 produces a median age of 40.7 in 2026, compared to a median of 43.7 with an immigration of 150,000 and a fertility of 1.5 (Statistics Canada, 1994: 71). These results are nonetheless simplistic because the age distribution of immigrants at arrival is held constant. The aging of the world population would imply that this assumption is unlikely to hold true. That is, the impact of immigration on the age structure is likely to be even less than that implied by these projections.

Other projections have analysed the impact of immigration on the age structure, but they are still based on a constant age structure of immigrants on arrival. Denton et al. (1997: 41) use immigration levels ranging from zero to 500,000 per year, producing the following proportions over 65:

<u>Immigration level</u>	<u>Percent over 65</u>	
	<u>2016</u>	<u>2036</u>
zero	18.1	29.1
100,000	17.3	26.7
200,000	16.6	24.8

⁴New projections here.

300,000	16.0	23.4
400,000	15.5	22.2
500,000	15.0	21.3

In comparison, the proportion aged 65 and over changed from 10.5 percent in 1986 to 12.2 in 1996, or 1.7 percentage points over ten years. In 2016, each additional 100,000 immigrants would have reduced the proportion over 65 by some 0.6 percentage points, which is comparable to the aging that occurs over about four years in current conditions. In 2036, each 100,000 immigrants would have reduced the proportion over 65 by 1.6 percentage points or the equivalent of eleven years of aging. While the impact is larger as one moves further into the future, the assumption of a constant age structure of immigrant arrivals becomes increasingly unrealistic.

In the stable population models that Ryder (1997) has used for projections into the future, the median age at equilibrium is 45.0 years with present fertility and no migration, compared to 40.9 with replacement fertility and no migration, and 44.0 with present fertility and sufficient migration to assure population replacement. That is, compared to zero migration, a net immigration of 167,225 per year (immigration of some 212,000) reduces the average age by 1.5 years in the stable population that is reached at the point of equilibrium. Since the median age in Canada increased from 31.6 years in 1986 to 35.3 in 1996, this level of net migration would ultimately reduce the average age by some two and a half years of aging. Clearly, the movement from current fertility to replacement fertility would have a larger impact, ultimately reducing the average age by 4.1 years.

Nonetheless, each of these scenarios involves a population that ages considerably from its present state. Even with 500,000 immigrants per year, the proportion over 65 would increase from 12.2 in 1996 to 15.0 in 2016 and 21.3 in 2036. Denton et al. (1997: 23) conclude that

“immigration is clearly not an effective tool for offsetting the process of population aging.”

Various calculations have been made of **dependency ratios**, seeking to measure those dependent on persons who are at labour force ages, or employed. These results show declines in dependency since the baby boom period, and increases only after 2011 when the baby boom starts moving into retirement ages. In this regard, we are living in an ideal time as the proportion of children has declined and the proportion of elderly has not risen that much, maximizing the proportion of persons at labour force ages. After 2011, all of the dependency measures and immigration levels show increased dependency (Denton et al., 1997: 40-41). Nonetheless, this dependency remains lower in 2036 than it was in 1971 when the baby boom was at young ages. These authors have also attempted various simulations of immigration levels that might prevent the anticipated increase in dependency. They find that the levels would have to be far in excess of a million persons per year at the current age distribution for immigrants (p. 20).

Another approach to the measure of the age distribution is to consider the growth of the **labour force**. There has been considerable growth of the labour force, especially as the baby boom entered the work force, and women took paid employment. The peak growth was a 17.9 percent increase between 1971 and 1976, and the growth has since declined to 4.2 percent between 1991 and 1996 (Denton et al., 1997: 38-39). At the same time, the contribution of net immigration to labour force growth has increased from 9.6 percent in 1976-81 to 71.0 percent between 1991 and 1996. Under their base assumption of 200,000 immigrants per year, the size of the labour force declines slightly in the period 2026 to 2036, but the size in 2036 is 16 percent larger than in 1996. They also attempt various scenarios to determine the level of immigration that would be needed to maintain the labour force growth that was experienced between 1986 and 1996. For the period 1996-2006, an annual immigration of some 227,000 would be sufficient, but

after 2016 levels in excess of 500,000 would be needed (p. 44).

