SOCIOECONOMIC AND DEMOGRAPHIC PROFILES OF IMMIGRANTS IN NOVA SCOTIA

by

Ather H. Akbari[*], Scott Lynch[**], James Ted McDonald[+], and Wimal Rankaduwa[#]

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[*] Department of Economics, Saint Mary's University, Halifax, NS. Principal investigator.
[**] Department of Economics, Memorial University of Newfoundland, Saint John's, NL
[+] Department of Economics, University of New Brunswick, Fredericton, NB
[#] Department of Economics, University of Prince Edward Island, Charlottetown, PE
Drs. Akbari, McDonald, and Rankaduwa are also affiliated with the economics domain of the Atlantic Metropolis Centre.

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TABLE OF CONTENTS

LIST OF TEXT TABLES

Page

LIST OF CHARTS

Page

LIST OF APPENDIX CHARTS AND TABLES

* To view the entire table, print on 11x17 paper.

EXECUTIVE SUMMARY

This document is one of a series of reports based on a project that analyzed the socioeconomic and demographic profiles of immigrants in Atlantic Canada and in each Atlantic province. It updates an earlier Nova Scotia study conducted for the Atlantic Canada Opportunities Agency – Nova Scotia branch. The primary objectives of this part of the project were to (a) collect and tabulate data on various aspects of immigration to Nova Scotia, (b) analyze those data to highlight the socioeconomic, demographic and geographic dimensions of immigration to the province, (c) identify gaps in knowledge necessary to implement immigration attraction, integration and retention strategies in Nova Scotia, and (d) write a report bringing together all of these elements.

Following previous literature, the term "immigrant" is used in this study to refer to all foreign-born individuals who are permanent residents of Canada. The primary data sources for this study were Citizenship and Immigration Canada (CIC) and Statistics Canada. The analysis mostly covers the period 1981-2005, although some available data for 2006 have also been used. This is the first study to analyze the profiles of **resident** immigrants in Nova Scotia, and provide their comparisons with non-immigrants, using data from five population censuses starting in 1981.

General immigration trends

Immigrants comprise less than 5 percent of Nova Scotia's population but 18 percent of the national population. Immigrant inflows to the province have fluctuated dramatically over the 1981-2005 period, with rising trends in recent years that are attributed to new policy initiatives aimed at attracting more immigrants to the province. Most immigrants come under the family class category followed by economic immigrants and refugees. Projected demographic trends in the province indicate that, as is the case with many other Canadian provinces, positive population growth can only be sustained through immigration. In fact, Nova Scotia, whose population declined by 0.4 percent during 1996-2001, would have suffered a 0.9 percent decline in its population without immigration during this period.

Countries of origin, settlement patterns and economic immigrants

While the United States and the United Kingdom remain among the major source countries of immigrants destined for Nova Scotia, the relative importance of China, Kuwait, Jordan, and Saudi Arabia has increased among the major immigrant source countries since the early 1990s. In 2005, most immigrants came from China. India is also emerging as a major immigrant source country.

Immigration to the province is heavily slanted in favour of Halifax County. However, more than one-fifth of immigrants who had arrived during 1996-2001 were staying outside of Halifax in 2001, which indicates the potential for developing rural destinations for new immigrants.

Demographic profile

The age profile of immigrant inflows to Nova Scotia is dominated by the lower age groups. More than 75 percent of principal applicants (aged 15 years and older) who arrived during 2001-2005 were under 45, with about 10.5 percent being under 25. The corresponding numbers for resident Nova Scotians (aged 15 years and older) in 2006 were 47 percent and 15.4 percent, respectively.

Reliance on government transfer payments

Since the start of the study period (1981), immigrants have relied far less on income from government transfers than has the native-born population. For instance, in 2001, government transfers amounted to less than 10 percent of total income for immigrants, compared to more than 16 percent of total income for non-immigrants. These numbers are not surprising. If immigrants are young at the time of arrival, they do not receive such age-related transfers as Canada Pension Plan and Old Age Security payments. They also do not become eligible for employment insurance until they start working and pay employment insurance premiums.

Labour market outcomes

In terms of labour market outcomes, compared to non-immigrants, immigrants in Nova Scotia have attained higher education levels, earn higher employment income, and have lower unemployment rates. In addition, skilled immigrants, who are mostly engaged in the knowledge economy as managers and professionals, have unemployment rates and employment income comparable to those of the native born in that sector. They also account for a significant share of immigrant inflows to Nova Scotia.

However, there are two concerns. One concern is that the labour market outcomes of recent arrivals (those who arrived within five years of a census year) have worsened since 1981. Possible causes could include language barriers and non-recognition of immigrants' educational credentials and experience as more immigrants now come from non-traditional source countries. A second concern is that the inflow of skilled immigrants has declined since the mid-1990s. Their numbers have slowly increased since 2003, however, a trend that is expected to continue in the light of recent policy initiatives.

Highly skilled immigrants

Throughout the period 1981-2005, highly skilled immigrants (managers and professionals) comprised a significant proportion of immigrants destined for the labour force in Nova Scotia. Since the early 1990s, their percentages in total inflows have exceeded those of medium- and low-skilled immigrants, whose numbers have been declining since then. However, the share of immigrant professionals in the total supply of professionals resident in the province fell over the 1991-2001 period while that of non-

immigrant professionals grew. Most of the decline in immigrants' share in resident professionals took place during the first half of the decade.

The service sector employs about 82 percent of all highly skilled immigrants, with the education sector alone employing about a quarter of them. Immigrants account for about 11 percent of all engineers and scientists, 17.5 percent of health care professionals, 11 percent of teachers and professors, and 12 percent of musicians and singers in Nova Scotia. Most notable is the remarkable rise of immigrant computer and information systems professionals, whose supply more than doubled during 1996-2001, rising faster than that of non-immigrants. Despite the growing shortage of health professionals in the province, which is often discussed in public policy circles and in the news media, the inflow of immigrant health professionals rose by only 12 percent, while that of non-immigrants rose by about 20 percent during 1996-2001.

Business immigration

Business immigration is a potentially potent source of economic growth as it brings entrepreneurship, capital, innovation and expertise into the provincial economy. Like highly skilled immigrants, large numbers of business immigrants come from the UK and the US, followed by those from the Asian countries. Moreover, business immigrants are concentrated in the service sector, with the top three sub-sectors being health and social services, retail trade, and business services. The manufacturing sector accounted for a small percentage of business immigrants. The data also show that the capital invested by self-employed immigrant entrepreneurs has also been mostly in the service sector. However, while business immigrants formed the highest percentage of total immigrants in the mid-1990s, their numbers have now slowed to a trickle. In 2005, only 30 immigrants arrived under the business class, the smallest inflow since 1990.

Retention of immigrants

Immigrant retention rates in Nova Scotia shrank from about 86 percent during 1981-1986 to only 48 percent during 1996-2001. In the light of this decline in retention rate, policies that facilitate the economic and social integration of immigrants in Nova Scotia will be critical. Such policies should focus on increasing language training, improving the quality of settlement services and expediting the process of foreign credential recognition. The provincial government has already adopted some initiatives in this regard. Retention rates based on 2006 census data, when available, will shed light on the success of these initiatives.

International students

Most international students in Nova Scotia are university students and comprise 8 percent of total undergraduate enrolments across universities in Nova Scotia, a percentage that remained constant during 2002-05. China and the United States are the top two source countries of international students, followed by Korea, Bermuda, Japan, the Bahamas, and others. On average an international student takes just under three years to finish his / her education.

Since international students represent a potential pool of highly skilled immigrants, educational institutions, as well as provincial and federal governments, should collaborate to attract them to this province. The introduction of the "International Graduate Stream" in the Nova Scotia Provincial Nominee Program is an important step in this direction.

Some research gaps on immigration trends and suggestions for future research

The information presented in this report needs to be enhanced through surveys and additional research to inform policymakers about the economic impacts of immigrants and how best to attract and retain them.

For example, we need to know who out-migrates from Nova Scotia (and why) to assess the human capital being lost by failing to retain immigrants. We also need to know what factors specific to Nova Scotia motivate immigrants—whether skilled workers, business immigrants, refugees or family class immigrants—to leave or to stay. In addition, we need to know the extent to which the human capital of skilled immigrants from non-traditional sources is being lost through underemployment if they are pushed into low-skill, low-wage employment because their foreign-earned credentials are not recognized. We also need to know whether immigrants out-migrate at rates different from the native born. Information is also lacking on what specific factors deter business immigration to Nova Scotia or how enterprises set up by immigrants perform and what difficulties they face. All this information will help the province strengthen its immigrant retention policies.

In addition to the above, systematic research is also needed to explore what mix of skills should be encouraged to meet current shortages and the projected labour market needs of the province. Research on the effects of immigrants on the earnings and employment of non-immigrants, as well as their effects on the public treasury, can also provide useful information to understand their role in the economic development of Nova Scotia.

Finally, it is also important to perform a comparative analysis of the socioeconomic and demographic profiles of immigrants in Nova Scotia and in other provinces to investigate whether the patterns and changes observed are unique to this province or common to Canada as a whole.

The data that will help fill the above research gaps are either lacking or difficult to access. Additional information will have to come from surveys to provide the input for both quantitative and qualitative analyses of these issues so that effective policies can be formulated. Analysis of the 2006 census data, when available, will also be important to assess the impacts of new initiatives adopted in the province to attract and retain more immigrants.

I. INTRODUCTION

According to the preliminary estimates based on the 2006 Canadian census, Canada's population grew by about 5.4 percent over the period 2001-06, the highest growth among G-8 countries. However, since the natural growth of the Canadian population has been on a continuous decline in the post World War II period, most of the population growth (about two-thirds) during 2001-06 was contributed to by international immigration. Population growth was also uneven across all Canadian provinces. Only Alberta, British Columbia and Ontario had population growth rates that exceeded the national rate. Population growth in each Atlantic province was less than 1 percent, with Newfoundland and Labrador's declining (1.5 percent on top of the 7 percent decline during the previous five years).

Projections show that the natural component of population growth will actually turn negative in 15-20 years across many Canadian provinces. In Nova Scotia alone, a continuous decline in birth rates, along with almost stable death rates in the post World War II period, has resulted in a decline in the natural population growth rate from about 20 per thousand in the late 1940s to under one per thousand in the 2000s. In fact, last year's (2005-06) estimates provided by the Demography Division of Statistics Canada show that the natural population growth rate was zero in Nova Scotia, which, when combined with net out-migration from the province, resulted in a negative provincial population growth rate. Net population out-migration from the province has been a continuous phenomenon in the post World War II period, as reflected by Charts A1 and A2.

If present trends of natural population growth and out-migration continue, Nova Scotia, like the rest of Canada, will also have to rely more heavily on immigration for a positive growth in its population. This does not bode well for this province, given that the bulk of immigration inflows to Canada gravitate towards the major population centres in Ontario, Quebec and British Columbia. As a result, these provinces have become "immigrant abundant" in that they account for a much larger share of Canada's immigrant population than they do of the national population. On the other hand, the relatively small immigrant inflows coming into Nova Scotia have made it relatively "immigrant scarce" in that its share of the immigrant population is significantly lower than the national share (about 4 percent compared to 18).

The negative population growth rate has no doubt raised serious concerns about the adverse economic impacts on the province, which would exacerbate its economic imbalance with the rest of Canada. Negative population growth in Nova Scotia would slow the growth rate of human capital formation, as well as of physical capital formation, both of which would impact adversely on the economic well-being of the resident population. Shortages in the availability of skilled workers, a decline in innovators, and shrinking markets for goods and services are all serious consequences of negative population growth. Thus, for example, a shortage of construction workers, especially of bricklayers and electricians, has been identified by Competencies Canada (Skills Shortages and Labour Market Trends in the Construction Industry, Issue 2).

Declining population is also partly blamed for a decline in certain public and private services across Nova Scotia. (See box, Understaffing at Nova Scotia Hospitals, p. 3, on physician shortages in the summer of 2007.) Many such services have fixed costs, which do not go down with population, thereby making them economically unfeasible. Closures of schools, hospitals, mail and banking services in rural areas are also often heavily reported in the media.

It is not surprising, therefore, that the Nova Scotia government has recognized the need to boost immigration to the province in the form of skilled workers and entrepreneurs as a way of addressing population decline. These new immigrants will not only help increase the production of goods and services directly but also indirectly as consumers. In this regard, important issues arise from the perspectives of not only attracting, integrating, and retaining new immigrants to the province but also from the perspective of their impacts on labour markets, economic growth, and public finances. Unfortunately, research-based knowledge on the economic role of immigrants in Nova Scotia, which is essential for policy formation and implementation, is lacking.

This project is an effort to build a broader and deeper stock of knowledge relating to the many economic issues that immigration to Atlantic Canada raise, specifically in Nova Scotia. Our special interest is to outline the economic dimensions of immigration because our primary focus is on the role of immigration in promoting economic growth and development in the region. The report is organized as follows. Section II defines the objectives underlying the project, while Section III outlines the methodology used. Section IV presents a statistical outline of the economic, demographic and geographic characteristics of immigration to Nova Scotia since 1981. Sections V and VI review in greater detail the nature of economic immigration to Nova Scotia, while Section VII analyzes the trends in the international student population of Nova Scotia because it represents a potential pool of highly skilled immigrants in the province. Section VIII presents major findings and suggested directions for future research.

Understaffing at Nova Scotia Hospitals

- The Digby General Hospital emergency room has been closing Fridays all year due to a lack of doctors to provide coverage. Officials were preparing to close the ER as many as two more days a week when one doctor retired at the end of June and another goes on maternity leave. That will leave only one family doctor in the area to provide coverage.
- The Cape Breton District Health Authority announced it will close three emergency rooms on a rotating basis for one week at a time through July and August because of a shortage of nurses, said Cape Breton district health authority spokesman Greg Boone. About a quarter of ER positions are vacant. The rotating closures are necessary to allow the health authority's regular nurses to take vacation.
- The New Waterford Consolidated Hospital emergency room will be closed July 1-8, July 15-22 and August 5-12.
- The Northside General Hospital emergency room will be closed July 8-5, July 22-29 and August 19-26.
- The Glace Bay Health-Care Facility emergency room will be closed July 29 to August 5, August 12-19 and August 26 to September 2.

Source: The Chronicle Herald. "Understaffing forces Digby Hospital to shut down ER." (John Gillis, Health Reporter, 21-June-2007).

II. OBJECTIVES OF THIS STUDY

The primary objectives of this study include

- the collection and tabulation of data on immigration to Nova Scotia for the period 1981-2005, with a focus on economic immigration (some data for 2006 are also used)
- a descriptive analysis of the data to highlight the socioeconomic, demographic and geographic dimensions of immigration to Nova Scotia
- the identification of some gaps in research that can provide necessary information to implement immigrant attraction, integration and retention strategies in Nova Scotia
- a written report bringing all these elements together.

To meet the above objectives, the study analyzed the relevance, implications and effectiveness of immigration as a potential economic development strategy to address demographic and socioeconomic challenges faced by Atlantic Canada in general and Nova Scotia in particular.

This report is intended to complement a series of reports, one for each Atlantic province and one for the entire region, which will deepen our understanding of the challenges faced by immigration and economic policymakers in Nova Scotia. The report updates a previous study on immigration in Nova Scotia by the present authors for the Nova Scotia branch of the Atlantic Canada Opportunities Agency.

III. METHODOLOGY

Following previous literature, the term "immigrant" is used in this study to refer to all foreign-born individuals who are permanent residents of Canada. To meet the objectives of the study, we tried to ensure that the approaches used for data collection and their analyses were reliable and easy to replicate. The primary data sources for this study were

- Citizenship and Immigration Canada (CIC)
- Statistics Canada

Some data used in this study were obtained from the web sites of the above government sources. However, much of the required data was not available in the public domain and had to be acquired through different channels. Some data were made available to the authors under the specific data-sharing agreements of the Metropolis project team with Statistics Canada and CIC, and some Statistics Canada data were accessed through the Internet Data Library System (IDLS). Being a member of the Canadian Association of Research Libraries Data Consortium (CARLDC), the Patrick Power Library at Saint Mary's University shares this access with the University of Western Ontario under the Data Liberation Initiative (DLI). Some data were also purchased from Statistics Canada through a customized request, while some were provided by them as a courtesy, for which we are grateful.

The analysis we conducted is based primarily on descriptive tools. A distinction was made between immigrants destined for Nova Scotia and those who actually stayed in the province. Among those who stayed, separate data were also analyzed for more recent immigrants, i.e., those who arrived within five years before a population census, when possible. Some parts of the analysis also use data on the non-immigrant population to facilitate comparisons with immigrants.

Most analysis in this study covers the period 1981-2005. The CIC data are based on the landing documents of immigrants and are for immigrant inflows. These are available for the entire period of analysis, although some are also available until 2006. The Statistics Canada data are for resident immigrants and non-immigrants and are drawn from the five population censuses conducted during the period. The latest data are based on the 2001 census since immigrant data from the 2006 census have not yet been released by Statistics Canada. Thus, whenever a comparison of immigrant inflows with resident immigrants and non-immigrants was required, the period of analysis ended

in 2001. Available data from the 2006 census are also used to present the demographic situation of the province.

IV. AN OVERVIEW OF IMMIGRATION TO NOVA SCOTIA

This section analyzes annual immigration trends in Nova Scotia over the period 1981-2006 based on micro data obtained from the PRDS provided by CIC. Statistical profiles of immigrants resident in the province are also analyzed at five-year intervals along a range of socioeconomic, demographic and geographic variables. These profiles are based on the Public Use Microdata Files (PUMF) obtained from the 1981, 1986, 1991, 1996 and 2001 Canadian population censuses conducted by Statistics Canada. These micro data were accessed through IDLS and CARLDC. The 2 percent individual sample was used. The microdata files include a weight variable to allow estimates of the population. However, for confidentiality reasons, Statistics Canada suppresses any variable frequency that falls below 25. Finally, following the definition of immigrants found in immigration literature, foreign-born individuals are viewed as immigrants and Canadian-born as non-immigrants.

Immigration matters fall under federal jurisdiction although provinces can (and do) enter into intergovernmental agreements to tailor immigration to suit perceived provincial needs. However, the broad contours that define who gets in are largely set by the federal government. Under federal regulations, immigrants permitted to enter and stay in Canada can do so as refugees, family immigrants or economic immigrants. In addition, individuals can also enter as provincial nominees according to criteria agreed on through provincial-federal agreements.

IV. 1 The Composition of Immigrants

Summary Points

- In 2005, family class immigrants accounted for about half of the total inflow, followed by skilled immigrants (35 percent) and refugees (11 percent).
- Business immigration was the most dynamic component of immigration from the early to mid 1990s, rising from about 4 percent of total inflows in 1990 to about 43 percent in 1994. Its percentage in total inflows has retreated dramatically since then to its pre-1990s share in total inflows. In 2005, the province received only 30 business class immigrants. Prevailing business opportunities that fell short of immigrants' ambitions may account for this decline.

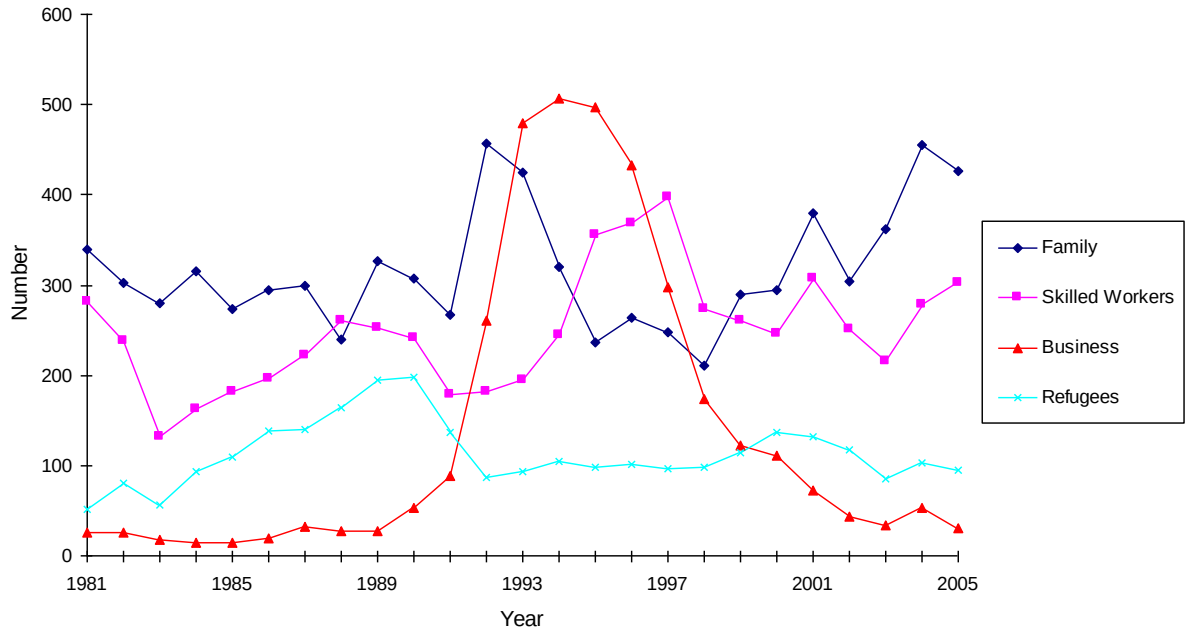
Refugee class immigration reflects Canada's commitment to humanitarian principles, while ***family class*** is intended to foster family re-unification – that is, facilitating individuals to enter Canada if they have close relatives who are already permanent residents/citizens. ***Economic immigrants***, on the other hand, are chosen

for their expected direct, positive economic contribution to Canada through the skills, expertise, entrepreneurship, or capital they bring with them. The economic class category comprises two major sub-categories: skilled workers and business immigrants. In this study, the primary (but by no means exclusive) focus is on economic immigrants.

