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Paper to be presented at the meetings of the Canadian Population Society, Halifax, June 2003.

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Effect of Immigration on the Canadian Population: Replacement Migration?

Abstract:

Immigration has a substantial influence on the size and growth of the population and the labour force, and also considerable influence on the socio-cultural composition, as seen through ethnicity, language and visible minority status. Given the uneven distribution of immigrants over regions, and their subsequent re-migration patterns, immigration accentuates the growth of the largest cities. Immigration enhances the educational profile of the population, but controlling for age, immigrants now have lower proportions in the labour force, lower average income and higher proportions with low income status. Replacement migration can be defined in various ways. An immigration of about 225,000 would prevent population decline in the foreseeable future, and with slightly higher participation would prevent decline of the labour force. It is impossible to use immigration to prevent an increase in the population aged 65 and over as a ratio to the population aged 20-64. Immigration can somewhat be seen as replacing the socio-economic distribution of the population, though to a lesser extent over time as the Canadian-born have various advantages. But immigration cannot be seen to be replacing the existing geographic distribution of the population, nor its socio-cultural composition.

Since fertility has been at levels below replacement, there has been the idea of using immigrants as a substitute for births. For instance, in *Fertility in Canada: From Baby-boom to Baby-bust,* Romaniuc (1984: 94) presents scenarios on the number of immigrants needed to achieve a one percent growth rate in the population, at specified levels of fertility from 1.4 to 2.5. Ryder (1997) uses the concept of replacement migration in the sense of the level of migration that would achieve the same ultimate population size as we would achieve if fertility were at replacement levels. The concept of replacement migration has especially gained currency through a United Nations (2000) study entitled, *Replacement Migration: Is it a Solution to Declining and Ageing Populations?* Using as examples eight countries plus the Europe and the European Union as aggregates, the United Nations study establishes scenarios that would achieve three goals: maintain the size of the total population, maintaining the size of the working age population, and maintaining the ratio of the population aged 15-64 to that 65 and over. The latter seeks to determine if immigration could be used to prevent population aging.

The idea of using immigration "to keep the population the way it was" can be used not only with regard to maintaining a certain growth rate, or avoiding decline, or preventing aging, but also with regard to regional distribution, even ethnic or linguistic composition, and socio-economic composition. These are the topics will be considered to explore how migration could bring forms of replacement that would keep the population more similar to what it has been in the past.

It is important to recognize the disadvantages of this point of departure. In particular, the concept of replacement migration puts an undue emphasis on demographic goals in talking about the future. It can also lead to a view that immigration is the only policy variable that can be manipulated (Lutz and Scherbov, 2002). At the same time, there is the common perception that immigration is somehow "needed" from a demographic point of view. For instance, the first

releases of the 2001 Census led various commentators to move quickly to immigration as a way of somehow correcting the situation (e.g. Armstrong, 2002). This view of immigration also underlies the first objective outlined 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 distrubtion of the Canadian population" (Parliament of Canada, 1978: C.52, 5-6). Thus the utility of exploring the concept of replacement migration in the Canadian case.

Population size and growth

The first definition of replacement migration is the number of immigrants necessary to avoid long term population decline, in the context of below replacement fertility. While fertility has been below replacement since the early 1970s, population momentum in the current conditions will mean that births will continue to outnumber deaths until about 2025.

In appreciating the impact of migration on population size and growth, it is useful to consider not only the direct impact of migration on population growth, but also the impact through children born to immigrants. Annual population estimates provide a summary measure of the **direct impact** of immigration on population growth. This measure includes only arrivals and departures, or the first generation of immigrants. Over the century 1901 to 2001, the total immigration of some 12.8 million persons and emigration of some 6.1 million produced a net gain of 6.7 million, representing a quarter of the population growth over the period (Table 1). The contribution of net international migration to population growth has varied considerably over history, reaching a peak in the 1901-11 decade when it accounted for 44.1 percent. Over the period 1951-91, net migration accounted for 25 percent of population growth. However, the 1991-2001 period shows close to 60 percent of population growth is due to net migration. On an annual basis, since 1994, net migration has comprised a larger proportion of total population growth than natural increase (Bélanger, 2002: 10).

As natural increase slows down, and especially after it becomes negative, the measures of the contribution of net immigration to population growth lose some of their intuitive value. Rather than comparing natural increase and net migration, it may be best to compare immigrants and births as additions to the population. For instance, over the period 1991-2001, immigration accounted for 59.7 percent of population growth, but the average annual immigration was 220,900, while average births were 367,900, that is immigrants amounted to 38 percent of the total additions to the population.

It should also be noted that we are not counting here the temporary residents, that is persons who have a student or work visa to stay in Canada for a limited period, and persons seeking refugee status whose cases have not been determined by the courts. Estimating those who are in Canada for at least one year, the number of non-permanent residents increased from about 85,000 in 1982 to 225,000 in 1990, and 288,000 in 2001 (Michalowski, 1993: 64; Statistics Canada, 2002b: 74). Their numbers are therefore slightly higher than one year's immigration.

—Table 1 about here—

The direct impact of immigration and emigration can also be appreciated through a comparison to the base population. In particular, it is useful to compute the average annual levels per 100 people in the Canadian population (Table 1). In the period around the turn of the century

there was an average of 2.46 annual arrivals per 100 population. The period of the 1950s had levels very close to one percent of the receiving population. Decades since 1971 have seen annual arrivals in the order of 0.52 to 0.75 percent of base population, and departures in the order of 0.13 to 0.27 percent of the base population. The averages for the period 1971-2001 show immigration amounting to 0.63 percent of base population, and emigration amounting to 0.20 percent, for a net migration of 0.43 percent of base population.

The demographic impact of immigration needs to further consider the impact of **births to immigrants** on population growth. Applying birth and death rates observed over the 1951-81 period to the 1951 population, the population would have changed from 14.0 million in 1951 to 20.4 million in 1981 (Le Bras, 1988:9). Since the 1981 population was 24.3 million, this implies that 38 percent of the actual growth was a function of immigration and births to these immigrants over the period 1951-81.

Adopting the same method of 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. Using the "counter-factual" scenario of no international migration over the period 1951-2001, Denton et al. (2001) arrive at a 2001 population of 22.2 million. This implies that 51.5 percent of the growth from 14.0 million to 31.1 million, over the period 1951-2001, was due to the direct plus indirect effect of international migration.

The indirect impact of immigration is affected by the **relative vital rages** of the foreign-born and Canadian-born populations. 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). This advantage appears to decline over time, pointing to selection factors. Immigrant fertility was lower than the Canadian average in the past, but above that average in the 1991 Census (Maxim, 1996; Beaujot, 1997; Bélanger and Dumas, 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. The study of fertility differentials show that persons born in other than Canada, Europe and North America have a higher probability of having a third child (Bélanger, and Dumas, 1998: 57). Data from Quebec over the period 1976-95 indicate strong differences in fertility, with an average of 1.5 births per woman for the Canadian born and 2.5 for the foreign born (Tossou, 2002: 114).