However, there is nothing magical about the labour force growth rate of the 1986-96 period, which was significantly lower than that of the earlier decade. If one considers the alternative goal of **avoiding decline of the labour force**, an immigration just above 200,000 per year is sufficient. With zero net immigration, the labour force would decline after 2006, with a total decline of some 20 percent in the next two decades. An immigration level of 100,000 per year involves a peak labour force size in 2016 with a decline of eight percent in the next fifteen years. An immigration of 200,000 per year produces labour force growth of 16 percent between 1996 and 2016 and basic stability to 2036. In comparison, an immigration of 300,000 per year produces a continuous labour force growth, for a total of 33 percent between 1996 and 2036.

Some authors have suggested that the age of immigrants could be subject to **deliberate policy control**. In particular, Foot (1989) had suggested that while the baby boom was moving into labour force ages, immigration should be used to fill-in the baby bust part of the age structure. However, it is difficult to envisage immigrants as disembodied demographic entities who are admitted simply on the basis of their age. Integration is facilitated by the migration of family groups, where there are necessarily a variety of ages. The age range that produces the maximum points in the points system is ages 21-44, having been 18-35 until January 1986. However, the increase in the average age at arrival is probably mostly a function of aging in the places of origin.

Thus, immigration cannot be seen as a means of preventing population aging. Since immigrants are somewhat younger upon arrival than the receiving population, immigration slightly reduces the average age. However, the impact is limited, and probably exaggerated in projections that assume a constant age structure at arrival while the populations at places of origin are aging.

While immigration attenuates aging and dependency, its impact is relatively minor.

Geographic Distribution

Over the four decades 1956-96, the two provinces of Ontario and British Columbia have consistently had a percentage of immigrant arrivals that exceeded their percentage of the Canadian population (Denton et al., 1997: 42). What is more, except for Manitoba and Alberta in 1976-86, Ontario and British Columbia are the only provinces to have more immigrants than their share of the population. Consequently, in this consideration of ten provinces times four periods, immigration has been larger than the share of population in only 10 of the 40 comparisons.

The regional integration of immigrants follows especially on economic questions and the links established between sending and receiving areas. In their theoretical syntheses, Massey et al. (1994) propose that globalization creates both migrant populations following on economic displacements and employment opportunities in large cities. With more efficient means of communication, migratory exchanges are perpetuated between places of origin and destination. As a consequence, recent immigrants are concentrated in the large Canadian cities, especially Toronto, Montreal and Vancouver.

Considering five **Canadian regions**, in comparison to the Canadian born population, immigrants are more concentrated in Ontario and British Columbia, and less concentrated in the Atlantic region and Quebec (Table 2). For instance, in 1996 Quebec represented 27.1 percent of the Canadian born population but 13.4 percent of the foreign born. In comparison, Ontario had 33.5 percent of the Canadian born but 54.8 percent of the foreign born. Among Canadian born, the largest province exceeds the second by 24 percent, but foreign born are four times as numerous as in Quebec.

Clearly, the distribution of the Canadian born population changes only very slowly, but the

distribution of immigrants differs considerably. Since natural increase varies little over the provinces, migration is the overwhelming component in differential growth. It is less clear whether internal or international migration plays the largest role. At the 1991 census, 12.7 percent of the population involved Canadian born persons who were not living in their province of birth, and another 16.2 percent were foreign born (Statistics Canada, 1992:). This would imply that international migration has a slight edge over internal migration. Yet, for all but two provinces the proportion born in another province was larger than the proportion foreign born. It was only in Quebec and Ontario that the proportion foreign born was larger than the proportion born in another province.

Adding the **foreign born and the internal migration of native born** shows that only four provinces have made net gains in the 1991 census: Ontario, British Columbia, Alberta and Quebec. This is a rather striking observation. While Canada is a country of immigration, enumerating 4.4 million persons born outside of the country at the 1991 census, the net impact of both international and internal migration is positive for only four provinces. In all other provinces, population movement has been to their net disadvantage. Among the provinces that gave gained, it is noteworthy that those born in another province or outside of the country represent 51.6 percent of the population of British Columbia.