Chart 1 provides annual immigration inflows (of principal applicants) by class of immigrants destined for Nova Scotia during 1981-2005. It shows that in general, the number of immigrants destined for Nova Scotia in each immigrant class was vulnerable to fluctuation over the reference period.

Specifically, the behavior of business immigration to the province has been the most dramatic. The sudden rise and fall of business immigration in Nova Scotia during the 1990s had some specific reasons. (See box, The Rise and Fall of Immigration in Nova Scotia in the 1990s, p. 7.)

Chart 1
Immigrants (Principal Applicants) Destined for Nova Scotia by Category, 1981-2005



Source: PRDS, microdata, CIC.

The Rise and Fall of Immigration in Nova Scotia in the 1990s

In the aftermath of the first Gulf War, many Palestinian and expatriate groups living in Kuwait and in its neighboring countries started to leave. Rising emigration from the Middle East caught the attention of some aggressive immigration consultants, who began to promote Nova Scotia as a province with a more conservative family lifestyle that was safer than big Canadian cities, and with nationally ranked educational institutions. As a result, immigration peaked at 3600 in 1995 and remained close to 3000 per year until 1997 (Charts 1 and 2 in the text). Most of the immigrants from the Middle East came as business class immigrants. The federal entrepreneur program at the time had fairly relaxed requirements (start a business within two years and employ one Canadian). Many immigration consultants even helped clients write business plans so that they could get into the country. However, many of these immigrants were actually professionals with no prior business experience but were told by consultants that it would be easy to do business in Nova Scotia. They had the money to invest, and Nova Scotia appealed to them. However, they encountered the following problems:

- many found that there were not as many business opportunities and settled for small retail operations, which they could not manage properly.
- even those with some business experience had mostly done international trade (import/export business), which was not a lucrative business in Nova Scotia.
- incomplete or erroneous information had been provided by consultants about business opportunities in the province.

As a result, many immigrants started to leave the province and may have also advised potential newcomers not to immigrate to Nova Scotia. Therefore, by 1999, the province had returned to its pre-1991 level of annual immigrant inflows.

In 2002, the federal government, concerned about the abuses of the system, changed the entrepreneur program drastically, requiring, among other things, recent entrepreneurial experience, a large initial investment, and more direct involvement in the business to be eligible under the program. As a result, business immigration to the province, which had already declined significantly since the 1990s, has now dropped to below its 1981 level (Chart 9). The federal government has also taken major steps to monitor immigration consultant activity throughout the country

The consultants' attention was also diverted from business immigrants when Nova Scotia signed a PNP agreement with the federal government in 2002. This agreement has recently been renewed for an indefinite period.

Source: Based on information collected from the Metropolitan Immigrant Settlement Association.

The movements in the other immigrant categories have also been volatile but far less dramatic. For example, family class immigrants have generally accounted for the bulk of immigrant inflows, with their share growing since 1998 after declining through much of the 1990s from their peak in 1992. Skilled class immigrants are the second largest category of immigrants and, for a brief period during the latter half of the 1990s, accounted for a larger share of immigrant inflows than family class immigrants. In general, economic immigrants, who averaged about 69 percent of immigrant flows destined for Nova Scotia in the mid 1990s, accounted for a much lower 39 percent in 2005, a percentage only slightly higher than their share in the early 1980s. Finally, refugee inflows, which rose sharply to above 20 percent of the total inflows during the 1980s, declined to only about 11 percent in 2005.

IV.2 Broad Demographic Trends

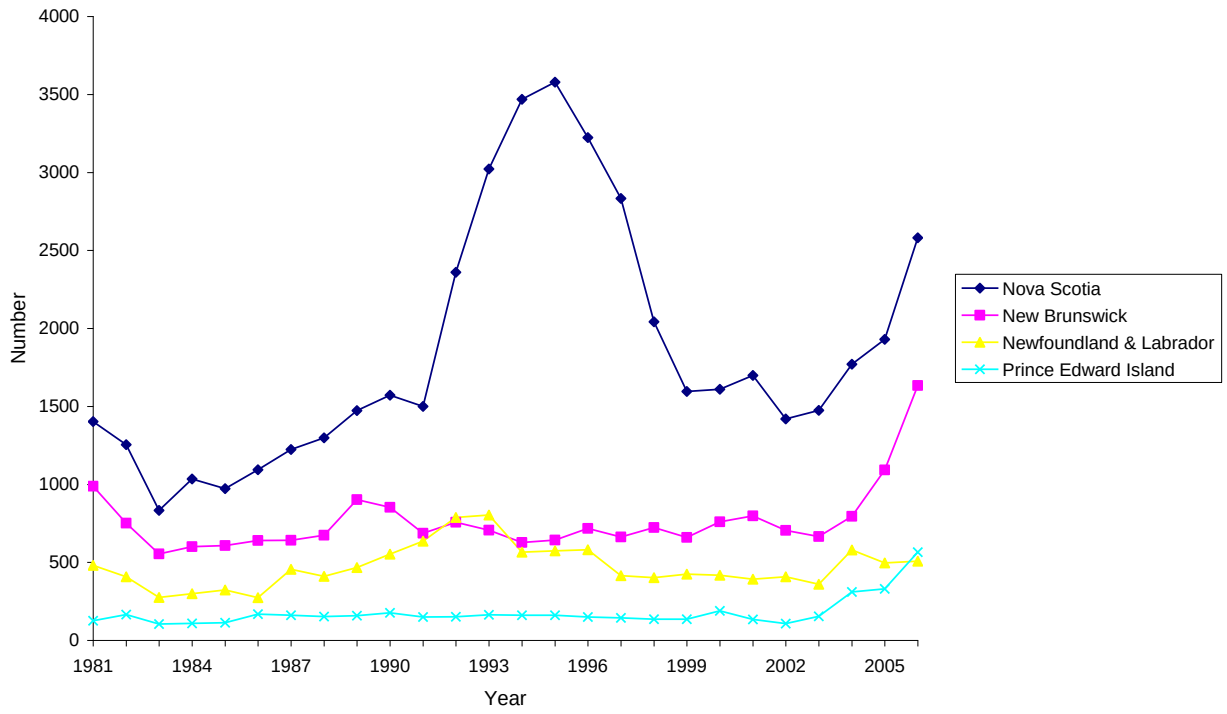
Summary Points

- Nova Scotia's share of annual immigration into Canada has generally hovered around the 1 percent range. The share peaked in 1995 but then fell steadily. In recent years, deliberate policy attempts have resulted in a return of the provincial share to 1 percent of national inflows.
- New immigrants accounted for 21 percent of population growth in the province during 1981-1986. During 1991-1996, this contribution of new immigrants rose to 72 percent. However, during 1996-2001, Nova Scotia's population fell by 0.3 percent; without new immigrants, however, this decline would have been 0.9 percent. Data from the 2006 census are not yet available to calculate the more recent contribution of immigrants to population growth.
- For the period 1981-2005, the age profiles of Nova Scotia's non-immigrant population and of newcomers to the province suggest that at the time of their arrival, immigrants were younger than the resident non-immigrant population.
- The finding that immigrants are younger than the resident population at the time of arrival suggests that for a long time after their arrival, immigrants are not likely to be heavy users of such age-related components of Canada's social security system as pension, old age security benefits, and health care.

Although Nova Scotia continues to account for the bulk of immigration to Atlantic Canada since 1981, there has been a sharp decline in immigrant inflows to the province since 1996. As Chart 2 shows, immigrants (including principal applicants and dependents) destined for Nova Scotia averaged about 1,100 persons per year (or about 48 percent of the average intended inflow into Atlantic Canada and 1 percent of total Canadian inflows) during the 1981-1985 period. There was a sharp increase over the first half of the1990s, with immigration peaking at almost 3,600 persons in 1995, a solid 72 percent of the total inflow into Atlantic Canada in that year. This sharp increase resulted in some active immigrant consultant activity in the province as discussed in the previous section. Between 1995 and 2002, however, immigration inflows retreated,

reaching just over 1400 persons in 2002, a level virtually the same as that in 1981. Since 2002, the province's immigrant inflows have risen consistently, with its share of immigrants destined for Atlantic Canada being 41.4 percent in 2006.

Chart 2
Immigrants (Principal Applicants and Dependents) Destined for the Atlantic Provinces, 1981-2006



Source: PRDS, microdata, CIC).

Indeed, Nova Scotia's share of annual immigration into Canada has generally hovered around the 1 percent range, often dipping below that level. The share peaked at 1.7 percent in 1995 but has fallen steadily since then, dropping to about 0.6 percent in 2002, the worst showing for the province over the entire 1981-2002 interval. Since then, the province's share has increased slightly to 1 percent in 2006, which can be attributed to the recent attempts to increase immigration in the region.

Table 1 shows that immigration has been an important component of population growth in Nova Scotia. For instance, during the 1981-86 period, almost 21 percent of the population growth of 24,350 people was due to the arrival of new immigrants. This proportion was even higher (almost 72%) during the 1991-96 period. During the 1996-2001 period, Nova Scotia's population fell by 2,767 despite the new immigration of 5,745 persons. Without the latter, however, the population decline would have been about 8,512 persons, i.e. 67.5 percent higher.

Table 1: Nova Scotia Population Net Growth Rate and Contribution of Recent Immigrants to the Growth of the Provincial Population				
Period	**1981-1986**	**1986-1991**	**1991-1996**	**1996-2001**
End of period population	864150	890950	899965	897570
Population change (1)	24350	26800	9015	-2767
Change without immigration (2)	19250	21400	2525	-8512
Recent immigrants (3)	5100	5400	6490	5745
Percentage contribution of immigration to population growth [(3/2)x100]*	26.5	25.2	257.0	*67.5
Percentage contribution of immigration to population growth [(3/1)x100]	21.0	20.0	72.0	208.0

Sources and notes:
1) For end of year population, Statistics Canada Catalogue number 97F0009XCB2001001. These data are not adjusted for undercoverage.
2) For recent immigrant data: a) in 2001 census, Statistics Canada Catalogue number 97F0009XCB-2001004, b) in 1996 census, Statistics Canada Catalogue number 93F0023XDB96003, c) in 1991 census, CIC Recent Immigrants in the Halifax Metropolitan Area (Selected Charts) Census 1991 (October, 2002), d) in 1986 census, Census 1986 PUMF-microdata, individual file, variable used: year of immigration and immigrant status indicator.
3) Recent immigrants include those who arrived within five years prior to the census date. Data on recent immigrants in the 1991 census are not available in the census PUMF.
4) Census data are different from the estimates of population provided by the Demography Division of the Statistics Canada. Please see the Appendix A1 for more explanation.
*Measures what percentage of population decline was averted by new immigrants. Absolute value of (1) is used in the denominator.

It should be borne in mind that the above table only shows the contribution of **recent** immigrants to the population growth. Immigrants also make their contribution to population growth through reproduction. To estimate this contribution, one needs to account for the fertility rate of the immigrant population, which is not considered in this report. However, the above numbers show that if population growth due to natural factors and net interprovincial migration of non-immigrants slows down or turns negative, as is projected in another 20-30 years, expansion of immigration will be an important demographic policy tool in counteracting that effect.

The demographic implications of population growth due to natural increase or new immigration can be very different. Much depends on the age profile (and fertility) of immigrants.

Table 2: Age Distribution of New Nova Scotia Immigrants (Principal Applicants) and Non-immigrants, 1981-2005 (%)										
Age group	Immigrants arriving 1981-1985	Non-immigrants in 1986	Immigrants arriving 1986-1990	Non-immigrants in 1991	Immigrants arriving 1991-1995	Non-immigrants in 1996	Immigrants arriving 1996-2000	Non-immigrants in 2001	Immigrants arriving 2001-2005	Total population in 2006
15-24	18.22	23.46	20.19	19.49	9.62	17.58	9.10	16.45	10.48	15.41
25-44	52.56	39.64	58.37	42.33	59.91	40.49	66.98	36.95	66.79	31.54
45-64	16.56	22.54	13.09	23.43	26.09	27.36	21.05	30.87	19.38	35.03
65+	12.66	14.36	8.35	14.75	4.37	14.57	2.87	15.73	3.35	18.02
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Sources and notes: 1) Immigrant data are from PRDS, microdata, as provided to AMC under contract by CIC. Principal applicant is based on variable "f_stat2", and an immigrant's age is based on variable "fage". 2) Non-immigrant data are based on Canadian population censuses (PUMF, 1986-2001, individual files), Statistics Canada. For the period 1991-2001, the non-immigrant data are based on the variable "immigrant status indicator", while for 1986, these are based on the variable "year of immigration" since the "immigrant status indicator" was not provided with 1986 census. Hence, 1986 data also include non-permanent residents. For 2006, non-immigrant data are not available. Hence, total population data based on the 2006 census are used for that year as they emulate non-immigrant data (Statistics Canada catalogue number: 97-551-XCB2006005).

Table 2 compares the age distributions of immigrant and non-immigrant Nova Scotians. One important difference between the age distributions of new immigrants and non-immigrants is that immigrant distributions are more concentrated in the lower age groups, 15-24 and 25-44, and thinner at the top range, 45-64 and 65 and above. In other words, new immigrant arrivals are generally younger than the resident population. Table 2 also shows an aging trend among non-immigrants. These facts confirm the important implication of the economic theory of human capital investment that young people are more likely to migrate than older people because they have a longer time available in their lives to reap the benefits of their investment in migration. These facts also suggest that for a long time after arrival in Canada, immigrants are not likely to be heavy users of such age-related components of Canada's social security system as pension, old age security benefits, and health care.

IV.3 Where Immigrants Come From

Table 3 shows the top five source countries for principal applicants and dependents, as well as for principal applicants destined for Nova Scotia. The mix of top five source countries of immigrants destined for Nova Scotia has changed since the early 1990s as it now more heavily represents the countries of East Asia and the Middle East. While the United States and United Kingdom remained among the top five immigrant source countries during 1996-2001, most immigrants came from Kuwait during that period. Also, since 2003, China has been a major source country.

Table 3 also shows that the top ranked source countries sent less than half of the immigrants destined for Nova Scotia since the 1990s. This finding indicates that although Nova Scotia receives a small number of immigrants (less than 1 percent of national inflows), they tend to come from diverse source countries. While the United States continues to be ranked top among principal applicant immigrants, the relative importance of China and some Middle Eastern countries has increased since about the

mid 1990s, especially when principal applicants are considered along with their dependents. This finding indicates the larger family sizes of immigrants coming from these countries.

The change in the source country mix of immigrants to the province is consistent with the changing source country mix for Canada, which had started in the 1970s and had many causes. (See box, Shifting Source Regions of Immigrants to Canada.) Nova Scotia especially experienced an increase in immigrant inflows from the Middle East due to at least two reasons: 1) the presence of a large Lebanese community in the province, which has been here for more than 100 years and has been an attractive factor for immigrants from that country, and 2) the emigration of certain groups from the Middle East in the aftermath of the first Gulf War that attracted the attention of immigrant consultants in the province (as discussed earlier).

Shifting Source Regions of Immigrants to Canada

In 1961, the Canadian government abolished the "preferred country" clause, which gave preference to admitting immigrants from countries of Western Europe. This clause had formed the basis of a 1910 Immigration Act. With the abolishment of this clause, all immigrant applications are now evaluated using a "point system" under which importance is given to an applicant's age, education, and suitability for the Canadian labour market, as well as such factors as the presence of family members in Canada, regardless of the country of origin. The new rules were fully promulgated in 1967. One reason for this change was that Canadians wanted to play a greater role on the international front in the post World War II era. Another reason was that the economic prosperity that followed soon after that war increased the demand for skilled labour.

The period of the early 1960s was also a time when economic conditions in Europe, adversely affected by World War II, had begun to improve. More labour was in demand there, and incomes were rising. As a result, immigration from Europe to North America generally slowed. Immigration slowed further with the formation of the European Union and re-unification of Germany, which allowed for greater mobility of workers within Europe.

As a consequence of the above changes, as well as of the greater mobility of workers in a globalized world and continuing political discourse in countries of the Third World, Canada has seen a shift in source countries of its immigrant inflows from those of Western Europe to those of Asia, Africa, and South and Central America over the past three decades.

Table 3: Top Five Source Countries of Immigrants Destined for Nova Scotia, by Year, 1981-2005																
	1981-1985		1986-1990		1991-1995		1996-2001		2002		2003		2004		2005	
	Country	Count	Country	Count	Country	Count	Country	Count	Country	Count	Country	Count	Country	Count	Country	Count
Principal Applicants																
Rank																
1	USA	993	USA	829	USA	573	China	520	China	97	USA	106	USA	126	China	122
2	UK	517	UK	408	Egypt	368	USA	471	USA	80	China	100	China	110	USA	113
3	Vietnam	193	Lebanon	298	China	362	Kuwait	421	UK	50	UK	64	UK	76	UK	96
4	Poland	180	Vietnam	278	UK	320	UK	249	India	36	Lebanon	35	Lebanon	37	Egypt	44
5	India	137	Poland	222	Kuwait	287	Germany	243	Kuwait	31	India	27	India	34	Saudi Arabia	37
Total, 5 countries		2020		2035		1910		1904		294		332		383		412
Province total		3254		3866		5372		5469		782		810		955		1000
Principal Applicants and Dependents																
Rank																
1	USA	1570	USA	1358	Egypt	1519	Kuwait	1629	China	138	China	127	USA	176	UK	177
2	UK	919	UK	718	Kuwait	1247	China	893	USA	101	USA	124	China	145	China	162
3	Vietnam	398	Vietnam	455	Hong Kong	894	Jordan	828	Kuwait	91	Saudi Arabia	88	UK	136	USA	159
4	Poland	331	Lebanon	444	Saudi Arabia	887	Korea	783	India	72	UK	83	Saudi Arabia	110	Egypt	109
5	India	208	Poland	413	USA	850	Saudi Arabia	677	UK	70	UAE	82	Egypt	96	Saudi Arabia	105
Total, 5 countries		3426		3388		5397		4810		472		504		663		712
Province total		5497		6659		13924		13003		1419		1474		1770		1927

Source: PRDS, microdata, CIC.

IV.4 Where Immigrants Go

Summary Points

- Halifax County, where about 40 percent of Nova Scotians live, is home to 59 percent of Nova Scotia's immigrant population.
- Kings, Cape Breton, Colchester, Hants and Pictou counties account for most of the remaining immigrant population.
- The 2001 census revealed that about 20-23 percent of immigrants who arrived during 1996-2001, lived in rural areas of Nova Scotia. This finding is important for population planners interested in developing new immigrant destinations that are smaller and predominantly rural as a means of reversing the declining trend of rural populations. Research should investigate factors that determine immigrants' choice of location.
- In 2005, immigrant inflows to Annapolis County doubled and increased four times in Hants County and 1.43 times in Kings County over their 2004 levels. These increases were the results of active promotion by community organizations who actively participated in the "Community Identified Stream" of the Nova Scotia Provincial Nominee Program.

Responding to the declining trends of rural population, which can cause 1) decline of natural resource industries such as agriculture and mining, 2) decline in public and private services in rural regions, and 3) increased pressures on the provision of services in metropolitan (urban) areas as the rural population moves there, federal and provincial governments in Canada have considered rural repopulation strategies. One component of these strategies is the initiative to attract immigrants to rural regions, and the Provincial Nominee Program and community-based initiatives are used as tools to achieve this goal.

Table 4 shows the geographic distributions of both immigrant and native-born populations in the 2001 census year and recent immigrants (who arrived between 1996 and 2001 and were in the province at the time of the 2001 census). More detailed annual data on intended destinations of new arrivals are also included in Table A2 for the period 1981-2005. Our findings are discussed below.

Immigrants accounted for less than 5 percent of Nova Scotia's population in 2001 and, as in the case of native-born Canadians, gravitated towards Halifax County. The other major population centres - Kings, Cape Breton, Colchester, Hants and Pictou counties – accounted for most of the remaining immigrant population in 2001, including those who came between 1996 and 2001.