The impact of immigration on the population can also be appreciated through the **proportion foreign born** (e.g. Badets and Chui, 1994). This figure has increased slowly from 15 to 18 percent over the censuses from 1951 to 2001. The second generation, that is persons with at least one foreign-born parent amounted to 33.8 percent at the time of the 1971 Census (Kalbach and McVey, 1979: 179). The 2001 Census included the "birthplace of parents" question for persons aged 15 and over, showing that 16 percent are Canadian born with at least one foreign born parent. 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.

Immigration and future population growth

In the projections based on the 1996 Census, the medium fertility assumption of 1.48 births per woman, with zero international migration produces a population that reaches a peak of 31.5 million in 2018, then begins to decline (Loh and George, 2001). In the medium projection used in the Statistics Canada (2001a) projections, that is fertility of 1.48, immigration of 225,000 per year, emigration of 66,000 per year, and life expectancy reaching 82, the population reaches a peak of 37.1 million in 2040, before beginning a slow decline to 36.9 million in 2051. That is, compared to zero immigration, an immigration of 225,000 delays population decline by 22 years, and produces a 2040 population that is 27 percent higher.

Table 2 sets out the assumptions that have been used in Statistics Canada population projections following the various censuses. The low assumption following the 1996 Census uses a fertility of 1.3 and an immigration of 180,000, while the high assumptions is based on a fertility of 1.8 and immigration of 270,000. Natural increase becomes negative by 2016 in the low projection, 2026 in the medium projection, and 2036 in the high projection. Population decline starts after 2030 in the low projection, after 2040 in the medium projection, and there is continued growth in the high projection.

—Table 2 about here—

Without reviewing all other projections here, it is worth observing that in the 18th Actuarial Report on the Canada Pension Plan, the fertility rate is set at 1.64, life expectancy at 81 by 2025, and net migration of 0.50 percent of population (Office of the Chief Actuary, 2001: 14, 18). With these assumptions, the population of Canada less Quebec is still growing in 2050, having increased 38.8 percent since 2001.

In their projections to 2046, Denton et al. (2000) use medium assumptions of 1.55 for fertility, 225,000 for immigration, 0.19 for emigration and 82.9 for life expectancy. These assumptions show continued growth through the projection period, bringing the 2046 population to 37.7 million, or a growth of 21.5 percent since 2001.

Unless fertility were to return to higher levels, immigration will likely continue to be more important than natural increase, and population growth will be slower than it has been in the past, with prospects for decline under low assumptions. For instance, over the period 1951-2001 the population of Canada more than doubled, while the high, medium and low projections based on the 1996 Census anticipate a total growth of 39.7, 19.0 and 4.2, percent respectively over the period 2001-2051 (Statistics Canada, 2001a: 61). The impact of immigration will clearly become larger as natural increase declines and eventually becomes negative. Nonetheless, in the medium projection, after natural increase becomes negative and all of the growth is due to immigration, births still comprise 59.3 percent of the additions to the population (births plus immigrants) in the period 2025-2030 (Statistics Canada, 2001a: 118).

Both in past trends, and especially in anticipated future trends, immigration has a considerable impact on Canadian population size and growth. The concept of replacement migration can be used in the sense of the level of immigration that would prevent population from declining. Ryder (1997) had calculated the level of migration that would achieve the same ultimate population size as we would achieve if fertility were at replacement levels. Using the vital rates of the early 1990s, Ryder places the replacement net migration figure at 167,225, which might be translated into an immigration of 215,000. Using a simpler definition, the projections reviewed here suggest that, with a continuation of recent levels of fertility, an annual

immigration slightly above 225,000 per year would prevent population decline in the foreseeable future.

Age structure

The impact of immigration on the age structure can 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 1994-99 (Beaujot et al., 1989; Beaujot and Hou, 1993; Citizenship and Immigration, 1997b: 40; Citizenship and Immigration, 1999: 40; Bélanger, 2001: 53). The median age of the entire Canadian population has changed much more, increasing from 26.3 in 1961 to 37.6 in 2001. In effect, the median age of arriving immigrants was about one to two years younger than that of the receiving population in 1961, compared to seven to eight years younger by 2000. While this difference has increased, 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.

Other measures confirm that immigration has a rather small impact on the age structure. For instance, simulating population change as a function only of births and deaths after 1951 produces a 1981 population with an average age that is only 0.5 years older than the actual average observed in that year. Stated differently, the 1951-81 immigration would have reduced the average age of the 1981 population by a half year (Le Bras, 1988:12). As another example, with zero international migration over the period 1951 to 2001, the median age in 2001 is only 0.8 years older than the actual figure for that year (Denton et al., 2001).

Other analyses confirm that immigration slightly reduces the average age. For instance, Li and Wu (2001) obtain the result that as long as the fertility of the foreign born is higher than 34 percent of that of the Canadian-born, immigration would have a slowing effect on aging. Using the assumptions underlying the projections from the 1991 Census, George et al. (1997) compare the impact of the various alternative fertility, mortality and immigration assumptions on various parts of the population. As would be expected, it is the alternate fertility assumptions that have the largest impact on the growth of the population aged 0-14, while alternate mortality assumptions have the largest impact on the growth of the population aged 65 and over, and alternate immigration assumptions on the growth of the population aged 15-64.

The projections based on the 1996 Census indicate that the proportion 65 and over reaches 25.4 percent in 2051 with an immigration of 225,000 per year, compared to 29.8 percent with zero international migration, and a 2001 figure of 13.0 percent (Loh and George, 2001). Denton et al. (2001) show the effects of three immigration assumptions to 2051: (1) the standard case with immigration of 225,000, (2) immigration 50 percent higher, and (3) double the standard case. The median age in 2051 is 46.5 in the standard case, 45.1 with immigration 50 percent higher, and 44.2 with immigration of 450,000 per year. Thus an extra 225,000 immigrants per year for 50 years reduces the median age by 2.3 years, and reduces the percent aged 65 and over by 3.0 percentage points (from 25.9 to 22.9 percent).

It is probably for the study of aging that population projections play their most useful role. Table 3 gathers data on the ratio of population aged 20-64 to the population aged 65 and

over. In 1951, this ratio was close to seven persons of working ages per person at retirement ages, it has declined to under five, and will be about 2.5 in 2050. Even an immigration of 500,000 per year brings the ratio to 2.7 in 2036.