Not only is the distribution of the immigrant population rather different from that of the Canadian born, but the subsequent **internal migration of the foreign born** tends to accentuate these differences, in favour of Ontario and British Columbia (Table 2). In addition, looking at arrival cohorts, the immigrant concentration especially favours British Columbia: in the 1996 census 20.8 percent of recent immigrants were in this province, compared to 13.0 percent in the 1971 census. In comparison, Quebec had 18.0 percent of recent immigrants in 1971 and 14.5

percent in 1996. In a further analysis, Edmonston (1996) finds that both the foreign born and the native born are more likely to move to provinces that have larger populations, more economic opportunities, and higher proportions of foreign born population. At the same time, immigrants are more likely to stay in a province that has a higher proportion of foreign born of the same ethnicity, and they are more likely to leave provinces with low relative incomes. Consequently, he finds no evidence of an increased dispersion of immigrants over time. Similar results are available in the 1981 census (Bélanger, 1993). The provinces that were receiving disproportionate numbers of immigrants were less likely to see their departures for other provinces. Projecting these probabilities to the point of stability, Bélanger concludes that the internal migration of the immigrant population brings a greater concentration of this population.

The initial arrival of immigrants has the largest impact on population distribution. To some extent this impact is reduced by the emigration of immigrants, which comprises about half of emigration from Canada (Beaujot and Rappak, 1989; Michalowski, 1991). The subsequent internal migration of immigrants has less impact, but at the same time it does not bring greater dispersion of the foreign born.

The geographic impact is even more visible at the level of **census metropolitan areas**. While post-war immigration has largely been a metropolitan phenomenon, the Review of Demography (1989) more correctly concluded that this has involved the metropolitan areas west of the Quebec-Ontario border, plus Montreal. East of this border, the highest proportion of immigrants is in Halifax, but this is still under half of the national average (Statistics Canada, 1997b). Even Winnipeg, Oshawa, Ottawa-Hull, Thunder Bay, Regina, Saskatoon and Sudbury have a smaller proportion of immigrants than the national average of 17.4 percent foreign born.. In these distributions, it is especially Toronto and Vancouver that stand out, with 41 and 35

percent foreign born respectively by 1996. In the Canadian born population, Montreal retains its historical position as the largest Canadian city, but the immigrant population of Toronto is three times that of Montreal.

In terms of total numbers, the three metropolitan areas of **Toronto, Montreal and Vancouver** stand out, with 60.2 percent of the foreign born compared to 26.9 percent of the Canadian born population (Table 3). The concentration is even more uneven when considering recent immigrants. For example, 42 percent of immigrants to Canada who arrived in 1998 settled in Toronto, and 71 percent settled in Toronto, Montreal or Vancouver. A fifth of the 1996 populations of Toronto and Vancouver consists of immigrants who have arrived since 1981 (Statistics Canada, 1997b: 5). Over the immigrant arrival cohorts, Toronto and Vancouver have increased their share of immigrants, while this share is stable for Montreal, has declined slightly for the total of other metropolitan areas, and it has declined significantly for the non-metropolitan areas. Consequently, the non-metropolitan population comprises 43.0 percent of the Canadian born population but only 6.5 percent of immigrant arrivals of the period 1991-96.

Immigrants to Quebec are highly concentrated in Montreal. In 1996, 88 percent of Quebec's foreign born were in Montreal. Projecting these trends with 40,000 arrivals to the province per year, Termote (1988) finds that Montreal's population would increase significantly. This would add some 1,150,000 to the population over 40 years, compared to a 1986 size of 1,750,000.

These types of projections need to be done for other metropolitan areas. It would appear that the metropolitan destination of immigrants is **pushing the urbanization trend**. There is a need for more analyses of the impact of immigration on the relative growth of the urban population, including any impact that it may be having on the movement of the Canadian born

towards urban areas. In the recent censuses, the metropolitan areas as a whole have been increasing through immigration but declining as a result of net internal migration (Table 4). Over the 25 metropolitan areas, the net internal migration of the 1991-96 period represents a net departure of 156,000 persons, while 971,000 immigrants had arrived in the five years that preceded the census. Internal migration is positive in ten of the metropolitan areas, but except in Victoria recent immigrants are more numerous than net internal migrants. In eight metropolitan areas the immigrant arrivals are insufficient to compensate for the net departure by internal migration. However, in the remaining seven cities (Edmonton, Halifax, London, Montreal, Sherbrooke, St. Catharines-Niagara and Toronto) there is a negative net migration of 167,485 persons but a net international arrival of 627,265 persons over the period 1991-96. Not only is immigration pushing the urbanization trend, but in most of the largest cities it is helping to compensate for the net departure through internal migration.