Table 4: Geographic Distribution of Nova Scotian Population by Immigrant Status, 2001

Census Metropolitan Area[1]	Population	Non-immigrants	Immigrants	Immigrants arriving 1996-2001
Nova Scotia	**897570**	**853655**	**41315**	**5745***
Halifax	355945	329605	24385	4435
Cape Breton	107880	105980	1780	155
Metro Adjacent**	**261830**	**254170**	**7415**	**625**
Colchester	48780	47115	1615	100
Lunenburg	47005	44950	2025	175
Hants	40175	38745	1395	80
Richmond	10125	9755	365	105
Victoria	7865	7625	235	10
Non-metro Adjacent**	**279795**	**269870**	**9515**	**690**
Shelburne	16090	15680	400	20
Yarmouth	26520	25695	785	35
Digby	19250	18630	600	75
Queens	11590	11155	405	10
Annapolis	21465	20405	1050	105
Kings	58135	55425	2615	290
Cumberland	31715	30905	795	45
Pictou	46250	44820	1350	25
Guysborough	9725	9575	145	0
Antigonish	19390	18435	880	55
Inverness	19665	19145	490	30

*Differs from the PUMF data due to different sample size and post census adjustment made by Statistics Canada.
**Based on Statistics Canada classifications.
[1]Outside of Halifax County is viewed as predominantly rural.
Source: Non-immigrant data are from 95F0495XCB01001-NS-NE, Statistics Canada (B20/20 format). Immigrant data are from Census 2001 Target Group Profile, Statistics Canada (customized tabulations in B20/20 format).

It is evident from Table 4 that immigrants to Nova Scotia show the same tendencies (albeit on a smaller scale) as immigrants to Canada, that is, they tend to

move to major population centres characterized by ethnic clusters, especially new immigrants from non-traditional source countries. This implies that rural-urban imbalances that have resulted from native-born migration to urban areas over the past several decades will be intensified through immigration unless specific policies seek to attract immigrants to rural settings and get them to stay. This fact poses a major policy challenge not simply because the pull of urban centres, though not unique to immigrants, is a strong one, but also because a significant problem is the high rate of out-migration of immigrants to Nova Scotia – a problem to which we will turn in the next section.

As revealed in Table A2, about 87 percent of the immigrants destined for Nova Scotia during 1996-2001 indicated Halifax as their potential destination. However, Table 4 indicates that at the time of the 2001 census, only 77 percent of these arrivals still in the province were living in Halifax.

Immigrants in Kings County

Smaller communities are using the new initiatives introduced by the provincial government in Nova Scotia to attract immigrants. One is Kings County in central Nova Scotia with a population of about 59,000, an area famous for its fruit crops (primarily apples), poultry, and cattle farming.

Kings County received 86 new immigrants in 2005, up from 60 in the previous year. Most came from the United Kingdom and were involved in businesses (such as upper end specialty shops, saddling, landscaping, and exports), professional jobs, such as accounting, and organic fruit farming. Some were retirees but independent financially. The 2001 census data reveal that among metro non-adjacent counties, Kings was home to the largest number of immigrant managers and professionals (150 and 385, respectively).

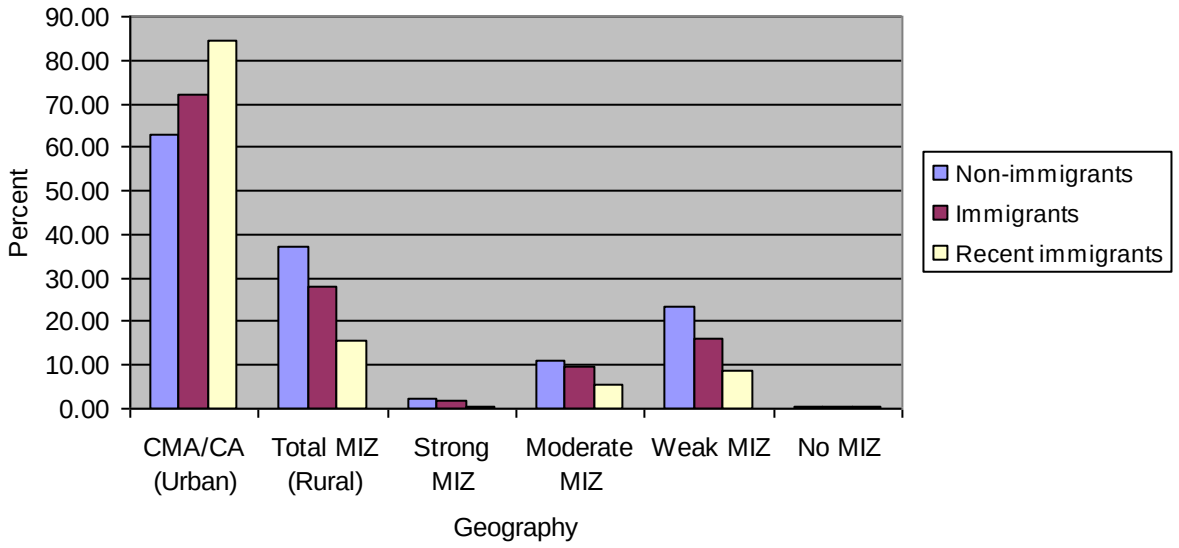
The county actively participates in the Nova Scotia Provincial Nominee Program (NSPNP) through its “Community Identified Stream,” which is aimed at selecting individuals who have long-established connections to a Nova Scotia community, wish to live there permanently, and are employable and can contribute to the labour market and economy of that specific community. This stream is community driven. The applicant must have a Letter of Identification from an organization mandated by the Nova Scotia Office of Immigration before submitting an application to the NSPNP. The final approval of an application comes from the CIC.

In addition, Kings County also actively promotes itself within Canada, the United States and internationally as a quiet, safe community with affordable housing and ideal place to raise a family, to retire or to bring a business. The fact that it is a one-hour and 15 minute drive from Halifax and one-hour and a half drive to the Halifax International airport is also advertised. The place appeals to people of all ages and backgrounds, and most find out about it through the community websites, NSPNP and word of mouth.

Source: Kings County Community Economic Development.

To obtain further insights into the geographic distribution of immigrants in Nova Scotia, we followed another more direct classification of population into rural and urban areas as used by Statistics Canada, i.e., the Metropolitan Influenced Zone (MIZ) classification system, an approach to better differentiate areas of Canada outside of census metropolitan areas (CMA) and census agglomerations (CA). Census subdivisions that lie outside these areas are classified into one of four zones of influence ranging from "strong" to "no" influence according to the degree of influence that CMA/CAs have on them. This type of categorization has proven useful for developing the rural-urban profiles because it highlights differences between types of rural-based labour market integration as a proxy for rurality.

Chart 3
Population Distribution in Nova Scotia, 2001



Source and notes: Based on census 2001 Table CO-0861, 2001 Basic Profile. We thank the Rural Secretariat for providing us these tables. MIZ = Metropolitan Influenced Zone. The degree of rurality is the lowest for "Strong MIZ" and the highest for "No MIZ." For a detailed explanation of the MIZ classification system, please see Chuck McNiven, Henry Puderer and Darryl Janes. 2000. Census Metropolitan Area and Census Agglomeration Influenced Zones (MIZ): A description of the Methodology , Statistics Canada catalogue no. 92F0138MIE, no. 2000-2.

As shown in Chart 3, about 40 percent of Nova Scotia's population is rural, so any change in the composition of rural population in total population is expected to have a significant impact on the region's economy. As expected, more immigrants (71 percent) live in urban Nova Scotia than do non-immigrants (62 percent). However, that about 28 percent of immigrants and 17 percent of recent immigrants also choose to live in rural parts of the region indicates that rural areas can be destinations for new immigrants. It is also interesting that about half of recent immigrants who choose to live in rural areas go to those with high degrees of rurality (weak MIZ). Charts 4 and 5 provide a

breakdown of immigrants and recent immigrants, respectively, by top five source countries, who live in highly rural areas (weak MIZ). The United States, and four Western European countries constitute the top five source countries of immigrants residing in the weak MIZ. However, the composition of recent immigrants is slightly different. While the United States, United Kingdom, and Germany are still on the list, The Netherlands and France have been replaced by China and Korea. Therefore, the overall shift in source country composition of immigrant inflows to Canada is also felt in rural regions. We do not have data on the labour market characteristics of immigrants living in rural areas. However, information gathered from the Rural Secretariat and Kings County Community Economic Development Association suggests that most American and Western European immigrants are engaged in a variety of jobs including agricultural, professional, and small business. Recent immigrants from China and Korea have come under the PNP, aimed at meeting the shortages of professionals in rural areas. The dominance of the United States and Western European countries among new immigrants may also be attributed to the presence of a large existing population whose ancestral background is from those countries.

The findings of this section suggest that 1) rural destinations of new immigrants can be developed, and 2) the presence of ethnic networks plays an important role in attracting immigrants to a region.

Chart 4
Immigrants in Weak Metropolitan Influence Zones of Nova Scotia by Top Five Source Countries, 2001

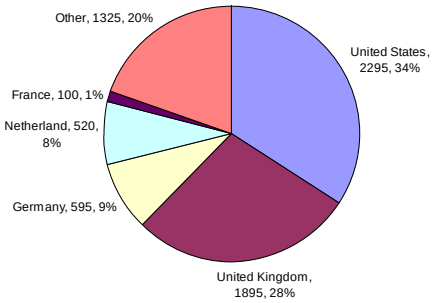
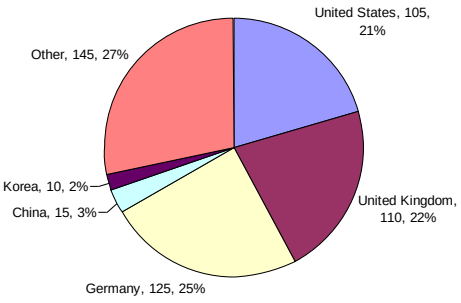


Chart 5
Recent Immigrants in Weak Metropolitan Influence Zones of Nova Scotia by Top Five Source Countrires, 2001



Source: Based on census 2001 Table CO-0861, 2001 Basic Profile. We thank the Rural Secretariat for providing us these tables.

IV.5 The Retention of Immigrants

Summary

In Nova Scotia, five-year immigrant retention rates dropped from 86 percent in the early 1980s to about 48 percent at the end of the1990s. This was also the time when the province began to experience a shift in the source region mix of its immigrant inflows from Western Europe to Asia and Africa. Another study found that in 2001, only 40 percent of immigrants who had arrived over the past ten-year period (1991-2001) were still living in the province. Changes in the ethnic and cultural mix of new arrivals that could have acted as employment barriers and the "pull" of ethnic and cultural clusters in Canada's larger cities may be some factors explaining the decline in retention rates.

If immigrants are to make a durable contribution to Nova Scotia, the province's success in retaining its immigrants is critical, but Table 5 shows that retention is a significant problem for the province.

Only about 48 of every 100 arrivals in Nova Scotia stayed on during the 1996-2001 period compared to about 86 of every 100 arrivals during 1981-1986. In other words, retention rates have plummeted since the 1980s. Although the flow of new immigrants to Nova Scotia almost tripled during the 1991-1996 period, the retention rate fell to only 43 percent during this period. However, as the number new arrivals plunged during the 1996-2001 period, those who stayed rose, causing the retention rate to rise to 48 percent.

Another study has shown that out of every 100 arrivals to Nova Scotia during 1991-2001, only 40 were still living in the province in 2001 (Goss Gilroy Inc. Retention and Integration of Immigrants in Newfoundland and Labrador Are we Ready? May, 2005).

Other evidence for Atlantic Canada suggests that out-migration occurs across all categories of immigrants and schooling levels. For example, calculations performed by this author based on the International Migration Data Base (IMDB, 2003) reveal that over the period 1988-2003, the overall out-migration rate of immigrants destined for Atlantic Canada was 45 percent. About 67 percent of refugees, 45 percent of economic class immigrants and 17 percent of family class immigrants (the largest of all classes) destined for Atlantic Canada during this period had left for other Canadian provinces. Another study, conducted by the Atlantic Provinces Economic Council (APEC, 2001), which covered the period 1980-1995, found that the out-migration rate was 55-60 percent for business immigrants and about 45 percent for skilled workers. We would like to compute these rates for Nova Scotia, but the data required for these computations were not available at the time of writing. However, it is likely that the numbers for Atlantic Canada also reflect the pattern of out-migration from Nova Scotia, which receives the most immigrants in the region. Most likely, greater economic opportunities in large urban centres such as Toronto, Montreal and Vancouver, combined with the presence of ethnic clusters in the case of recent immigrants in the 1990s, exert a strong pull on immigrants

in Nova Scotia, except perhaps on those with secure employment and other ties to the region. The lack of adequate recognition of foreign credentials in the professions and trades and inadequate resources for settlement support also likely affected the retention rate of immigrants. The loss of economic immigrants is equivalent to a reduction in the provincial economy's human capital, with damaging implications for long-term growth.

As discussed earlier, in recent years, the province has adopted several initiatives to retain its immigrants. Retention rates based on 2006 census data, when available, will shed light on the success of these initiatives.

Table 5: Immigrant Retention Rates for Nova Scotia, 1986-2001*

Period	New immigrants arriving in Nova Scotia**	New immigrants residing in Nova Scotia at the end of period**	Retention rate (%)
	(1)	(2)	(3)=(2)/(1)×100
1981 - 1986	5896	5100	86
1986 - 1991	7208	5400	75
1991- 1996	15023	6490	43
1996 - 2001	12021	5745	48

*Retention rates may be slightly higher than reported because no provision can be made for deaths among new arrivals. Other studies have shown that the ten-year immigrant retention rate in Nova Scotia in 2001 was only 40 percent. In a previous version of this report, rates were reported only for those aged 15 and above at the time of arrival based on census PUMF.
**Data for the census year in columns 1 and 2 are only for the first five months.
Source: Data in column (1) are based on PRDS - microdata while those in column (2) are based on Canadian population censuses obtained from the following sources:
1. For 1996-2001 data, Statistics Canada Catalogue number 97F0009XCB-2001004.
2. For 1991-96 data, Statistics Canada Catalogue number 93F0023XDB96003.
3. For 1986-91 data, Citizenship & Immigration Recent Immigrants in the Halifax Metropolitan Area (Selected Charts) Census 1991 (October 2002).
4. For 1981-86 data, Statistics Canada population census 1986, PUMF-microdata.
Variables used: "prov" in PRDS. "province" and "year of immigration" in Censuses.

V. IMMIGRANTS IN THE LABOUR MARKET IN NOVA SCOTIA

Immigrants represent a vital human resource that can bring major economic and other benefits to Nova Scotia. One way to assess how immigrants are doing in the economic sphere is to look at their contributions to the quantity and quality of human capital in the province and how they compare to the native born in terms of both various labour market outcomes and the level of their dependence on social transfers. We examine these in turn.

V.1 Labour Force Growth

Summary

Immigrants are an important source of labour force growth in Nova Scotia. Their contribution rose substantially from about 7 percent in the early 1980s to about 27 percent at the turn of the present century.

Labour force growth is an increase in the quantity of human capital and, therefore, contributes to improving an economy's productive capacity and the standard of living of its residents in the long term. In Nova Scotia, labour force growth has shrunk dramatically since 1981. As Table 6 shows, after growing by almost 33,510 workers during 1981-86, the labour force grew by only about 10,985 workers during the 1996-2001 period. Indeed, the labour force growth would have been even slower in the absence of new immigrants. New immigrants accounted for only between 6-9 percent of labour force growth during the 1980s, but their contribution was much more substantial (averaging about 25 percent) over the entire 1991-2001 interval.

Table 6: Nova Scotia Labour Force Net Growth Rate and Contribution of Recent Immigrants to the Growth of the Provincial Labour Force, 1981-2001

Period	Total growth of labour force	Growth owed to new immigrants	Growth without new immigrants[1]	Immigrants' contribution to labour force growth (%)	
	(1)	(2)	(3)	(4a)=(2)/(3)x100[2]	(4b)=(2)/(1)x100[3]
1981-1986	33510	2090	31420	6.65	6.2
1986-1991	32610	2585	30025	8.61	7.9
1991-1996	-8950	2820	-11770	*23.96	31.5
1996-2001	10985	2350	8635	27.21	21.4

[1]Attributed to natural growth and net interprovincial migration. New immigrants are those who arrived during the listed period.
[2]Measures by what percentage recent immigrants caused the labour force to increase by virtue of their presence.
[3]Measures what percentage of labour force growth was contributed by recent immigrants.
*Measures what percentage of labour force decline was averted by new immigrants. Absolute value of Column (3) is used in calculation.

Source: Calculations based on Statistics Canada publication 97F0012XCB2001003.

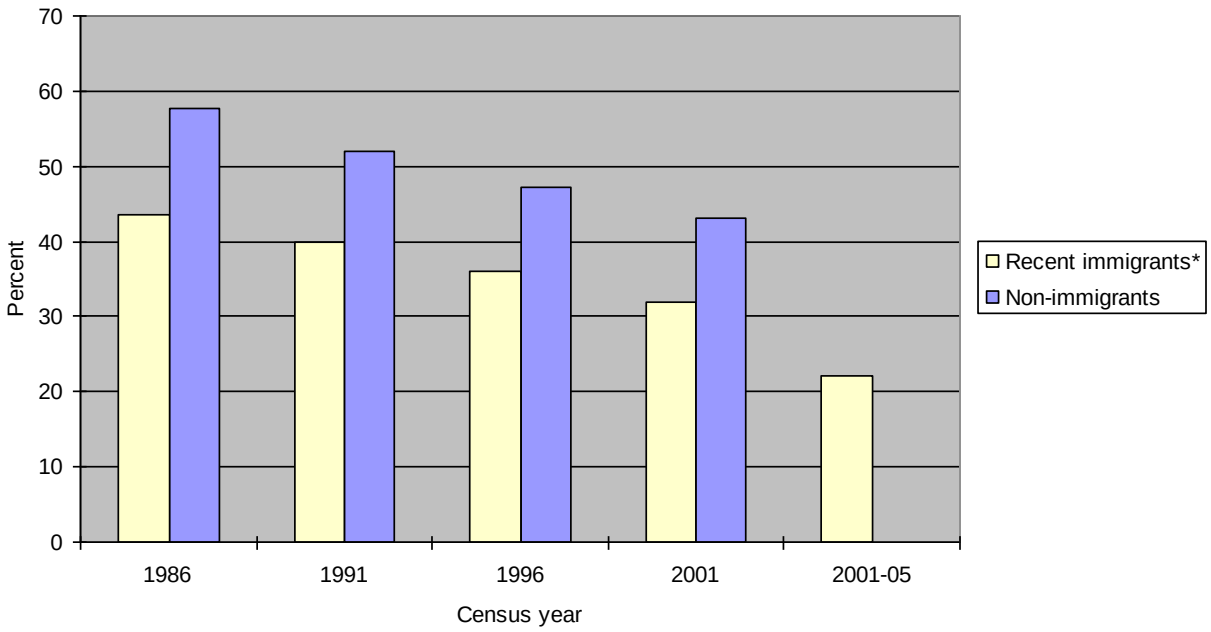
V.2 Human Capital

Summary Points

- In terms of human capital, the education level of immigrants to Nova Scotia compared favourably with that of non-immigrants over the 1981-2001 period.
- At the time of the 2001 census, about 45 percent of non-immigrants in Nova Scotia had acquired high school or less education, while this percentage was only 30 among recent immigrants (those who arrived during 1996-2001). Only 22 percent of those who arrived during 2001-05 came with high school or less education.
- A higher percentage of recent immigrants (46 percent) held a university degree than non-immigrants (13 percent). These percentages were up from 8 and 28 percent, respectively, in 1986. About 55 percent of new arrivals during 2001-05 held university degrees.

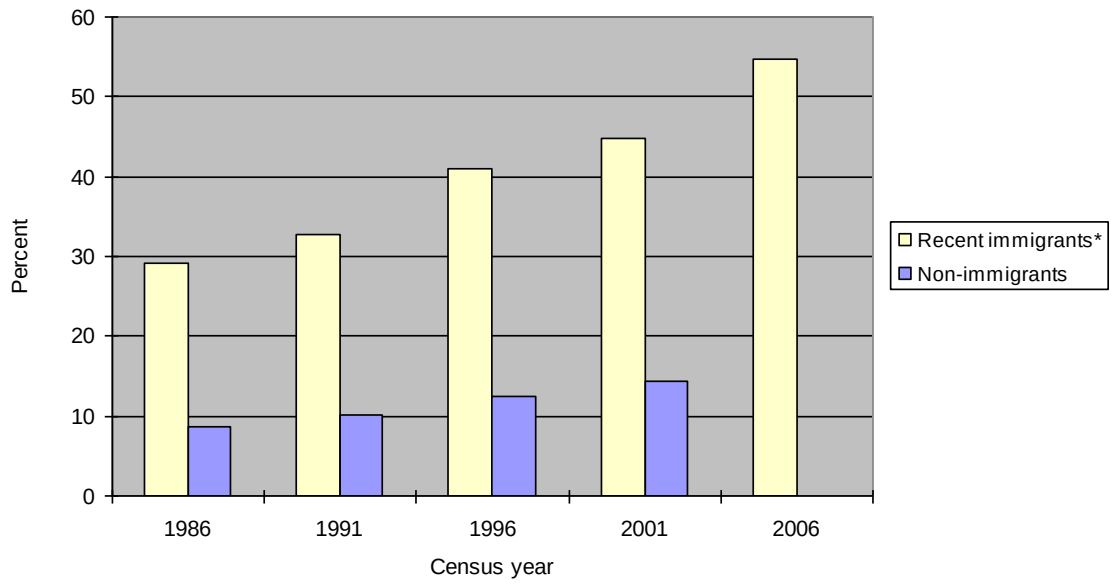
Economic growth and living standards are governed by more than increases in the quantity of human capital. What matters also is the quality of that capital. How do immigrants contribute to the growth in the quality of Nova Scotia's human capital? This is difficult to assess because data on the quality of human capital are difficult to come by. Typically, economists look at various schooling and labour market experience measures. In this section, we compare the human capital characteristics of immigrants to Nova Scotia to those of non-immigrants by looking at schooling levels of the two groups, as reported in Table A3. Based on that table, Charts 6 and 7 suggest that throughout the period 1981-2005, the educational attainment of immigrants coming to Nova Scotia compared favourably with that of non-immigrants. Smaller percentages of recent immigrants had high school or less education than did non-immigrant Nova Scotians. On the other hand, higher percentages of recent immigrants had university degrees than resident non-immigrants. Furthermore, since 1981, the percentages of recent immigrants arriving with high school or less education have declined, while percentages of those arriving with university degrees have risen. The same holds true for non-immigrants.