—Table 3 about here—

One of the definitions of replacement migration seeks to use migration to maintain the relative size of the population aged 15-64 to that aged 65 and over. As recognized by the authors of the report, this scenario leads to absurd results, sometimes assuming that the whole world move to one country to prevent an increase in the proportion aged 65+ compared to that aged 15-64 (Coleman, 2000). This is the strong sense of "replacement migration," with migrants eventually replacing the original population (Lachapelle, 2001). As indicated by various projections, including those from Denton et al. (1997), there is not a demographic solution to aging.

Labour force

In "One hundred years of labour force," Crompton and Vickers (2000) show that the periods of most rapid labour force growth were those of high immigration, especially the decades of 1901-1911 and 1951-1961. In addition, the period 1955-1990 experienced an increase in women's labour force participation, from 20 percent of women aged 25 and over working, to a level of 56 percent in 1990. Consequently, the labour force grew rapidly in the post-war era. The period 1966-86 included the entry of the baby boom into labour force ages, the rising participation of women, and the substantial level of immigration. The rate of growth of this period was unmatched by any other western industrialized economy (Foot, 1987). The period 1970-95, also shows higher labour force growth in Canada than in twelve other comparable countries (McDonald and Kippen, 2001: 3).

Both for growth and for aging, the trends in the labour force and in the whole population have been rather different. While the rate of growth of the entire population had been slowing down since 1951-56, the labour force population continued to grow rapidly into the early 1980s. In the period 1966 to 1981, the labour force was growing at close to 3 percent per year, while the growth has been 1.2 percent per year in 1991-2001 (Statistics Canada, 2001b). For aging, while the whole population had been aging for over a century, the average age of the labour force did not increase until 1986 when the baby boom was completely at labour force ages.

In their "what if" scenario with no immigration since 1951, Denton et al. (2001) show that the labour force would have been almost 30 percent smaller in 2001 if there had been no migration. On the other hand, the median age of the labour force would only have been 0.4 years older than its actual 2001 average age of 38.9 years.

Turning to projections, the low assumptions from Statistics Canada (2001a) anticipates that the population aged 18-64 would reach a peak of 21.9 million in 2016, then slowly decline to 18.9 million in 2051. In the medium projection, this population increases by 11.5 percent between 2001 and 2021, then declines by 4.0 percent to 2051. In the high projection, the total growth over the period 2001-2051 is 22.0 percent. Thus in all scenarios labour force growth is likely to be markedly slower than it has been in the past, and the low assumptions imply declines after 2016. However, the medium projection would anticipate only a very minor decline, and the total in 2051 would be higher than that of 2001. In this medium projection, it is not inconceivable that there would be no decline, if women's participation continues to increase, and

if the participation for persons ages 60 and over stops declining.

It is also noteworthy that youth population, defined as ages 18-24, corresponding to labour force entry, increases under all scenarios from 2001 to 2011, then declines in absolute size under all scenarios at least for a ten year period (Statistics Canada, 2001a: 74). Another useful comparison is between the population at ages 15-24 and 55-64, corresponding to typical ages for labour force entry and exit. At the time of release of the age and sex profile from the 2001 Census, many commentators spoke of an imminent labour shortage, and the Prime Minister made a case for higher immigration. Yet, in 2001 there were 1.4 persons aged 15-24 for every person aged 55-64. While the relative size of the persons at ages for labour force entry will continue to decline, according to the medium projection this ratio will nonetheless be 1.2 in 2006. In 2011, when the leading edge of the baby boom will be in retirement ages, the ratio of persons 15-24 to 55-64 will be 1.02, but the ratio will be 0.82 in 2031 when all of the baby boom will be over 65 years of age. Thus, until 2011, the numbers of people at ages for labour force entry will remain higher than those at ages for labour force exit, but in the more distant future all scenarios show more people at ages for labour force exit than at ages for entry.

In their projections of population and labour force to 2046, Denton et al. (2000) show the labour force starting to decline after 2016 under the medium assumptions (fertility at 1.55 and immigration at 225,000). However, the decline to 2046 is only by 364,000 people, 2.1 percent over 30 years, which could be made up with slight increases in participation. The low assumptions, fertility at 1.25 and immigration at 175,000, show the labour force starting to decline after 2011, with a decline of 12.7 percent over the next 35 years. Compared to an immigration of 225,000, annual immigration that is 50% higher increases the size of the labour force in 2051 by 18.5 percent, while double the immigration increases the size by 36.9 percent (Denton et al., 2001). However, doubling the immigration level only reduces the median age of the labour force in 2051 by 0.4 years compared to an average age of 40.9 years in the standard case.

A third meaning of replacement migration would seek to use migration to maintain the size of the labour force. If the objective is to prevent the labour force from declining, it is useful to appreciate that there are other factors that can be manipulated. McDonald and Kippen (2001) have outlined scenarios where, besides immigration, other factors are considered, in particular the participation rate in the labour force (including ages at entry and departure, and women's participation) and the level of fertility. In their results for Canada, along with United States, New Zealand, and Australia, decreases in labour supply can be avoided through continuation of the present fertility, immigration and labour force participation rates. These results are similar to those obtained by Denton and colleagues shown above, where the standard assumptions shows very little labour force decline after 2016, that could be made up through higher participation.

Compared to the other twelve comparable countries studied by McDonald and Kippen (2001), Canada and Australia are seen as having "moderate fertility, high immigration and low labour force participation". With current net immigration of 170,000 persons per year, their results show the labour force increasing by 12 percent between 2000 and 2050. Compared to this standard assumption, the current fertility and labour force participation rates, but with zero immigration, would bring declines in labour supply after about 2015, by a total of 25 percent. Increased labour force participation rates, moving men's rates at ages 35+ toward their rates in 1970 and moving women's rates at ages 25+ toward Swedish rates, would lead to a 25 percent

growth of the labour force, under current immigration and fertility. A return to fertility of 1.8 would bring 19 percent growth to 2050, under current immigration and labour force participation.

That is, while immigration is an important source of recruitment to the labour force, some have exaggerated this importance. For instance, based on projections using zero immigration, Baxter is quoted as saying that "if we didn't have immigration, we'd stop regenerating our labour force in about four years" (Hutchinson, 2002: 32). This implies that there is little regeneration associated with the numbers of people leaving Canadian schools to enter the labour force. It is absurd to say that the labour force will not be renewed unless we have immigration! Clearly, immigration is an important source of recruitment, but there are other avenues. Depending excessively on immigration can also undermine other sources of recruitment, both in terms of appropriate educational investments and population groups that have lower labour force participation. For instance, demographers in Sweden are convinced that, by avoiding the solution of guest workers, the country was pushed to adopt family-friendly policies that encouraged women's participation (Hoem and Hoem, 1997).

If the aim of replacement migration is to prevent the labour force from declining, various means can be used, including having a continued annual immigration of some 225,000 per year, with very slight increases in participation. Without immigration, the labour force would start declining after about 2015, and all scenarios indicate that the labour force will grow more slowly than in the past, and it will age significantly.

