Q. Produce the report “Demographic Change: Newfoundland and Labrador Issues and Implications”, April 2002 referred to in footnote 3 on page 10 of the Cost of Capital Evidence.

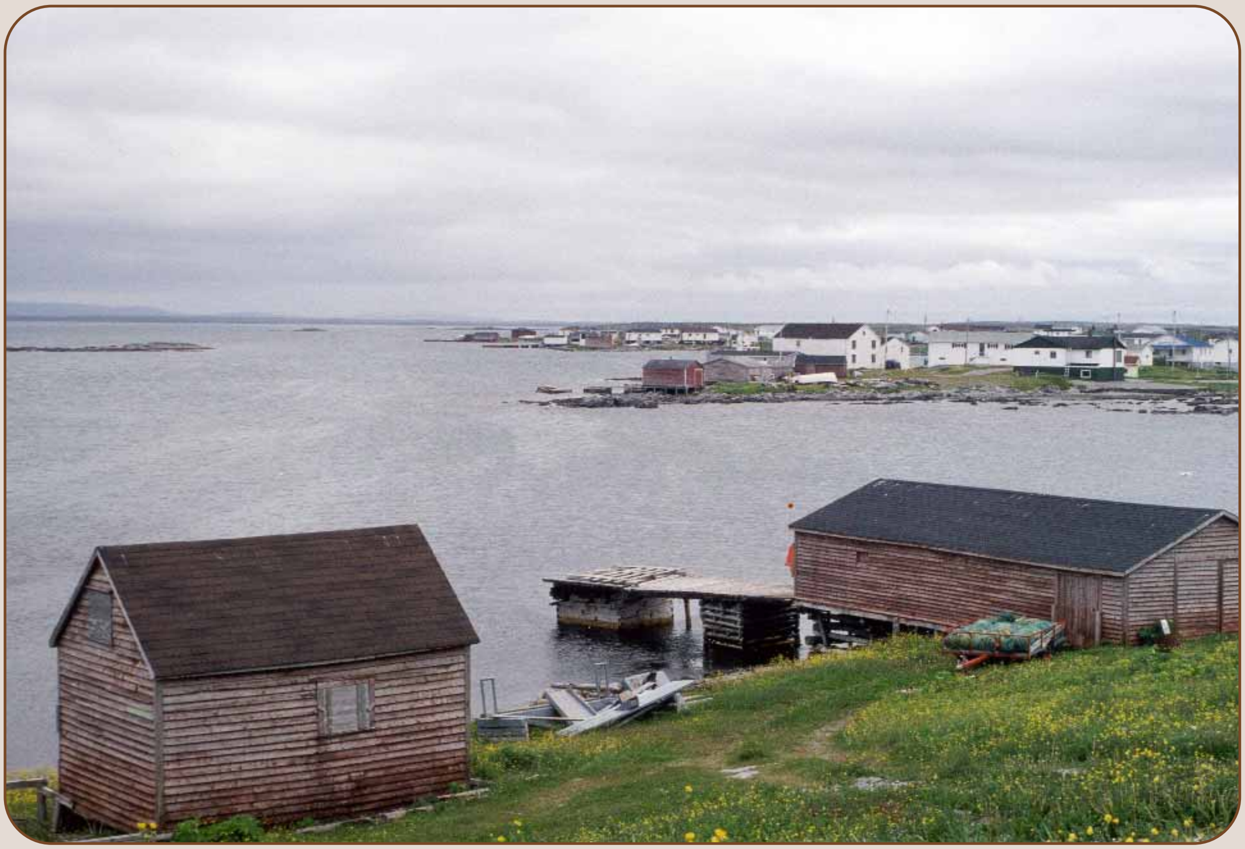
A. Please see attached.

IC-113 NLH Attachment

Demographic Change

Newfoundland & Labrador Issues and Implications

April 2002



GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR

Demographic Change: Newfoundland and Labrador Issues and Implications was prepared by the Economics and Statistics Branch, Department of Finance. Note: Data used throughout this report are as of March 2002.

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Cover photo: Fishing stages - Cook’s Harbour.
Photo Credit: Beverley A. Carter

Photo: Child feeding ducks at Bowring Park
Photo Credit: Trudy Finlay

Photo: Grand Concourse walking trail.
Photo Credit: Grand Concourse

Photo: Senior with young child.
Photo Credit: Trudy Finlay

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Executive Summary

Photo: School children utilizing computer lab. Photo Credit: Department of Education.

Beginning in 1993-94, following a decade of little or no change in total population, Newfoundland and Labrador entered a period of continuous population decline precipitated by record high levels of net out-migration and continually declining births. The population has aged rapidly over the past decade or two and significant shifts in the regional distribution of population have occurred. These trends are expected to continue with aging and inter-regional population shifts altering the expectations, demands and needs of the province's population for goods and services in the years to come.

Because demographics is one of the key leading indicators, or predictors, of future demands for government and business services, it is important that demographic changes be carefully considered in Government's strategic planning and decision making processes. Aging is a case in point since it is well understood that values, priorities, behaviours and needs change with age. Demands on the education sector vary systematically with age. They are greatest, at least in terms of participation rates, between 5-18 years of age and thereafter generally diminish. Demands on the health care sector, on the other hand, generally increase with age, while those on the social welfare system may also rise somewhat with age. Given strong regional variations in demographic trends, an understanding of and ability to quantify the regional implications are important as well. This will be particularly important in the case of policy decisions about constructing social and economic infrastructure, including decisions about the type of infrastructure and its location. Aging and regional population shifts are long-term trends and a thorough understanding of them, and an ability to accurately predict their impacts on the future age structure of the population, is important to the smooth and efficient management of government programs and services.

Looking forward, it appears highly probable that total population and births will continue to decline, deaths will continue to increase, the population will continue to age (younger age groups decline in number while older age groups increase) and regional shifts towards urban centres will continue. In addition, less young people entering the labour force combined with large groups of baby boomers retiring point to potential shrinking of labour supply.

The impacts of demographic trends are multi-faceted but they generally mean less demand for government services from younger age groups (i.e., education, youth corrections, etc.), but more demand for services from older age groups (i.e., health care, seniors housing, etc.). Continued urbanization will mean shrinking population in many rural areas, particularly in younger age groups, and this will mean a more dramatic drop off in demand for youth oriented public services in these areas.

Government will need to carefully monitor demographic developments and ensure emerging trends, particularly as they relate to aging and inter-regional population shifts, are fully reflected in departmental strategic planning initiatives. In particular, demographic projections should be an important factor in planning infrastructure development. Labour market training needs to be increasingly linked to human resource requirements of industries that are likely to face labour shortages in the future. If government would like to try and slow the decline in young age groups it could consider child/family friendly policies designed to enhance the childbearing/raising environment or policies designed to encourage more young people to stay and/or move to this province.

Foreward

In 1994, the Department of Finance's Economics and Statistics Branch began to scrutinize demographic trends that were already becoming of some concern. In that year out-migration rose significantly and by 1996 it was beginning to significantly reduce the province's population and contribute to rapid aging. Since changes in this area have the potential to profoundly affect the Province's future, the Economics and Statistics Branch, as the central agency responsible for meeting the broad macroeconomic and statistical requirements of government and its agencies, initiated a formal, comprehensive study of the issue in 1999.

The objectives of the study were to determine the underlying causes of demographic change and to anticipate future demographic changes. Specifically, the study would provide an understanding of the extent to which demographic trends could affect the future size, age structure and regional distribution of the population and assess how and what demographic change might mean for government strategic planning and policy development.

As part of the Demographic Study process an interdepartmental committee was established to provide specialized knowledge of key programs and policies that could be affected by demographic trends. Consultations were held with, or offered to, all Government Departments and Agencies, while the following departments/agencies were represented on the Committee and participated directly in the Study:

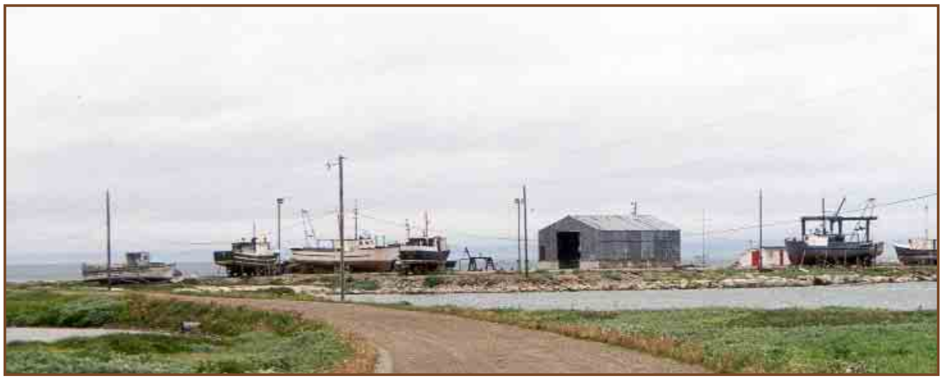


Photo: Boats in for repair at drydock - Flower's Cove. Photo Credit: Beverley A. Carter

- Department of Finance (lead)
- Human Resources and Employment
- Department of Health
- Department of Development and Rural Renewal
- Department of Education
- Municipal and Provincial Affairs
- Department of Justice
- Newfoundland and Labrador Housing

As work progressed, it was determined that a four phased approach would be needed:

Phase I: entailed developing the necessary statistical information, and the technical tools and models needed to analyze vast amounts of demographic information; an in depth analysis of historical demographic trends in the province; developing preliminary population projections (total province) to provide an indication of the likely direction of future demographic trends; and developing an understanding of some of the broader provincial/regional issues and implications for government of demographic change. This phase also sought to develop a departmental perspective on issues and implications of demographic change for government, incorporating information from the Part 1 report.

Phase II: Produced a set of three long-term economic/demographic projections for the province (see Appendix 1 for provincial population projections) with input from a *Panel of Experts* in the areas of economics and demographics.

Phase III: Involved a process of regional consultations, carried out in conjunction with the Atlantic Canada Opportunities Agency. Intelligence gathered from meetings with the SSP Boards was used in the formulation of regional demographic projections.

Phase IV: Focused on synthesizing and summarizing the results of the first three phases, and producing this final, summary report, *Demographic Change: Issues and Implications*.

Introduction

Beginning in 1993-94, following a decade of little or no change in total population, Newfoundland and Labrador entered a period of continuous population decline precipitated by record high levels of net out-migration and continually declining births. The population has aged rapidly over the past decade or two and significant shifts in the regional distribution of population have occurred. These trends are expected to continue with aging and inter-regional population shifts altering the expectations, demands and needs of the province's population for goods and services in the years to come.