Chart 6
Immigrants Destined for Nova Scotia and Non-immigrants with High School or Less Education



*Those who arrived within five years of the census year.
Source: 1) PRDS – microdata (CIC), for immigrants. Variables used: "prov", "ed_qua", "fage". High School or Less Education = None + Secondary or less.
2) Canadian population censuses (PUMF, 1986-2001, individual files) for non-immigrants. Variables used: "province or territories", "immigrant status indicator", "age", "highest level of schooling". For the 1986 census, "place of birth" is used instead of "immigrant status indicator" because the latter is not available to determine whether the individual is a non-immigrant. High School or Less Education = less than grade 5 + grades 5-8 + grades 9-13 + secondary school graduation certificate.
Both the immigrant and non-immigrant samples are restricted to those 25 years or older. Non-immigrant data from the 2006 census are not yet available.

Chart 7
Immigrants Destined for Nova Scotia and Non-immigrants with University Degrees



*Those who arrived within five years of the census year.
Source: 1) PRDS – microdata (CIC), for immigrants. Variables used: "prov", "ed_qua", "fage". High School or Less Education = None + Secondary or less.
2) Canadian population censuses (PUMF, 1986-2001, individual files) for non-immigrants. Variables used: "province or territories", "immigrant status indicator", "age", "highest level of schooling". For the 1986 Census, "place of birth" is used instead of "immigrant status indicator" because the latter is not available to determine whether the individual is a non-immigrant. High School or Less Education = less than grade 5 + grades 5-8 + grades 9-13 + secondary school graduation certificate.
Both the immigrant and non-immigrant samples are restricted to those 25 years or older. Non-immigrant data from the 2006 census are not yet available.

The findings of this section point to increasing skill levels all around among immigrants. More significantly, they show that the educational level of immigrants is generally superior to that of non-immigrants in Nova Scotia. As we note later in our discussion of economic immigrants to Nova Scotia, they are also engaged in high-skill occupations in greater proportions than non-immigrant Nova Scotians. Therefore, the human capital of immigrants makes a positive economic contribution to the province. However, while human capital characteristics represent a potentially higher economic contribution, that potential may not be fully realized if the quality of human capital that immigrants bring with them is not recognized. In the absence of the data in requisite detail, however, it is impossible to assess the extent to which this is happening. Nevertheless, actual labour market outcomes can give us a sense of how immigrants perform in those labour markets. This question of potential is addressed in the next subsection.

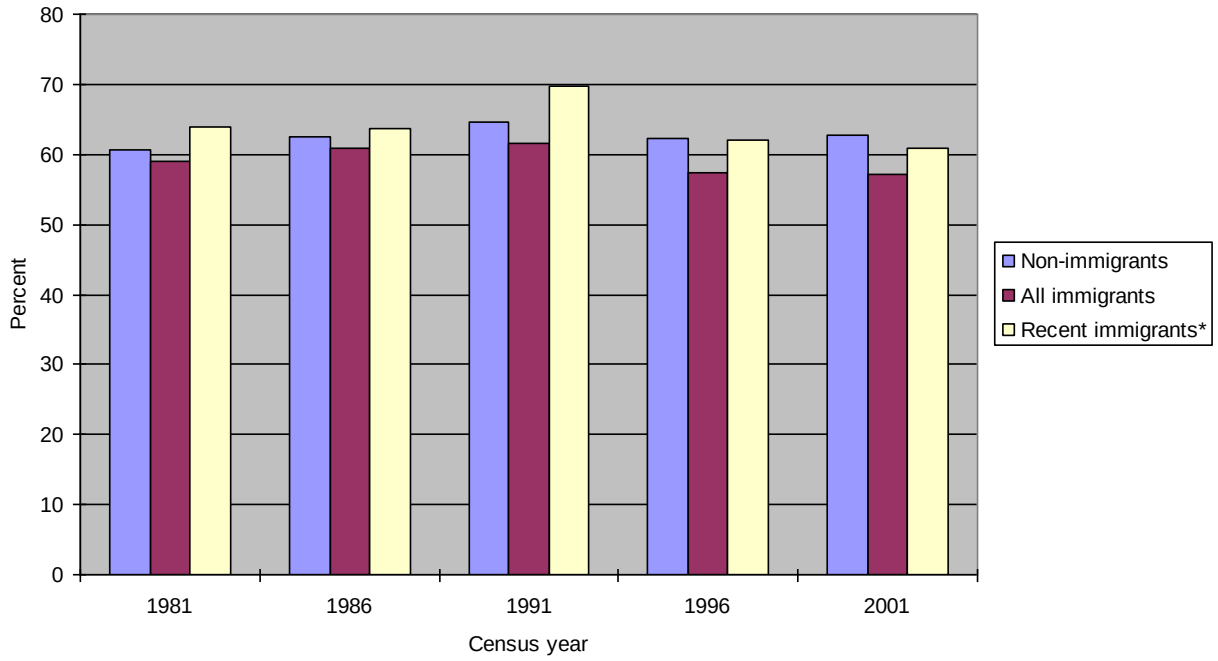
V.3 Labour Market Outcomes

Summary Points

- Labour market outcomes (labour force participation rates, unemployment rates, and employment income) for immigrants are generally superior to those of non-immigrants but tend to be worse for recent immigrants, perhaps because of their shorter length of stay.
- Over time, labour market outcomes have worsened for recent immigrants enumerated in each census despite their rising educational levels. One possible reason is the lack of recognition of the educational credentials of those recent immigrants whose source country composition is showing some shift from the US and UK towards the Middle and Far East.
- Recent immigrants depend less on government transfer payments for income support than both non-immigrants and immigrants in general.
- It is quite likely that although immigrants appear to be holding their own in labour markets and appear not to be a drain on the public purse, their potential economic contribution to Nova Scotia's economy is not being fully realized.

Chart 8 displays labour market participation rates among non-immigrants and immigrants for the census years 1981-2001. Over the 1981-2001 interval, labour force participation rates of non-immigrants averaged 2-5 percentage points higher than those of the entire immigrant population aged 15 and over. The falling participation rates of recent immigrants since the mid-1990s may be due to larger enrolments of youth among them attending post-secondary institutions as full-time students. Some evidence, based on the authors' observations, on university enrolments in Halifax universities suggests a rising population of students from the Middle East. These students are from either Middle Eastern families or those of expatriates who lived in the Middle East but recently migrated to Canada. (Children of expatriates in many Middle Eastern countries are prohibited from attending universities there.) A systematic research study on this topic could reveal more concrete information about these falling labour market participation rates among recent immigrants.

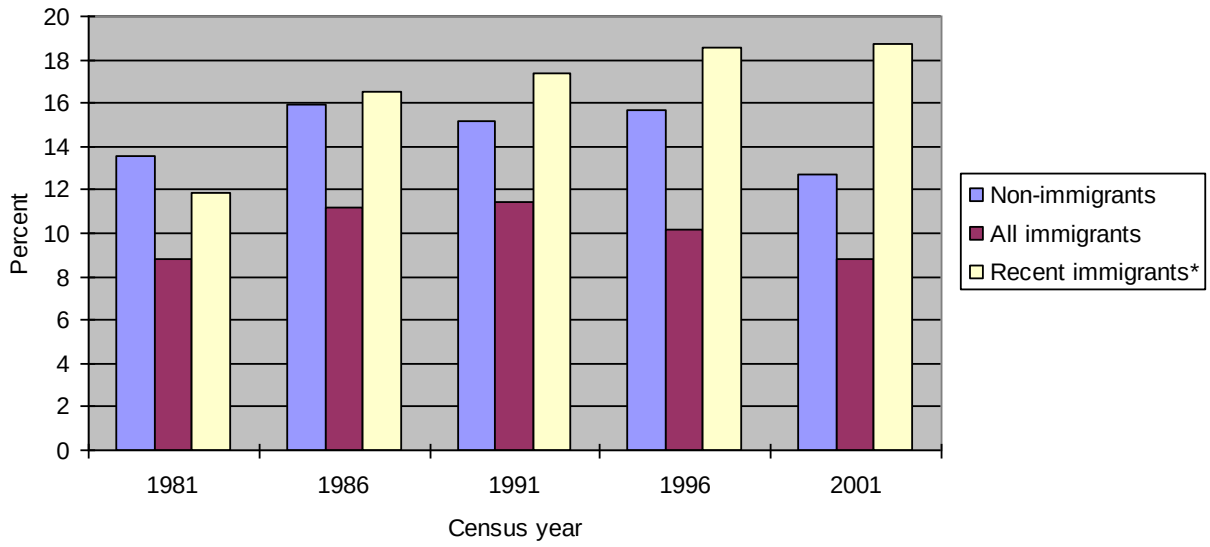
Chart 8
Nova Scotia Labour Force Participation Rates, Immigrants and Non-immigrants, 1981-2001



*Those who arrived within five years of the census date.
Source: Based on "Historical Labour Force Activity (Based on the 1971 Concepts) (8), Immigrant Status and Period of Immigration (10), Age Groups (18), Marital Status (7) and Sex (3) for Population 15 Years and Over, for Canada, Provinces and Territories, 1971, 1981 to 2001 censuses - 20% Sample Data". Ottawa: Statistics Canada, March 25, 2003. Census of Canada. Catalogue number 97F0012XCB2001003. Data are reported in Table A4.

Chart 9 provides the unemployment rates for immigrants and non-immigrants from 1981-2001. Although the unemployment rate among the entire immigrant population has generally been substantially lower than that of non-immigrants, recent immigrants experienced significantly higher unemployment rates than non-immigrants.

Chart 9
Unemployment Rates among Immigrants and Non-immigrants in Nova Scotia, 1981-2001

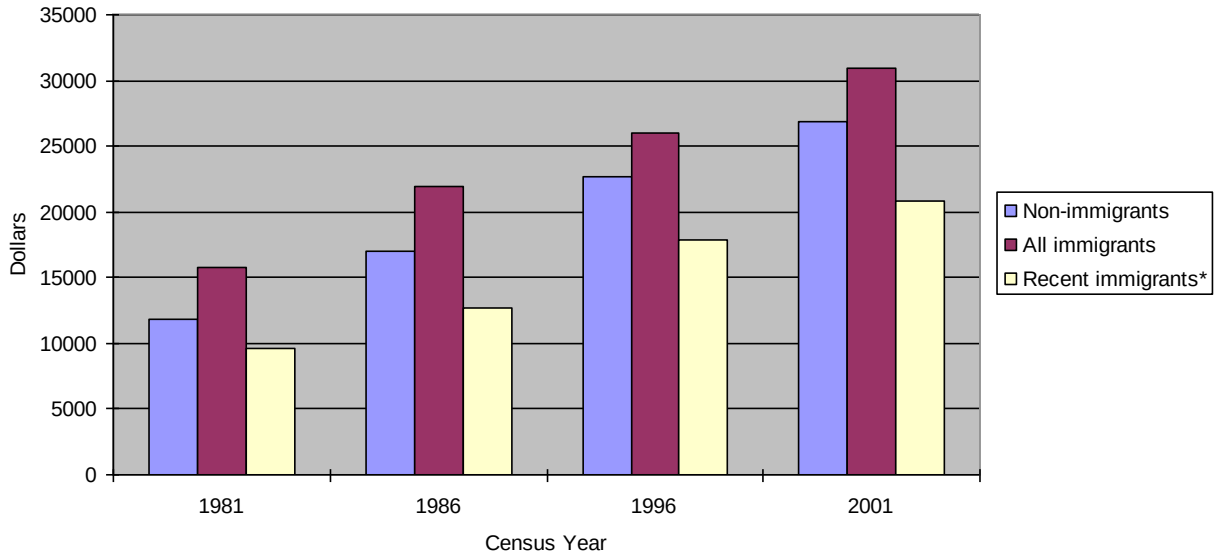


*Those who arrived within five years of the census year.
Source: Based on "Historical Labour Force Activity (Based on the 1971 Concepts) (8), Immigrant Status and Period of Immigration (10), Age Groups (18), Marital Status (7) and Sex (3) for Population 15 Years and Over, for Canada, Provinces and Territories, 1971, 1981 to 2001 Censuses - 20% Sample Data". Ottawa: Statistics Canada, March 25, 2003. Census of Canada. Catalogue number 97F0012XCB2001003. Data are reported in Table A4.

Turning next to employment earnings, Chart 10 suggests that over the 1981-2001 interval, an average employed immigrant earned a higher income than an average non-immigrant. However, the employment earnings of recent immigrants has been consistently lower than that of non-immigrants. This earning gap has also widened slightly; while in 1981, a recent immigrant earned about 19 percent less than a non-immigrant, in 2001, a recent immigrant earned about 22 percent less than a non-immigrant.

The above findings on the rising income disadvantage of recent immigrants in relation to that of non-immigrants, and also on recent immigrants' rising unemployment rates, indicate that newer immigrant arrivals face greater difficulties in their labour market adjustments in Nova Scotia than those who came in the past, despite their higher educational attainments. One such difficulty may be the lack of recognition of the educational credentials of new immigrant arrivals, a large number of whom arrive from the Middle and Far East (Table 3).

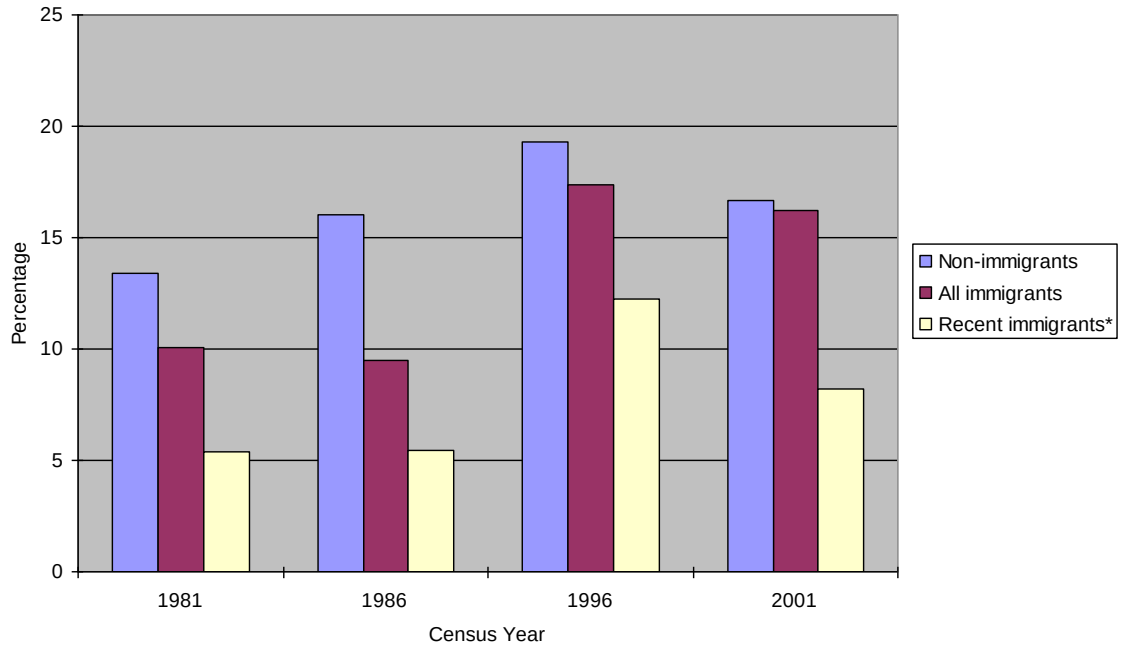
Chart 10
Employment Incomes of Immigrants and Non-immigrants in Nova Scotia, 1981-2001



*Those who arrived within five years of the census year. Data on recent immigrants in the 1991 census were not available in the census PUMF for Nova Scotia.
Source: Special tabulations by authors based on Canadian population censuses (PUMF, 1981-2001, individual files).

The profile of employment income of an average non-immigrant and a recent immigrant is mirrored in their respective reliance on government transfer payments as supplements to that income, as reflected in Chart 11. Generally, an average immigrant receives lower government transfer payments than does an average non-immigrant; however, that gap was narrowed in the 1996 and 2001 census years. The receipt of government transfer payments by recent immigrants is even lower than that of immigrants in general, likely due to their younger age, which makes them ineligible for such transfer payments as the Canada / Quebec Pension Plan and Old Age Security income. Due to their shorter stay, many also may not be eligible for Guaranteed Income Supplements and some not for employment insurance payments. A more detailed investigation of these reasons may be undertaken in a future research study.

Chart 11
Percentage of Total Income Received as Government Transfers by Immigrants and Non-immigrants in Nova Scotia,1981-2001



*Those who arrived within five years of the census year. Data on recent immigrants in the 1991 census were not available in the census PUMF for Nova Scotia.
Source: Special tabulations by authors based on Canadian population censuses (PUMF, 1981-2001, individual files).

Overall, the evidence presented in this section suggests that labour market outcomes for immigrants are generally superior to those of non-immigrants but tend to be worse for recent immigrants, who appear to be facing greater difficulty in their labour market adjustment than those who arrived in the past. On the other hand, recent immigrants rely less on social transfers for income support than both the native born and immigrants in general. It is quite likely that although immigrants appear to be holding their own in labour markets and appear not to be a drain on the public purse, their potential economic contribution to Nova Scotia's economy is not being fully realized. This becomes more apparent in the next section in which we review various aspects of economic immigration to Nova Scotia.

VI. SKILLED AND BUSINESS IMMIGRANTS IN THE NOVA SCOTIAN ECONOMY

Skilled workers and business immigrants make up the so-called "economic" immigrant class. CIC defines this class as "people who may become permanent residents because they are able to become economically established in Canada." (www.cic.gc.ca)

"Business immigrants are people who can invest in, or start businesses in Canada and are expected to support the development of a strong and prosperous

Canadian economy. The Business Immigration Programs seek to attract to Canada people experienced in business. Business immigrants are selected based on their ability to become economically established in Canada.'' (www.cic.gc.ca)

CIC also divides business immigrants into three classes: investor, entrepreneur, and self-employed. Investors are experienced persons who must demonstrate business experience, have a minimum net worth of $800,000, and make an investment of $400,000. Entrepreneurs are experienced persons who will own and actively manage a business in Canada that will contribute to the economy and create jobs. Entrepreneurs must have business experience and a minimum net worth of $300,000 and are subject to conditions on arrival in Canada that include creation of at least one job for original Canadians. Finally, the self-employed are persons who must have the intention and ability to create their own employment by operating a business or farm in Canada. They are also expected to contribute to the cultural or athletic life of Canada.

While Nova Scotia abides by national objectives that allow immigration on humanitarian grounds for refugees and others for family re-unification, the need to foster economic immigration suited to the long-term needs of the province is paramount. Immigration policy falls under federal jurisdiction, but all provinces can (and do) work out special arrangements for promoting immigration perceived to be in their interest. The province of Quebec has had such an arrangement for many years, but smaller provinces have begun to engage in such initiatives only over the past ten years. All Atlantic provinces are now signatory to Provincial Nominee Programs aimed at promoting economic immigration. The province of Nova Scotia was the last to sign on to this program in 2002.

Since economic immigration is likely to be central to policy in Nova Scotia, it is important to examine it in detail. Therefore, this section analyzes data from a number of sources to shed light on the various dimensions of economic immigration to Nova Scotia. Our discussion will be divided into two parts – one dealing with skilled workers and the other with business immigrants.

While PRDS provides data on the arrival of immigrants under the skilled and business classes, no direct data are available on their economic performance. However, the economic performance of immigrants who practiced different occupations in Canada can be assessed. Since this part of this study focuses on immigrants who can establish themselves economically in Canada, census data are analyzed only for those who worked as professionals and managers. The occupational matrix (Table A5) prepared by Human Resources and Social Development Canada (HRSDC) lists these two occupations among the top in terms of their educational and skill requirements. Finally, to assess the performance of immigrants in the business sector, data are analyzed for those who declared themselves “self-employed” on the census questionnaire.