Given that immigrants are likely to settle mostly in metropolitan areas and to follow the pathways established by earlier cohorts, immigration will probably continue to accentuate the inequalities in Canada's regional population distribution. While there are efficiencies associated with more concentration of population, this also means that immigration cannot be seen as a means of demographic redistribution toward areas that have smaller populations.

The inequalities in demographic growth are likely to be accentuated as immigration becomes the principle component of change. On most characteristics, the impact of immigration in terms of the differences that they represent, lessens over time (Beaujot, 1999). For instance, their fertility and mortality comes to resemble that of the Canadian born, as do their economic characteristics. Even the visibility of minorities lessens over time as styles of dress and speech become more similar with a longer length of residence, and certainly into the second and third

generation. However, on geographic distribution, where immigration accentuates the uneven distribution of the population, the subsequent internal migration of immigrants brings a further concentration to the main areas of primary destination.

Discussion

The immediate demographic results of immigration are rather straightforward.

Immigration can make a significant contribution to population growth, but it has a minor impact on aging and accentuates the inequalities in population distribution.

Over the period 1991-2001, immigration comprises close to half of the **population growth**. At levels of about 220,000 per year, immigration can effectively prevent population decline, if current levels of fertility continue. Similarly, this level of immigration would prevent decline in the labour force, though the amount of increase in the labour force will continue to be smaller from decade to decade, reaching a point of stability around 2016.

Aging will continue, but immigration brings a slight attenuation of this process. At the same time, the measures of dependency indicate declines since 1971 and until 2011, as a maximum proportion of the population is of labour force ages. Unless one weights the elderly more than the young in dependency, the dependency levels will remain lower than they were in 1971 for the foreseeable future. On the other hand, it would take immigration levels in excess of one million persons per year to prevent an increase in dependency from its current low levels.

Given the lower role of natural increase, immigration is also accentuating the differentials in **population distribution**, in favour of Ontario and British Columbia, and particularly the Vancouver and Toronto metropolitan areas. In effect, immigration is driving the urbanization trend and in some of the largest cities, including Toronto and Montreal, it is compensating for the net departures through internal migration.

While these immediate demographic questions are reasonably established, the role that they should play in determining immigration levels is much less clear. While demographic objectives are long term, the short term implications involve questions of integration and public acceptance. There are also advantages to a program that moves slowly to different levels. When population renewal occurs through migration rather than through births, it brings much change. However, persistent below replacement fertility ultimately means either population decline or a large role for immigration in population replacement. Already immigration comprises half of population growth. Once natural increase becomes negative, after about 2025, immigration will be the only source of growth. This underlines the need to plan for, and manage, the change that accompanies immigration.

We are assuming that maintaining population growth, or at least avoiding population decline, is a valuable objective. While environmentalists question this objective, it would be our view that Canada has profited from population growth in the past and that population decline would carry significant negative consequences. It would undermine some investments in infrastructure as there would be too many schools and other facilities (Lapierre-Adamcyk, 1986). Personal investments in housing and retail businesses would depreciate. Growth-related industries such as construction would decline. More important, it would mean a labour force that is not renewing itself and thus would have less of the flexibility necessary to take advantage of changing opportunities.

As immigration becomes an ever increasing share of population change, it is particularly important to ensure that this experiment remains successful. In their book on The Fear of Population Decline, Teitelbaum and Winter (1985: 150) proposed that rapid changes in cultural and ethnic composition would generate opposition, and consequently that large-scale immigration

would not likely be a politically viable response to declining population. Opinion polls suggesting that there are as many respondents who think there are “too many” as those who say that the level is “about right” (Palmer, 1997) should be taken seriously. This report concludes that support for current immigration levels is “very soft”, that the concerns are largely economic, related especially to unemployment, while there is an appreciation for the cultural contribution of immigrants.

Attitudes toward immigration are more favourable among persons who are more educated, younger, employed and living in larger urban centres. Similarly, the review by the Economic Council of Canada (1991) has some encouraging results, especially that those who are in greater contact with immigrants are more likely to be favourable toward immigration. However, they also observe that rapid changes, especially at the neighborhood level, can bring uncertainties. We need to maintain a continuous watchful eye and be willing to admit that immigration could produce social tensions. If integration is not working, we must consider both alternatives: improve the mechanisms for effective integration and/or ensure that immigration levels are not beyond an optimal level. Of course, it is not a simple matter to determine the extent of social tensions that are caused by immigration or determine whether or not integration is “working”.