Photo: Abandoned Church in Cook's Harbour
Photo Credit: Beverley A. Carter

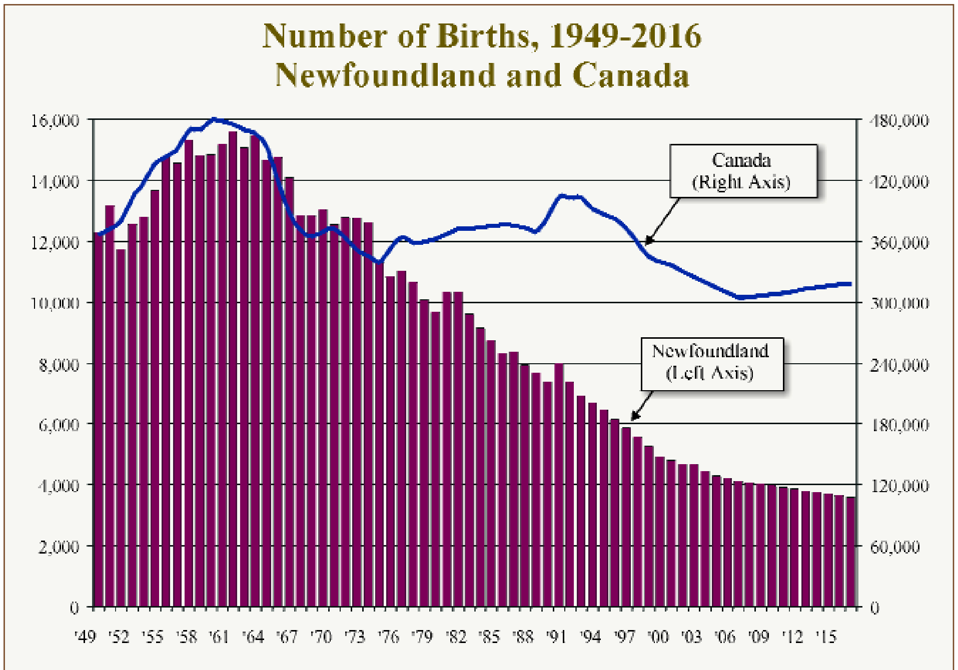
Photo: Fishing gear on wharf - Cook's Harbour
Photo Credit: Beverley A. Carter

Demographic Trends: Review and Outlook

Fertility

The roots of Newfoundland's current demographic situation began with the high fertility rates and births that characterized most of the industrialized world during the 20-year period that followed World War II. The *baby boom* period ended midway through the 1960s as female baby boomers began pursuing higher education and entering the workforce at rates previously not witnessed. This combined with the introduction of birth control pills pushed fertility rates down in most of the industrialized world and ushered in the *baby bust* period during which the number of births fell rapidly and natural population growth began to slow. Newfoundland and Labrador was no exception—its baby boom was also followed by a baby bust.

Fertility rates and births leveled off in Canada, similar to other industrialized countries, around the late-1970s to early-1980s as the largest group of baby boomers began to enter their child-bearing years. This gave rise to a mini baby boom, or *baby echo*, during the late-1980s and early-1990s. Unlike the previous two periods, Newfoundland and Labrador did not follow the national trend this time. Births continued to decline and there was no *baby echo* in this province, largely for two reasons: (1) The size of the Province's baby boom generation, who would later produce the baby echo, had been reduced by out-migration; and (2) fertility rates continued to decline well into the 1990s. Since the mid-1970s, Newfoundland and Labrador has gone from having the highest birth rates in the Country to the lowest and unlike the rest of Canada, the number of births have declined continuously since the *baby boom* ended in the mid-1960s. Currently the province's birth rate is 1.3 children per child-bearing age woman on average, well below the 2.1 rate required to just maintain population in the absence of out-migration.



Source: Economics and Statistics Branch, Department of Finance

Fertility rates are a complex product of economic, social and cultural factors; they change slowly over time and are not easily influenced by isolated policy interventions in the absence of a broad family friendly economic and fiscal environment. Thus fertility levels are not expected to change significantly over the next 15 years. Low fertility rates are compounded by an aging population and increasingly fewer females of child-bearing age. Consequently births are expected to continue falling, even if fertility rates remain at current levels or increase modestly.

Mortality

Historically, the province's death rate has been lower than Canada's because the population has generally been younger. Population aging over the past twenty years has been more rapid than in Canada, however, and this has increased the number of deaths per capita to the point where in 2001 it exceeded Canada's; 8.7 deaths per thousand in Newfoundland and Labrador versus 7.3 in Canada.

Even though deaths per thousand have increased over the past 30 years, age specific mortality rates, as reflected in increased life expectancy, have generally declined. Thus the people of Newfoundland and Labrador are living longer on average, similar to the rest of Canada and other industrialized areas of the world. A number of factors have contributed to gains in the province's life expectancy including improved health care services, better nutritional awareness and practices, and higher average incomes.

Life expectancy is expected to continue rising in line with historical trends in the coming years, but as more and more people move into the older age groups the number of deaths will continue to rise.

Natural Population Change

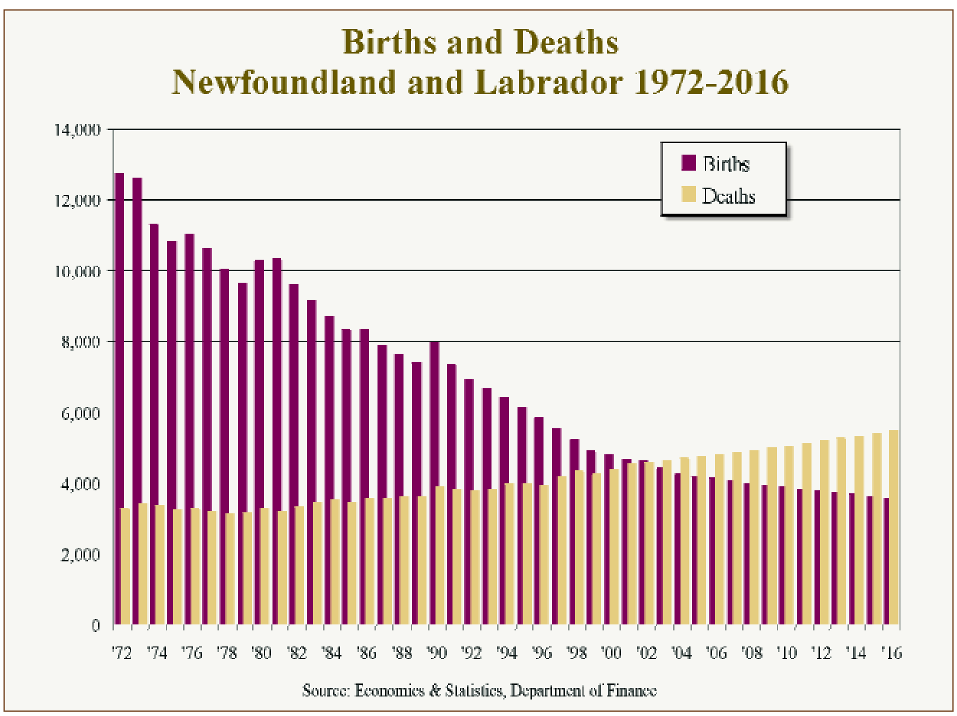
Historically, Newfoundland and Labrador has recorded many more births than deaths because of its relatively young population and high fertility rates. The change in the size of the population that results from this difference between births and deaths is commonly referred to as the natural population change. It was the high rate of positive natural population change that provided a cushion against net out-migration in the past. This situation has changed quite significantly in the last decade or two, however, with the province recording large declines in the rate of natural population change—the result of increasingly fewer births and aging-related increases in deaths. The declines have been such that in 2000-01 births were only marginally higher than deaths, and in the not to distant future deaths are expected to equal or outnumber births for the first time in the province's history.

Negative natural population changes are expected to continue in the future as births decline further and deaths gradually increase.

Migration

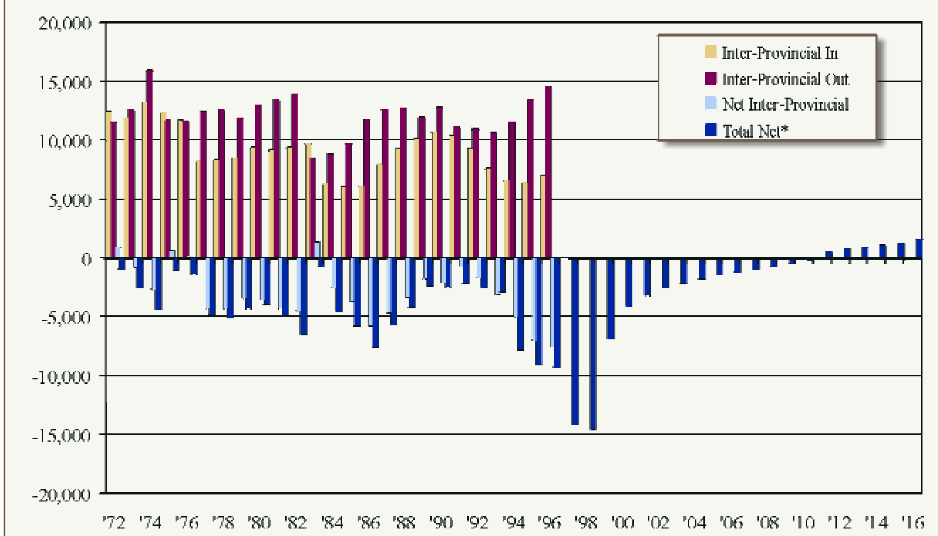
In addition to having the lowest birth rates in the country, Newfoundland and Labrador has also typically had the highest rates of net out-migration, with young people leaving their home communities to further their education and/or to seek employment. Labour force attrition has also worked against the province, demographically speaking. From the 1970s to the early 1990s, there have generally been two or three times as many 15-24 year old potential new entrants to the labour force as there have been 55-64 year old potential retirees from the labour force. The large number of new labour force entrants relative to attrition, together with rising female labour force participation rates at all ages, over the past 25 years generated tremendous growth in labour supply. The economy was not able to generate enough new jobs to accommodate growth in labour supply. Out-migration to other provinces during this period was mainly related to relatively high unemployment rates since incentives to population retention provided by generous UI/EI benefits and job growth, including government job creation, were unable to keep up with rapid growth in labour supply.