VI.1 Immigration of Highly Skilled Workers

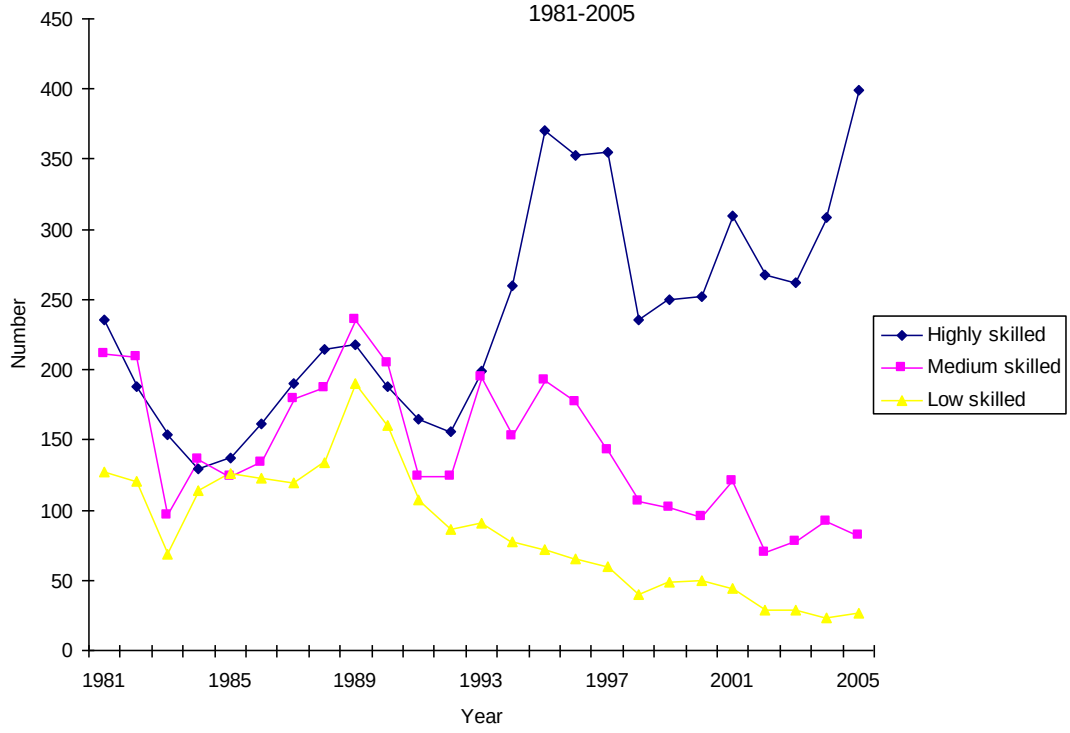
PRDS provides data on the occupational classifications of immigrants destined for the labour force according to the five classifications used by HRSDC defined in Table A5. We used these classifications to derive three occupational groups: “highly skilled”, “medium-skilled”, and “low-skilled” immigrants. Chart 12 provides annual trends for these three occupational groups of immigrants destined for Nova Scotia’s labour force, showing that throughout the period 1981-2002, highly skilled immigrants (managers and professionals, i.e., groups “O and “A”) comprised a significant proportion of those destined for the labour force in Nova Scotia. Since the early 1990s, the levels of highly skilled Immigrants destined for Nova Scotia have exceeded those of medium- and low-skilled immigrants. In recent years, the levels of highly skilled immigrants are rising, while those of medium- and low-skilled immigrants are declining.

Where Immigrant Managers and Professionals Work

Summary Points

- As of 2001, immigrant professionals and managers were overwhelmingly engaged in the service sector, accounting for about 82 percent of all highly skilled immigrant worker employment.
- About 64 percent of highly skilled immigrants are professionals; the rest are managers.
- About a quarter of highly skilled immigrants are employed in the education sector.
- The level of non-immigrant professionals grew at a rate of 20 percent during 1991-2001, with the strongest growth coming in the latter half of the period. In contrast, immigrant professionals grew by less than 1 percent over that period. The slow growth of immigrant professionals in the past decade is reflected in a decline in education and related professions, the area in which immigrant professionals are most concentrated. A higher growth of immigrant professionals was observed towards the second half of the past decade.

Chart 12
Immigrants Destined for Nova Scotia's Labour Force by Major Skill Classifications[1]
1981-2005



[1]National Occupational Classifications (NOC) were further classified as highly skilled = “O” and “A”; medium skilled = “B”, low skilled = “C” and “D”. Detailed definitions of NOC are provided in A5.
Source: PRDS – microdata (CIC). Variables used: "NOC2", "PROV".

Table 7 depicts the distribution of managers (subdivided into two subgroups) and professionals by industry of employment in Nova Scotia in 2001. These immigrants may or may not have entered Nova Scotia as skilled immigrants so may or may not be included in Chart 12. However, their current occupations are described as highly skilled occupations as they conform to the HRSDC definitions. Several facts emerge from Table 7. First, immigrant professionals and managers are overwhelmingly engaged in the service sector, accounting for about 82 percent of all highly skilled immigrant worker employment. Public administration, manufacturing, and agriculture, mining and utilities, respectively, account for about 10.7 percent, 3.1 percent and 2.8 percent of all such workers. The most important employer of highly skilled immigrants is the education sub-sector, which employed a solid 24 percent of them in 2001. Professionals constitute the largest sub-group, about 64 percent, among the highly skilled immigrants. Middle and other managers account for about 30 percent, with senior managers making up the rest (6 percent). Each sub-group of highly skilled immigrants is concentrated mainly in the service industries. Thus, about 86 percent of professionals, almost 80 percent of middle and other managers, and 50 percent of senior managers work in the service sector.

The second most important industry that employs highly skilled immigrants is public administration (31 percent for senior mangers, about 13 percent for middle managers, and about 8 percent for professionals). The primary sector (agriculture,

mining and utilities), construction and manufacturing account for the remaining employment among the highly skilled.

Within the service sector, highly skilled immigrants appear to be concentrated in two or three sub-sectors. For instance, almost 70 percent of professionals working in the service industry are engaged in the education, health care and social assistance sub-sectors, while 50 percent of all senior managers in services are employed in the wholesale and retail trade and in administrative support, waste management and remediation sub-sectors. About 59 percent of middle and other managers work in the wholesale and retail trade, as well as in accommodation and food services. The remaining workers are somewhat more evenly distributed across other service industries.

Table 7: Immigrant Managers and Professionals in Nova Scotia by Industry of Employment, 2001

Industry	Managers				Professionals	
	Senior		Middle & Other		No.	%
	No.	%	No.	%		
Agriculture, Mining and Utilities	**37**	**6.3**	**111**	**3.4**	**148**	**2.2**
Construction Industry	**0**	**0**	**37**	**1.1**	**73**	**1.1**
Manufacturing Industry	**74**	**12.5**	**74**	**2.3**	**186**	**2.7**
Service Industries:	**294**	**49.8**	**2580**	**79.5**	**5900**	**86.0**
Wholesale & Retail	73	12.4	774	23.9	185	2.7
Transportation, Warehousing, Information & Culture	0	0.0	73	2.3	184	2.7
Finance & Insurance	37	6.3	74	2.3	37	0.5
Real Estate, Rental & Leasing	0	0.0	147	4.5	0	0
Professional, Scientific, & Technical	37	6.3	185	5.7	736	10.7
Admin Support, Waste Management & Remediation	73	12.4	147	4.5	110	1.6
Education	37	6.3	147	4.5	2396	34.9
Health Care & Social Assistance	0	0.0	37	1.1	1700	24.8
Arts, Entertainment & Recreation	0	0.0	74	2.3	258	3.8
Accommodation & Food Services	0	0.0	738	22.7	0	0
Other (excluding Public Administration)	37	6.3	184	5.7	294	4.3
Public Administration	**185**	**31.4**	**405**	**12.5**	**553**	**8.1**
Other (not specified)	**0**	**0.0**	**37**	**1.1**	**0**	**0**
TOTAL	**590**	**100**	**3244**	**100**	**6860**	**100**

Source: Special tabulations based on the Canadian population census (PUMF, 2001, individiual file). Variables used: "Immigrant Status Indicator", "Occupation – Employment Equity Designations – Based On The National Occupational Classification", and "Industry – Based On The 1997 North American Industry Classification System [NAICS]".

Table 8 provides further information about the distribution of immigrant professionals across the 1991, 1996 and 2001 census years in selected occupations. These data are based on a 20 percent sample of individuals, as noted at the bottom of that table. Statistics Canada cautions that some numbers in Table 8 may not be

accurate due to some miscoding of occupations; however, the data do permit comparisons between immigrants and non-immigrants and also between these groups and recent immigrants.

Overall, immigrants constitute a significant proportion of total professionals in Nova Scotia. However, over the 1991-2001 period, the number of non-immigrant professionals grew at a faster rate, with the strongest growth coming in the latter half of the period.

Table 8: Professionals in Nova Scotia by Selected Occupations: Immigrants and Non-immigrants, 1991-2001 Censuses, Nova Scotia

	Census Year		
PROFESSIONALS BY OCCUPATIONS	**1991**	**1996**	**2001**
Business and Finance			
Auditors, accountants & other investment professionals			
Non-immigrants	2870	3120	5240
Immigrants	220	230	310
Recent immigrants	10	10	30
Other professionals in business and finance*			
Non-immigrants	970	900	1320
Immigrants	50	50	140
Recent immigrants	5	0	10
Natural and Applied Science and related			
Engineers			
Non-immigrants	2865	2370	2835
Immigrants	500	390	395
Recent immigrants	55	70	40
Computer & information systems			
Non-immigrants	2810	2850	6050
Immigrants	315	280	620
Recent immigrants	35	65	85
Other scientists*			
Non-immigrants	1755	1660	2165
Immigrants	365	270	315
Recent immigrants	75	5	45
Health Professionals			
Physicians, dentists and veterinarians			
Non-immigrants	1545	1770	2020
Immigrants	740	610	675
Recent immigrants	140	60	45
Other health professionals*			
Non-immigrants	1485	1710	2145
Immigrants	140	180	210
Recent immigrants	5	5	20

Contd.

Table 8 (Contd.): Professionals in Nova Scotia by Selected Occupations: Immigrants and Non-immigrants, 1991-2001 Censuses, Nova Scotia			
	Census Year		
	1991	1996	2001
Social Science, Education, Government Services & Religion*			
Judges, lawyers, Quebec notaries			
Non-immigrants	1235	1285	1570
Immigrants	90	100	120
Recent immigrants	10	0	0
Teachers and professors			
Non-immigrants	15375	15320	15615
Immigrants	1990	1865	1865
Recent immigrants	85	190	135
Other professionals in social science, education, government			
services and religion*			
Non-immigrants	8270	9080	10755
Immigrants	775	765	740
Recent immigrants	75	80	65
Arts, Culture, Recreation, and Sports			
Musicians and singers			
Non-immigrants	660	795	735
Immigrants	105	80	90
Recent immigrants	20	15	15
Other professionals in arts, culture, recreation, and sports*			
Non-immigrants	2650	2695	3330
Immigrants	505	455	430
Recent immigrants	55	35	25

*Computed total of all other professionals in the occupation. Health professionals exclude nurse supervisors and registered nurses.
Source: "Occupation - 1991 Standard Occupational Classification (Historical) (707B), Selected Labour Force, Demographic, Cultural, Educational and Income Characteristics (252) and Sex (3) for Population 15 Years and Over, for Canada, Provinces, Territories and Census Metropolitan Areas [1], 1991 to 2001 Censuses - 20% Sample Data." Ottawa: Statistics Canada. Catalogue number 97F0012XCB2001048.

The dramatic difference between immigrant and non-immigrant groups is reflected in the sub-categories within the professions. For instance, during 1996-2001, the growth in the number of non-immigrant professionals was quite broadly based, with solid growth in the categories of computers and information systems (115 percent), business and finance (71 percent, and a higher 83 percent among auditors, accountants and other investment professionals), physicians, veterinarians and dentists (31 percent), and other non-nursing health professionals (74 percent) leading the way. As Table 8 shows, all other categories grew with the exception of musicians and singers, which fell almost 8 percent.

In contrast to the above, there was a decline of immigrant professionals in many fields over the entire 1990s, which conforms with the declining trends of the mid to late 1990s noted in Chart 12 (see p. 32). The number of immigrant professors and teachers,

which is the largest among all occupations, fell during the first half of that decade and remained flat during the second half. Immigrant professionals increased during the second half (1996-2001), mostly in the fields of business and finance (61 percent), natural and applied sciences and related fields (41 percent, and a higher 121 percent among computer and information systems), and among musicians and singers (about 10 percent), while continuing to decline in many other fields.

Employment Income, Unemployment Rates and Country of Origin of Highly Skilled Immigrants

Table 9 shows that an average immigrant manager earned 13 percent less, while an average immigrant professional earned 11 percent more, than the corresponding non-immigrants in 2001. Senior managers earned about 6 percent more than their non-immigrant counterparts, but this is offset by the fact that the middle-level and other immigrant managers earned about 20 percent less. Unemployment rates were slightly lower among immigrant professionals and managers.

Table 9: Managers and Professionals in Nova Scotia by Employment Income, Unemployment Rate, and Country / Region of Birth, 2001

	Senior Managers	Other Managers	All Managers	Professionals
Employment income ($)				
Immigrants	62015	32320	37054	44410
Non-immigrants	58562	40349	42514	40000
Unemployment rate (%)				
Immigrants	0.00	2.44	2.06	2.95
Non-Immigrants	0.81	3.09	2.83	3.43
Immigrants' country / region of birth				
United States	185	666	851	1842
United Kingdom	184	920	1104	1990
Germany	0	186	186	222
Netherlands	37	111	148	257
Other Europe	73	405	478	886
Asia	110	737	848	1220
Other countries / regions	0	221	221	406
Total immigrants	589	3246	3836	6823
Non-immigrants	4612	36449	41061	60271

Source: Special tabulations based on Canadian population census (PUMF, 2001, individual file).
Mean employment income is calculated only for those who were employed in the reference week and includes wages and salaries and self-employment incomes.
Unemployment rate = unemployed / (unemployed + employed)
Total immigrants & non-immigrants include employed, unemployed and not in the labour force.
Variables used: "Province or territory", "Place of birth", "Immigrant status indicator", "Labour Force Activity – In Reference Week", "Occupation – Employment Equity Designations – Based On The National Occupational Classification", "Wages And Salaries", "Self-Employment Income".

Table 9 also shows that the United States and the United Kingdom are the primary source countries of highly skilled immigrants, accounting for 62.5 percent of senior managers, 49 percent of middle-level and other managers, and 72 percent of professionals. The second largest source region is Asia, where about 19 percent of senior managers, 23 percent of middle-level managers and 18 percent of professionals originated.

Geographic Distribution of Highly Skilled Immigrants

Table 10 shows the distribution of highly skilled immigrants by county of residence in Nova Scotia. Most (59 percent) are located in Halifax County, with fairly even percentages of managers and professionals. The remaining 41 percent are spread thinly across other counties, with a greater concentration of remaining professionals in Colchester, Lunenburg, Cape Breton and Kings counties and of managers in Lunenburg and Kings. However, 11 percent of managers and almost 12 percent of professionals did not state their county of residence in the 2001 census. Therefore, except for Halifax County, the data reported for other counties could be quite sensitive based on where the workers in this unclassified group settled.

Overall, results of this section show that immigrant professionals and managers are well placed in the labour market of Nova Scotia. Their labour market outcomes compare favourably with those of their non-immigrant counterparts, and they are well represented in the knowledge economy. In light of this, the tepid or negative growth of highly skilled immigrants in many professions over the 1991-2001 period might reflect a failure to retain these professionals. The loss of productive potential resulting from their departure is not known but needs to be explored.

Table 10: Geographic Distribution of Highly Skilled Immigrants, Nova Scotia, 2001				
County	**Senior Managers**	**Other Managers**	**Total for Managers**	**Professionals**
Halifax	300	1925	2225	4020
Cape Breton	20	65	85	225
Metro Adjacent	**75**	**470**	**545**	**800**
Colchester	20	50	70	240
Lunenburg	25	175	200	285
Hants	10	90	100	140
Richmond	0	35	35	10
Victoria	0	35	35	0
Non-Metro Adjacent	**70**	**620**	**690**	**1125**
Shelburne	0	30	30	55
Yarmouth	0	60	60	100
Digby	10	60	70	65
Queens	15	15	30	55
Annapolis	20	75	95	100
Kings	10	140	150	385
Cumberland	15	50	65	110
Pictou	0	90	90	130
Guysborough	0	10	10	25
Antigonish	0	45	45	160
Inverness	0	20	20	90
Rounding Error[1]	**144**	**276**	**421**	**818**
TOTAL	**589**	**3246**	**3836**	**6823**

Source: Census 2001 Target Group Profile, Statistics Canada (customized tabulations).
1. This is computed as the difference between totals in Target Profile data and the PUMF data (Table 9). Since the numbers in the table are rounded to the nearest 5 people for confidentiality reasons, totals may not necessarily add up to the actual number of immigrants in a particular occupational category in the province. These numbers are intended to adjust the 'rounded' column totals so they equal the actual total numbers for Nova Scotia as a whole.

VI.2 Business Immigration

Summary Points

- A large number of self-employed immigrants in Nova Scotia operate their businesses in the service sector, with health and social services, business services, and retail trade as the top three choices.
- Most self-employed immigrants are from the United Kingdom (29%) and the United States (25%). Immigrants from Asia (21%) and Europe (20%) account about evenly for the remainder.
- About 57 percent of self-employed immigrants live in Halifax.
- There is a significant gender disparity among business immigrants, with about 182 businessmen for every 100 businesswomen. Both sexes have a higher rate of unincorporated than incorporated businesses.
- Annual data show that immigrant business investments under the entrepreneurial class were highly volatile during 1995-2005. Most business investments are made in the service sector, with some in manufacturing and in building, developing and general contracting.

As noted earlier in Section II, business immigration to Nova Scotia has shown dramatic shifts over the 1981-2005 interval. Data on the performance of business immigrants are not directly available. However, census micro data permit the analysis of the performance of self-employed immigrants, some of whom may not have arrived in Canada as business immigrants. The self-employed reported under the census terminology are those who were actually running their own business, incorporated or unincorporated, at the time of the census. Since the purpose of this section is to review the contribution of resident immigrants to Nova Scotia's business sector, census data on the performance of self-employed immigrants are appropriate for analysis.

Table 11: Immigrant Businesspersons by Industry, 2001[1]	
Industry	**Number**
Agriculture	221
Other primary	185
Manufacturing	111
Construction	111
Transportation & storage	148
Communication & other utilities	37
Wholesale trade	74
Retail trade	664
Finance, insurance, & real estate	295
Business services	661
Educational services	111
Health & social services	812
Accommodation, food & beverage services	406
Other services	957
TOTAL	4791

[1] Data reported in this table are for those who reported as being self-employed in 2000.
Source: Special tabulations based on Canadian population census (PUMF, 2001, individual file).
Variables used: "Province or territory", "Immigrant status indicator", "Class of worker", "Industry - based on the 1980 Standard Industrial Classification".

The Distribution of Immigrant Businesspersons in Nova Scotia by Industry and Country of Origin

Table 11 shows the distribution of immigrant businesspersons by industry in the census year 2001. This table shows where the capital goes that such immigrants bring, not the amounts invested. For example, immigrant businessmen and businesswomen are most active in the health and social services sector, which accounts for almost 17 percent of all business immigrants. Also important are retail trade and business services (14 percent), agriculture, mining and utilities, and accommodation and food and beverage services (8.5 percent). However, immigrants are not active in the wholesale trade, manufacturing, construction and storage sectors.

However, the businesses in which 20 percent of self-employed immigrants were engaged in 2001 were classified as “other services”, and if the true industrial destination of this group were known, the above ranking could alter.

Table 12 depicts self-employed immigrants in 2001 by country of origin, showing that the United Kingdom and the United States have been Nova Scotia’s primary sources of business immigration, accounting for about 53 percent of all business immigrants. Asian (22 percent) and European immigrants (20 percent) account about evenly for most of the remainder.

Table 12: Immigrant Businesspersons in Nova Scotia by Source Country / Region, 2001	
Country	**Number**
United States	1181
United Kingdom	1363
Germany	258
Netherlands	257
Other Europe	442
Asia	1033
Other	257
TOTAL	4791

[1] Data reported in this table are for those immigrants who reported to be self-employed in 2000.
Source: Special tabulations based on Canadian population census (PUMF, 2001, individiual file).
Variables used: "Province or territory", "Immigrant status indicator", "Class of worker", "Place of birth".

Table 13: Immigrant Businessmen and Businesswomen in Nova Scotia by Geographic Distribution, 2001[1]

County	Men aged 15 years and over				Women aged 15 years and over			Grand
	Self-employed (incorporated)	Self-employed (un-incorporated)	**Total Male**		Self-employed (incorporated)	Self-employed (un-incorporated)	**Total Female**	**Total**
Halifax	585	1115	**1700**		200	735	**935**	**2635**
Cape Breton	25	60	**85**		15	20	**35**	**120**
Metro Adjacent	130	390	**520**		140	230	**370**	**890**
Colchester	30	75	**105**		15	60	**75**	**180**
Lunenburg	60	150	**210**		45	125	**170**	**380**
Hants	0	95	**95**		20	25	**45**	**140**
Richmond	15	10	**25**		25	0	**25**	**50**
Victoria	0	0	**0**		20	0	**20**	**20**
Non-Metro Adjacent	225	550	**775**		65	275	**340**	**1115**
Shelburne	10	10	**20**		0	10	**10**	**30**
Yarmouth	20	40	**60**		15	10	**25**	**85**
Digby	30	40	**70**		10	25	**35**	**105**
Queens	20	0	**20**		0	10	**10**	**30**
Annapolis	20	80	**100**		10	50	**60**	**160**
Kings	45	120	**165**		20	60	**80**	**245**
Cumberland	20	80	**100**		0	15	**15**	**115**
Pictou	20	100	**120**		10	40	**50**	**170**
Guysborough	10	0	**10**		0	15	**15**	**25**
Antigonish	20	35	**55**		0	20	**20**	**75**
Inverness	10	45	**55**		0	20	**20**	**75**
TOTAL	**940**	**2055**	**2995**		**405**	**1240**	**1645**	**4640**

[1] Data reported in this table are for those who reported they were self-employed in 2000.
Source: Census 2001 Target Group Profile, Statistics Canada (customized tabulations in B20/20 format). The difference between the totals reported in Tables 11 and 13 could be because the geographic location of some respondents could not be identified by the census.