Geographic distribution

Given its uneven distribution over space, immigration has an impact on the geographic distribution of Canada's population. As immigration becomes the principle component of population change, there are increased regional inequalities in demographic growth. The subsequent re-migration of the foreign-born population accentuates this regional inequality. Rather than being a national phenomenon, immigration especially benefits population growth in a limited number of provinces and metropolitan areas.

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 over the period 1956-96.

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 efficient means of communication, migratory exchanges are perpetuated between places of origin and destination. As a consequence, recent immigrants are concentrated in the large cities.

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 4). 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.

—Table 4 about here—

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 boarder, plus Montreal. East of this border, the highest proportion 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 the 1996 Census. 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 addition, immigrants to Quebec are highly concentrated in Montreal, amounting to 88 percent of Quebec's foreign born in 1996.

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 26.8 percent of the Canadian-born population (Table 5). The concentration is even more uneven when considering recent immigrants. 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, it has declined slightly for the total of other metropolitan areas, and 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.

—Table 5 about here—

More generally, the metropolitan destination of immigrants is pushing the urbanization trend. The metropolitan areas as a whole have been increasing through immigration but declining as a result of net internal migration. In a study of metropolitan areas of various sizes over the period 1976-1996, Gilbert et al. (2001) find that the growth of the largest metropolitan areas is largely due to immigration, while that of non-metropolitan regions is due mostly to internal migration. Over the 25 metropolitan areas of the 1996 Census, 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 (Statistic Canada, 1998). Migration statistics for 2000-2001 indicate that these patterns have since continued. That is, there was positive net migration into the three largest metropolitan areas, but the internal migration indicates more people leaving than arriving (Statistics Canada, 2002d: 6). 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.

The 2001 Census has highlighted four large urban regions which together comprised just over half of Canada's population: the extended Golden Horseshoe from Oshawa to Kitchener in Southern Ontario with 6.7 million people or 22 percent of the country's population, Montreal and adjacent region with a population of 3.7 million or 12 percent of the country, British Columbia's lower mainland and southern Vancouver Island with 2.7 million people or 9 percent

of the country, and the Calgary-Edmonton corridor, with 2.2 million people and 7 percent of the country. Compared to the total country which grew by 4 percent over the period 1996-2001, these four regions grew by 7.6 percent. Those provinces that did not include one of these urban regions either declined in population or increased by less than one percent in the five year period.

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 4). It is in the initial years after arrival that immigrants are most mobile; after 15 years of residence, their mobility is less than that of the Canadian-born population (Ram and Shin, 1999). The foreign born are most likely to leave the Atlantic region as well as Manitoba, Saskatchewan and Quebec, while they are least likely to leave Ontario (Edmonston, 1996). The provinces that receive disproportionate numbers of immigrants are less likely to see their departures for other provinces (Bélanger, 1993; Edmonston, 2002). That is, there is no evidence of an increased dispersion of immigrants over time (Edmonston, 1996).

Population distribution is thus different from other characteristics that distinguish immigrants. 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. However, on geographic distribution, where immigration accentuates the uneven distribution of the population, the subsequent re-migration of immigrants tends to accentuate the largest areas of initial destination.

In an article on the social and political implications of recent immigration trends, Simmons (1997) expresses concern that those provinces which do not include large metropolitan areas will see a decline in their relative population share and associated political and economic correlates. 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 works counter to the idea of replacement migration, when it comes to population distribution..

Socio-cultural composition

The main elements of socio-cultural composition are place of birth, visible minority status and language. Until 1961, the selectivity by place of origin could be seen as a means of using migration to keep the ethnic composition as it had been, or not to change the “character of our population.” The concept of replacement migration along ethnic lines would clearly run counter to the interest of non-discrimination toward areas that are currently sources of international migrants.

Turning to language, significant numbers do not know English nor French at the time of arrival, but over time the majority come to associate with one or the other of the official languages. In order to highlight this tendency for immigrants to associate with the official languages, the concept of "predominant language" combines the responses on language spoken at home and knowledge of official languages. Persons who speak English or French at home

were assigned this language as their predominant language. Persons speaking "other" languages at home were also assigned to English or French predominant language if they could speak "only" that language among the official languages. In effect, this measures which one among the official languages is a given person's predominant language.

Outside of Quebec, the results are simple: immigration contributes to the English language, and there is less French among immigrants than in the Canadian-born population (Table 6). In Quebec, the foreign born are clearly less French (41.0 percent) than the Canadian-born population (88.5 percent). In spite of the minority status of English in Quebec, immigrant cohorts before 1965 are more English than French. For the cohorts arriving since 1980, about 45 percent are French predominant language, with 25 percent English, and the remaining 30 percent cannot be classified in either language. Other research finds that French is stronger for younger immigrants and for those who did not know English at the time of arrival (Veltman, 1988; Paillé, 1989).

—Table 6 about here—

Quebec also receives a greater proportion of immigrants who know neither of the official languages, and persons of third languages retain these longer. This longer retention is probably related to the larger potential for ethnic separateness provided by French-English tensions in Quebec. In addition, as we have seen, immigration is concentrated in the one metropolitan area of Montreal, and the city of Montreal in particular (Paillé, 1991). This concentration presents a difficulty for linguistic integration. For instance, in given localities, the French mother tongue children can be in a minority, even in French schools. It is found that, immigrant students in French schools which have high concentration of non-French ethnic origin are less positively oriented to learning French (McAndrew et al., 2000). On the other hand, immigrants of third languages are more oriented to French than are non-immigrants of either English or third languages (Castonguay, 1992).

The general linguistic trends in Canada involve decreases in the official language minorities, that is English in Quebec and French in the rest of Canada. For the rest of Canada, immigration contributes to the trend as there is less French among immigrants than in the native born population. In Quebec, immigration enhances the English minority because there is more English among immigrants than in the native born, and a sizeable proportion of third language migrants continue to transfer to the English language. The immigrants to Quebec who are most likely to associate with the French language are those who were selected on the basis of prior knowledge of French, and children who arrive early enough to be schooled in French.

Immigration therefore plays an important role in Canada's changing linguistic distribution. Although the distribution by languages changes only slowly, immigration is the main element producing an increase in the relative size of the English language in comparison to the French language (Lachapelle, 1988a). While language policy in Quebec has promoted a greater association of immigrants to the French language, this is partly at the expense of departures of English and other linguistic groups. Therefore, it is at the expense of a lower total weight of Quebec in the population of Canada. Lachapelle (1988b) has put it well: it is hard to envisage scenarios that would both sustain the weight of Quebec in the Canadian total and increase the proportion French in Quebec. The rest of Canada does not have such a problem: more of its international arrivals are English to start with, other immigrants retain their languages less, and almost all transfers favour English. In terms of language, replacement migration may be

seen to operate for the English language, but it works against the second official language, at least at the national level.