Under the Department of Finance's medium population projection, net out-migration from the Province remains near the 2000-01 level over the next five years. Beyond 2006, net out-migration trends to zero and net in-migration begins to occur after 2010 as economic and labour market conditions continue to improve. It should be noted that this is



a long term projection which will likely be subject to some year-to-year volatility. Over the next 10 to 15 years, as the economy continues to grow and more and more baby boomers leave the labour force, tight labour markets will begin emerging and this will reduce out-migration from the province and/or attract more in-migrants to the province. However, the historical trend of young people migrating from rural areas to urban areas to further their education is expected to continue. Continued youth out-migration from rural areas together with low fertility levels means that most rural areas will age more rapidly than urban areas and the share of total population in rural areas is expected to continue declining. This will likely result in further shifts in the regional distribution of the province's population and, in the long run, has the potential to cause severe shortages of labour in some rural areas in the absence of increases in relative wage rates.

In, Out, and Net-Migration
Newfoundland and Labrador 1972-2016



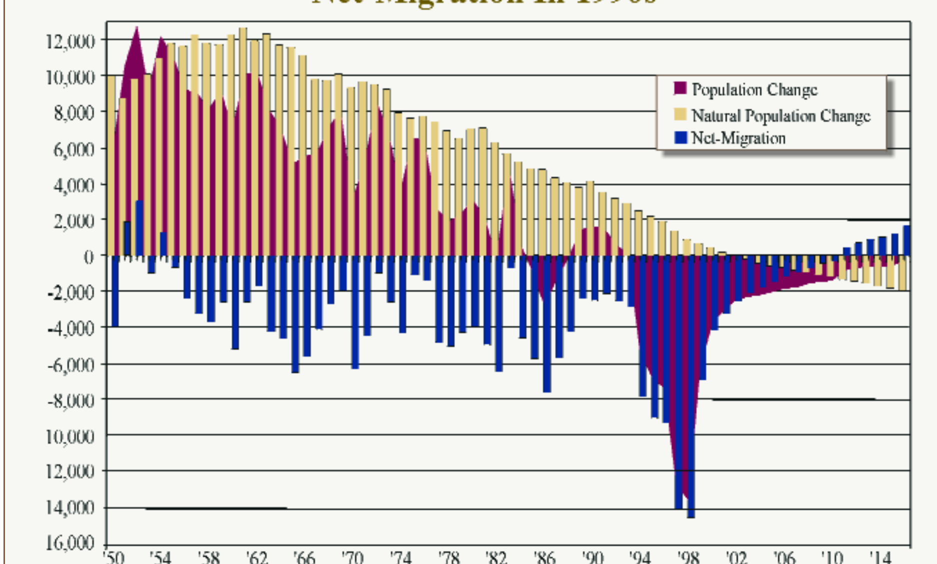
*Includes net-international migration and residual deviation
Source: Statistics Canada; and Economics & Statistics, Department of Finance

Population Decline

Historically the impacts of out-migration on population growth had been offset by a relatively high level of natural population growth. In the 1990s, however, the continual decline in births since the mid-1960s, together with severe economic shocks resulting from the fisheries crisis, public sector restraint and changes to the UI/EI program took their toll. A sharp increase in out-migration combined with low natural population growth resulted in significant population declines. Population losses and net out-migration both peaked in 1997/98. However, net out-migration declined sharply in 1998/99 and 1999/2000 as economic conditions improved and adjustments related to fishery and UI/EI restructuring were nearing completion. As out-migration declined, population losses also slowed, but births continued to decline and deaths continued to increase reflecting continuing low fertility and aging.

Negative natural population change and continued net out-migration in the short to medium term means that population will, in all likelihood fluctuate but probably continue to show modest declines over the next 15 years.

Natural Population Could Not Offset
Net-Migration In 1990s



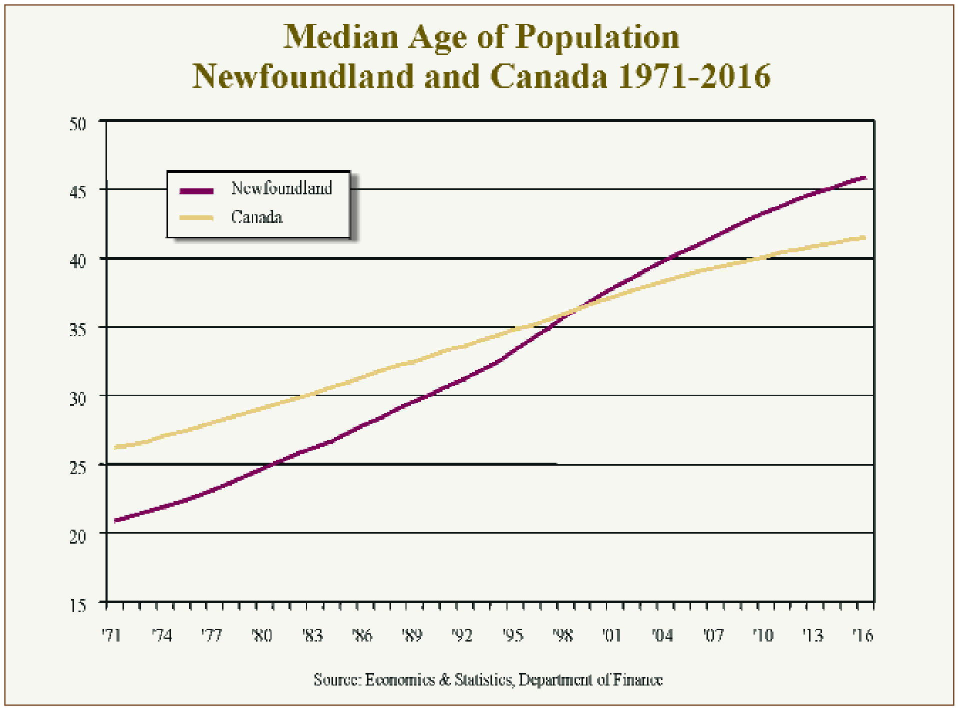
Source: Economics & Statistics, Department of Finance

Aging

As a result of falling births and out-migration, generally of young people, Newfoundland's population has aged much more rapidly than Canada's over the last 30 years. The province's median age has gone from five years lower than Canada's in 1971 to slightly higher than Canada's in 2001; 37.9 years in this province compared to 37.2 in Canada.

The province's age structure in 1971 was such that close to half the population was under 20 years of age while those 50 and over accounted for only about 17% of the total population. In other words, the under-20 population was nearly triple the size of the over-50 group in 1971. By 2001, the shares were about even, in the 25% range. Aging has been one of the most significant features of demographic change in Newfoundland and Labrador.

All Canadian provinces are faced with an aging population and the challenges this presents for social and other program areas. In Newfoundland and Labrador, however, the aging phenomenon has been exacerbated by relatively low and declining births; high rates of out-migration among young people in their most fertile child-bearing age range; and extremely low fertility rates. The impact on age structure has been to age the province's population much more rapidly than any other province in the country over the last 30 years. The share of the population 50 plus is expected to increase sharply while the proportion under 20 will decline further.



The median age in the province is expected to increase from 37.9 years of age in 2001 to roughly 46 in 2016. Rapid aging is one of the most important demographic changes confronting the province because of its potentially significant implications for Government.

The aging trend is expected to be more pronounced in rural areas of the province as youth out-migration from these areas continue. For example in Economic Zone 10 on the province's Southwest Coast, the median age is roughly 41 years, almost 4 years higher than for the province as a whole, and is expected to increase to the mid fifties by 2016. Many of the participants in the regional consultations echoed concerns about their ability to meet the needs of the rising number of seniors in many rural communities. Thus, the impacts of aging will be even more severe in areas such as this.

Regional Demographic Change

It is widely known and accepted that the demographic geography of the province is changing. Population has declined in most regions of the province since 1993, but the pattern of decline has been uneven, with fishery/EI-dependent rural regions disproportionately impacted. As can be seen in the following table, with the exception of one zone in Labrador, all areas experienced population losses over the 1991 to 2001 period. Areas more heavily dependent on the groundfish fishery on the Northern Peninsula, the Northeast Coast, the South Coast and areas of the Avalon Peninsula outside the St. John's Census Metropolitan Area experienced the largest population losses.

Most of the observed regional variation has been related to patterns of migration rather than natural population changes. Age-adjusted birth and death rates have shown little variation across regions, with the notable exception of birth rates in Labrador communities with large Aboriginal populations. On the other hand, net-migration rates, particularly among youth, have generally varied considerably between rural and urban regions of the province, and indeed even between different communities within the same region.

During the Demographic Study process a series of regional consultations were carried out with the seven SSP Boards. Delegates at the consultations represented the views of people in each region. Each consultation included youth representatives as well as a cross-section of representatives from various industries and social sectors. Some of the views expressed by the participants are presented in the box below. These views were the key input to the development of three sets of regional population projections; the Medium (or most likely) Scenario is shown in the table below.

The urbanization trends of the past decade are expected to continue in the future as economic growth prospects are concentrated in or near urban regions. Continued migration of youth from rural to urban areas together with in-migration from other provinces to meet growing labour demands should result in relative population stability in some urban areas. In most rural areas, however, stagnant economic growth combined with negative natural population change and continued youth out-migration will make it difficult for these areas to maintain population at current levels. This impact will vary, however, depending on the level and mix of local economic activity and the proximity of the community to regional service centres.