Immigrant Businesspersons in Nova Scotia by Type of Business, Gender and Geographic Distribution

Table 13 (above) shows for self-employed business immigrants the type of business set-up (incorporated or not) by gender and geographic distribution in 2001. This table shows that regardless of gender and the legal business form chosen, Halifax County gets the lion's share (about 57 percent) of all self-employed immigrants, males and females. In contrast, business immigration to other areas in Nova Scotia is substantially smaller and thinly spread out. Only Lunenburg (8.2 percent) and Kings (5.3 percent) have 5 percent or more of business immigrants. Thus, as in the case of highly

skilled immigrants, there is significant inequality in the distribution of business immigrants across Nova Scotia.

There is also a significant gender disparity in business immigration. At the provincial level, there are 182 immigrant businessmen for every 100 immigrant businesswomen. Halifax County almost exactly mirrors this disparity. This pattern is also evident in the next two most populated counties, with 206 men per 100 women in Kings County and a more moderate 123 men per 100 women in Lunenburg County.

Entrepreneurial Investment by Industry in Nova Scotia

An important category under business immigration is the immigrant entrepreneur. CIC defines entrepreneurs as "experienced persons that will own and actively manage businesses in Canada that will contribute to the economy and create jobs. Entrepreneurs must demonstrate business experience, a minimum net worth of CDN $300,000 and are subject to conditions upon arrival in Canada." The previous section viewed all self-employed individuals as business immigrants. Therefore, given CIC's definition of an entrepreneur, the self-employed in the census data could also include some entrepreneurs who manage their own business. However, since entrepreneurial immigrants are also required to present evidence of compliance with certain conditions established by the province, some industry-level data are available for the period 1995-2005 on the amounts of their investment. These data were obtained from CIC through special request and are presented in Table 14. One factor that stands out is the extreme volatility of investment over time, which partly reflects the behaviour of business immigration over this period. As we saw earlier, business immigration to Nova Scotia rose sharply through 1995, then decreased dramatically thereafter. As Table 14 shows, investment fell off sharply from 1995 to 1999. Although some sort of a revival is evident thereafter, the year-to-year volatility is pervasive throughout.

Investment is by nature volatile, but in this case, the substantial fluctuations also likely reflect the small number of entrepreneurs, so small changes in their number can bring about large swings in investment. In light of this volatility, much caution is needed in drawing conclusions. However, immigrant entrepreneurs invest predominantly in services and in the retail and wholesale trade, but amounts fluctuate yearly. Also, immigrant entrepreneurs seem to invest in manufacturing, building, developing and general contracting. The amounts they invest, while relatively much smaller, tend to be relatively more stable over time.

In conclusion, we note that immigrants who run businesses put their resources primarily in services and trade, as opposed to manufacturing, and the amounts invested by immigrant entrepreneurs show a great deal of volatility over time. Most business enterprises owned by immigrants tend to be unincorporated, which is consistent with the nature and types of their businesses. Business immigration is also predominantly skewed in favour of Halifax County.

Table 14: Entrepreneur Program, Dollars Invested by Industry, Nova Scotia, 1995-2005											
	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Agricultural Industries										350000	
Fishing & Trapping		100000									
Forestry	575000	150000									
Manufacturing											
Fabricated Metal					95000						
Food		150000				137000		214800			
Furniture & Fixture								128000	470000	95961	
Electrical & Electronic Products						225000			70000		
Textile Products	25000										
Transportation Equipment							21000				
Paper & Allied	100000										200000
Other								227469			
Building, Developing & General Contracting	350000	212654	30000			375000	200000	228350	310000	172308	
Industrial & Heavy Engineering Construction								150000			
Trade Contracting								285000			50000
Wholesale											
Apparel & Dry Goods		53877									
Machinery, Equipment & Supplies		84615									
Food, Beverage, Drug & Tobacco	85200					2530000	450000	180000	311000		
Household Goods						25000		600000			
Other Products	124000	170000	100000				80000	118893	33000		
Retail											
Food, Beverage & Drug	442254	310844	185000			102000	85000	149985		40000	
Shoe, Apparel, Fabric & Yarn	25000	70000	25000			61000		25000			
Automative Vehicles, Parts, Accessories, Sales & Service		30000	95000					150000			
General Merchandising		0				280000			81000	150000	
Other	134991	170000				199000	100000	27000			645000
Real Estate Operator (except developer)						100000		175000			
Services											
Health & Social								70000			
Business	50000						160000	210000	88000		
Accommodation	375000	300000				2796000	1658800	1492308	150000		
Food & Beverage	186000	295000				469000	50000	302593	277000	75000	
Amusement & Recreational		556115									
Personal & Household	36000	55000	40000		210000	45000			30000		
Services Incidental to Construction						162000	300000			6000	
Services Incidental to Mineral Extraction						70000	210000				
Other	85000	2617717		30000				6231110			77137
Communication and Other Utilities						380000	40000				120000
TOTAL	2593445	5325822	475000	30000	305000	7956000	3354800	10965508	1820000	889269	1092137

Source: CIC, data warehouse extraction.

VII. INTERNATIONAL STUDENTS IN NOVA SCOTIA

Summary

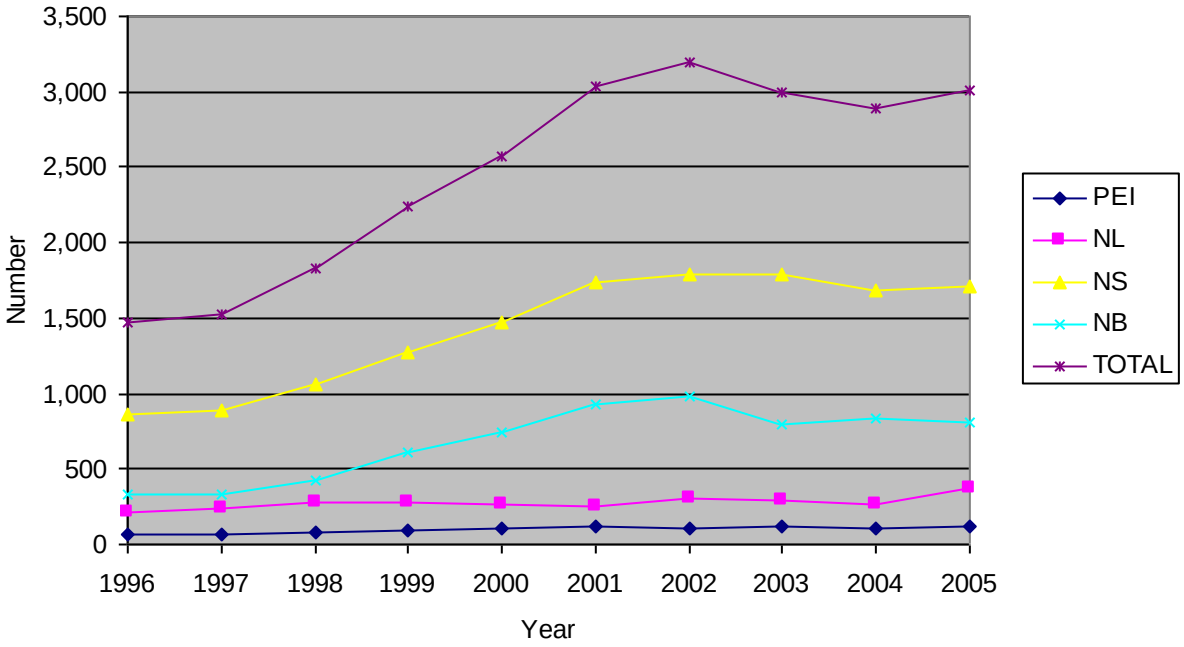
Most international students in Nova Scotia are university students, who represent a potential source of highly skilled immigrants for the province. Their annual inflows have increased slowly since 2001. In 2005, most international students came from China. The United States, Korea, Bermuda and Japan are also among top five source countries of international students in the province.

In smaller provinces like Nova Scotia, international students play two important roles. First, they are viewed as potential new immigrants. International graduates are "young, with advanced English language skills, with fully recognized qualifications, locally relevant professional training and a high degree of acculturation" (Hawthorne, L.2005. "Picking Winners: The Recent Transformation of Australia's Skill Migration Policy." International Migration Review, 39(2)).These characteristics are believed to facilitate integration both into the labour market as well as into the social sphere. Second, because most international students are university students, their presence helps offset some of the decline in enrolments resulting from the decline in the university-aged population (18-24 age group), whose net out-migration rate was about 1.6 percent in Nova Scotia during 2005-06 (Maritime Provinces Higher Education Commission, MPHEC, Trends in Maritime Higher Education). Indeed, in Nova Scotia, where undergraduate enrolments declined by about 2 percent during 2005-06 after remaining stalled in the previous year, international students comprised 9 percent of total enrolments (MPHEC, Trends in Maritime Higher Education).

On average, according to CIC, between 15 and 20 percent of international students can be expected to eventually settle and work in Canada (data presented by Martha Justus, CIC, at the 11th International Metropolis Conference in Lisbon, 4 October 2006).

Attracting international students and retaining them at graduation is one of the goals of immigration strategies adopted by provincial governments in Atlantic Canada. The province of Nova Scotia has recently added a component of "International Graduate Stream" to its Provincial Nominee Program, which fast tracks the landing process for those international students who wish to stay in the province after finishing their studies. In addition, the federal government also entertains two-year work permit applications from international students wishing to work outside of Montreal, Toronto, and Vancouver in their fields of study filed within 90 days of graduation.

Chart 13
Annual Inflows of International Students into the Atlantic Provinces, 1996-2005

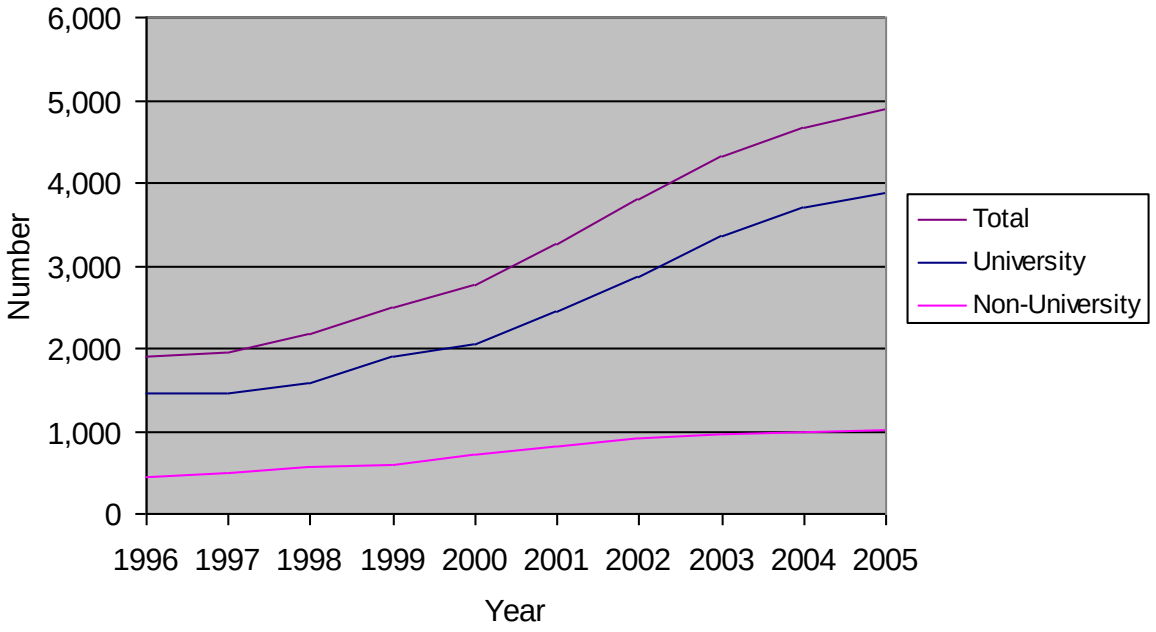


Source: CIC, Facts and Figures Digital Library

As Chart 13 shows, Nova Scotia receives the highest number of international students who arrive each year in Atlantic Canada. The province experienced an accelerated growth in its international student inflow during 1997-2001, after which the inflow of international students stabilized. A similar trend is found for New Brunswick, which is the second largest recipient of international students in Atlantic Canada. The other two provinces experienced minimal growth. As a result, Nova Scotia's share in total regional inflow of international students has stayed in the range of 57-60 percent over the period.

Most international students studying in Canada are enrolled in a university degree program, which is also true in Nova Scotia (Chart 14). Their enrolments in university level education grew at a faster rate than at the non-university level during 1996-2005. At the non-university level, their enrolments accounted for about 20 percent of all international students in 2005, so international students may represent a potential supply of highly skilled, as well as of medium- and low-skilled, workers in the province (according to the definitions of skill levels provided in Tables A5 and A6). A typical international student takes about 2.8 years to finish his / her education.

Chart 14
International Students Studying in Nova Scotia by Level of Study, 1996-2005



Source: CIC, Facts and Figures Digital Library

Table 15 provides data on international students by the top ten source countries for the period 1996-2005. China has been the largest supplier of international students to Nova Scotia's educational institutions since 2002, taking the place of the United States, which now ranks second. The higher numbers of Chinese and Korean students in recent years are attributable to two major factors: 1) expedited medical procedures for international students beginning in 1997, and 2) establishment of Canadian Education Centres in the capital cities of China and Korea. A decade earlier (1996), the United States, China, Bermuda, Malaysia and Hong Kong were among the top five source countries of international students studying in Nova Scotia.

Table 15: International Students Studying in Nova Scotia, 1996-2005 (as of December 1)										
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
China, People's Republic of	78	65	88	104	139	251	525	807	1,023	1,230
United States	186	187	217	272	296	360	405	467	500	520
Korea, Republic of	116	145	80	88	123	173	185	234	306	307
Bermuda	184	167	176	179	208	258	290	342	351	306
Japan	80	107	124	132	122	145	181	193	182	198
Bahamas, The	66	72	84	92	80	103	130	161	175	181
Mexico	31	32	66	78	100	150	166	152	147	176
Germany	57	62	73	75	80	78	96	118	178	158
India	48	38	39	51	53	61	90	97	112	133
Taiwan	21	25	34	59	94	97	126	122	122	119
United Arab Emirates	7	16	26	49	67	83	87	103	90	89
United Kingdom	43	54	75	79	70	79	72	68	67	66
Hong Kong	194	146	132	107	100	80	74	63	64	56
Brazil	9	17	50	68	80	67	63	36	25	41
Malaysia	171	187	161	130	107	61	37	30	30	33
Top 10 source countries	1180	1192	1210	1261	1369	1700	2194	2699	3096	3328
Other countries	713	755	952	1224	1394	1564	1599	1613	1582	1563
Total	1893	1947	2162	2485	2763	3264	3793	4312	4678	4891

Source: CIC, Facts and Figures Digital Library

VIII. MAJOR FINDINGS AND DIRECTIONS FOR FUTURE RESEARCH

The research conducted in this project provided, in some detail, the nature of immigration to Nova Scotia, with a focus on its economic role in the province since 1981. The province's share in Canada's immigrant population is small and falls well short of its share in the national population, making it an immigrant-scarce province in relation to provinces such as British Columbia, Ontario and Quebec. The province also receives a small share of annual immigrant inflows to Canada. Net out-migration from the province and falling fertility rates have raised questions about the adverse long-term implications for economic growth and development and placed immigration at the centre of policy discussion. Policy formulation and implementation are, however, hampered by the limited body of research-based knowledge about many economic and social issues that immigration raises. This project is a step towards enhancing our understanding primarily of the economic dimensions of immigration to Nova Scotia. However, a number of information gaps need to be addressed. In concluding this report, we provide a sampling of those gaps.

Our findings suggest that immigration inflows to Nova Scotia are heavily slanted in favour of urban areas. However, about 28 percent of immigrants and 17 percent of recent immigrants lived in rural areas of the province at the time of the 2001 census. Some evidence indicates that these immigrants are involved in a variety of occupations, including private business and professional jobs. These findings therefore indicate that new immigrant destinations can be developed in rural areas. A systematic research study investigating the factors that determine provincial choices new immigrants make, as well as their destination choices within a province, should interest rural population planners such as the Rural Secretariat, for whom repopulation of rural areas is a priority.

Such research could also be of interest to provincial immigration policymakers interested in attracting more immigrants to the province.

The age profiles of previous and new immigrants to Nova Scotia indicate that greater proportions are in the lower age groups, thus confirming the economic theory that the young are more likely to migrate. Due to the small inflows of immigrants each year, their age distribution would affect the age distribution of the Nova Scotian population only marginally. However, if their share increases, it could have a moderating effect on the aging trend in Nova Scotia directly and also indirectly over the longer term if immigrants have higher fertility rates. This will also increase the labour force participation and contribute positively to long-term economic growth in the province. An investigation into how much of the current aging trend in Nova Scotian population might be averted by the current immigration strategy over the next few decades, under different assumptions of fertility rates among immigrants, could provide useful information to population planners in the province.

If immigration is viewed as one means of reversing declining population trends and the aging of the province's population, then an investigation of the labour market effects of immigrants is also important because an increase of immigrant workers has certain wage and employment implications for the host population. In this regard, two important research questions are 1) How do immigrants affect the wages paid to workers in Nova Scotia? And 2) Do immigrants displace the original Nova Scotian workers in the province's labour force. While these questions have been answered using Canada-wide data, evidence for provincial labour markets and also for labour markets in small areas is lacking. These questions form the federal government's priority research areas identified for Metropolis research centres and will provide 1) useful input for the debate on the role of immigration in the economic development of Nova Scotia, and 2) useful information if public policy is to encourage immigrant workers to settle in rural areas.

One common notion among the public, which has often appeared in the media, is that immigrants are a drain on the public purse because they tend to consume more public transfers than the host population. It is also held that immigrants pay lower taxes than the amount of public transfers they consume. Our finding that immigrants are young at the time of their arrival does not support such views. We imply this result because many public transfers are age related (such as Canada Pension Plan and Old Age Security payments), and immigrants do not become eligible for these and some others, such as employment insurance, for a long time after arrival in the country. Most immigrants are also not likely to demand much health care service for a long time after arrival. However, they start to pay taxes, such as the sales tax, soon after arrival. Therefore, over their lifetime, immigrants are likely to make a positive contribution to the provincial economy. These implications could also be confirmed or denied in a separate research project analyzing available data on immigrants' earnings and immigrants' use of public transfers, health care and education services.

We also found that, after a surge during the first part of the 1990s, skilled immigrant (managers and professionals) inflows declined in the province. It is important to investigate 1) whether there is a shortage of professionals in the province and in which fields, 2) in which fields immigrant professionals can be used to fill in the shortages, and 3) in which fields immigrant professionals are more likely to face difficulties in the recognition of their credentials and professional qualifications. The role of entry barriers into certain regulated professions, such as health care and law, in preventing immigrants from practicing in those professions should also be investigated. A research study should also examine why the share of immigrant professionals has declined in some fields.

Our analysis of data on skilled immigrants also indicates that they are well placed in the labour market of Nova Scotia. Their labour market outcomes compare favourably with those of their non-immigrant counterparts, and they are well represented in the knowledge economy. In light of this, the tepid or negative growth of highly skilled immigrants in many professions over the 1991-2001 period might reflect a failure to retain these professionals. This loss of productive potential resulting from their departure is not known but needs to be explored. We have provided a broad breakdown of the employment of the skilled immigrants in the province, but in some industries more detailed industrial and occupational breakdowns, as well as information on the size of the firms in which they are employed, could shed some light on the stability of their employment.

The evidence gathered in this project also tells us that Nova Scotia fares poorly in retaining its immigrants, with retention rates plummeting over the 1981-2005 interval. Unfortunately, time limitations did not permit us to obtain data on the out-migration of various classes of immigrants. The evidence also suggests that new immigrants likely face adjustment problems in the labour market, as is evident in their higher unemployment rates and lower employment income. It is possible that part of this poorer performance is the result of non-recognition of immigrant credentials as a greater number of immigrants are now coming from “non-traditional” countries of the Middle and Far East, as opposed to from the United States and United Kingdom, which had been major source countries of Nova Scotia immigrants until the mid-1980s. Based on these findings, at least five important research questions emerge: 1) Do immigrants from the newer source countries face a lack of their credential recognition due to discrimination? 2) How does the rate of out-migration vary among immigrant classes? 3) Do immigrants out-migrate at a different rate than non-immigrants, 4) How much human capital is lost due to out-migration of skilled immigrants from the province? And 5) What factors motivate immigrants to leave the province?