Socio-economic status

Immigration can also affect the characteristics of the population in terms of education, labour force status and income. These are best analyzed in regard to entry cohorts, which are here also separated by birthplace groups.

On **education**, the relative advantage of immigrants compared to the Canadian born was highest in the immediate post-war period, when the Canadian educational system was poorly developed. Even for the 1961-69 arrivals, 23.1 percent of persons aged 25-64 had some university education in 1971, compared to 10.5 percent of the Canadian population.

Measured in terms of average years of education, Table 7 shows that immigrant men of given immigration cohort and age groups always have more average education than their Canadian born counterparts. However, for women the differences are smaller and there are some comparisons, especially among women aged 45 and over for recent cohorts, where the Canadian-born have more education. Among the immigrant cohorts since 1975 or 1980, those from Europe and the United States typically have more education. For the older cohorts, the immigrants from other than Europe and the United States typically have more average education..

—Tables 7 and 8 about here—

In the 1986 Census, **labour force participation** at given ages was higher for immigrants than for the Canadian-born (Beaujot, 1991: 129). In the 1996 Census, labour force participation is now slightly higher for Canadian born than for immigrants (Table 8). There are significant differences by immigration cohort, with participation typically higher than that of the Canadian born for cohorts arriving before 1980 or 1985. For the cohorts arriving since 1986, all but one of the ten-year age and sex groups has lower labour force participation than that of the Canadian-born. Labour force participation is typically higher for immigrants born in Europe and the United States, especially for men and for women arriving since 1980.

Table 9 shows two age-adjusted measures of **average income**. Total income relates to all persons who indicated a positive income in 1995. Employment income is based on persons aged 15-64 who worked full-time for at least 40 weeks in 1995.

—Table 9 about here—

In earlier censuses, immigrants as a whole were very close to the national average (Beaujot et al., 1988). In the 1996 Census, the averages for total immigrants are 6 to 14 percent below the Canadian born in average income. There are marked differences by arrival cohort and place of origin. Groups that arrived before 1975 largely have average incomes higher than that of the Canadian-born population, while the more recent immigrant cohorts have a disadvantage. Another change takes place over these same cohorts: the average income of immigrants from Europe and the United States moves from being less than to being more than that of immigrants from other continents. In the post-1976 cohorts there is a strong disadvantage for immigrants who are not from Europe and the United States, that is who are largely visible minorities. For persons admitted in the period 1981-90, the disadvantage at the time of the 1996 Census is in the range of 25 to 35 percent for men and 15 to 25 percent for women. For arrivals in the last five years before the census, those from Europe and the United States have a disadvantage of some 20 to 35 percent, while those form other continents have a disadvantage of 40 to 50 percent.

Similar conclusions are reached by looking at the proportions with low income status or who are unemployed. For the 1980s, Hou and Picot (2002) find that the propensities of low income were quite similar for the immigrants in comparison to the Canadian-born, but by 1999 the rates of low income were 33 percent higher in the foreign born. Immigrants who had been in Canada less than five years already had low income levels that were 1.29 times the rate of the Canadian-born in 1981, but this increased to 2.18 times in 1989 and 2.93 times in 1999. Following male unemployment over the period 1982 to 1993, McDonald and Worswick (1997) find higher unemployment for the recent immigrants who had arrived in the period 1971-80, but not for those of the 1956-70 arrival cohorts. Especially during periods of recession, like the early 1980s and early 1990s, unemployment was significantly higher for the 1971-80 arrival cohorts. These same differences applied when considering only persons with university education.

The comparison of the 1961 and 1971 Censuses had shown a very encouraging outcome for post-war immigrants (the 1946-60 cohort). In the majority of age-sex groups, the average income in 1961 was lower than that of the Canadian born, but by 1971 these groups had largely exceeded the averages of Canadian born counterparts (Richmond and Kalbach, 1980). Few similar transitions occurred over the 1971 to 1991 Censuses (Beaujot and Rappak, 1990: 139; Beaujot, 1999: 111). In the vast majority of comparisons, a given immigrant cohort was either above or below the average of the Canadian-born population at each census. The transitions that did occur were as follows: the 1961-69 cohort had lower average incomes than the Canadian born in 1971 but exceeded this average in 1981, and women of the 1970-74 cohort made a similar transition by the time of the 1986 Census.

Table 9 shows no further transitions in the 1996 Census, for persons arriving since 1975. It would appear that the immigrant cohorts since 1975 may not reach the average income of persons born in Canada, in spite of their educational advantage. The situation is more positive for immigrants from Europe and the United States until 1985, whose average total income exceeds that of the Canadian born. For the majority of recent immigrants, that is those who are not from Europe and the United States, and who would largely be visible minorities, the four most recent cohorts show serious disadvantages. On the other hand, in the cohorts that preceded 1965, these immigrants from the "other continents" have an average income that is typically superior to the average for immigrants from Europe and the United States.

Various analyses have highlighted the economic disadvantages of immigrants of the early 1990s, in spite of the increase in the relative size of the economic class and their high levels of education. Between 1990 and 2000, the proportion arriving as skilled workers increased while family and refugee classes declined. The principal applicants of the economic class comprised 23 percent of immigrants arriving in 2000, but 43 percent of the immigrants who were intending to join the labour force (Ruddick, 2001). Among the principal applicants of the economic class, the vast majority have university education and know at least one of the official languages. One year after landing, the employment earnings of these principal applicants, were above the Canadian average for landing years 1980 to 1988, but below this average for 1989-1997. Despite the high average education of the 1991-96 immigration cohort, at the time of the 1996 Census, they were less likely to be employed, had relatively high unemployment rates, and they had a significant risks of low-income status (Thompson, 2002).

Other analyses of the 1986, 1991 and 1996 Censuses show a trend toward lower rates of employment and earnings relative to the Canadian-born population. Looking at successive

cohorts of immigrants, Reitz (2001) finds in particular that the increased education of the Canadian-born population has reduced the relative advantage of immigrants. In addition, over time, the increased returns to education are stronger for Canadian-born than for immigrants (see Boyd and Thomas, 2001). In particular, the proportion of immigrants aged 20-64 who are employed has declined, especially for men who have been in Canada for 0-5 years (Reitz, 2001: p. 32). Among persons who are employed, at ages 20-64, immigrant men who had been in Canada less than 25 years, and women who had been in Canada less than 15 years, had average 1995 incomes that were below that of the Canadian-born of the corresponding gender (idem., p. 35). In addition, from census to census the trends are downward, with the more recent censuses showing immigrants with given length of residence having lower relative income. A decomposition analysis indicates that, for most comparisons, a significant proportion of the increased disadvantage of more recent cohorts can be attributed to (1) change in the relative immigrant education level, and (2) change in the relative value of immigrant education in the labour market.