Projected Population Change by Economic Zone

1991 - 2016 MEDIUM SCENARIO

	1991 to 2001* Change		2001 to 2016 Change	
Economic Zone	**Actual**	**Percent**	**Actual**	**Percent**
1 - Inukshuk	+149	+4.8%	+384	+11.9%
2 - Hyron	-1,977	-15.9%	+201	+1.9%
3 - Central Labrador	-499	-4.9%	+360	+3.8%
4 - Southeastern Aurora	-272	-8.9%	-289	-10.4%
5 - Labrador Straits	-245	-10.9%	+152	+7.6%
6 - Nordic	-2,824	-21.5%	-1,400	-13.6%
7 - Red Ochre	-2,152	-17.8%	-311	-3.1%
8 - Humber	-5,038	-10.9%	-1,418	-3.4%
9 - Long Range	-4,159	-14.9%	-2,276	-9.6%
10 - Marine & Mountain	-2,858	-22.4%	-1,955	-19.7%
11 - Emerald	-3,950	-19.6%	-2,107	-13.0%
12 - Exploits Valley	-3,750	-12.0%	+489	+1.8%
13 - Coast of Bays	-1,609	-15.7%	-489	-5.7%
14 - Kittiwake	-8,445	-14.5%	-5,120	-10.3%
15 - Discovery	-4,885	-13.8%	-3,247	-10.6%
16 - Schooner	-4,913	-17.0%	-4,511	-18.8%
17 - Mariner	-4,245	-9.3%	-7,864	-18.9%
18 - Avalon Gateway	-2,223	-20.3%	-1,864	-21.4%
19 - Capital Coast	-2,238	-1.2%	+9,835	+5.4%
20 - Irish Loop	-2,205	-19.8%	+624	+7.0%
Total Province	**-58,338**	**-10.1%**	**-20,806**	**-4.0%**

* Estimates for 1997 to 2001 have been adjusted by the Department of Finance to take into account the 2001 Census Data.
Economics and Statistics Branch, Department of Finance, Government of Newfoundland and Labrador

Summary of Regional Consultations

- Generally speaking, the views of the consultation delegates reinforced the view that population decline and youth out-migration during the 1990s were highest in fishery dependent regions, and were linked to the economic and social impacts caused by the groundfish moratorium and UI/EI restructuring.
- Views of rural and urban participants differed, with urban representatives being much more positive about the future.
- Concerns about shortages of professionals (i.e. doctors, teachers, etc.) were expressed, as well as about availability of young people and seniors homes to provide services for the growing number of seniors.
- Many participants felt that a lot of the jobs created by retiring workers would be replaced, for the most part, by new technology, thus young people would tend to not migrate back to rural areas.
- Many youth participants expressed the view that high debt loads were forcing young, educated people to leave the province to find higher paying jobs necessary to pay off post-secondary debts. It was also felt that this same factor would prevent well educated young people from returning to rural areas in the future. Youth participants also expressed concerns about not getting enough career counseling in school, especially concerning local opportunities.
- Participants expressed concerns over the ability of the growing number of multi-grade classroom schools to offer the necessary range of high school courses.
- There was a dichotomy of views regarding future migration trends. Generally, most areas expect past migration trends to continue at a somewhat reduced pace, but several areas such as the Northern Peninsula, the Grand Falls-Windsor area and the St. John's CMA expect out-migration to reverse and in-migration to begin in the future as the regional economy improve.

Although modest population decline is projected for the province as a whole, (see Appendix 1 for high, medium and low scenarios for the total province) variation in demographic trends among regions of the province is expected to continue in the future, with consequences for future regional differences in births and aging patterns. An example of the potential for future regional variation in population change is provided in the table. Such trends have important long term implications for the provision of government services, particularly those with significant infrastructure needs.

Population Statistics and Outlook, Newfoundland & Labrador

Selected Years 1986-2016, Medium Scenario

(See Appendix 1 for all three scenarios and individual years)

Year	Population	Births	Deaths	Natural Population Change	Inter-provincial Migration In	Inter-provincial Migration Out	Inter-provincial Migration Net	Total Net-Migration*	Population Change
1986	576,489	8,346	3,575	4,771	6,045	11,742	-5,697	-7,579	-2,808
...									
1991	579,525	7,354	3,816	3,538	10,346	11,057	-711	-2,077	1,461
...									
1996	560,584	5,846	3,954	1,892	7,005	14,441	-7,436	-9,262	-7,370
...									
2001	521,200	4,679	4,531	148	N.A.	N.A.	N.A.	-3,179	-3,031
...									
2006	510,321	4,122	4,815	-693	N.A.	N.A.	N.A.	-1,155	-1,848
...									
2011	503,280	3,843	5,120	-1,277	N.A.	N.A.	N.A.	445	-832
...									
2016	500,394	3,574	5,498	-1,924	N.A.	N.A.	N.A.	1,605	-319

* Includes net-international migration and residual deviation.

Source: Statistics Canada; and Economics & Statistics, Department of Finance

Implications

The impacts of demographic trends will be felt across a broad spectrum of Newfoundland and Labrador society. The impacts will range from the implications of shifting spending patterns for the business sector to rising demand for health care services and falling and/or shifting demand for education services in the public sector to the changing nature of many communities as fewer children are born and young people continue to leave rural areas. Fewer young people entering the labour force population while more people are retiring will probably result in slower growth in labour supply which, depending on whether in-migration fills the gap, could have implications for where and how businesses invest and for long-term economic growth.

Business Sector Impacts

It is a well documented fact that people's values, priorities and spending patterns change with age and as Newfoundland's population continues to age it could have important implications for businesses. Preferences for culture, leisure and recreation activities and facilities change with age in well documented ways. Older people are more likely to frequent theaters, museums, walking trails and golfing facilities than younger people, and less likely to frequent stadiums, swimming pools and theme parks. Older people, with well-established and well-equipped homes and "empty nesters" generally have more money, freedom and time to spend on travel and leisure activities. They also may be inclined to spend less on new housing, perhaps opting for condominiums or town-houses.

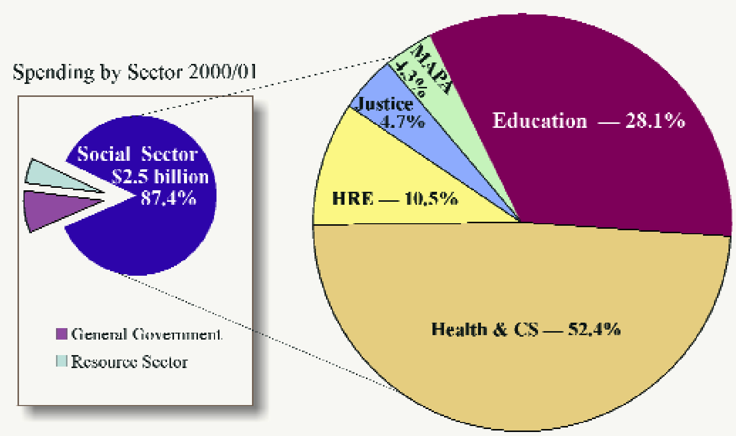
Regional population shifts are likely to have implications for the business sector and property owners in general. For the business sector, there could be downward pressure on commercial property values and profits as population declines in certain areas, especially for those parts of the business sector with a strong regional presence. For residential property owners, declining population in some areas could reduce resale opportunities and put downward pressure on the value of existing homes within the affected regions.

Fewer young people entering the labour force and establishing households will probably result in less growth in the demand for single family homes and apartment style housing for young people. Fewer new household formations could result in less of a need for new furniture and other household equipment and appliances. More older people, however, would likely have positive implications for the home renovation business, 50 plus type housing and rental housing geared towards older age groups.

Labour Market Impacts

Aging of the labour force will be occurring in Newfoundland, Canada and the United States over the next 15 years putting additional pressures on labour markets and probably bidding up wage rates. The pull of higher wages in

Social Programs Command Most of the Provincial Government's Discretionary Spending



Notes: (1) Figures are taken from the *Province of Newfoundland 2001 Budget Estimates*, year ending 31 March 2001. (2) Figures are calculated using net expenditures. (i.e., gross expenditures less related revenues) and excluding *Consolidated Fund Services* ($560.2 million in 2000/01). (3) MAPA figure includes NLHC. (4) HRE figures include Labour. (5) Education figures include Youth Services and Post-Secondary Education.

other parts of Canada and the United States, especially for skilled workers, will become an increasingly important factor affecting migration to and from this province in the years to come. The basic message is that if the province is to keep and attract the workers (both skilled and unskilled) that will be needed in the future, then wages and tax regimes will have to be competitive with the rest of North America.

Shrinking of the core labour force population (20 to 55 years old) could result in labour shortages. Labour shortages and increasing wage costs will be a problem in occupations with a large percentage of workers eligible to retire over the next 10 to 15 years, (i.e., baby boomers). With fewer young people, all occupations will find it more difficult to attract new workers without significant wage incentives and this may be even more difficult for occupations which require large numbers of new recruits. Higher wage costs could also be a major problem for certain entry level or low-skill service occupations which have traditionally relied on a plentiful supply of young people who have yet to assume family responsibilities or cultivate career aspirations.

A smaller and older labour force could affect long-run economic growth potential, but slower labour force growth is expected to be compensated for on several fronts. First, age related labour shortages are expected to be partly mitigated by a lowering of current high youth unemployment and net-migration rates. Secondly, higher wages and stronger labour demand will probably entice more older workers to stay in the labour force longer. Thirdly, higher productivity growth brought on by labour shortages and technological advances will also help offset the loss of core labour force population, allowing the economy to continue growing.

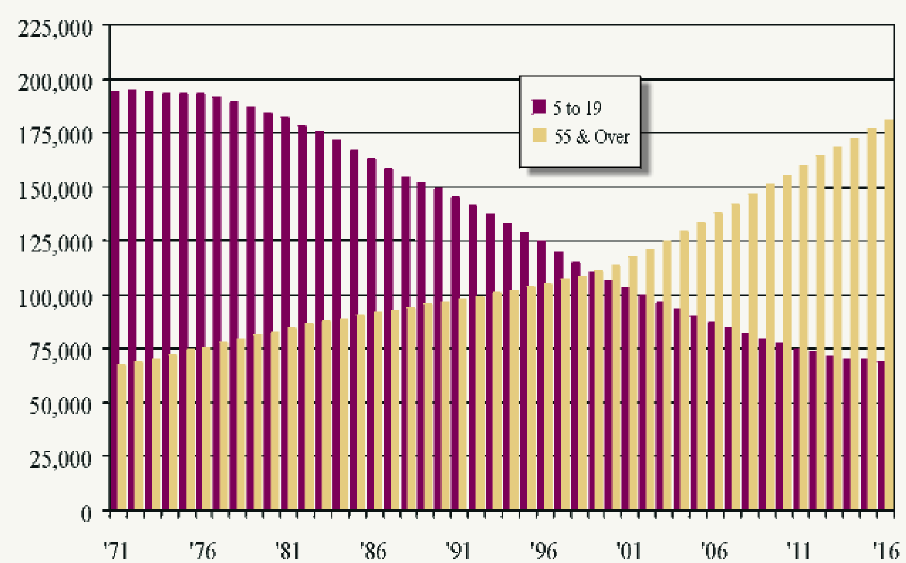
Public Sector Impacts

Government departments and agencies are primarily involved in the delivery of services to people and to communities. Therefore, most are impacted by changes in the absolute numbers of people they serve. But they are also impacted by changes in the age structure of the population. The need for public service varies by age group, gender, education level, labour market participation, income, family size, and health status. The demand for services of most social sector departments and agencies are tied to all these factors. The need for services for communities are also affected by demographic change.

Demographic trends are expected to significantly alter the expectations, demands and needs of the province's population for public services in the years to come. Population aging can be expected to have implications for the provision of public goods and services in the social sector which accounted for nearly 90% of the Provincial Government's 2000/01 total expenditures net of Consolidated Fund Services. Over 80% of the Social Sector budget was consumed by health and education.