Our evidence also indicated a slight decline in immigrants’ entry income since 1981.The above suggestion for a research study on immigrant credential recognition may also help explain this decline. At the same time, a research study should also investigate how long an immigrant takes to catch up with the labour market performance of a non-immigrant in Nova Scotia, which could shed further light on the labour market integration of immigrants.

The census data used in this study to analyze the earnings of skilled and business immigrants do not distinguish between entry classes of immigrants. In other words, these immigrants may have arrived in Canada under other non-economic classes, such as the family or refugee class, but opened a business or begun to practice as professionals. We had to resort to these data, which do shed light on the economic contributions of immigrants in the province, due to time limitations. The Longitudinal Immigration Data Base (IMDB) does permit analysis of the incomes of different entry classes of immigrants. These data may be analyzed to provide a more direct economic outcome of immigration policy.

Business immigration is a potentially potent source of economic growth in the province because it brings entrepreneurship, capital, innovation and expertise to the provincial economy. As with skilled workers, most business immigrants come from the United Kingdom and the United States, followed by Asian countries. Moreover, business immigrants are significantly engaged in the service sector and not in manufacturing. In services, they seem to be concentrated in health services, the retail trade and business services. Data also show that the capital invested by self-employed immigrant entrepreneurs has also been in these sectors. These activities are relatively low value-added activities compared to manufacturing. After a brief period in the early 1990s, when

business immigration was the primary source of immigrants to Nova Scotia, the number of business immigrants has been very low and now accounts for under 6 percent of immigrants destined for Nova Scotia, a value not much higher than it was in 1981. Recent trends, shown in this study and in an APEC study, suggest that the province has fared poorly in attracting and retaining business immigrants, which might reflect barriers new business immigrants face in setting up a business in an unfamiliar environment. A research study should identify those barriers. As in the case of skilled immigrants, data on out-migration of business class immigrants from the province could also not be obtained for this study due to time limitations. However, these data could be analyzed in a separate research study. We also need more detailed and reliable data on the amounts invested by business immigrants, the types of industries / businesses they invest in, the performance of their businesses, the industries/sectors in which immigrant entrepreneurs tend to do better, and the job creation of immigrant-run businesses in the province. This information will be useful in arriving at the overall conclusion about the role of business immigration in the Nova Scotian economy.

International students offer a potential pool of highly skilled immigrants and also help fulfill the enrolment deficiency created by the decline in the university-aged population in the province. To attract more international students, it may be fruitful to focus more on students from the countries that have existing communities in Atlantic Canada. The United States and the United Kingdom have been permanently among the top five immigrant source countries in the province, and a large immigrant population from those countries lives here. Due to their proximity to Nova Scotia, it may be easier to attract more students from these two countries. Some other factors that should be strongly promoted in these two countries about university education in Atlantic Canada can include highly competitive tuition fees, the high quality of education, and proximity to the two countries. Another dominant immigrant community in the region is those immigrants who came from the Middle East. Members of this community can help attract students from their countries of former residence, especially as most Middle Eastern countries do not permit children of expatriates to attend local universities. Nova Scotia universities can also target those students.

Today, most international students, as well as immigrants to Nova Scotia, come from China. As the population of Chinese immigrants grows, it is expected that more Chinese students will be attracted to this province. Strengthening English as a Second Language (ESL) programs and industry-specific language training as part of the university curriculum will also attract students from China and other non-English speaking countries.

At present, it takes about ten years for an international student (from the time of entry into Canada) to acquire landed immigrant status. The federal government can review the rules to help ease their landing process and the procedures for obtaining a work permit after graduation. More provincial governments could also allow universities to participate in the PNP in collaboration with private employers.

A comparative analysis of socioeconomic and demographic profiles of immigrants in Nova Scotia and in other provinces would also help determine whether the patterns and changes observed in this study are unique to this province or are common to Canada as a whole.

Finally, it is essential that the trends reported in this study be updated using the 2006 census data as soon as they are available. These latest data will help in the evaluation of recent policy initiatives that have been adopted in the province to attract and retain immigrants.

APPENDIX

A Note on Estimates of Population Published by Statistics Canada

Charts 1 and 2 of this report are based on population estimates published by the Demography Division of Statistics Canada. These data are different from the more accurate census data used elsewhere in the report.

To explain the discrepancy, the following information is reproduced from Statistics Canada's web site (August 12, 2007) under the title Estimates of Population by Age and Sex for Canada, Provinces and Territories

The estimates program of Statistics Canada provides annual estimates of population by age and sex for Canada, provinces and territories. Demographic estimates can be categorized as either intercensal or postcensal. Intercensal estimates correspond to estimates between censuses, whereas postcensal estimates correspond to non-census years after the most recent census. In producing up-to-date figures, postcensal estimates are obviously more timely, albeit less accurate. The production of intercensal estimates involves the retrospective adjustment of past figures with the availability of new census data.

Estimation

Postcensal estimates are obtained by adding the number of births, subtracting the number of deaths and by adding or subtracting the net impact of international and internal migration on the most recent census population adjusted for census coverage error (i.e. both census undercount and census overcount). The inclusion of non-permanent residents in the target population dictates that net change in the size of this subpopulation in Canada be added or subtracted from the base period.

Quality evaluation

The Census is considered to be a reliable benchmark for validating the postcensal population estimates. The error of closure (the difference between the postcensal estimate and the enumerated census population, adjusted for net undercoverage) provides a measure of accuracy for the postcensal estimates. It should be noted that it represents errors that have accumulated over the five-year period since the previous census.

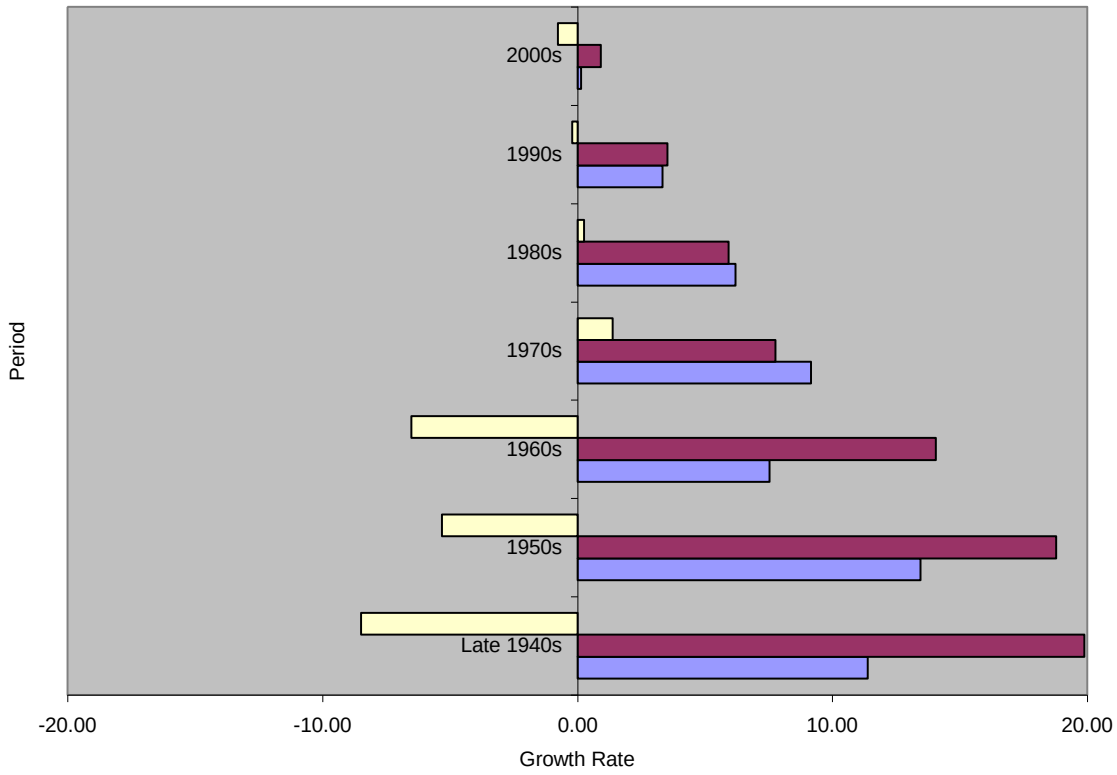
At the national level, the differences are small (0.32% for 1986, 0.15% for 1991 and 0.61% for 1996). At the provincial/territorial level, however, the differences are understandably larger, since the provincial/territorial estimates are affected by errors in estimating interprovincial migration, in addition to the other components which affect the total population estimates. Nevertheless, excluding the territories, the provincial postcensal estimates fall within 1% of the census counts with few exceptions (Newfoundland and Labrador in 1986, 1991 and 1996; Alberta in 1986; Prince Edward Island and Saskatchewan in 1991; and Quebec in 1996.

Data accuracy

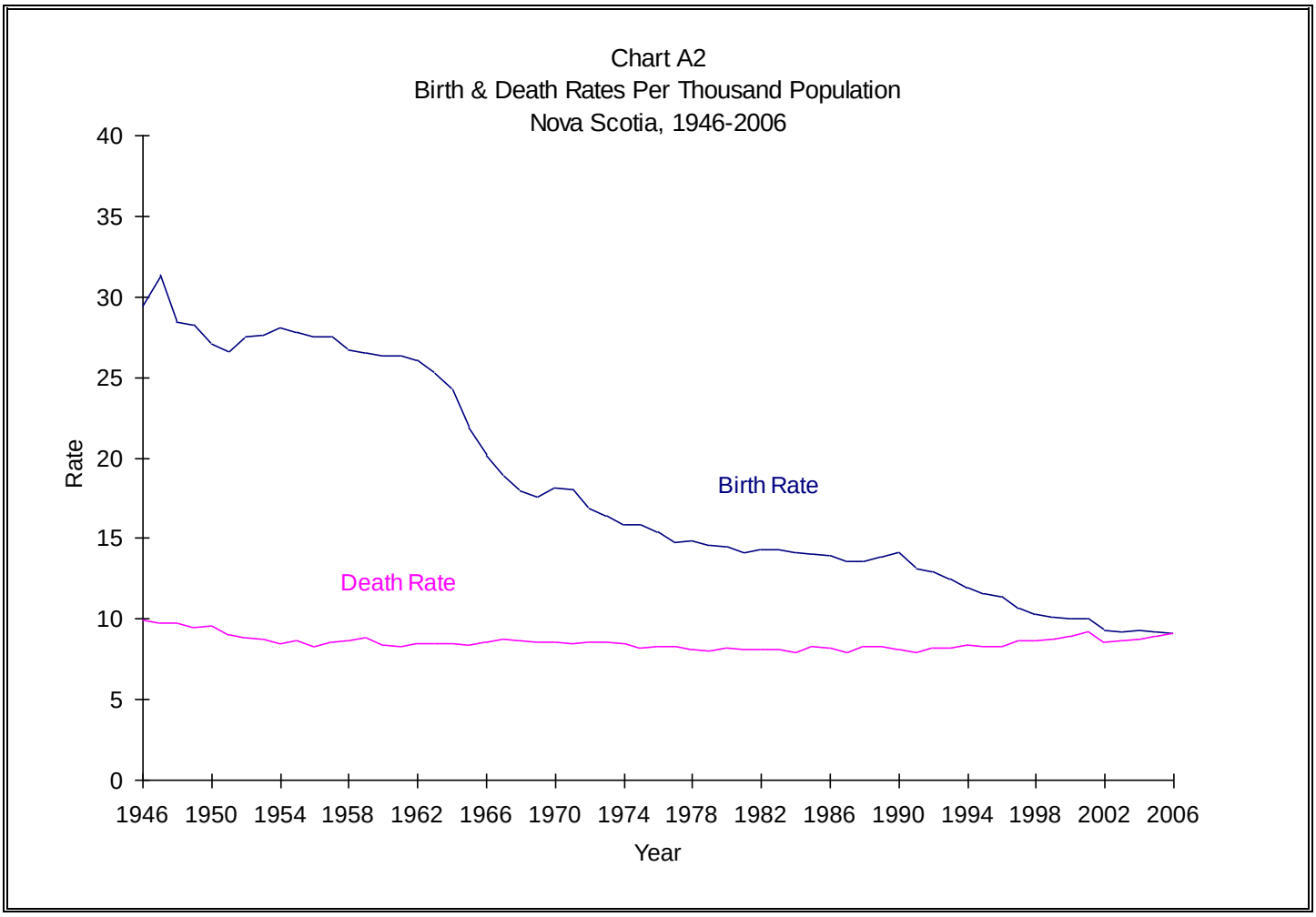
The estimates of population by age and sex contain certain inaccuracies stemming from (1) errors in corrections for net census undercoverage and (2) imperfections in other data sources and the methods used to estimate the components. Errors due to estimation methodologies and data sources other than censuses are difficult to quantify but not insignificant. The more detailed the breakdown of the data, the larger the inaccuracy coefficient becomes. The component totals

contain a certain amount of initial error, and the methodology used to classify them by sex and age, produces additional error in the figures at each stage. Nevertheless, the components can be divided into two categories according to the quality of their data sources: births, deaths, immigration and non-permanent residents, for which the sources of final data may be considered very good; emigrants, returning emigrants, net temporary emigrants and interprovincial migration for which the methods used may be a more substantial source of error. Lastly, the size of the error due to component estimation may vary by province, sex, and age and errors in some components (births and emigration) may have a greater impact on a given age group or sex. Intercensal estimates contain the same types of errors as postcensal estimates, as well as errors resulting from the way in which the errors present at the end of the period were distributed, that is, on the basis of the time elapsed since the reference Census.

Chart A1
Components of Population Growth Rate in Nova Scotia in the Post World War Period
(Per Thousand Population)



Source: Statistics Canada, CANSIM tables.



Source: Statistics Canada, CANSIM tables.

Table A1: Immigrants (principal applicants) destined for Nova Scotia in the defined period by year, category, education level, language ability (English, French or both), age, gender, occupation, 1981-2002.

Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Age group and gender																									
Under 15																									
Male	8	7	6	2	4	5	1	6	4	5	8	7	5	13	7	4	4	7	6	10	14	16	5	6	9
Female	2	7	5	3	4	6	5	5	4	6	7	15	16	19	11	18	13	19	33	32	39	38	55	52	62
15-24																									
Male	51	67	51	60	61	95	74	91	85	110	55	65	40	40	20	36	39	29	46	46	34	42	43	39	28
Female	56	67	48	56	67	52	74	63	62	65	51	63	72	57	39	49	38	40	35	45	51	45	46	52	55
25-44																									
Male	264	236	170	221	217	264	294	292	340	347	323	368	454	486	577	568	498	349	353	318	370	318	281	365	369
Female	142	112	101	119	103	121	135	127	161	148	138	207	230	173	169	200	188	142	164	185	221	157	217	224	249
45-64																									
Male	97	87	44	57	53	62	50	56	70	70	82	182	258	301	285	234	188	139	93	89	80	88	90	126	148
Female	51	37	26	37	42	34	34	29	43	52	43	55	58	50	47	49	45	19	36	40	55	56	39	61	61
65 and up																									
Male	37	52	36	30	24	19	37	32	27	25	25	37	31	15	21	14	15	11	9	13	16	7	15	19	19
Female	45	49	36	54	43	36	34	38	37	34	24	39	39	29	17	13	18	7	15	12	16	15	19	11	2
TOTAL	753	721	523	639	618	694	738	739	833	862	756	1038	1203	1183	1193	1185	1046	762	790	790	896	782	810	955	1002
Major Occupations*																									
High skilled	213	169	143	116	121	144	156	180	175	160	129	132	157	203	271	286	313	212	224	232	283	252	232	290	384
Medium skilled	182	186	86	116	115	121	158	169	203	176	102	109	165	120	139	141	117	94	91	83	109	60	65	85	75
Low skilled	97	93	54	101	111	108	99	116	152	139	85	74	78	54	45	53	43	34	38	45	37	26	25	22	21
Total to labour force	492	448	283	333	347	373	413	465	530	475	316	315	400	377	455	480	473	340	353	360	429	338	322	397	480
Total not to labour force	259	269	237	301	265	314	306	252	285	354	369	527	448	385	313	339	332	286	350	349	420	421	469	533	500
TOTAL	751	717	520	634	612	687	719	717	815	829	685	842	848	762	768	819	805	626	703	709	849	759	791	930	980

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Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Education																									
No Education	16	17	16	20	20	20	20	16	18	24	30	26	24	28	20	22	17	21	48	52	65	68	76	74	72
High school or less	311	297	192	256	261	277	284	290	345	368	301	359	397	370	332	356	303	205	193	215	205	186	159	177	187
Post secondary	160	184	96	128	120	130	147	145	189	164	127	198	235	181	173	223	160	149	180	132	139	117	129	156	177
Some University	45	43	44	53	56	73	64	65	51	59	67	81	89	62	63	48	53	43	32	44	58	56	50	53	29
University Degree	221	179	174	181	161	194	222	223	230	247	231	374	458	542	605	536	513	344	337	347	429	355	396	495	537
TOTAL	753	720	522	638	618	694	737	739	833	862	756	1038	1203	1183	1193	1185	1046	762	790	790	896	782	810	955	1002
Language ability																									
English only	559	517	401	439	421	462	487	505	521	547	493	779	857	859	886	864	787	527	549	542	613	529	554	674	735
French only	7	7	5	13	3	10	14	10	21	23	24	20	22	8	12	13	11	9	9	10	5	5	8	12	5
Both English and French	41	52	31	35	33	63	49	36	47	41	31	33	52	48	50	45	28	32	35	29	50	34	60	111	117
Neither English nor French	144	145	86	152	161	159	188	188	243	251	207	206	272	268	244	263	220	194	197	209	228	214	188	158	145
TOTAL	751	721	523	639	618	694	738	739	832	862	755	1038	1203	1183	1192	1185	1046	762	790	790	896	782	810	955	1002
Category																									
Family	339	302	280	315	274	294	299	239	326	307	267	457	424	320	237	264	247	211	290	294	380	304	362	455	427
Skilled Workers	282	238	132	162	181	197	222	260	253	242	179	181	194	244	356	369	398	274	261	246	308	251	215	279	302
Business	26	25	18	15	14	19	32	28	27	53	88	261	479	507	497	433	297	173	122	111	72	43	33	53	30
Refugees	52	80	56	94	110	138	140	164	195	198	137	87	93	104	98	102	97	98	115	136	132	118	85	103	95
Other immigrants	54	76	37	53	39	46	45	48	32	62	85	52	13	8	5	17	7	6	2	3	4	66	115	65	148
TOTAL	753	721	523	639	618	694	738	739	833	862	756	1038	1203	1183	1193	1185	1046	762	790	790	896	782	810	955	1002
County																									
Annapolis	12	7	5	0	0	0	0	1	8	8	9	6	11	7	7	9	9	9	10	7	7	6	9	11	14
Antigonish	15	15	9	8	9	12	10	10	13	9	3	4	11	5	5	5	4	3	4	7	6	11	12	15	11
Cape Breton	30	41	21	14	13	19	19	18	35	25	17	27	32	18	11	10	16	11	12	15	18	17	19	26	20
Colchester	15	21	8	7	6	16	9	8	15	16	17	18	19	24	18	25	12	10	14	15	19	11	24	18	17
Cumberland	9	3	3	0	0	0	0	0	4	5	1	5	3	2	3	5	3	3	4	5	2	1	2	2	5
Digby	12	6	4	0	0	0	0	0	4	7	7	10	7	6	5	6	3	3	3	2	4	2	6	3	5

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Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Guysborough	0	0	1	0	0	0	0	0	1	0	0	4	5	4	6	5	2	3	1	3	2	2	3	2	2
Halifax	435	385	312	421	428	464	534	509	597	645	580	776	941	987	1010	1001	900	627	622	607	691	587	560	684	714
Hants	2	3	1	0	0	0	0	0	11	9	7	10	9	6	5	5	10	0	4	5	4	4	11	5	14
Inverness	0	0	0	0	0	0	0	0	6	0	4	4	6	1	4	5	7	5	5	4	5	9	4	8	8
Kings	26	29	15	9	1	4	6	4	26	23	39	35	25	31	25	24	19	21	21	33	39	28	30	39	49
Lunenberg	16	16	6	0	0	0	1	1	23	16	16	25	22	24	15	20	14	15	23	21	16	15	26	26	24
Pictou	28	15	12	5	9	12	4	6	15	26	9	20	15	5	8	12	8	7	9	9	7	18	17	9	14
Queens	3	6	1	0	0	0	0	0	2	5	1	1	5	4	2	5	1	0	1	4	1	1	6	2	3
Richmond	1	1	2	0	0	0	0	0	5	3	2	4	3	1	0	3	2	1	2	11	3	7	7	4	2
Shelburne	3	4	4	0	0	0	0	0	5	5	5	10	8	5	2	6	0	4	3	4	7	5	1	4	5
Victoria	0	0	0	0	0	0	0	0	2	4	2	6	1	3	4	3	2	1	3	0	3	1	1	3	4
Yarmouth	19	12	10	10	10	10	6	10	18	14	9	20	12	8	12	8	4	8	9	9	11	7	9	12	9
Other	127	157	109	165	142	157	149	172	43	42	28	53	68	42	51	28	30	31	40	29	51	50	63	82	82
TOTAL	753	721	523	639	618	694	738	739	833	862	756	1038	1203	1183	1193	1185	1046	762	790	790	896	782	810	955	1002