There are also differences across origin groups; for instance, for men with 6-10 years of residence in Canada, white immigrants in the 1996 Census had a 5.7 percent disadvantage, compared to 33.0 percent for black immigrants, 22.6 for Chinese, 23.0 for South Asian, and 29.1 for Filipino. The average disadvantages for women in the same category of length of residence was 13.7 percent for white, 19.6 for black, 5.9 for Chinese, 22.6 for South Asian and 8.5 for Filipino immigrants (idem., p. 36). Looking at immigrants with bachelor degrees or higher, among persons who had come to Canada between 1980 and 1994, who were aged 20 or older at the time of arrival, and who were aged 25-54 at the 1996 Census, Boyd (2001) finds that men who came from refugee-producing countries had high unemployment, they were in low skilled occupations, and had low earnings, in spite of their educational credentials.

Reitz (2001) discusses three possible sources of changes in immigrant relative socio-economic status: changes in the skills that immigrants bring, changes in the treatment received by immigrants within the labour market, and changes in the structure of the labour market itself. Compared to the 1960s, the skills of immigrants have increasingly been defined by academic degrees rather than technical training. Racial discrimination could be the reason for the increased discounting of immigrant skills, but this explanation seems inadequate since white immigrants are also affected, although to a lesser degree. The changed structure of the labour market toward a service economy may undermine the value of educational credentials obtained abroad, and may accentuate the negatives associated with lack of "Canadian experience" and Canadian references.

In summary, while the average level of education of immigrants has been increasing, this increase has not been as strong as that of the younger cohorts of internal entrants to the labour force. The cohort differences by labour force participation and average income clearly show that the strong negative differential at the time of arrival is reduced over time (Badets and Howatson-Leo, 1999). However, especially with regard to the average income of immigrants who are not from Europe and the United States, the disadvantage of the more recent cohorts are not being reduced as quickly. Counter to earlier cohorts, it is unlikely that more recent immigrant cohorts will come to match the average incomes of the Canadian born, in spite of having more average years of education.

Especially for the post-war period, we can say that immigrants replaced, and even enhanced that socio-economic status of the population. This remains true for education, though

to a lesser degree, but there are disadvantages with regard to labour force participation and income. Nonetheless, it should be observed that immigrants who finish their education in Canada receive stronger economic value for this education (De Silva, 1997, 1996; Hum and Simpson, 1999). In addition, while immigrants themselves often have economic disadvantages, the second generation has shown very strong levels of economic adaptation. Based on data for persons aged 25-64 in 1994, Boyd and Grieco (1998) find that second generation men and women have positive outcomes in terms of education and occupational achievement.

Discussion

Especially in media discussions, there is a tendency to turn rather quickly to immigration as a means of solving problems in the way the population is evolving. This was seen in the first releases from the 2001 Census, where the commentary often focused on using immigration to maintain population growth and to avoid labour shortages. For instance, *The Globe and Mail* carried the headline "Canada Is 30 Million, But Will That Last?" (Armstrong, 2002: A1). In its issue of 16 December 2002, *Maclean's* reported that "Immigrants do form a large proportion of the Canadian workforce: more than half are foreign born" (Janigan, 2002: 22). The correct figure is 20 percent foreign born. At the time of the release of the labour force profile from the 2001 Census, *The Globe and Mail* observed that "The country's aging work force ... is bracing for a people deficit ... At current rates, by 2011, when nearly half of all baby boomers will be 55 years old and over, new Canadians will account for virtually all of the country's new workers (Anderssen, 2003: A7). This seems to ignore the 400,000 persons who were born in 1991 and who by 2011 will be leaving Canadian schools to enter the labour force.

Part of the problem lies in the way we represent the statistics. The 2001 *Annual Report to Parliament* observes that 70% of labour force growth is due to immigration (Citizenship and Immigration, 2001: 2). The same figure is quoted in the 2001 Census release that "census data show that immigrants who landed in Canada during the 1990s, and who were in the labour force in 2001, represented almost 70% of the total growth of the labour force over the decade" (Statistics Canada, 2003: 5). While this figure is technically correct, it can easily be mis-interpreted. The figure is derived by looking at the change in the size of the labour force between two censuses, used as a denominator, compared to the number of labour force participants who had arrived in the previous period. That is, of the change in the size of the labour force, what percentage is due to immigration. When the labour force is growing slowly, this figure is not very meaningful. For instance, if the labour force grew from 10,000,000 to 10,000,001 but one member of the labour force was an immigrant of the past five years, then 100% of the labour force growth would be due to the arrival of that one person. It would seem more appropriate to look at the relative size of the internal and external sources of entry into the labour force. The size of cohorts turning say 20 these days is about 408,000, while immigration is about 210,000. Of course, neither group would be completely in the labour force. If we estimate that 90% of those coming to labour force ages will be in the labour force at some point, and that 90% of immigrants aged 15-64 will also be in the labour force, then we would have 507,000 additions to the labour force, of which 72% would be due to internal recruitment and only 28% due to immigration.

This tendency to highlight the immigration solution may also be due to an unwillingness to consider means of sustaining fertility, as another approach to demographic questions, or to

finding means of accommodating the evolving demographics, as largely we must. In effect, the releases from the 2001 Census have highlighted how different the population is from the time that major social programs were being formulated, following on the 1961 Census. That was a time when the elderly represented a significant pocket of poverty, but their numbers were small. It was also a time of strong economic and demographic growth and low unemployment, where one could assume that the increasing incomes of the larger number of contributors will be able to handle pension costs. The Bilingualism and Biculturalism Commission was proposing that we could become a bilingual country, from coast to coast. Security was often based on families, which were largely of the breadwinner type. Lone-parent families were relatively uncommon, and more likely to result from the death of a parent when children were older. Policy provisions for widows and orphans were based on a breadwinner model of families that stayed together until death. Post-war immigrants were integrating well into the economy, given their relatively high skills and education.

The releases from the 2001 Census, which have made headlines across the country, indicate a strong hunger for understanding how the population and society are changing, and a deep interest to appreciate the implications. The emerging society can no longer be based on high demographic and economic growth, breadwinner families and small numbers of elderly. The significant pockets of poverty are now in lone-parent families, recent immigrants, Aboriginal groups, and outlying regions. Canadian population and society are changing in ways that require new thinking about social and economic policy. The emerging society is very different from the one of the 1960s when major social programs were being established.