The aging of the population and major increases in older age groups will have significant implications for the demands for health care services. The province's low birth rate will have a

Aging Trend Significant For Some of the Social Sectors



Source: Economics & Statistics, Department of Finance major impact on the school age population, and hence education policy. Increased urbanization and other inter-regional shifts in population have implications for the future financial viability of many communities and is also important for planning regional allocations of health and educational facilities and other public infrastructure and services. A declining number of young people could see the number of crimes against people and property decline, and other crimes associated with older age groups increase. Social support requirements in general—for instance, social housing, family services, public pensions, income support, and so on—can be expected to change as the population ages. In addition, the province has a very large land mass and a small widely distributed population. This distribution makes it difficult to reap the benefit of lower per capita costs associated with economies of scale. This issue has serious implications for providing services in rural areas.

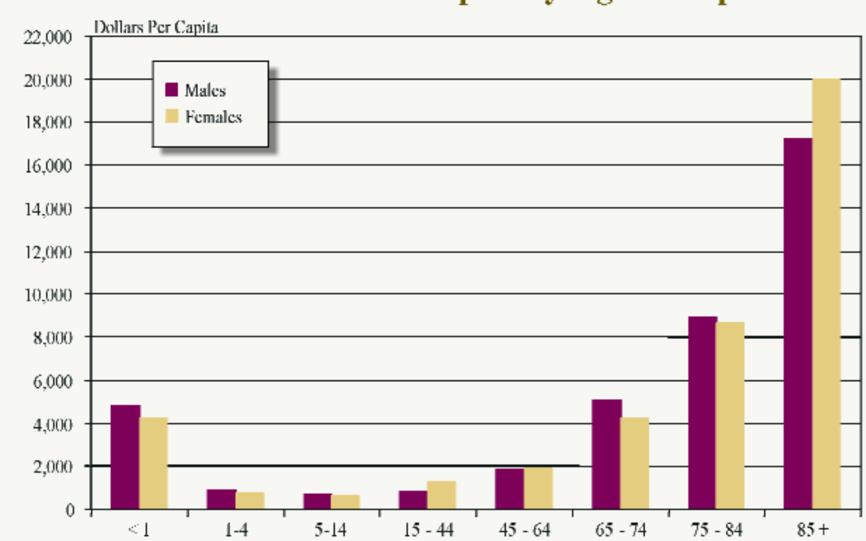
Demographic change will not just affect the expenditure side of the Provincial Government's budget. Revenues from the federal government have already been affected by demographic change, in particular, by population decline, which has had a significant impact on the Province's overall Equalization and CHST entitlement. Population losses have been caused by high levels of net out-migration combined with ongoing declines in the natural increase, two trends which are likely to be affected by aging over the long-term. Since migration rates are generally much lower for older age groups, aging should reduce net out-migration. At the same time it will cause continued declines in the natural increase since it will reduce births and increase deaths. Should the net effect of aging, as well as other factors that could influence migration, result in long-term population decline as projected, then per capita based fiscal transfer payments from the federal government, as per existing formulas, would continue to be negatively affected.

Aging could also affect Government's own source personal income tax revenue more directly through the workings of the current tax system. Since most pension plans provide for only partial or fractional replacement of earned income, the income tax base could become relatively smaller as the number of retirement age people increases compared to the working age population. In addition, the progressive nature of the income tax system will cause marginal tax rates to decline automatically if income declines upon retirement. On the other hand, tax exempt contributions to registered pension plans including RRSPs could decline with aging while taxable withdrawals may increase. Aging could also affect revenues from sales and excise taxes to the extent that it affects the level and/or nature of consumption.

Health

The Provincial government will spend roughly $1.4 billion on health and community services in 2001/02, about 44 percent of the program budget. Examples of rapid spending growth can be found in the cost of physician services and home support expenditures, as well as pharmaceuticals and new technologies. Demands on the health care sector are expected to continue changing as the population ages.

Health Care Expenditures in Newfoundland and Labrador
1998 Dollars Per Capita by Age Group



* 1998 Provincial government health spending.
Source: Canadian Institute for Health Information

Spending on health care is highly correlated to age of the population. Historically, persons 65 years and older accounted for a large proportion of the total hospital days in Canada. Of the 33.9 million hospital days in 1996/97, the 65+ group comprised only 12 percent of the population but accounted for 62 percent of hospital days. The length of hospital stay also increases as people age. Trends in provincial health care spending as a person ages are shown in the chart. With the exception of newborns (<1 year of age), per capita spending on health care is fairly low for younger age groups, but increases significantly for the 45-64 year age group. More large increases are registered at 65-74, 75-84 and again at 85+. These are precisely the age groups that will increase dramatically in number over the next 15 years.

There was a 27.4 percent increase in population 75 years of age and older between 1991 and 2001. In addition, recent increases in the 40-55 year age categories signify future increases in demand for health care and the marked decreases in the less than 35 age groups will create a disproportionate balance of senior to younger age groups in the province.

Expenditure and other socio-political pressures can be expected to increase as the requirements for the treatment of heart disease, cancer, osteoporosis, cataracts, arthritis, dementia, and other ailments or conditions known to accompany aging increase. As well, concerns about lifestyle and quality of life such as personal independence, family and community support systems, and financial resources and means are also important considerations. In addition to aging in general, uneven aging patterns and regional population shifts could have significant implications for the long-term planning of regional health facilities.

"While there is some debate on whether the costly health services often required by older people will overwhelm the public health system, there is no doubt that the mix of services provided by the health system must change enormously. Gerontology, home support, long-term care and pharmaceuticals will require more spending, with less spending required in areas such as pediatrics and obstetrics."

— Reaching Consensus and Planning Ahead Health Forums 2001, Discussion Document Department of Health and Community Services

It should be noted that aging of the population will not be the only factor affecting future health care costs. Other factors such as regional presence, accessibility, increasing labour costs for health care professionals, increasing drug and medical equipment costs, and shifting health care utilization rates across different generations will also be important in determining future health care costs.

An August 2000 joint report produced by the Provincial and Territorial Ministers of Health concluded that for Canada as whole, health care spending could increase by nearly 5 percent per year over the next 27 years. "*Every province and territory faces a growing demand for health care services fueled by demographics, new technologies, pharmaceuticals, and other growing costs of providing service. ... a number of cost accelerators have the potential to raise growth of costs well in excess of those numbers. ... Examples of accelerators include: emerging and new technologies (such as major joint surgery, neonatal and fetal technologies, dialysis, organ transplantation, genetic testing and therapy), and increased incidence of chronic and new diseases such as heart disease, diabetes, tuberculosis, Hepatitis C, HIV and AIDS.*" [1]

Education

Demands on the education sector vary systematically with age. They are greatest, at least in terms of participation rates, between ages 5 to 18 years and thereafter diminish.

Enrolments in elementary and secondary education have already declined substantially, and are expected to continue declining due to past and future declines in the number of births. Enrolment has declined by 46.6 percent since the peak in 1971/72, and have decreased by 7.5 percent in the past two years alone. Declines have not, however, been

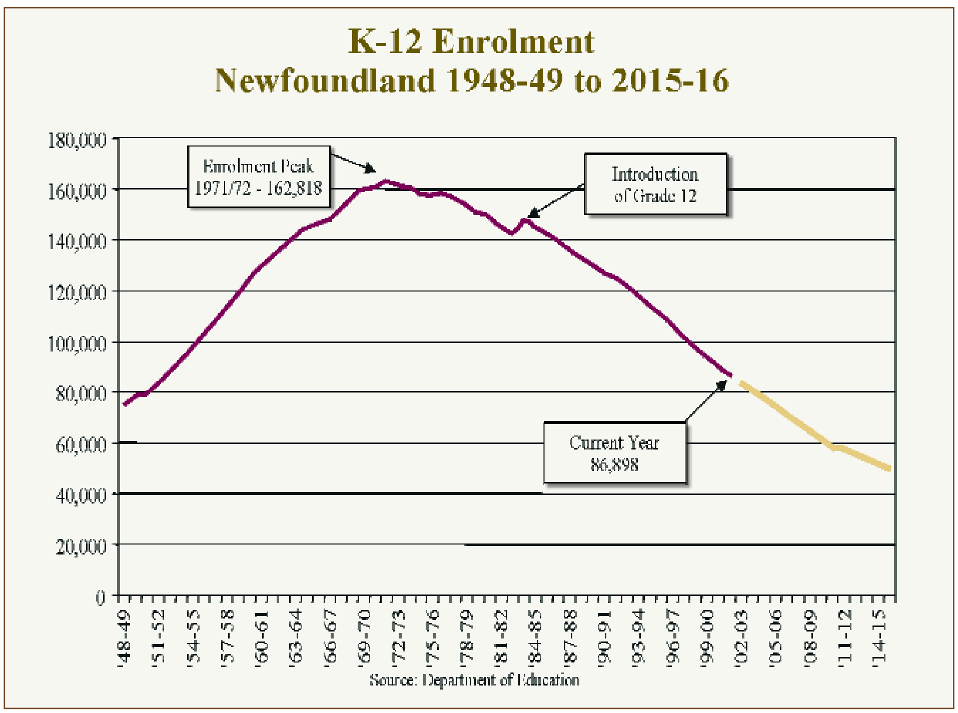
[1] Understanding Canada's Health Care Costs Final Report, Provincial and Territorial Ministers of Health, pp. iv-v. Canadian Intergovernmental Conference Secretariat, August 2000.

regionally balanced. Over the past decade, enrolment in some rural schools has decreased by as much as 40 to 60 percent. A recent report by a Ministerial Panel on Education noted that "*enrolment decline is not evenly distributed throughout the province but is more pronounced in rural than in urban areas. In particular, the Eastern Avalon area is declining less rapidly than other areas, while the school population on the North Coast of Labrador is growing.*"[2]

Declining enrolments implies that in the future more consolidation of schools may be necessary and multi-grade classrooms may potentially become more common in many rural areas. Different enrolment trends across various regions of the province have important implications vital to the process of planning for and construction of new school facilities. Also, purely on a per student basis, declining enrolment implies that there may be room for expenditure savings in the education sector. However, the geographic dispersion of Newfoundland's communities (schools located in small and remote communities which cannot be serviced from a central point) and the associated fixed costs will make savings difficult to realize in some areas. Pressure for more funding to increase the quality of education will likely be another factor that may make it difficult to achieve significant savings.