Source: PRDS (microdata, CIC)

Table A2: Immigrants (Principal Applicants and Dependents) Destined for Nova Scotia in the Defined Period by Year and Geographic Distribution in Nova Scotia, 1981-2005																										
Year	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Total NS	1163	964	668	750	763	852	963	1003	1402	1502	1454	2266	2887	3380	3480	3175	2785	1984	1532	1572	1634	1349	1381	1644	1808
ANNAPOLIS COUNTY	25	10	8	0	14	0	0	1	24	19	13	13	22	13	13	16	11	17	14	11	11	12	14	14	27
ANTIGONISH COUNTY	26	30	20	8	0	18	10	13	17	16	5	4	19	6	12	8	5	8	10	10	13	14	15	27	14
CAPE BRETON COUNTY	59	71	37	22	23	29	34	30	56	51	25	43	53	30	15	22	22	21	21	20	26	25	26	35	35
COLCHESTER COUNTY	36	35	10	16	6	26	19	16	28	25	27	39	40	33	35	35	15	30	21	18	31	12	42	22	24
CUMBERLAND COUNTY	14	3	3	0	0	0	0	0	5	5	1	9	3	2	4	5	3	3	4	12	2	1	2	2	7
DIGBY COUNTY	22	7	5	0	0	0	0	0	5	12	18	12	18	11	5	15	8	4	3	2	7	2	7	6	6
GUYSBOROUGH COUNTY	0	0	1	0	0	0	0	0	4	1	0	8	7	6	9	12	5	8	2	3	2	4	3	3	3
HALIFAX COUNTY	792	687	482	661	680	738	872	911	1043	1193	1217	1932	2564	3148	3259	2906	2623	1790	1322	1330	1394	1135	1105	1351	1478
HANTS COUNTY	2	3	3	0	0	0	0	0	21	15	10	11	10	6	12	7	17	0	11	8	7	7	17	6	25
INVERNESS COUNTY	0	0	0	0	0	0	0	0	12	0	9	5	9	1	7	9	11	10	11	8	5	9	5	10	11
KINGS COUNTY	42	46	36	13	1	5	13	10	47	41	57	56	31	45	39	40	25	30	31	48	67	46	37	60	86
LUNENBURG COUNTY	29	22	18	0	0	0	1	1	36	25	26	44	41	42	26	33	20	20	43	42	18	20	45	46	35
PICTOU COUNTY	69	23	24	9	21	21	6	6	46	50	18	29	27	5	10	25	8	14	14	15	8	30	27	10	17
QUEENS COUNTY	7	6	3	0	0	0	0	0	3	9	2	1	6	4	4	7	1	0	1	7	5	3	8	3	3
RICHMOND COUNTY	2	2	2	0	0	0	0	0	5	4	3	4	4	1	1	10	5	1	2	22	4	13	13	12	2
SHELBURNE COUNTY	4	5	5	0	0	0	0	0	13	5	8	19	10	6	2	11	0	5	3	5	7	6	1	6	8
VICTORIA COUNTY	0	0	0	0	0	0	0	0	2	9	3	7	1	6	8	3	2	4	3	0	3	2	4	7	9
YARMOUTH COUNTY	34	14	11	21	18	15	8	15	35	22	12	30	22	15	19	11	4	19	16	11	24	8	10	24	18
OTHER ATLANTIC PROVINCES																									
Total NB	827	610	434	399	395	471	447	498	859	823	665	718	667	590	618	688	640	694	628	740	753	654	593	705	1014
TOTAL PEI	80	103	82	72	74	107	114	101	140	162	143	124	143	147	146	140	144	129	131	186	129	88	143	279	288
TOTAL NL	418	323	227	209	250	217	315	319	423	513	608	745	732	495	555	563	409	390	416	405	384	391	328	539	469
ALL ATLANTIC PROVINCES	2488	2000	1411	1430	1482	1647	1839	1921	2824	3000	2870	3853	4429	4612	4799	4566	3978	3197	2707	2903	2900	2482	2445	3167	3579
CANADA TOTAL	120623	112091	83629	80218	78683	93531	144188	152848	189141	214527	229726	251001	251696	220291	210357	222400	215478	173217	189401	226868	249918	228101	220170	234500	260714

Source: PRDS (microdata, CIC)

Table A3: Educational Distribution of Recent Nova Scotia Immigrants (Principal Applicants, 25+ years old) and Non-immigrants (25+ years old), 1981-2001 (%)

Education Level	Immigrants arriving 1981-85	**Non-immigrants In 1986**	Immigrants arriving 1986-90	**Non-Immigrants In 1991**	Immigrants arriving 1991-95	**Non-Immigrants In 1996**	Immigrants arriving 1996-00	**Non-Immigrants In 2001**
High School or Less	43.61	57.65	39.83	52.02	36.00	47.28	31.85	43.05
Post secondary, No University	20.84	25.43	20.54	29.13	16.62	30.67	18.80	32.48
Some University	6.30	8.18	6.96	8.62	6.32	9.61	4.60	10.12
University Degree	29.08	8.75	32.68	10.23	41.06	12.44	44.74	14.35
TOTAL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: 1) PRDS - microdata (CIC) for immigrants. Variables used: "prov", "ed_qua", "fage". With University Degrees = bachelor's degree + Some Post-Grad. Education (No Degree) + master's degree + doctorate.
2) The Canadian population censuses (PUMF, 1986-2001, individual files) for non-immigrants. Variables used: "province or territories", "immigrant status indicator", "age", "highest level of schooling". For 1986 Census, "place of birth" is used instead of "immigrant status indicator" because the latter is not available to determine whether the individual is non-immigrant. With University Degree = with bachelor or 1st professional degree + with certificate or diploma above a BA + with master's degree + earned doctorate.

Table A4: Nova Scotia Labour Market Statistics: Participation Rate, Unemployment Rate, Employment Income, and Government Transfer Payment as Percentage of Total Income for Immigrants and Non-Immigrants, 1981-2001

Census Year	1981	1986	1991	1996	2001
Labour Force Participation Rate (%)					
Non-immigrants	60.7	62.4	64.5	62.2	62.7
All immigrants	58.9	60.9	61.6	57.4	57.1
Recent immigrants[1]	63.8	63.7	69.8	62	60.8
Unemployment Rate (%)					
Non-immigrants	13.6	15.9	15.2	15.7	12.7
All immigrants	8.8	11.2	11.4	10.2	8.8
Recent immigrants[1]	11.9	16.5	17.4	18.6	18.7
Employment Income ($)					
Non-immigrants (1)	11833	17049	21875	22707	26808
All immigrants (2)	15734	21949	28923	26057	30944
Recent immigrants (3)[1]	9634	12698	N.A.	17870	20863
Ratio (3 / 1)	0.81	0.74	N.A.	0.79	0.78
Government Transfers (% of total income)					
Non-immigrants	13.4	16.0	16.3	19.3	16.6
All immigrants	10.1	9.5	12.4	17.4	16.2
Recent immigrants[1]	5.4	5.5	N.A.	12.3	8.2

[1]Recent immigrants include those arriving within five years of the census year. They include those who arrived in the census year and in the prior year, so their entire year's performance is not reflected.

Source and notes:

1) Labour force participation and unemployment rates are based on "Historical Labour Force Activity (Based on the 1971 Concepts) (8), Immigrant Status and Period of Immigration (10), Age Groups (18), Marital Status (7) and Sex (3) for Population 15 Years and Over, for Canada, Provinces and Territories, 1971, 1981 to 2001 Censuses - 20% Sample Data". Ottawa: Statistics Canada, March 25, 2003. Census of Canada. Catalogue number 97F0012XCB2001003. The rest of the data are based on special tabulations performed by the authors based on population censuses (PUMF, 1981-2001, individual files).

2) All income data are averages. Data on recent immigrants include those who arrived in the census year and in the year prior to the census year so do not reflect their entire year's performance. Employment income is equal to the sum of wages and salaries and self-employment income and is reported only for those who were employed.

3) The following variables were used to obtain government transfers as a percentage of total income: For the 1991, 1996 and 2001 censuses, "total income" and "total government transfer payments" were available directly. For the 1986 census, "total income", "Old age security pension & guaranteed income supplement (OASGIP)", "Canada, Quebec pension plan benefits (CQPPBP)", "Family allowances (FAMALP)", "Federal child tax credits (CHDCRP), "Unemployment insurance benefits (UICBNP)" and "Other government transfer payments (GOVTIP)" were added. For the 1981 census, "total income", "Oas, gis and cpp/qpp benefits (OASGI)", "Unemployment insurance benefits (UICBN)" and "Other government transfer payments (GOVTI)" were added.

4) All labour force and income information are for the year prior to the census year.

5) The 1991 PUMF does not does not provide separate data on recent arrivals.

TABLE A5

Human Resources Development Canada / Développement des ressources humaines Canada

NATIONAL OCCUPATIONAL CLASSIFICATION MATRIX 2001

The National Occupational Classification (NOC) matrix provides an overview of the classification at the minor group level. It also illustrates how the NOC is accessible on the basis of skill level, skill type, or on a combination of these two criteria. The four skill level categories are listed on the left side of the matrix, while nine skill type categories are listed across the top. The tenth skill type category (0 Management Occupations) is organized across the top of the matrix. In most cases, each matrix cell consists of a major group.

	1 BUSINESS, FINANCE AND ADMINISTRATION OCCUPATIONS	2 NATURAL AND APPLIED SCIENCES AND RELATED OCCUPATIONS	3 HEALTH OCCUPATIONS	4 OCCUPATIONS IN SOCIAL SCIENCE, EDUCATION, GOVERNMENT SERVICE AND RELIGION	5 OCCUPATIONS IN ART, CULTURE, RECREATION AND SPORT	6 SALES AND SERVICE OCCUPATIONS	7 TRADES, TRANSPORT AND EQUIPMENT OPERATORS AND RELATED OCCUPATIONS	8 OCCUPATIONS UNIQUE TO PRIMARY INDUSTRY	9 OCCUPATIONS UNIQUE TO PROCESSING, MANUFACTURING AND UTILITIES
0 MANAGEMENT OCCUPATIONS					**Major Group 00** SENIOR MANAGEMENT OCCUPATIONS 001 Legislators and Senior Management				
	011 Administrative Services Managers 012 Managers in Financial and Business Services 013 Managers in Communication (Except Broadcasting)	021 Managers in Engineering, Architecture, Science and Information Systems	031 Managers in Health, Education, Social and Community Services 041 Managers in Public Administration		051 Managers in Art, Culture, Recreation and Sport	061 Sales, Marketing and Advertising Managers 062 Managers in Retail Trade 063 Managers in Food Service and Accommodation 064 Managers in Protective Service 065 Managers in Other Services	071 Managers in Construction and Transportation 072 Facility Operation and Maintenance Managers	081 Managers in Primary Production (Except Agriculture)	091 Managers in Manufacturing and Utilities
SKILL LEVEL A Occupations usually require university education.	**Major Group 11** PROFESSIONAL OCCUPATIONS IN BUSINESS AND FINANCE 111 Auditors, Accountants and Investment Professionals 112 Human Resources and Business Service Professionals	**Major Group 21** PROFESSIONAL OCCUPATIONS IN NATURAL AND APPLIED SCIENCES 211 Physical Science Professionals 212 Life Science Professionals 213 Civil, Mechanical, Electrical and Chemical Engineers 214 Other Engineers 215 Architects, Urban Planners and Land Surveyors 216 Mathematicians, Statisticians and Actuaries 217 Computer and Information Systems Professionals	**Major Group 31** PROFESSIONAL OCCUPATIONS IN HEALTH 311 Physicians, Dentists and Veterinarians 312 Optometrists, Chiropractors and Other Health Diagnosing and Treating Professionals 313 Pharmacists, Dietitians and Nutritionists 314 Therapy and Assessment Professionals 315 Nurse Supervisors and Registered Nurses	**Major Group 41** PROFESSIONAL OCCUPATIONS IN SOCIAL SCIENCE, EDUCATION, GOVERNMENT SERVICES AND RELIGION 411 Judges, Lawyers and Quebec Notaries 412 University Professors and Assistants 413 College and Other Vocational Instructors 414 Secondary and Elementary School Teachers and Educational Counsellors 415 Psychologists, Social Workers, Counsellors, Clergy and Probation Officers 416 Policy and Program Officers, Researchers and Consultants	**Major Group 51** PROFESSIONAL OCCUPATIONS IN ART AND CULTURE 511 Librarians, Archivists, Conservators and Curators 512 Writing, Translating and Public Relations Professionals 513 Creative and Performing Artists				
SKILL LEVEL B Occupations usually require college education or apprenticeship training.	**Major Group 12** SKILLED ADMINISTRATIVE AND BUSINESS OCCUPATIONS 121 Clerical Supervisors 122 Administrative and Regulatory Occupations 123 Finance and Insurance Administrative Occupations 124 Secretaries, Recorders and Transcriptionists	**Major Group 22** TECHNICAL OCCUPATIONS RELATED TO NATURAL AND APPLIED SCIENCES 221 Technical Occupations in Physical Sciences 222 Technical Occupations in Life Sciences 223 Technical Occupations in Civil, Mechanical and Industrial Engineering 224 Technical Occupations in Electronics and Electrical Engineering 225 Technical Occupations in Architecture, Drafting, Surveying and Mapping 226 Other Technical Inspectors and Regulatory Officers 227 Transportation Officers and Controllers 228 Technical Occupations in Computer and Information Systems	**Major Group 32** TECHNICAL AND SKILLED OCCUPATIONS IN HEALTH 321 Medical Technologists and Technicians (Except Dental Health) 322 Technical Occupations in Dental Health Care 323 Other Technical Occupations in Health Care (Except Dental)	**Major Group 42** PARAPROFESSIONAL OCCUPATIONS IN LAW, SOCIAL SERVICES, EDUCATION AND RELIGION 421 Paralegals, Social Services Workers and Occupations in Education and Religion, n.e.c.	**Major Group 52** TECHNICAL AND SKILLED OCCUPATIONS IN ART, CULTURE, RECREATION AND SPORT 521 Technical Occupations in Libraries, Archives, Museums and Art Galleries 522 Photographers, Graphic Arts Technicians and Technical and Co-ordinating Occupations in Motion Pictures, Broadcasting and the Performing Arts 523 Announcers and Other Performers 524 Creative Designers and Craftpersons 525 Athletes, Coaches, Referees and Related Occupations	**Major Group 62** SKILLED SALES AND SERVICE OCCUPATIONS 621 Sales and Service Supervisors 622 Technical Sales Specialists, Wholesale Trade 623 Insurance and Real Estate Sales Occupations and Buyers 624 Chefs and Cooks 625 Butchers and Bakers 626 Police Officers and Firefighters 627 Technical Occupations in Personal Service	**Major Group 72/73** TRADES AND SKILLED TRANSPORT AND EQUIPMENT OPERATORS 721 Contractors and Supervisors, Trades and Related Workers 722 Supervisors, Railway and Motor Transportation Occupations 723 Machinists and Related Occupations 724 Electrical Trades and Telecommunication Occupations 725 Plumbers, Pipefitters and Gas Fitters 726 Metal Forming, Shaping and Erecting Trades 727 Carpenters and Cabinetmakers 728 Masonry and Plastering Trades 729 Other Construction Trades 731 Machinery and Transportation Equipment Mechanics (Except Motor Vehicle) 732 Automotive Service Technicians 733 Other Mechanics 734 Upholsterers, Tailors, Shoe Repairers, Jewellers and Related Occupations 735 Stationary Engineers and Power Station and System Operators 736 Train Crew Operating Occupations 737 Crane Operators, Drillers and Blasters 738 Printing Press Operators, Commercial Divers and Other Trades and Related Occupations, n.e.c.	**Major Group 82** SKILLED OCCUPATIONS IN PRIMARY INDUSTRY 821 Supervisors, Logging and Forestry 822 Supervisors, Mining, Oil and Gas 823 Underground Miners, Oil and Gas Drillers and Related Workers 824 Logging Machinery Operators 825 Contractors, Operators and Supervisors in Agriculture, Horticulture and Aquaculture 826 Fishing Vessel Masters and Skippers and Fishermen/women	**Major Group 92** PROCESSING, MANUFACTURING AND UTILITIES SUPERVISORS AND SKILLED OPERATORS 921 Supervisors, Processing Occupations 922 Supervisors, Assembly and Fabrication 923 Central Control and Process Operators in Manufacturing and Processing
SKILL LEVEL C Occupations usually require secondary school and/or occupation-specific training.	**Major Group 14** CLERICAL OCCUPATIONS 141 Clerical Occupations, General Office Skills 142 Office Equipment Operators 143 Finance and Insurance Clerks 144 Administrative Support Clerks 145 Library, Correspondence and Related Information Clerks 146 Mail and Message Distribution Occupations 147 Recording, Scheduling and Distributing Occupations		**Major Group 34** ASSISTING OCCUPATIONS IN SUPPORT OF HEALTH SERVICES 341 Assisting Occupations in Support of Health Services			**Major Group 64** INTERMEDIATE SALES AND SERVICE OCCUPATIONS 641 Sales Representatives, Wholesale Trade 642 Retail Salespersons and Sales Clerks 643 Occupations in Travel and Accommodation 644 Tour and Recreational Guides and Casino Occupations 645 Occupations in Food and Beverage Service 646 Other Occupations in Protective Service 647 Childcare and Home Support Workers 648 Other Occupations in Personal Service	**Major Group 74** INTERMEDIATE OCCUPATIONS IN TRANSPORT, EQUIPMENT OPERATION, INSTALLATION AND MAINTENANCE 741 Motor Vehicle and Transit Drivers 742 Heavy Equipment Operators 743 Other Transport Equipment Operators and Related Workers 744 Other Installers, Repairers and Servicers 745 Longshore Workers and Material Handlers	**Major Group 84** INTERMEDIATE OCCUPATIONS IN PRIMARY INDUSTRY 841 Mine Service Workers and Operators in Oil and Gas Drilling 842 Logging and Forestry Workers 843 Agriculture and Horticulture Workers 844 Other Fishing and Trapping Occupations	**Major Group 94/95** PROCESSING AND MANUFACTURING MACHINE OPERATORS AND ASSEMBLERS 941 Machine Operators and Related Workers in Metal and Mineral Products Processing 942 Machine Operators and Related Workers in Chemical, Plastic and Rubber Processing 943 Machine Operators and Related Workers in Pulp and Paper Production and Wood Processing 944 Machine Operators and Related Workers in Textile Processing 945 Machine Operators and Related Workers in Fabric, Fur and Leather Products Manufacturing 946 Machine Operators and Related Workers in Food, Beverage and Tobacco Processing 947 Printing Machine Operators and Related Occupations 948 Mechanical, Electrical and Electronics Assemblers 949 Other Assembly and Related Occupations 951 Machining, Metalworking, Woodworking and Related Machine Operators
SKILL LEVEL D On-the-job training is usually provided for occupations.						**Major Group 66** ELEMENTAL SALES AND SERVICE OCCUPATIONS 661 Cashiers 662 Other Sales and Related Occupations 664 Food Counter Attendants, Kitchen Helpers and Related Occupations 665 Security Guards and Related Occupations 666 Cleaners 667 Other Occupations in Travel, Accommodation, Amusement and Recreation 668 Other Elemental Service Occupations	**Major Group 76** TRADES HELPERS, CONSTRUCTION LABOURERS AND RELATED OCCUPATIONS 761 Trades Helpers and Labourers 762 Public Works and Other Labourers, n.e.c.	**Major Group 86** LABOURERS IN PRIMARY INDUSTRY 861 Primary Production Labourers	**Major Group 96** LABOURERS IN PROCESSING, MANUFACTURING AND UTILITIES 961 Labourers in Processing, Manufacturing and Utilities

LM-279-05-01 MP53-25-3-2001

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Table A6: Definitions of skill levels in Canadian labour markets

Skill level (alpha)	Skill level (digit)	Nature of education/training
A Occupations usually require university degree	1	• University degree at the bachelor's or master's level.
B Occupations usually require college education or apprenticeship training	2 or 3	• Two to three years of post-secondary education at a community college, institute of technology or CEGEP; or • Two to five years of apprenticeship training; or • Three to four years of secondary school and more than two years of on-the-job training, specialized training courses or specific work experience. • Occupations with supervisory responsibilities and occupations with significant health and safety responsibilities, such as those of firefighters, police officers and registered nursing assistants are all assigned skill level B.
C Occupations usually require secondary school and/or occupation-specific training	4 or 5	• One to four years of secondary school education; or • Up to two years of on-the-job training, specialized training courses or specific work experience.
D On-the-job training is usually provided for occupations	6	• Short work demonstration or on-the-job training; or • No formal educational requirements.

Source: Human Resources and Skills Development Canada.