Immigration needs to play a role in this changing demographic context, and Canada is better placed than many other countries in this regard. Immigration has a favourable demographic and economic impact, especially in terms of growth of the population and the labour force, but it cannot stop demographic aging, it accentuates the inequality in population distribution, and it no longer plays such a positive a role in terms of socio-economic composition. Rather than being based excessively on demographic or economic considerations, the case for immigration should be made in socio-political terms, that is, increasing the cultural richness of Canada, and achieving stronger integration into a broader pluralistic 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%
1991-2001	31,081,887	2,229,125	0.75%	407,180	59.7%

Sources: Beaujot and Rappak, 1988: 27; Statistics Canada, Annual Demographic Statistics, 1999: 20,188,191, 249; Statistics Canada, Annual Demographic Statistics, 2001: 18-19

Table 2. Assumptions Underlying Statistics Canada Projections from 1971 to 1996 Censuses

	Total fertility rate			Immigration			Life expectancy M/F		
Projection	L	M	H	L	M	H	H	M	L
1971 census	1.8	2.2	2.6	120,000	…	160,000		70.2/ 78.3	
1976 census	1.7	…	2.1	125,000	150,000	175,000		70.2/ 78.3	
1981 census	1.4	1.66	2.2	100,000	…	150,000		74.9/ 81.6	
1986 census	1.2	1.67	2.1	140,000	…	200,000		77.2/ 84.0	
1991 census	1.5	1.7	1.9	150,000	250,000	330,000	81.0/ 86.0	78.5/ 84.0	77.0/ 83.0
1996 census	1.3	1.48	1.8	180,000	225,000	270,000	81.5/ 85.0	80.0/ 84.0	78.5/ 83.0

Source:

1. Statistics Canada, 1974: 26, 59; 1979: 21, 29; 1985: 27, 41; 1990: 12, 26; 1994: 59; 2001: 57
2. Statistics Canada, Demography Division, special tabulations

Table 3. Ratio of population aged 20-64 to population aged 65+, Canada, 1950-2100

Historical data			
1951	6.97		
1976	6.49		
2001	4.86		
Statistics Canada medium projection (from 1971 census)			
2001	5.35		
Statistics Canada projections in 2001	2026	2051	
Low (Projection 1)	3.04	2.42	
Medium (Projection 2)	3.04	2.45	
High (Projection 3)	3.05	2.51	
Projected in CPP for (year)	2000	2050	2100
Report 0 (1964)	6.22	5.61	
Report 6 (1977)	5.62	3.47	
Report 12 (1988)	4.83	2.48	2.32
Report 17 (1999)	4.92	2.39	2.17
Report 18 (2000)	4.90	2.36	2.23*
Projected with alternate immigration levels (year)	2016	2036	
Zero immigration	3.36	1.79	
100,000	3.54	2.02	
200,000	3.70	2.22	
300,000	3.86	2.40	
400,000	4.00	2.59	
500,000	4.15	2.70	

Note: * in 2075

Source:

1. Statistics Canada, 2001: 183 -- 185; Denton et al., 1997: 39, 41
2. Office of the Chief Actuary, 2001: 18

Table 4. Regional Distribution of Canadian Born and Immigrants by Arrival Cohorts, Censuses of 1971 to 1996, Canada

	1971	1981	1991	1996
Canadian born				
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
Immigrants 1961-70				
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
Immigrants 1971-80				
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
Immigrants 1981-91				
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
Immigrants 1991-96				
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 5. Distribution of Canadian Born and Immigrants by Arrival Cohorts, by Metropolitan Areas, Canada, 1991 and 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

In 1996 the Canadian born includes the non-permanent residents

Sources: special tabulations based on 1991 public use sample.

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

Table 6. Predominant Language for Canadian Born and Various Immigrant Cohorts, Quebec and Rest of Canada, 1996

	Quebec			Rest of Canada		
	English	French	Other	English	French	Other
Canadian born	9.3	88.5	2.2	95.8	3.3	0.9
Immigrants	31.9	41.0	27.1	90.6	0.6	8.9
Before 1951	69.0	20.8	10.2	98.1	0.2	1.7
1951-65	42.9	32.3	24.8	95.0	0.3	4.7
1966-75	34.3	42.6	23.1	93.5	0.5	6.0
1976-80	23.1	49.1	27.7	90.5	0.5	9.0
1981-85	23.4	45.0	31.6	87.5	0.6	11.9
1986-90	24.7	43.5	31.7	87.5	0.5	11.9
1991-1996	26.3	43.7	30.0	83.8	0.7	15.4

Notes: The predominant language is determined on the bases of language spoken at home and knowledge of official languages. Those who speak one national language at home are assigned this predominant language. Those who do not speak English or French at home are assigned that predominant language if they know only English or French among the official languages. The 'other' category comprises those who speak both English and French at home, plus those who speak neither language at home and know both or neither of the official languages.

Source: Census of Canada, 1996. Public Use Microdata File of Individuals.

Table 7. Average Years of Education by ten-year Age Group and Sex, separately for Canadian Born, Foreign Born, by Arrival Cohort, and Place of Birth of Foreign Born, Canada, 1996

	Female						Male					
	15-24	25-34	35-44	45-54	55-64	Total	15-24	25-34	35-44	45-54	55-64	Total
Canadian born	12.5	13.7	13.1	12.3	10.9	12.7	12.0	13.4	13.1	12.5	10.8	12.6
Immigrants	12.8	13.7	13.2	12.5	10.7	12.6	12.5	13.9	13.6	13.3	11.9	13.1
Before 1951				12.9	11.1	12.1				13.4	11.8	12.6
1951-65		14.3	13.5	12.0	10.5	11.6		13.9	13.8	12.8	11.3	12.3
1966-75	14.8	14.2	12.9	12.8	11.5	12.9	14.0	13.8	13.4	13.4	12.7	13.4
1976-80	13.7	14.1	12.9	12.9	10.9	13.1	13.4	13.9	13.3	13.6	12.3	13.4
1981-85	12.8	13.3	13.3	12.6	10.1	12.8	12.5	13.8	13.7	13.9	12.5	13.3
1986-90	12.5	13.2	13.3	12.6	9.7	12.8	12.2	13.5	13.7	13.7	11.7	13.2
1991-1994	12.3	13.7	13.4	12.2	9.5	12.8	12.1	14.4	13.9	13.3	11.3	13.2
Europe & U.S.	12.9	14.0	13.3	13.5	10.6	12.4	12.6	13.7	13.5	13.0	11.5	12.8
Before 1951				12.9	11.1	12.1				13.4	11.9	12.7
1951-65		14.2	13.4	11.9	10.3	11.5		14.6	13.7	12.8	11.1	12.2
1966-75	14.5	13.9	12.3	12.3	10.9	12.4	13.9	15.0	12.8	12.8	12.0	12.8
1976-80	13.6	14.1	13.1	13.1	11.1	13.1	13.3	13.9	13.4	13.4	12.3	13.4
1981-85	12.8	13.7	14.2	13.6	12.0	13.6	12.4	13.4	14.1	14.5	13.0	13.7
1986-90	12.1	13.6	13.8	13.2	10.9	13.2	11.9	13.3	13.7	13.7	11.9	13.2
1991-1994	12.5	14.8	14.4	13.9	12.0	14.1	12.3	13.6	14.4	14.4	13.1	13.9
Other	12.7	13.5	13.1	12.4	10.8	12.8	12.5	13.8	13.7	13.8	12.7	13.4
Before 1951				12.8	10.7	12.0				15.0	10.7	11.4
1951-65		14.9	14.2	13.1	12.0	12.9		14.1	14.3	13.7	12.8	13.4
1966-75	15.2	14.8	13.6	13.5	12.4	13.6	14.2	14.3	14.1	14.3	13.9	14.3
1976-80	13.8	14.1	12.9	12.7	10.8	13.0	13.6	13.9	13.3	13.7	12.4	13.5
1981-85	12.8	13.2	12.7	11.9	9.4	12.5	12.5	13.5	13.5	13.3	12.0	13.2
1986-90	12.6	13.1	13.1	12.4	9.4	12.6	12.3	13.3	13.7	13.7	11.7	13.2
1991-1994	12.2	13.3	13.1	11.8	9.1	12.5	12.0	13.8	13.8	13.1	11.1	13.0