As a society, we accept the notion that the public, through tax dollars, should spend large amounts of money on the health and education of each child that is born here. We agree that it is a good investment for society, and will provide long term benefits because we have produced a healthy, productive adult. However, as a society, we have not yet agreed that money spent to help an immigrant get established here, whether through language and employment training or through social programs, is an equally good investment.

Demographic arguments alone cannot be used to justify the level of Canadian immigration. Even in demographic terms, there is nothing magical about the orientation to maintain population

growth or avoid population decline. While one can argue that significant declines or particularly high growth may be problematic, it is not clear where the optimum may lie and this probably changes over time. One might argue that Canada has profited from reasonably high population growth in the past, but it is not clear that this would apply to the future. Environmental arguments in particular would favour smaller populations (Barrett et al., 1987).

We would agree with the Economic Council of Canada (1991), that it is an exaggeration to say that Canada “needs” immigration either from a demographic or an economic point of view. This view that Canada needs immigration is probably based on nation-building myths and the role of immigration in our past, where Canada is considered to be a nation of immigrants. The research is not as conclusive as to indicate a demographic or economic “need” for immigration. From a demographic point of view, a minimal level of immigration, producing a population that would start to slowly decline in some 25 years, is not necessarily to be avoided. Similarly, immigration makes positive contributions to the economy, but it probably benefits capital more than labour and the measurable difference in terms of average income is very small, in the order of one or two percentage points (Economic Council of Canada, 1991; Stafford, 1993; Veugelers and Klassen, 1994; Simmons, 1994). By way of contrast, and probably based on alternative nation-building myths, demographers from Sweden tend to conclude that the absence of cheap immigrant labour has prompted policies aimed at full-employment and family-friendly policies that ensure strong labour force participation for women (Hoem and Hoem, 1997). Rather than on demographic or economic terms, it is especially in socio-cultural terms that a case for immigration should be made (Economic Council of Canada, 1991). As long as integration can ensure equal opportunity, immigration brings diversity, richness and contact with a broader world. However, it may also bring resentment, conflict and socio-cultural disintegration. While research can

contribute to the determination of the socio-cultural goals, these are necessarily based on a political judgement involving the public and its political leaders.

A broad-ranging book entitled Age of Migration argues both that migration is a constant phenomenon in human history, and that it was never as significant as today in terms of the diversity brought to most countries (Castles and Miller, 1993). Canada is part of this picture, especially in terms of the role of immigration in the growth and distribution of the Canadian population, to say nothing of ethnic diversity. This presents both a challenge to maintain a cohesive society and an opportunity to profit from diversity and contact with a broader world.

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Table 1. Immigration, emigration and contribution to population growth, Canada, 1851-2001.

	Population (at end of period)	Immigration	Average immigration (% of population)	Emigration	Contribution to population growth
1851	2,523,000				
1851-61	3,230,000	352,000	1.22 %	170,000	23.0%
1861-71	3,689,000	260,000	0.75 %	410,000	-32.6%
1871-81	4,325,000	350,000	0.87 %	404,000	- 8.5%
1881-91	4,833,000	680,000	1.49 %	826,000	-28.7%
1891-1901	5,371,000	250,000	0.49 %	380,000	-24.2%
1901-11	7,207,000	1,550,000	2.46 %	740,000	44.1%
1911-21	8,788,000	1,400,000	1.75 %	1,089,000	19.7%
1921-31	10,376,700	1,200,000	1.25 %	970,000	14.5%
1931-41	11,506,700	149,000	0.14 %	241,000	- 8.1%
1941-51	14,009,400	548,000	0.43 %	379,000	7.9%
1951-61	18,238,200	1,543,000	0.96 %	463,000	25.5%
1961-71	21,962,082	1,429,000	0.71 %	707,000	21.7%
1971-81	24,820,382	1,429,000	0.61 %	636,000	28.6%
1981-91	28,030,864	1,381,000	0.52 %	490,000	27.7%
1991-98	30,300,422	1,556,000	0.67%	328,000	54.1%
1991- 2001(est.)	31,048,284	1,881,000	0.64%	428,000	48.2%

Sources: Beaujot and Rappak, 1988: 27; Statistics Canada, Annual Demographic Statistics, 1999: 20,188,191, 249.

Table 2. Regional distribution of Canadian born and immigrants by arrival cohorts, censuses of 1971 to 1996, Canada.