Like the overall population, the province's teaching force has also been aging over the past 30 years. This trend has been exacerbated by a large influx of teachers in the 1960's and 1970's. In recent years teachers have been retiring as soon as they are eligible and a large number of teachers in the 45 to 54 age group points to large number of retirements over the next ten years. Even if more teachers remain beyond the minimum time to retire this simply delays the retirements a few years. It is projected that in the period to 2010, two thirds of today's teaching force will be retired from the system. This points to an urgency for the development and implementation of district level human resource plans.[3]

On the post-secondary side, enrolment has been moving in the opposite direction. A new culture has been emerging in the province, one which strongly encourages higher education for population of all ages. The result has been a significant enrolment increase in all segments of the post-secondary sector over the past ten years. The post-secondary feeder population is composed of graduates from the K-12 system, out of province and international students, and increasingly, adults who are retraining or upgrading their skills. While all segments of the post-secondary sector registered enrolment increases throughout the



[2] Supporting Learning: Report of the Ministerial Panel on Educational Delivery in the Classroom. Government of Newfoundland and Labrador. March 2000.

[3] The MUN Faculty of Education has carried out an Education Sector Study to examine human resource requirements. Government will be considering the results of this Study in its policies deliberations.

Photo: Rural school accommodating students from St. Lunaire/Griquet.
Photo Credit: Beverley A. Carter

1990's, indications are that the changing demographics of the province are beginning to have an impact on the post-secondary sector as well. While the impact of declining enrolment in the K-12 sector was previously offset to some extent by increasing participation and graduation rates, this decline is beginning to have an impact on the direct from high school cohort feeding into the post-secondary system. This is expected to continue as an annual decline of high school graduates is forecasted for the next 15 years. As the school-aged cohort declines and the demand for continuing education in the adult population increases, there will be shifts in focus, both within and across the education sectors.

The impact of the steep decline in graduates from the K-12 system will likely be greatest at the university level. Proactive steps in relation to recruitment and retention strategies are needed to balance the adverse effects of declining numbers. The situation is somewhat different in the public college sector. Since 1990 the number of direct-from-high school entrants in proportion to the overall public college population has been declining. The clear enrolment trend for college students is that as a group they are becomingly increasingly older, and thus aging could, in fact, boost enrolment, at least in the near term.

"Such (rural) schools have become the focal point of concerns over their ability to maintain adequate programs. The questions for the future are whether small schools will become increasingly smaller and whether other schools will soon join the small necessarily existent category. The province may have reached the point at which further consolidation in rural areas will be difficult because of the distances and the continuing relative isolation of some communities. Although the number and size of schools cannot be projected directly from enrolment trends, as this depends on geography, transportation routes and local community interests more than on demography, it is likely that most further school consolidation will take place in urban areas where schools continue to exist in close proximity to one another."

— Ministerial Panel on
Education Delivery in the Classroom
March 2000

In summary, there is a shift in demand for educational services across the different sectors. There is still a large pool of adult learners who have not completed even a minimum level of education. Labour market changes have meant that the number of low-skilled jobs available to adults has declined rapidly. Skill sets need to be updated to match the needs of the knowledge economy, both for illiterate adults and for the existing workforce. The challenge for Government will be to maintain high quality and diversity of programs in an environment of declining enrolments and shifting demographics.

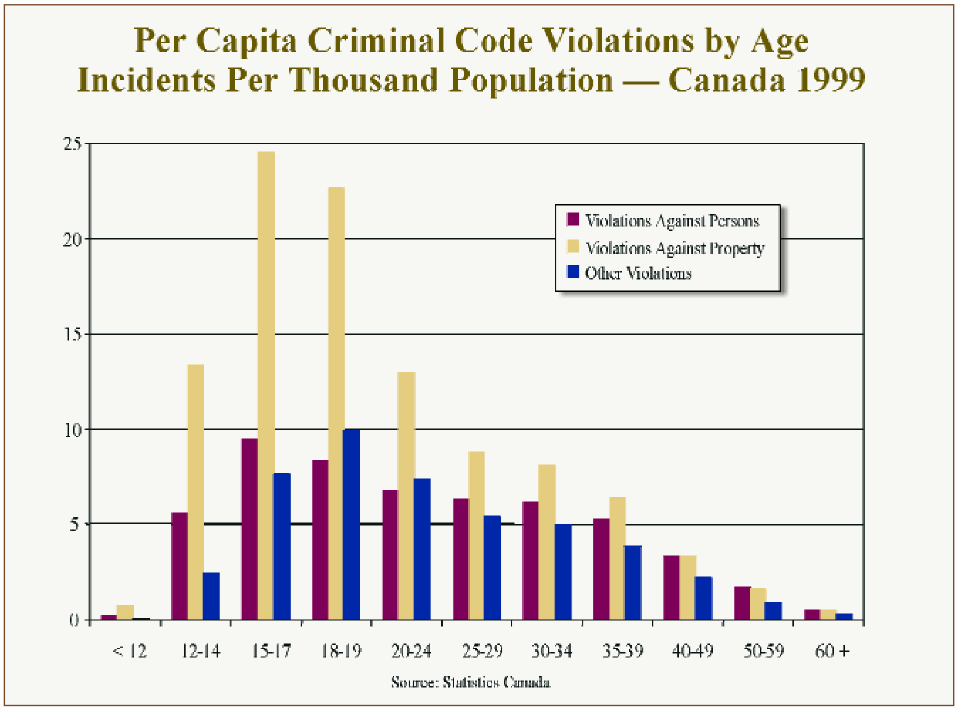
Justice

Demands on some components of the provincial justice system are likely to be impacted by demographic change, particularly by aging. Services such as Civil Law and Criminal Law are not particularly sensitive to aging, however, other elements of the justice system such as Policing, Courts, Corrections as well as Community Services and Legal Aid Commission are influenced by population age structure to varying degrees.

The nature and level of criminal activity is generally understood to change with age. The 15 to 34 year old age group is considered in Corrections as the "crime prone" age group (see figure). The largest majority of admissions to both probation and custody are in this age group. As it is much less likely for older individuals to engage in criminal activity, an aging population is expected to result in a continuing decline in the number of crimes and corresponding decreases in probation and custody admissions. Nevertheless, demographic trends offer only partial explanations for changes in crime rates and correctional populations. There is not a direct relationship between the number of citizens in the province and the demand for services provided by the justice system, nor is population aging the only factor that needs to be considered. Other factors influence crime and incarceration rates, including:

- socio-economic factors—education level, low income, unemployment and family stress;
- willingness of individuals to report crimes;
- definition of crime which is shaped by society's moral and values;
- service and program expansion facilitating better access to custody and probation services;
- changes in legislation containing new sentencing options;
- changes in law enforcement practices i.e. more warnings for first minor offence;
- changes in government policy;
- changes in correctional practices; and
- changes in sentencing practices.

In general, criminal code violations are highest in the younger age groups, particularly for those under forty years of age. These are precisely the age groups that will shrink dramatically over the coming decades suggesting that criminal code violations will probably decline as a result. There is also evidence to indicate that the nature of criminal activity changes with age. Thus, the province may see an increase in white collar crimes such as fraud, and a decrease in property and violent crimes usually associated with younger people.



Social Assistance

At the national level, social assistance costs per case are generally higher for those designated as non-employable cases in the 50 to 64 age groups. This is probably a reflection of recent restructuring and downsizing in the Canadian economy which has forced many older workers out of the labour market. Many have chosen not to retrain, but rather to rely on a combination of early retirement compensation payments and/or Social Assistance until they reach age 65 at which point they become eligible for Old Age Security, Guaranteed Income Support, Canada Pension Plan and other federally funded social benefits for seniors. At the provincial level, however, social assistance recipients are relatively young and the incidence of social assistance peaks in the 25 to 34 age group, possibly reflecting weak labour markets in some areas and the difficulties young people have had in the past trying to find employment in this province. It may also reflect the skill set possessed by this group. In 1998, 46 percent of the caseload was less than 35 years of age.

The large increase in the number of people 50 to 65 over the next 10 years seems to indicate that social assistance costs for this group will increase over this period. However, other factors such as the declining size of younger age groups, fewer teenage pregnancies, out-migration, higher education levels, the improving job market and the associated incentives encouraging older workers to stay in the job market longer will likely more than offset any upward pressures from growth in the 50 to 64 age group and result in a declining social assistance caseload over time.

In terms of implications for the Newfoundland and Labrador Children's Benefit, declining births will result in less children being eligible. Meanwhile growth in older age groups will increase those eligible for the Low Income Seniors Benefit.

Regional Economic Development

The continued decline of population in some rural areas and aging in all areas will present significant challenges to regional economic development initiatives. Government's clients in this area are typically groups comprising businesses or organizations rather than individuals. Thus demographic change impacts the Department in a somewhat different manner than other departments. Nevertheless, secondarily, success is dependent upon markets, an appropriate labour force and willing and interested entrepreneurs.

> **"Planning and implementation of new infrastructure and education and training programs must be started now while the contradictory policies of addressing labour surpluses and maximizing job creation today are priorities. Balancing these potentially contradictory priorities is perhaps the foremost challenge for public policy related to economic development today."**
>
> *— Department of Industry Trade and Rural Development*

In the short-term, there is an excess supply of lower educated, less mobile workers displaced from traditional resource industries. At the same time, continued out-migration will reduce the numbers of young workers with the skills and education needed by emerging sectors. This will impede the development of business and the attraction of investment to areas most affected by demographic change. Displaced workers who have remained in rural areas often have low levels of formal education and will require awareness of opportunities and skill requirements in new sectors as well as education and training linked to growth areas. Entrepreneurship and new firm creation is less likely to be affected by the decline in educated youth since business start-ups are dominated by individuals who have been in the workforce long enough to develop expertise, personal and business networks and capital for investment. The exception to this is information technology firms that have relatively low capital requirements and where youth have a proficiency in applications.

In the short to medium term, economic development initiatives need to be targeted towards areas like small scale manufacturing, such as secondary food processing and secondary wood products, which require competitive wage levels, manual dexterity and low labour turnover. In the long-run, however, the declining number of births and the out-migration of educated youth from rural areas will limit the supply of skilled labour necessary for growth sectors to expand.

Transportation and communication infrastructure will be a key requirement for rural communities and firms to maintain their link with global suppliers and markets. Information technology must be accessible as an enabler of efficient businesses. Linking education and training with human resource requirements of potential growth sectors will be crucial, whether it be through regional institutions or links to the outside in ways which provide the skills needed to succeed "back home" if the graduate wishes. All these initiatives will need to be geared to enhancing innovation and productivity. The demands of global competition require this approach. Much is being done to enhance productivity now, however, government priorities must also address the labour surplus and maximize job creation today. Balancing these potentially contradictory priorities is perhaps the foremost challenge for public policy related to economic development.

Labour Markets

Fewer young people available to enter the labour force (due to falling births in the past) combined with the attrition of large numbers of baby boomers from the labour force will most likely result in labour shortages over the next 15 years. Indeed, shortages are already occurring in certain occupations and regions. Such shortages will probably be addressed through higher labour force participation rates, particularly in the younger and older age groups; higher wage rates; higher labour productivity; and more in-migration. The implications of an aging workforce are discussed in detail in the *Business Impacts* section.