Source: Census of Canada, 1996. Public Use Microdata File of Individuals.

Table 8. Labor Force Participation Rate by ten-year Age Group and Sex, separately for Canadian Born, Foreign Born, by Arrival Cohort, and Place of Birth of Foreign Born, Canada, 1996

	Female						Male					
	15-24	25-34	35-44	45-54	55-64	Total	15-24	25-34	35-44	45-54	55-64	Total
Canadian born	61.3	79.4	80.3	74.0	39.0	70.0	64.2	92.4	92.5	89.0	59.8	81.9
Immigrants	51.6	72.9	75.7	74.5	42.3	66.2	53.6	88.6	90.7	90.0	67.6	81.5
Before 1951				77.7	42.4	61.2				89.0	64.3	76.6
1951-65		82.1	82.9	73.7	40.0	60.0		93.7	94.1	91.6	64.3	79.4
1966-75	81.7	81.1	81.5	78.4	51.5	74.6	79.6	92.4	92.5	91.5	76.5	88.3
1976-80	65.8	78.7	77.1	77.3	51.8	73.6	71.7	91.3	92.7	91.3	75.5	87.3
1981-85	54.8	74.5	76.0	76.7	42.7	69.5	57.7	90.1	91.6	91.1	69.5	83.1
1986-90	47.3	69.7	73.0	69.9	34.5	64.0	47.8	87.3	89.6	86.0	64.5	78.3
1991-1994	42.3	66.1	65.1	56.5	24.1	56.4	44.1	83.8	84.6	79.6	43.2	71.7
Europe & U.S.	61.2	77.6	79.3	75.1	41.6	67.1	63.0	92.5	93.4	91.7	67.9	83.9
Before 1951				77.8	43.1	61.8				89.0	64.5	77.2
1951-65		81.6	83.1	73.3	38.7	59.3		93.4	93.9	91.7	64.0	79.4
1966-75	83.1	81.3	80.3	75.6	46.5	72.0	80.6	93.3	93.1	91.6	74.7	88.1
1976-80	70.7	81.8	76.8	76.5	51.7	74.2	72.8	93.9	94.3	92.9	77.3	88.6
1981-85	59.2	77.2	78.6	80.0	56.6	73.6	63.3	93.1	92.9	93.3	79.6	85.6
1986-90	51.1	73.4	76.2	80.5	42.6	69.6	53.8	92.6	94.0	90.6	73.9	84.5
1991-1994	53.3	70.9	73.5	69.1	33.0	66.5	54.5	89.0	91.8	93.1	78.5	83.1
Other	48.2	70.4	73.1	73.8	43.8	65.4	50.0	86.5	88.6	87.6	66.8	79.3
Before 1951				75.0	30.0	50.0				87.5	61.9	66.0
1951-65		84.8	81.5	77.6	50.4	65.9		94.7	95.8	90.5	66.6	80.0
1966-75	80.3	80.8	82.8	81.9	59.6	78.2	78.4	91.0	91.8	91.5	79.2	88.6
1976-80	62.8	77.0	77.2	78.0	51.9	73.3	71.0	90.0	91.8	90.2	74.1	86.6
1981-85	52.3	73.5	74.6	74.4	38.0	67.4	54.4	89.2	91.0	89.3	61.3	81.8
1986-90	46.1	68.3	71.7	67.0	32.7	62.0	45.8	85.6	87.7	84.4	62.7	76.2
1991-1994	40.3	64.7	62.8	53.6	22.8	53.9	42.0	82.3	82.6	76.4	38.2	68.9

Source: Census of Canada, 1996. Public Use Microdata File of Individuals.

Table 9. Indexes of Total Income and Employment Income, by Sex, Place of Birth, and Arrival Cohorts, Adjusted for Age, Canada, 1996

	Total Income		Employment Income	
	Men	Women	Men	Women
Canadian born	1.00	1.00	1.00	1.00
Immigrants	0.92	0.94	0.86	0.87
Before 1951	1.14	1.15	1.02	1.03
1951-65	1.08	1.09	1.03	0.99
1966-75	1.03	1.10	0.97	1.01
1976-80	0.92	0.96	0.87	0.90
1981-85	0.86	0.89	0.83	0.84
1986-90	0.70	0.75	0.70	0.74
1991-1994	0.56	0.59	0.57	0.59
Europe & U.S.	1.04	1.01	0.95	0.91
Before 1951	1.13	1.15	1.02	1.04
1951-65	1.08	1.07	1.02	0.97
1966-75	1.04	1.09	0.97	0.99
1976-80	1.06	1.00	0.98	0.90
1981-85	1.03	1.01	0.95	0.89
1986-90	0.89	0.83	0.83	0.75
1991-1994	0.81	0.69	0.77	0.64
Other	0.78	0.86	0.77	0.83
Before 1951	1.49	1.14	--	--
1951-65	1.17	1.22	1.11	1.11
1966-75	1.00	1.12	0.96	1.05
1976-80	0.84	0.94	0.81	0.90
1981-85	0.76	0.85	0.75	0.82
1986-90	0.64	0.72	0.65	0.73
1991-1994	0.51	0.56	0.51	0.58

Notes:
-- fewer than 50 cases
Adjustments for age (using ten-year age group of Canadian men and women as the standards), ages 15+ are used for total income and ages 15-64 for employment income. Employment income (wages and salaries plus self-employed income) is measured for those working full-time at least 40 weeks in 1995. Only persons with positive total income are used to calculate income.

Source: Census of Canada, 1996. Public Use Microdata File of Individuals.