	1971	1981	1991	1996
<u>Canadian born</u>				
Atlantic	10.3	10.9	9.9	9.5
Québec	30.7	28.9	27.5	27.1
Ontario	33.2	32.2	33.4	33.5
Prairies	16.5	17.8	17.7	17.7
Brit Col	9.3	10.3	11.1	11.8
Total	100.0	100.0	100.0	100.0
<u>Immigrants 1961-70</u>				
Atlantic	2.1	2.1	1.8	1.9
Québec	18.0	16.0	14.2	13.9
Ontario	55.5	55.5	57.4	57.1
Prairies	11.3	11.3	10.5	10.4
Brit Col	13.0	15.1	15.9	16.6
Total	100.0	100.0	100.0	100.0
<u>Immigrants 1971-80</u>				
Atlantic	---	2.4	1.9	1.9
Québec	---	14.1	13.6	13.3
Ontario	---	51.6	52.5	52.5
Prairies	---	15.1	14.3	13.7
Brit Col	---	16.8	17.6	18.5
Total	---	100.0	100.0	100.0
<u>Immigrants 1981-91</u>				
Atlantic	---	---	1.3	1.3
Québec	---	---	15.8	14.4
Ontario	---	---	54.0	54.9
Prairies	---	---	13.1	12.3
Brit Col	---	---	15.7	17.0
Total	---	---	100.0	100.0
<u>Immigrants 1991-96</u>				
Atlantic	---	---	---	1.1
Québec	---	---	---	14.5
Ontario	---	---	---	54.2
Prairies	---	---	---	9.3
Brit Col	---	---	---	20.8
Total	---	---	---	100.0

Note: Total includes the Territories

Sources: Beaujot and Rappak, 1990: 113; 1991 Census: 93-316 Tables 3 and 6, 1996 Census: N03-0411.IVT

Table 3. Distribution of Canadian born and immigrants by arrival cohorts, by metropolitan areas, Canada, 1991 et 1996.

	CanBorn	Before 61	1961-70	1971-80	1981-91	1991-96
-1991-						
Toronto	10.2	25.1	35.4	36.5	39.4	---
Montréal	11.3	9.5	12.8	11.7	14.0	---
Vancouver	4.8	8.4	9.8	12.6	12.9	---
Sub-total	26.3	43.0	58.0	60.8	66.3	---
Other CMA	28.0	30.3	26.0	25.8	24.5	---
Other	45.6	26.6	16.0	13.4	9.2	---
Total	100.0	100.0	100.0	100.0	100.0	---
-1996-						
Toronto	10.4	25.1	34.2	36.2	40.0	42.4
Montréal	11.4	9.4	12.4	11.6	12.8	12.9
Vancouver	5.0	8.1	10.0	13.0	13.7	18.3
Sub-total	26.8	42.6	56.6	60.8	66.5	73.6
Other CMA	30.1	30.2	26.8	24.9	23.9	19.8
Other	43.0	27.1	16.6	14.3	9.7	6.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Notes: CMA: census metropolitan areas

Sources: In 1996 the Canadian born includes the non-permanent residents special tabulations based on 1991 public use sample.

1996 Census: N03-0411IVT and Population by age group, sex and marital status.

Table 4: Immigrants of the 1991-96 period and net internal migration of the period 1991-96 by metropolitan area

	Immigrants of 1991-96	Net Internal Migration
Total CMA	971,040	-156,425
Calgary	33,775	9,275
Chicoutimi-Jonquière	285	-4,060
Edmonton	27,270	-23,615
Halifax	4,850	-3,730
Hamilton	17,940	820
Kitchener	12,600	1,480
London	11,770	-3,440
Montréal	134,535	-47,880
Oshawa	3,785	13,005
Ottawa-Hull	38,040	1,695
Québec	5,175	1,670
Regina	2,675	-4,520
Saskatoon	3,555	-3,960
Sherbrooke	2,095	-1,225
St. Catharines-Niagara	5,715	-190
St. John's	895	-3,950
Saint John	245	-1,520
Sudbury	745	-2,400
Thunder Bay	945	-3,585
Toronto	441,030	-87,405
Trois-Rivières	470	730
Vancouver	189,660	12,095
Victoria	6,250	9,715
Windsor	10,655	1,545
Winnipeg	16,080	-16,975

Source: 1996 Census: N03-0411.IVT
 Statistics Canada, Daily, 14 April 1988