More older workers being enticed to stay in the labour market longer will also increase the demand for life long learning and continued retraining of workers. Labour shortages and increasing wage costs will be especially acute in occupations with a large percentage of workers eligible to retire over the next 10 to 15 years and enhanced recruitment and training in these areas will be needed.

Photo: Houses scattered along shoreline at Conche. Photo Credit: Beverley A. Carter

Workplace Injury Prevention and Management

Demographic change will affect the Workplace Health, Safety and Compensation Commission (WHSCC) as the nature of the labour force changes. The mandate of the Workplace Health, Safety and Compensation Commission spans the entire spectrum of injury management, ranging from injury prevention, education and training to functional management of workplace injuries and illnesses. While the severity of injuries increases with age, the frequency of accidents is higher among workers less than 30 years of age. Beginning at age 34, a decline in frequency of injuries occurs with age.

A decline in both mortality and birth rates will result in an older workforce. The challenge will be for WHSCC to be able to provide appropriate benefit levels to an older worker population that will require increased medical benefits. Research has shown that as workers age, their attitude towards work changes. Older workers are much more safety conscious than younger workers. An aging workforce means more older workers are and will be in the future referred for vocational and medical rehabilitation. There has been a dramatic increase in the overall proportion of claimants above the age of 40 in the past ten years. In 1989, approximately 26 percent of all lost-time claims were registered by people above 40 years; by 1998, this proportion has grown to 39 percent.

A major concern in shifting demographics towards an older population base is the increase in medical costs. Although older workers have lower injury rates, the types of injuries that occur in this population group are generally more severe. As severity of injuries increases, the probability of permanent disability also increases. In an aging workforce, an increase in the number of permanent disability claims will significantly impact the costs for the Commission.

An aging workforce also means an increase in the average age of workers referred to vocational rehabilitation. Older individuals, however, often experience significant barriers to re-employment including employers' preference for younger employees with greater educational and technological backgrounds. The likelihood of an older individual becoming a long-term claimant is greater even after vocational rehabilitation. An aging population will require more intensive, flexible and creative return-to-work programs.

Demographic change, new technology and the new economy are continually shaping WHSCC policies and programs. Chronic injury and aging will continue to shape future policy-making and program development. Innovative return-to-work programs must become the foundation of injury management for an older workforce. Older workers must be trained which means overcoming the present barriers to re-employment. Medical management of injury must facilitate a smooth care plan for difficult and complex injuries and illnesses. All these challenges are influenced by demographic change and will require new responses and actions.

Municipalities

There are more than 600 communities of various sizes in the province—

roughly 300 are incorporated, 175 are local service districts and 150 are unincorporated. Only incorporated communities are eligible for Municipal Operating Grants which incorporate population statistics in calculating entitlements. Local Service Districts do not receive grant funding but can apply for capital works funding. Unincorporated communities are not eligible for direct funding. The smaller communities are generally only marginally viable and have limited capacity to respond to negative impacts on them such as downturns in the economy, out-migration and reduced financial support. Most have only basic services such as garbage collection and street lighting and many have only partial water and sewer services.

The decline and rapid aging of many rural populations is likely to have long-term implications for the future economic growth and development, and perhaps even long-term financial viability, of some municipalities. For communities that derive the majority of their revenue from property taxes, the majority of out-migrants are young and often do not own property, thus there is not likely to be an immediate impact on the property assessment base. Additionally, young families migrating who own property leave homes that remain and continue to be subject to taxation whether vacant, rented or sold. For communities that derive the majority of their revenues from Poll Taxes which are assessed against individuals, there will be an immediate impact causing a reduction in the tax base.

Photo: Fishplant workers processing crab. Photo Credit: Department of Fisheries and Aquaculture.

There is a growing concern about the effects of de-population on the financial viability of smaller and more rural communities in the long-term. More than half of the incorporated municipalities, the majority of which are small communities, are experiencing serious financial difficulties. Further erosion of the tax base will further contribute to their reduced viability. It is also recognized that the current Debt Relief Program may not be able to fully address all the problems that will face communities.

The province guarantees a significant amount of municipal debt under the Newfoundland Municipal Financing Corporation, thus the implications for Provincial government spending and/or debt in the long term could be serious unless steps are taken to alleviate some of the problems. The bottom line is that while urban areas of the province and rural areas with crab or shrimp plants may be experiencing an economic renewal, there are still a significant number of municipalities suffering for a number of reasons. These problem areas need to be identified and efforts made to help these towns adjust to the new economic reality unless new business opportunities can be identified and appropriated sources of investment attracted to support them.

Out-migration may diminish the need for further expansion or extension of municipal infrastructure, beyond that which is presently required. The aging of the population, however, will likely alter the servicing needs in communities including accessibility, different types of recreational programs, snow clearing, street lights and security. Fewer young people will also place increased pressure on municipalities to find volunteers for such activities as firefighting. This will have an impact on service provision and overall quality of life in many rural communities.

It is important that future change be managed. There are numbers of competing service delivery mechanisms serving a multitude of communities and community interests leading to inefficiencies. Rationalization of both structures and processes of delivering municipal services is required to reduce costs and enhance services. The Department of Municipal and Provincial Affairs is committed to revisiting the municipal financing framework because of the disproportionate number of communities experiencing financial difficulties, in part due to out-migration that is eroding the tax base. There is an ongoing need for adequate municipal infrastructure and forward planning. Through strategic planning the Department is being positioned to work with municipalities to ensure their long-term viability.

Social Housing and Other Social Sector Services

For other areas in the social sector, demographic change will alter the size and mixture of services required. The Newfoundland and Labrador Housing Corporation provides social housing of some form to nearly 17,000 people. The average age of the household heads is 48 years, but 38 percent of the client population are children under 18 years of age. Thirty eight percent of the housing units are occupied by single parents, most of which are female - the average age of this group is 41 years. Eighty-eight percent of tenants receive either pension income or Social Assistance.

Demographic changes such as population shifts, changing family composition, and aging population will significantly impact the need for social housing. Other factors such as economic trends and increased representation from special interest groups will also affect housing demands. Recent trends are increasing the numbers of homeless and “hard to house” applicants in urban areas while an increasing number of housing units are left vacant in rural areas, often becoming subject to neglect and vandalism. Adding to the impacts are declining household sizes requiring smaller accommodation than the three, four and five bedroom units which currently comprise most of the housing stock. Conversion of existing stock to units more suited to current needs/demands is cost prohibitive. As well, there is a growing seniors population requiring housing adapted to meet their needs for greater accessibility while at the same time there is a scarcity of accessible housing for persons with disabilities. More resources will be required to assist in providing housing modifications for the frail elderly to enable them to live in their own homes and thus delay expensive institutionalization. Changing demographics, therefore, may mean fewer clients served at a higher cost.

NLHC is experiencing vacancy rates as high as 50 percent in some rural areas of the province where out-migration has been the highest. One of the greatest challenges is to provide aboriginal housing for the increasing population of young families in Labrador where the cost of constructing a house is often more than six times the market value of houses.

Demographic considerations involving an aging population, fewer children, more single parents, smaller households and changing family configurations will continue to test the flexibility of the existing housing stock and related programs and supports. Within a context of a fixed supply of units, flexible responses to accommodate changing needs, a focus on independent living, and properly integrated and coordinated social housing within a progressive social policy framework will be required.

The demand for other family services can also be expected to change as the population ages, with less demand for services directed towards families with children and more demand for family services for 50 plus type households (i.e., more home care and less child welfare services).

Conclusion

The worst would appear to be over for the province as far as out-migration and population decline are concerned. Adjustment to the short and medium term problems created during the 1990s by groundfish closures; major reform of the EI/UI program; and public sector restraint is all but complete. Strong economic and employment growth over the last number of years has slowed migration flows. Under the Economic and Statistics Branch's medium population projection, net out-migration from the Province remains near the 2000/01 level over the next five years. Beyond 2006, net out-migration trends to zero and net in-migration begins to occur after 2010, prompted by labour shortages resulting from jobs created through economic growth and the need to replace older workers as they retire from the labour force. Because natural population change is negative total population continues to decline over the projection period.

It is important to understand that these population projections refer to long term trends, and that there will likely be some year-to-year fluctuation. For instance, abnormally strong growth locally, or any significant changes to the economic outlook underpinning these population projections would alter the outlook for population as well.

While population decline has slowed considerably from the 1990s, there is no relief in sight in the foreseeable future for demographic issues stemming from declining births and rising deaths. This is owing largely to the current population age structure, and its implications for the future age structure. Consequently, the natural population change, which has always been the sole factor behind population growth (owing to negative net-migration) in the province, is expected not only to continue declining but to actually become negative within the next year or so.

The two most significant demographic challenges confronting the province in the coming years have to do with aging and regional population shifts, both of which are related in no small way to past out-migration and declining birth trends. As a result of falling births and out-migration over the past 30 years, the province's population has aged rapidly, a trend which is expected to continue. In addition, in recent years population losses have been larger in rural areas of the province resulting in increased concentration of the population in urban areas. More youth out-migration from rural areas together with low fertility means that the share of total population in rural areas is projected to continue to trend downward producing further shifts in the regional distribution of the province's population. Thus, while total population decline is expected to moderate, some regions of the province will continue to record significant population decline while others will experience population growth. Aging and regional shifts in the population will pose significant challenges to the provincial government in the years to come.

Demographic trends are likely to significantly alter the expectations, demand and needs of the province's population over the next fifteen years. The impacts will range from the implications of shifting spending patterns for the business sector, to rising demand for health care services and changing demand for education services in the public sector, to the changing nature of many communities as fewer children are born and young people continue to leave rural areas. Less young people entering the labour force while more people are retiring will result in slower labour supply growth which, depending on how it is addressed, could have implications for long-term economic growth. For Government, regional population shifts and uneven aging patterns could have significant implications for policy and program areas with location-specific applications such as long term planning of roads, other municipal infrastructure, and regional health and educational facilities. In addition, uneven demographic change will likely have impacts on potential economic growth, and perhaps even long term economic and financial viability of certain municipalities.

Newfoundland's demographic trends are generally long term and are not easily changed. In order to effectively and efficiently accommodate and manage demographic changes, their impacts must be accurately assessed and long term strategic planning which incorporates the implications of declining births, aging, and regional population shifts should begin.

Appendix 1

Population Statistics and Outlook
Newfoundland & Labrador
1986-2016

High, Medium and Low Scenario

Population Statistics and Projections
Newfoundland & Labrador 1986-2016
Low Scenario

Year	Population*	Births	Deaths	Natural Population Change	Inter-provincial Migration In	Inter-provincial Migration Out	Inter-provincial Migration Net	Total Net-Migration*	Population Change*
1986	576,489	8,346	3,575	4,771	6,045	11,742	-5,697	-7,579	-2,808
1987	575,135	7,899	3,578	4,321	7,951	12,611	-4,660	-5,675	-1,354
1988	574,994	7,656	3,612	4,044	9,259	12,639	-3,380	-4,185	-141
1989	576,412	7,396	3,611	3,785	10,105	11,895	-1,790	-2,367	1,418
1990	578,064	7,996	3,894	4,102	10,705	12,726	-2,021	-2,450	1,652
1991	579,525	7,354	3,816	3,538	10,346	11,057	-711	-2,077	1,461
1992	580,162	6,929	3,791	3,138	9,266	10,935	-1,669	-2,501	637
1993	580,195	6,689	3,815	2,874	7,558	10,636	-3,078	-2,841	33
1994	574,828	6,423	3,977	2,446	6,580	11,532	-4,952	-7,813	-5,367
1995	567,954	6,138	3,987	2,151	6,406	13,380	-6,974	-9,025	-6,874
1996	560,584	5,846	3,954	1,892	7,005	14,441	-7,436	-9,262	-7,370
1997	547,826	5,542	4,181	1,361	N.A.	N.A.	N.A	-14,119	-12,758
1998	534,199	5,245	4,340	905	N.A.	N.A.	N.A	-14,532	-13,627
1999	527,943	4,910	4,275	635	N.A.	N.A.	N.A	-6,891	-6,256
2000	524,231	4,782	4,375	407	N.A.	N.A.	N.A	-4,119	-3,712
2001	521,200	4,679	4,531	148	N.A.	N.A.	N.A	-3,179	-3,031
2002	518,069	4,599	4,605	-5	N.A.	N.A.	N.A	-3,126	-3,131
2003	514,955	4,380	4,668	-287	N.A.	N.A.	N.A	-2,827	-3,114
2004	511,925	4,251	4,731	-480	N.A.	N.A.	N.A	-2,550	-3,030
2005	509,113	4,122	4,804	-683	N.A.	N.A.	N.A	-2,129	-2,812
2006	506,521	4,002	4,867	-865	N.A.	N.A.	N.A	-1,727	-2,592
2007	503,928	3,902	4,930	-1,028	N.A.	N.A.	N.A	-1,565	-2,593
2008	501,402	3,793	4,994	-1,201	N.A.	N.A.	N.A	-1,325	-2,526
2009	498,914	3,703	5,067	-1,364	N.A.	N.A.	N.A	-1,124	-2,488
2010	496,445	3,604	5,130	-1,526	N.A.	N.A.	N.A	-943	-2,469
2011	493,152	3,514	5,204	-1,690	N.A.	N.A.	N.A	-1,603	-3,293
2012	490,581	3,395	5,277	-1,883	N.A.	N.A.	N.A	-688	-2,571
2013	488,072	3,295	5,351	-2,056	N.A.	N.A.	N.A	-453	-2,509
2014	485,566	3,196	5,435	-2,239	N.A.	N.A.	N.A	-267	-2,506
2015	483,029	3,096	5,519	-2,423	N.A.	N.A.	N.A	-114	-2,537
2016	480,583	2,997	5,603	-2,607	N.A.	N.A.	N.A.	161	-2,446

* Estimates for 1997 to 2001 have been adjusted by the Department of Finance to take into account the 2001 Census data.
Total net-migration includes net-international migration and residual deviation.
Source: Statistics Canada; and Economics & Statistics, Department of Finance

Population Statistics and Projections Newfoundland & Labrador 1986-2016

Medium Scenario

Year	Population*	Births	Deaths	Natural Population Change	Inter-provincial Migration In	Out	Net	Total Net-Migration*	Population Change*
1986	576,489	8,346	3,575	4,771	6,045	11,742	-5,697	-7,579	-2,808
1987	575,135	7,899	3,578	4,321	7,951	12,611	-4,660	-5,675	-1,354
1988	574,994	7,656	3,612	4,044	9,259	12,639	-3,380	-4,185	-141
1989	576,412	7,396	3,611	3,785	10,105	11,895	-1,790	-2,367	1,418
1990	578,064	7,996	3,894	4,102	10,705	12,726	-2,021	-2,450	1,652
1991	579,525	7,354	3,816	3,538	10,346	11,057	-711	-2,077	1,461
1992	580,162	6,929	3,791	3,138	9,266	10,935	-1,669	-2,501	637
1993	580,195	6,689	3,815	2,874	7,558	10,636	-3,078	-2,841	33
1994	574,828	6,423	3,977	2,446	6,580	11,532	-4,952	-7,813	-5,367
1995	567,954	6,138	3,987	2,151	6,406	13,380	-6,974	-9,025	-6,874
1996	560,584	5,846	3,954	1,892	7,005	14,441	-7,436	-9,262	-7,370
1997	547,826	5,542	4,181	1,361	N.A.	N.A.	N.A	-14,119	-12,758
1998	534,199	5,245	4,340	905	N.A.	N.A.	N.A	-14,532	-13,627
1999	527,943	4,910	4,275	635	N.A.	N.A.	N.A	-6,891	-6,256
2000	524,231	4,782	4,375	407	N.A.	N.A.	N.A	-4,119	-3,712
2001	521,200	4,679	4,531	148	N.A	N.A.	N.A	-3,179	-3,031
2002	518,743	4,659	4,594	65	N.A.	N.A.	N.A	-2,522	-2,457
2003	516,427	4,430	4,647	-217	N.A.	N.A.	N.A	-2,099	-2,316
2004	514,209	4,261	4,699	-438	N.A.	N.A.	N.A	-1,780	-2,218
2005	512,169	4,181	4,762	-581	N.A.	N.A.	N.A	-1,459	-2,040
2006	510,321	4,122	4,815	-693	N.A.	N.A.	N.A	-1,155	-1,848
2007	508,563	4,052	4,878	-826	N.A.	N.A.	N.A	-932	-1,758
2008	506,972	4,002	4,930	-928	N.A.	N.A.	N.A	-663	-1,591
2009	505,518	3,952	4,994	-1,041	N.A.	N.A.	N.A	-413	-1,454
2010	504,112	3,893	5,057	-1,164	N.A.	N.A.	N.A	-242	-1,406
2011	503,280	3,843	5,120	-1,277	N.A.	N.A.	N.A	445	-832
2012	502,584	3,793	5,193	-1,400	N.A.	N.A.	N.A	704	-696
2013	501,941	3,743	5,267	-1,524	N.A.	N.A.	N.A	881	-643
2014	501,298	3,683	5,340	-1,657	N.A.	N.A.	N.A	1,014	-643
2015	500,713	3,634	5,414	-1,780	N.A.	N.A.	N.A	1,195	-585
2016	500,394	3,574	5,498	-1,924	N.A.	N.A.	N.A.	1,605	-319

* Estimates for 1997 to 2001 have been adjusted by the Department of Finance to take into account the 2001 Census data.
Total net-migration includes net-international migration and residual deviation.
Source: Statistics Canada; and Economics & Statistics, Department of Finance

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High Scenario

Year	Population*	Births	Deaths	Natural Population Change	Inter-provincial Migration In	Inter-provincial Migration Out	Inter-provincial Migration Net	Total Net-Migration*	Population Change*
1986	576,489	8,346	3,575	4,771	6,045	11,742	-5,697	-7,579	-2,808
1987	575,135	7,899	3,578	4,321	7,951	12,611	-4,660	-5,675	-1,354
1988	574,994	7,656	3,612	4,044	9,259	12,639	-3,380	-4,185	-141
1989	576,412	7,396	3,611	3,785	10,105	11,895	-1,790	-2,367	1,418
1990	578,064	7,996	3,894	4,102	10,705	12,726	-2,021	-2,450	1,652
1991	579,525	7,354	3,816	3,538	10,346	11,057	-711	-2,077	1,461
1992	580,162	6,929	3,791	3,138	9,266	10,935	-1,669	-2,501	637
1993	580,195	6,689	3,815	2,874	7,558	10,636	-3,078	-2,841	33
1994	574,828	6,423	3,977	2,446	6,580	11,532	-4,952	-7,813	-5,367
1995	567,954	6,138	3,987	2,151	6,406	13,380	-6,974	-9,025	-6,874
1996	560,584	5,846	3,954	1,892	7,005	14,441	-7,436	-9,262	-7,370
1997	547,826	5,542	4,181	1,361	N.A.	N.A.	N.A	-14,119	-12,758
1998	534,199	5,245	4,340	905	N.A.	N.A.	N.A	-14,532	-13,627
1999	527,943	4,910	4,275	635	N.A.	N.A.	N.A	-6,891	-6,256
2000	524,231	4,782	4,375	407	N.A.	N.A.	N.A	-4,119	-3,712
2001	521,200	4,679	4,531	148	N.A.	N.A.	N.A	-3,179	-3,031
2002	519,474	4,660	4,594	65	N.A.	N.A.	N.A	-1,791	-1,726
2003	518,087	4,607	4,636	-29	N.A.	N.A.	N.A	-1,358	-1,387
2004	517,118	4,566	4,678	-112	N.A.	N.A.	N.A	-857	-969
2005	516,293	4,546	4,731	-185	N.A.	N.A.	N.A	-640	-825
2006	515,679	4,525	4,773	-247	N.A.	N.A.	N.A	-367	-614
2007	515,088	4,515	4,815	-300	N.A.	N.A.	N.A	-291	-591
2008	514,552	4,505	4,867	-362	N.A.	N.A.	N.A	-174	-536
2009	514,157	4,495	4,920	-425	N.A.	N.A.	N.A	30	-395
2010	513,793	4,474	4,973	-498	N.A.	N.A.	N.A	134	-364
2011	513,565	4,454	5,025	-571	N.A.	N.A.	N.A	343	-228
2012	513,347	4,433	5,078	-644	N.A.	N.A.	N.A	426	-218
2013	513,281	4,403	5,141	-738	N.A.	N.A.	N.A	672	-66
2014	513,234	4,362	5,204	-842	N.A.	N.A.	N.A	795	-47
2015	513,266	4,321	5,267	-946	N.A.	N.A.	N.A	978	32
2016	513,266	4,269	5,340	-1,071	N.A.	N.A.	N.A.	1,071	0

* Estimates for 1997 to 2001 have been adjusted by the Department of Finance to take into account the 2001 Census data.
Total net-migration includes net-international migration and residual deviation.
Source: Statistics Canada; and Economics & Statistics, Department of Finance